

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061103-BW-016

GC/MS Volatiles

Lot-Sample #....: A3F120247-005	Work Order #....: FQFCT1AA	Matrix.....: WG
Date Sampled....: 06/11/03 14:58	Date Received...: 06/12/03	
Prep Date.....: 06/14/03	Analysis Date...: 06/14/03	
Prep Batch #....: 3166106		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	2.4	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	11	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	1.1	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061103-BW-016

GC/MS Volatiles

Lot-Sample #....: A3F120247-005 Work Order #....: FQFCT1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP

GC/MS Volatiles

Lot-Sample #....: A3F120247-006	Work Order #....: FQFCV1AA	Matrix.....: WQ
Date Sampled....: 06/11/03	Date Received...: 06/12/03	
Prep Date.....: 06/14/03	Analysis Date...: 06/14/03	
Prep Batch #....: 3166106		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP

GC/MS Volatiles

Lot-Sample #: A3F120247-006 Work Order #: FQFCV1AA Matrix: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F120247
MB Lot-Sample #: A3F150000-106

Work Order #....: FQK3R1AA

Matrix.....: WATER

Analysis Date...: 06/14/03
Dilution Factor: 1

Prep Date.....: 06/14/03
Prep Batch #....: 3166106
Initial Wgt/Vol: 5 mL

Final Wgt/Vol...: 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F120247

Work Order #....: FQK3R1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro- benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	107		(73 - 122)	
1,2-Dichloroethane-d4	95		(61 - 128)	
Toluene-d8	97		(76 - 110)	
4-Bromofluorobenzene	78		(74 - 116)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F120247 Work Order #....: FQK3R1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F150000-106 FQK3R1AD-LCSD
 Prep Date.....: 06/14/03 Analysis Date...: 06/14/03
 Prep Batch #....: 3166106
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
Benzene	10	10	ug/L	103		SW846 8260B
	10	10	ug/L	100	3.5	SW846 8260B
Chlorobenzene	10	11	ug/L	110		SW846 8260B
	10	10	ug/L	104	5.7	SW846 8260B
1,1-Dichloroethene	10	10	ug/L	100		SW846 8260B
	10	10	ug/L	101	1.5	SW846 8260B
Toluene	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	100	3.8	SW846 8260B
Trichloroethene	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	100	3.8	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	102	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	96	(61 - 128)
Toluene-d8	98	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F120247 Work Order #....: FQK3R1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F150000-106 FQK3R1AD-LCSD
 Prep Date.....: 06/14/03 Analysis Date...: 06/14/03
 Prep Batch #....: 3166106
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	103	(80 - 116)			SW846 8260B
	100	(80 - 116)	3.5	(0-20)	SW846 8260B
Chlorobenzene	110	(76 - 117)			SW846 8260B
	104	(76 - 117)	5.7	(0-20)	SW846 8260B
1,1-Dichloroethene	100	(63 - 130)			SW846 8260B
	101	(63 - 130)	1.5	(0-20)	SW846 8260B
Toluene	104	(74 - 119)			SW846 8260B
	100	(74 - 119)	3.8	(0-20)	SW846 8260B
Trichloroethene	104	(75 - 122)			SW846 8260B
	100	(75 - 122)	3.8	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
	96	(61 - 128)
Toluene-d8	98	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F120247 Work Order #....: FP2C41AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F050302-006 FP2C41AD-MSD
 Date Sampled...: 06/04/03 14:45 Date Received...: 06/05/03
 Prep Date.....: 06/14/03 Analysis Date...: 06/14/03
 Prep Batch #....: 3166106
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	11	ug/L	107	3.4	SW846 8260B
Chlorobenzene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	10	ug/L	104	2.1	SW846 8260B
1,1-Dichloroethene	ND	10	11	ug/L	106		SW846 8260B
	ND	10	11	ug/L	110	3.5	SW846 8260B
Toluene	ND	10	10	ug/L	98		SW846 8260B
	ND	10	10	ug/L	100	1.4	SW846 8260B
Trichloroethene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	11	ug/L	108	3.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
	109	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	104	(61 - 128)
Toluene-d8	97	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	88	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F120247 Work Order #....: FP2C41AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F050302-006 FP2C41AD-MSD
 Date Sampled...: 06/04/03 14:45 Date Received...: 06/05/03
 Prep Date.....: 06/14/03 Analysis Date...: 06/14/03
 Prep Batch #....: 3166106
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	104	(78 - 118)			SW846 8260B
	107	(78 - 118)	3.4	(0-20)	SW846 8260B
Chlorobenzene	102	(76 - 117)			SW846 8260B
	104	(76 - 117)	2.1	(0-20)	SW846 8260B
1,1-Dichloroethene	106	(62 - 130)			SW846 8260B
	110	(62 - 130)	3.5	(0-20)	SW846 8260B
Toluene	98	(70 - 119)			SW846 8260B
	100	(70 - 119)	1.4	(0-20)	SW846 8260B
Trichloroethene	104	(62 - 130)			SW846 8260B
	108	(62 - 130)	3.1	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
	109	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	104	(61 - 128)
Toluene-d8	97	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	88	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F120247 Work Order #....: FP2C41AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F050302-006 FP2C41AD-MSD
 Date Sampled....: 06/04/03 14:45 Date Received...: 06/05/03
 Prep Date.....: 06/14/03 Analysis Date...: 06/14/03
 Prep Batch #....: 3166106
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	11	ug/L	107	3.4	SW846 8260B
Chlorobenzene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	10	ug/L	104	2.1	SW846 8260B
1,1-Dichloroethene	ND	10	11	ug/L	106		SW846 8260B
	ND	10	11	ug/L	110	3.5	SW846 8260B
Toluene	ND	10	10	ug/L	98		SW846 8260B
	ND	10	10	ug/L	100	1.4	SW846 8260B
Trichloroethene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	11	ug/L	108	3.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
	109	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	104	(61 - 128)
Toluene-d8	97	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	88	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F120247 Work Order #....: FP2C41AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F050302-006 FP2C41AD-MSD
 Date Sampled...: 06/04/03 14:45 Date Received...: 06/05/03
 Prep Date.....: 06/14/03 Analysis Date...: 06/14/03
 Prep Batch #....: 3166106
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	104	(78 - 118)			SW846 8260B
	107	(78 - 118)	3.4	(0-20)	SW846 8260B
Chlorobenzene	102	(76 - 117)			SW846 8260B
	104	(76 - 117)	2.1	(0-20)	SW846 8260B
1,1-Dichloroethene	106	(62 - 130)			SW846 8260B
	110	(62 - 130)	3.5	(0-20)	SW846 8260B
Toluene	98	(70 - 119)			SW846 8260B
	100	(70 - 119)	1.4	(0-20)	SW846 8260B
Trichloroethene	104	(62 - 130)			SW846 8260B
	108	(62 - 130)	3.1	(0-20)	SW846 8260B

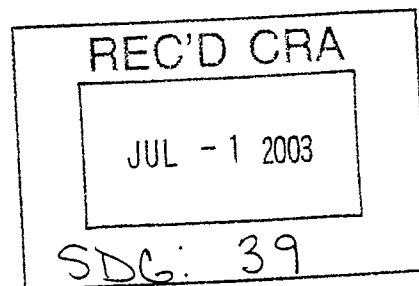
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
	109	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	104	(61 - 128)
Toluene-d8	97	(76 - 110)
	98	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	88	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

END OF REPORT



ANALYTICAL REPORT

PROJECT NO. 17360

GM GRAND RAPIDS METAL

Lot #: A3F130153

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360 Lab#: A3F130153

Name: GMGR

Description

Event: _____

Samples: 4 water

Analysis: TCL VOC

TAT: 2 day

Lab: STL

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: 10/24/03

Invoice Approval Date: _____

Comments: _____

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in cursive script, reading "Amy L. McCormick".

Amy L. McCormick
Project Manager

June 27, 2003

Severn Trent Laboratories, Inc.

STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720

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CASE NARRATIVE

CASE NARRATIVE

A3F130153

The following report contains the analytical results for three water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Metal Site, project number 17360. The samples were received June 13, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameter listed on the analytical methods summary page in accordance with the method indicated. Preliminary results were provided to the Chemistry Department on June 17, 2003. A summary of QC data for these analyses is included at the rear of the report.

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.



Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride

Acetone

2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper

Iron

Zinc

Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is repped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be repped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)



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STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A3F130153

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

SAMPLE SUMMARY

A3F130153

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQG8T	001	GW-17360-061203-BW-017	06/12/03	10:30
FQG8V	002	GW-17360-061203-BW-018	06/12/03	11:30
FQG8X	003	GW-17360-061203-BW-019	06/12/03	12:50
FQG80	004	TRIP BLANK	06/12/03	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

***SHIPPING
AND
RECEIVING DOCUMENTS***

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL

REFERENCE NUMBER:

17360

PROJECT NAME:

Gym Grand Rapids Metc

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: *[Signature]* PRINTED NAME: *Bart Williams*

SEQ. NO.

DATE TIME

SAMPLE TYPE

OF CONTAINERS

TEL VOC

PARAMETERS

REMARKS

48 hr TAT

6/12/03

1030

Gym 17360 06/12/03 Bw - 017

H2O

3

Y

X

1130

1250

↓

TR:0 Bkalt

↓

018

019

↓

H2O

3

Y

X

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:

[Signature]

DATE: 6/12/03
TIME: 1500

RECEIVED BY:

1.

DATE:

TIME:

DATE:

TIME:

RELINQUISHED BY:

DATE:

TIME:

RECEIVED BY:

2.

DATE:

TIME:

DATE:

TIME:

RELINQUISHED BY:

DATE:

TIME:

RECEIVED BY:

1.

DATE:

TIME:

DATE:

TIME:

METHOD OF SHIPMENT:

Fed Ex

AIR BILL NO.

White

Yellow

-Fully Executed Copy
-Receiving Laboratory Copy

Pink
Goldenrod
-Shipper Copy
-Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

[Signature]

DATE: 6/13/03 TIME: 73950

RSR280

Client:

57787

Lot #:

A3F130153

Case Number/SDG:

17360

Storage Location: MS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FGG8T	BURNST	6/13/03	Yes		Storage	
FGG8V	BURNST	6/13/03	Yes		Storage	
FGG8X	BURNST	6/13/03	Yes		Storage	
FGG80	BURNST	6/13/03	Yes		Storage	

STL Cooler Receipt Form/Narrative

Lot Number: A3F130153

North Canton Facility

Client: CRAProject: GM GRD

Quote#:

Cooler Received on: 6/13/03Opened on: 6/13/03

by:

(Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: _____Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____STL Shipper No#: m-11661. Were custody seals on the outside of the cooler? Yes ☐ No ☒

If YES, Quantity _____ Location _____

Were the custody seals signed and dated?

2. Shipper's packing slip attached to this form?

3. Were custody papers included inside the cooler and relinquished?

4. Did you sign the custody papers in the appropriate place?

5. Packing material used:

Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☒ None ☐ Other: _____6. Cooler temperature upon receipt 2.8 °C (see back of form for multiple coolers/temp)METHOD: Temp Via ☒ Coolant & Sample ☐ Against Bottles ☐ IR ☐ ICE/H₂O Slurry ☐COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)?

8. Did all bottle labels and tags agree with the custody papers?

9. Were samples at the correct pH? (record on back)

10. Were correct bottles used for the tests indicated?

11. Were air bubbles > 6 mm in any VOA vials?

12. Was a sufficient amount of sample sent in each bottle?

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

☒ MACRO ☐ MACRO

1. CHAIN OF CUSTODY

SR1A

The chain of custody and sample bottles did not agree. The following discrepancies occurred _____

2. SAMPLE CONDITION

SR2A

Sample(s) _____ were received or requested after the recommended holding time had expired.

SR2B

Sample(s) _____ were received with insufficient volume.

SR2C

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

SR3A

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).

Nitric Acid Lot # 012203-HNO₃; Sulfuric Acid Lot # 112801-H₂SO₄; Sodium Hydroxide Lot # 011102-NaOH; Hydrochloric Acid Lot # 020501-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH₃COO₂ZN/NaOH

SR3B

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061203-BW-017

GC/MS Volatiles

Lot-Sample #....: A3F130153-001	Work Order #....: FQG8T1AA	Matrix.....: WG
Date Sampled....: 06/12/03 10:30	Date Received...: 06/13/03	
Prep Date.....: 06/17/03	Analysis Date...: 06/17/03	
Prep Batch #....: 3168243		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061203-BW-017

GC/MS Volatiles

Lot-Sample #....: A3F130153-001 Work Order #....: FQG8T1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	31	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061203-BW-018

GC/MS Volatiles

Lot-Sample #....: A3F130153-002 **Work Order #....:** FQG8V1AA **Matrix.....:** WG
Date Sampled....: 06/12/03 11:30 **Date Received...:** 06/13/03
Prep Date.....: 06/17/03 **Analysis Date...:** 06/17/03
Prep Batch #....: 3168243
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol...:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061203-BW-018

GC/MS Volatiles

Lot-Sample #....: A3F130153-002 Work Order #....: FQG8V1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	7.2	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061203-BW-019

GC/MS Volatiles

Lot-Sample #....: A3F130153-003 Work Order #....: FQG8X1AA Matrix.....: WG
 Date Sampled....: 06/12/03 12:50 Date Received...: 06/13/03
 Prep Date.....: 06/17/03 Analysis Date...: 06/17/03
 Prep Batch #....: 3168243
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061203-BW-019

GC/MS Volatiles

Lot-Sample #....: A3F130153-003 Work Order #....: FQG8X1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	85	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F130153-004 Work Order #....: FQG801AA Matrix.....: WQ
 Date Sampled....: 06/12/03 Date Received...: 06/13/03
 Prep Date.....: 06/17/03 Analysis Date...: 06/17/03
 Prep Batch #....: 3168243
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F130153-004 Work Order #....: FQG801AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F130153
MB Lot-Sample #: A3F170000-243

Work Order #....: FQMLT1AA

Matrix.....: WATER

Analysis Date...: 06/17/03
Dilution Factor: 1

Prep Date.....: 06/17/03
Prep Batch #....: 3168243
Initial Wgt/Vol: 5 mL

Final Wgt/Vol...: 5 mL

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F130153

Work Order #....: FQMLT1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	108		(73 - 122)	
1,2-Dichloroethane-d4	99		(61 - 128)	
Toluene-d8	101		(76 - 110)	
4-Bromofluorobenzene	87		(74 - 116)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F130153 Work Order #....: FQMLT1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F170000-243 FQMLT1AD-LCSD
 Prep Date.....: 06/17/03 Analysis Date...: 06/17/03
 Prep Batch #....: 3168243
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.4	ug/L	94		SW846 8260B
	10	9.9	ug/L	99	5.4	SW846 8260B
Chlorobenzene	10	9.8	ug/L	98		SW846 8260B
	10	10	ug/L	101	2.5	SW846 8260B
1,1-Dichloroethene	10	9.9	ug/L	99		SW846 8260B
	10	10	ug/L	104	4.7	SW846 8260B
Toluene	10	10	ug/L	100		SW846 8260B
	10	11	ug/L	105	5.2	SW846 8260B
Trichloroethene	10	9.5	ug/L	95		SW846 8260B
	10	9.9	ug/L	99	4.4	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
	100	(61 - 128)
Toluene-d8	105	(76 - 110)
	105	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	103	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F130153 Work Order #....: FQMLT1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F170000-243 FQMLT1AD-LCSD
 Prep Date.....: 06/17/03 Analysis Date...: 06/17/03
 Prep Batch #....: 3168243
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	94	(80 - 116)			SW846 8260B
	99	(80 - 116)	5.4	(0-20)	SW846 8260B
Chlorobenzene	98	(76 - 117)			SW846 8260B
	101	(76 - 117)	2.5	(0-20)	SW846 8260B
1,1-Dichloroethene	99	(63 - 130)			SW846 8260B
	104	(63 - 130)	4.7	(0-20)	SW846 8260B
Toluene	100	(74 - 119)			SW846 8260B
	105	(74 - 119)	5.2	(0-20)	SW846 8260B
Trichloroethene	95	(75 - 122)			SW846 8260B
	99	(75 - 122)	4.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
	100	(61 - 128)
Toluene-d8	105	(76 - 110)
	105	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	103	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F130153 Work Order #....: FQA391AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F110189-003 FQA391AD-MSD
 Date Sampled...: 06/10/03 14:58 Date Received...: 06/11/03
 Prep Date.....: 06/17/03 Analysis Date...: 06/17/03
 Prep Batch #....: 3168243
 Dilution Factor: 20 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	200	200	ug/L	98		SW846 8260B
	ND	200	200	ug/L	100	1.9	SW846 8260B
Chlorobenzene	ND	200	190	ug/L	96		SW846 8260B
	ND	200	200	ug/L	98	2.0	SW846 8260B
1,1-Dichloroethene	ND	200	220	ug/L	108		SW846 8260B
	ND	200	210	ug/L	105	2.5	SW846 8260B
Toluene	ND	200	200	ug/L	100		SW846 8260B
	ND	200	200	ug/L	101	1.2	SW846 8260B
Trichloroethene	ND	200	210	ug/L	99		SW846 8260B
	ND	200	210	ug/L	99	0.26	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
	103	(61 - 128)
Toluene-d8	102	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F130153 Work Order #....: FQA391AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F110189-003 FQA391AD-MSD
 Date Sampled....: 06/10/03 14:58 Date Received...: 06/11/03
 Prep Date.....: 06/17/03 Analysis Date...: 06/17/03
 Prep Batch #....: 3168243
 Dilution Factor: 20 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	98	(78 - 118)			SW846 8260B
	100	(78 - 118)	1.9	(0-20)	SW846 8260B
Chlorobenzene	96	(76 - 117)			SW846 8260B
	98	(76 - 117)	2.0	(0-20)	SW846 8260B
1,1-Dichloroethene	108	(62 - 130)			SW846 8260B
	105	(62 - 130)	2.5	(0-20)	SW846 8260B
Toluene	100	(70 - 119)			SW846 8260B
	101	(70 - 119)	1.2	(0-20)	SW846 8260B
Trichloroethene	99	(62 - 130)			SW846 8260B
	99	(62 - 130)	0.26	(0-20)	SW846 8260B

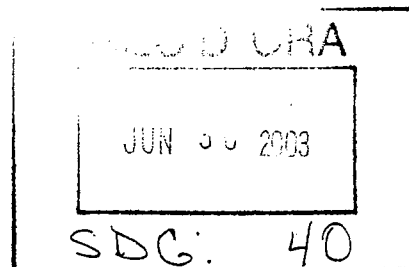
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
	105	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
	103	(61 - 128)
Toluene-d8	102	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

END OF REPORT



ANALYTICAL REPORT

PROJECT NO. 17360

GM G.RAPIDS METAL

Lot #: A3F140121

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360 Lab#: A3F140121

Name: GM GR

Description

Event: _____

Samples: 6 water

Analysis: TC, VOC

TAT: 2 day

Lab: STL

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: 10/21/03

Invoice Approval Date: _____

Comments: _____

SEVERN TRENT LABORATORIES, INC.

Amy L. McCormick
Project Manager

June 27, 2003

Severn Trent Laboratories, Inc.

STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720

Tel 330 497 9396 Fax 330 497 0772 • www.stl-inc.com

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

57L

REFERENCE NUMBER:

17360

PROJECT NAME:

GM G. Repids Metal

CHAIN OF CUSTODY RECORD

SAMPLER'S
SIGNATURE:

[Signature]

PRINTED

NAME: *Bar Williams*

SEQ:
No.

DATE

TIME

SAMPLE
TYPE

NO. OF
CONTAINERS

PARAMETERS

TEL
VOL

REMARKS

48 hr Tar

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STL

CASE NARRATIVE

CASE NARRATIVE

A3F140121

The following report contains the analytical results for five water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM G. Rapids Metal Site, project number 17360. The samples were received June 14, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameter listed on the analytical methods summary page in accordance with the method indicated. Preliminary results were provided to the Chemistry Department on June 19, 2003. A summary of QC data for these analyses is included at the rear of the report.

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.



Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride
Acetone
2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper
Iron
Zinc
Lead*

- for analyses run on TJA Trace ICP, ICPMS or GFAA only
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is repped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be repped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence - Participating Lab Status Award (#82)



METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A3F140121

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

SAMPLE SUMMARY

A3F140121

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQKHQ	001	GW-17360-061303-BW-020	06/13/03	08:40
FQKHV	002	GW-17360-061303-BW-021	06/13/03	08:46
FQKHW	003	GW-17360-061303-BW-022	06/13/03	09:35
FQKHX	004	GW-17360-061303-BW-023	06/13/03	09:46
FQKH0	005	GW-17360-061303-BW-024	06/13/03	10:20
FQKH2	006	TRIP BLANK	06/13/03	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.



***SHIPPING
AND
RECEIVING DOCUMENTS***

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360

PROJECT NAME:

LYM G. RECORDS Metal

SAMPLERS SIGNATURE: *[Signature]* PRINTED NAME: *BAET WILKINS*

SEQ. No.	DATE	TIME	SAMPLE TYPE	OF CONTAINERS	PARAMETERS	REMARKS

6/13/03 0810 Lym-17360-061303-BW-020
0810 021
0813 022
0816 023
0820 024

Tape Blank

[Signature]

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: *[Signature]* DATE: 6/13/03 RECEIVED BY: 1. DATE: 6/13/03 TIME: 1300
RELINQUISHED BY: 2. DATE: TIME: RECEIVED BY: 2. DATE: TIME:
RELINQUISHED BY: 3. DATE: TIME: RECEIVED BY: 1. DATE: TIME:

METHOD OF SHIPMENT: *Fe176x*

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldend - Goldenrod - Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

22410

[Signature]
DATE: 6/14/03 TIME: 945

RSR280

Client:

Severn Trent Laboratories, Inc.
Sample Control Record

57787

Lot #:

A3F140121

Case Number/SDG:

17360

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FQKHQ	SANDERSA	6/14/03	Yes		Storage	
FQKHV	SANDERSA	6/14/03	Yes		Storage	
FQKHW	SANDERSA	6/14/03	Yes		Storage	
FQKHX	SANDERSA	6/14/03	Yes		Storage	
FQKH0	SANDERSA	6/14/03	Yes		Storage	
FQKH2	SANDERSA	6/14/03	Yes		Storage	

STL Cooler Receipt Form/Narrative North Canton Facility			
<u>Client ID</u>	<u>pH</u>	<u>Date</u>	<u>Initials</u>
<u>Cooler</u>	<u>Temp</u>	<u>Method</u>	<u>Coolant</u>
<u>Discrepancies Cont.</u>			
Macro Name:			
Macro Name:			
Macro Name:			
Other Anomalies:			

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-020

GC/MS Volatiles

Lot-Sample #....: A3F140121-001	Work Order #....: FQKHQ1AA	Matrix.....: WG
Date Sampled....: 06/13/03 08:40	Date Received...: 06/14/03	
Prep Date.....: 06/18/03	Analysis Date...: 06/18/03	
Prep Batch #....: 3169338		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-020

GC/MS Volatiles

Lot-Sample #....: A3F140121-001 Work Order #....: FQKHQ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	7.0	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	3.8	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-021

GC/MS Volatiles

Lot-Sample #....: A3F140121-002 Work Order #....: FQKEV1AA Matrix.....: WG
 Date Sampled....: 06/13/03 08:46 Date Received...: 06/14/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3169338
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-021

GC/MS Volatiles

Lot-Sample #....: A3F140121-002 Work Order #....: FQKHV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	7.1	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	3.8	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	103	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-022

GC/MS Volatiles

Lot-Sample #....: A3F140121-003	Work Order #....: FQKHW1AA	Matrix.....: WG
Date Sampled....: 06/13/03 09:35	Date Received...: 06/14/03	
Prep Date.....: 06/18/03	Analysis Date...: 06/18/03	
Prep Batch #....: 3169338		
Dilution Factor: 2	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	50	ug/L
Benzene	ND	2.0	ug/L
Bromodichloromethane	ND	2.0	ug/L
Bromoform	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone	ND	50	ug/L
Carbon disulfide	ND	10	ug/L
Carbon tetrachloride	ND	2.0	ug/L
Chlorobenzene	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	2.0	ug/L
Chloromethane	ND	2.0	ug/L
Cyclohexane	ND	2.0	ug/L
Dibromochloromethane	ND	2.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	2.0	ug/L
1,2-Dichlorobenzene	ND	2.0	ug/L
1,3-Dichlorobenzene	ND	2.0	ug/L
1,4-Dichlorobenzene	ND	2.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	2.0	ug/L
1,2-Dichloroethane	ND	2.0	ug/L
1,1-Dichloroethene	ND	2.0	ug/L
cis-1,2-Dichloroethene	ND	2.0	ug/L
trans-1,2-Dichloroethene	ND	2.0	ug/L
1,2-Dichloropropane	ND	2.0	ug/L
cis-1,3-Dichloropropene	ND	2.0	ug/L
trans-1,3-Dichloropropene	ND	2.0	ug/L
Ethylbenzene	ND	2.0	ug/L
2-Hexanone	ND	100	ug/L
Isopropylbenzene	ND	10	ug/L
Methyl acetate	ND	20	ug/L
Methylene chloride	ND	10	ug/L
Methylcyclohexane	ND	2.0	ug/L
4-Methyl-2-pentanone	ND	100	ug/L
Methyl tert-butyl ether	ND	10	ug/L
Styrene	ND	2.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-022

GC/MS Volatiles

Lot-Sample #....: A3F140121-003 Work Order #....: FQKHW1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L
Tetrachloroethene	66	2.0	ug/L
Toluene	ND	2.0	ug/L
1,2,4-Trichloro- benzene	ND	10	ug/L
1,1,1-Trichloroethane	ND	2.0	ug/L
1,1,2-Trichloroethane	ND	2.0	ug/L
Trichloroethene	2.2	2.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	6.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-023

GC/MS Volatiles

Lot-Sample #....: A3F140121-004 Work Order #....: FQKHX1AA Matrix.....: WG
 Date Sampled....: 06/13/03 09:46 Date Received...: 06/14/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3169338
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-023

GC/MS Volatiles

Lot-Sample #....: A3F140121-004 Work Order #....: FQKH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-024

GC/MS Volatiles

Lot-Sample #....: A3F140121-005	Work Order #....: FQKH01AA	Matrix.....: WG
Date Sampled....: 06/13/03 10:20	Date Received...: 06/14/03	
Prep Date.....: 06/18/03	Analysis Date...: 06/18/03	
Prep Batch #....: 3169338		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	1.7	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061303-BW-024

GC/MS Volatiles

Lot-Sample #....: A3F140121-005 Work Order #....: FQKH01AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	1.5	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F140121-006 Work Order #....: FQKH21AA Matrix.....: WQ
 Date Sampled....: 06/13/03 Date Received...: 06/14/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3169338
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F140121-006 Work Order #....: FQKH21AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F140121
MB Lot-Sample #: A3F180000-338

Work Order #....: FQOD11AA

Matrix.....: WATER

Analysis Date...: 06/18/03
Dilution Factor: 1

Prep Date.....: 06/18/03
Prep Batch #....: 3169338
Initial Wgt/Vol: 5 mL

Final Wgt/Vol...: 5 mL

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	25	ug/L		SW846 8260B
Benzene	ND	1.0	ug/L		SW846 8260B
Bromodichloromethane	ND	1.0	ug/L		SW846 8260B
Bromoform	ND	1.0	ug/L		SW846 8260B
Bromomethane	ND	1.0	ug/L		SW846 8260B
2-Butanone	ND	25	ug/L		SW846 8260B
Carbon disulfide	ND	5.0	ug/L		SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L		SW846 8260B
Chlorobenzene	ND	1.0	ug/L		SW846 8260B
Chloroethane	ND	1.0	ug/L		SW846 8260B
Chloroform	ND	1.0	ug/L		SW846 8260B
Chloromethane	ND	1.0	ug/L		SW846 8260B
Cyclohexane	ND	1.0	ug/L		SW846 8260B
Dibromochloromethane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L		SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L		SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
Ethylbenzene	ND	1.0	ug/L		SW846 8260B
2-Hexanone	ND	50	ug/L		SW846 8260B
Isopropylbenzene	ND	5.0	ug/L		SW846 8260B
Methyl acetate	ND	10	ug/L		SW846 8260B
Methylene chloride	ND	5.0	ug/L		SW846 8260B
Methylcyclohexane	ND	1.0	ug/L		SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L		SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L		SW846 8260B
Styrene	ND	1.0	ug/L		SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L		SW846 8260B
Tetrachloroethene	ND	1.0	ug/L		SW846 8260B
Toluene	ND	1.0	ug/L		SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3F140121

Work Order #...: FQQD11AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro- benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	103	(73 - 122)		
1,2-Dichloroethane-d4	102	(61 - 128)		
Toluene-d8	103	(76 - 110)		
4-Bromofluorobenzene	89	(74 - 116)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F140121 Work Order #....: FQOD11AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F180000-338 FQOD11AD-LCSD
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3169338
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	103	1.1	SW846 8260B
Chlorobenzene	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	103	0.95	SW846 8260B
1,1-Dichloroethene	10	9.9	ug/L	99		SW846 8260B
	10	10	ug/L	100	0.71	SW846 8260B
Toluene	10	10	ug/L	103		SW846 8260B
	10	10	ug/L	104	1.1	SW846 8260B
Trichloroethene	10	9.9	ug/L	99		SW846 8260B
	10	10	ug/L	101	1.2	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
	101	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	105	(61 - 128)
Toluene-d8	104	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F140121 Work Order #....: FQQD11AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F180000-338 FQQD11AD-LCSD
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3169338
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	102	(80 - 116)			SW846 8260B
	103	(80 - 116)	1.1	(0-20)	SW846 8260B
Chlorobenzene	102	(76 - 117)			SW846 8260B
	103	(76 - 117)	0.95	(0-20)	SW846 8260B
1,1-Dichloroethene	99	(63 - 130)			SW846 8260B
	100	(63 - 130)	0.71	(0-20)	SW846 8260B
Toluene	103	(74 - 119)			SW846 8260B
	104	(74 - 119)	1.1	(0-20)	SW846 8260B
Trichloroethene	99	(75 - 122)			SW846 8260B
	101	(75 - 122)	1.2	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
	101	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
	105	(61 - 128)
Toluene-d8	104	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F140121 Work Order #....: FQKHW1AC-MS Matrix.....: WG
 MS Lot-Sample #: A3F140121-003 FQKHW1AD-MSD
 Date Sampled...: 06/13/03 09:35 Date Received...: 06/14/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3169338
 Dilution Factor: 2 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	20	21	ug/L	101		SW846 8260B
	ND	20	21	ug/L	103	1.4	SW846 8260B
Chlorobenzene	ND	20	21	ug/L	103		SW846 8260B
	ND	20	21	ug/L	104	0.45	SW846 8260B
1,1-Dichloroethene	ND	20	20	ug/L	101		SW846 8260B
	ND	20	20	ug/L	101	0.24	SW846 8260B
Toluene	ND	20	22	ug/L	103		SW846 8260B
	ND	20	22	ug/L	103	0.23	SW846 8260B
Trichloroethene	2.2	20	22	ug/L	98		SW846 8260B
	2.2	20	23	ug/L	103	4.6	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	101	(61 - 128)
Toluene-d8	102	(76 - 110)
	105	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	105	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A3F140121 Work Order #...: FQKHW1AC-MS Matrix.....: WG
 MS Lot-Sample #: A3F140121-003 FQKHW1AD-MSD
 Date Sampled...: 06/13/03 09:35 Date Received...: 06/14/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #...: 3169338
 Dilution Factor: 2 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	101	(78 - 118)			SW846 8260B
	103	(78 - 118)	1.4	(0-20)	SW846 8260B
Chlorobenzene	103	(76 - 117)			SW846 8260B
	104	(76 - 117)	0.45	(0-20)	SW846 8260B
1,1-Dichloroethene	101	(62 - 130)			SW846 8260B
	101	(62 - 130)	0.24	(0-20)	SW846 8260B
Toluene	103	(70 - 119)			SW846 8260B
	103	(70 - 119)	0.23	(0-20)	SW846 8260B
Trichloroethene	98	(62 - 130)			SW846 8260B
	103	(62 - 130)	4.6	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	101	(61 - 128)
Toluene-d8	102	(76 - 110)
	105	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)
	105	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters



STL

END OF REPORT

REC'D CRA

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SDG. 41

ANALYTICAL REPORT

PROJECT NO. 17360

GM GRAND RAPIDS

Lot #: A3F170129

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360 Lab#: A3F170129

Name: GM GR

Description

Event: _____

Samples: 6 water

Analysis: TCL VOC

TAT: 2 day

Lab: STL

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: 10/21/03

Invoice Approval Date: _____

Comments: _____

SEVERN TRENT LABORATORIES, INC.

Amy L. McCormick

Amy L. McCormick
Project Manager

June 27, 2003

Severn Trent Laboratories, Inc.

STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720

Tel 330 497 9396 Fax 330 497 0772 • www.stl-inc.com

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL

REFERENCE NUMBER:

17360

PROJECT NAME:

Cam Grand Dep. DS

CHAIN OF CUSTODY RECORD

SAMPLERS

PRINTED

SIGNATURE:

NAME: Burt Williams

PARAMETERS

TCL
VOC

REMARKS

SEQ. No.

DATE

TIME

SAMPLE TYPE

No. OF CONTAINERS

TCL
VOC

REMARKS

6/14/03

0910

1010

1102

1103

1236

17360-061603-BL-025

026

027

028

029

H2O

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X

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1010

1102

1103

1236

17360-061603-BL-025

026

027

028

029

H2O

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1236

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17360-061603-BL-025

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STL

CASE NARRATIVE

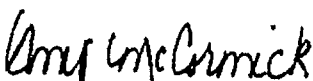
CASE NARRATIVE

A3F170129

The following report contains the analytical results for five water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360. The samples were received June 17, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameter listed on the analytical methods summary page in accordance with the method indicated. Preliminary results were provided to the Chemistry Department on June 20, 2003. A summary of QC data for these analyses is included at the rear of the report.

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.


Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride

Acetone

2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper

Iron

Zinc

Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is repped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be repped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)





STL

METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A3F170129

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.



STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A3F170129

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQMM3	001	GW-17360-061603-BW-025	06/16/03	09:10
FQMM6	002	GW-17360-061603-BW-026	06/16/03	10:10
FQMM9	003	GW-17360-061603-BW-027	06/16/03	11:02
FQMNA	004	GW-17360-061603-BW-028	06/16/03	11:03
FQMNC	005	GW-17360-061603-BW-029	06/16/03	12:36
FQMND	006	TRIP BLANK	06/16/03	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.



STL

***SHIPPING
AND
RECEIVING DOCUMENTS***

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

57L

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360

PROJECT NAME:

GM Grand Rep. IS

SAMPLER'S SIGNATURE:

[Signature]

PRINTED NAME:

Barbara Williams

PARAMETERS

TLL
VOC

REMARKS

4th T91

SEQ. No.

DATE TIME

SAMPLE TYPE

No. OF CONTAINERS

6/14/03

1610

GM-17360-061603-BL-025

1120

3

1

1610

↓

026

1

3

X

1102

↓

027

1

3

X

1103

↓

028

1

3

X

1236

↓

029

1

3

X

TEIP Blank

[Signature]

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:

[Signature]

DATE: 6/14/03
TIME:

RECEIVED BY:

1.

DATE:

RELINQUISHED BY:

DATE:

TIME:

RECEIVED BY:

2.

DATE:

RELINQUISHED BY:

DATE:

TIME:

RECEIVED BY:

1.

DATE:

METHOD OF SHIPMENT:

FEDEX

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldendrod - Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

[Signature]

23828

DATE: 6/17/03 TIME: 10:05

RSR280

Client:

57787

Lot #:

A3F170129

Case Number/SDG: 17360

Storage Location: MS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FQMM3	EARLES	6/17/03	Yes		Storage	
FQMM6	EARLES	6/17/03	Yes		Storage	
FQMM9	EARLES	6/17/03	Yes		Storage	
FQMNA	EARLES	6/17/03	Yes		Storage	
FQMNC	EARLES	6/17/03	Yes		Storage	
FQMND	EARLES	6/17/03	Yes		Storage	

STL Cooler Receipt Form/Narrative North Canton Facility

Lot Number: 73F170129

Client: CRA

Project:

Quote#:

Cooler Received on: 6/17/03

Opened on: 6/17/03

by: 72 Miller

(Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: _____
Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____

STL Shipper No#: M-293

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐

If YES, Quantity 2 Location Top

Were the custody seals signed and dated?

Intact? Yes ☒ No ☐ NA ☐

Yes ☒ No ☐ NA ☐

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☒ No ☐

2. Shipper's packing slip attached to this form?

3. Were custody papers included inside the cooler and relinquished?

4. Did you sign the custody papers in the appropriate place?

5. Packing material used:

Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____

6. Cooler temperature upon receipt 3.3 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H₂O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)?

Yes ☒ No ☐

8. Did all bottle labels and tags agree with the custody papers?

Yes ☒ No ☐

9. Were samples at the correct pH? (record on back)

Yes ☐ No ☐ NA ☒

10. Were correct bottles used for the tests indicated?

Yes ☒ No ☐

11. Were air bubbles >6 mm in any VOA vials?

Yes ☐ No ☒ NA ☐

12. Was a sufficient amount of sample sent in each bottle?

Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

☒ MACRO ☐ MACRO

1. CHAIN OF CUSTODY

SR1A

The chain of custody and sample bottles did not agree. The following discrepancies occurred

2. SAMPLE CONDITION

SR2A

Sample(s) _____ were received or requested after the recommended holding time had expired.

SR2B

Sample(s) _____ were received with insufficient volume.

SR2C

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

SR3A

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).

Nitric Acid Lot # 012203-HNO₃; Sulfuric Acid Lot # 112801-H₂SO₄; Sodium Hydroxide Lot # 011102-NaOH; Hydrochloric Acid Lot # 020501-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH₃COO₂ZN/NaOH

SR3B

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

STL Cooler Receipt Form/Narrative
North Canton Facility

[illegible]

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-025

GC/MS Volatiles

Lot-Sample #....: A3F170129-001 Work Order #....: FQMM31AA Matrix.....: WG
 Date Sampled....: 06/16/03 09:10 Date Received...: 06/17/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3170611
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-025

GC/MS Volatiles

Lot-Sample #....: A3F170129-001 Work Order #....: FQMM31AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	1.1	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Dibromofluoromethane	93	(73 - 122)	
1,2-Dichloroethane-d4	72	(61 - 128)	
Toluene-d8	95	(76 - 110)	
4-Bromofluorobenzene	85	(74 - 116)	

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-026

GC/MS Volatiles

Lot-Sample #....: A3F170129-002 Work Order #....: FQMM61AA Matrix.....: WG
 Date Sampled....: 06/16/03 10:10 Date Received...: 06/17/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3170611
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-026

GC/MS Volatiles

Lot-Sample #....: A3F170129-002 Work Order #....: FQMM61AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	1.4	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(73 - 122)
1,2-Dichloroethane-d4	82	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-027

GC/MS Volatiles

Lot-Sample #....: A3F170129-003 Work Order #....: FQMM91AA Matrix.....: WG
 Date Sampled....: 06/16/03 11:02 Date Received...: 06/17/03
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170611
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-027

GC/MS Volatiles

Lot-Sample #....: A3F170129-003 Work Order #....: FQMM91AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
1,2-Dichloroethane-d4	71	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-028

GC/MS Volatiles

Lot-Sample #....: A3F170129-004 **Work Order #....:** FQMNA1AA **Matrix.....:** WG
Date Sampled....: 06/16/03 11:03 **Date Received...:** 06/17/03
Prep Date.....: 06/19/03 **Analysis Date...:** 06/19/03
Prep Batch #....: 3170611
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol...:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-028

GC/MS Volatiles

Lot-Sample #....: A3F170129-004 Work Order #....: FQMNA1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	73	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-029

GC/MS Volatiles

Lot-Sample #....: A3F170129-005	Work Order #....: FQMNC1AA	Matrix.....: WG
Date Sampled....: 06/16/03 12:36	Date Received...: 06/17/03	
Prep Date.....: 06/19/03	Analysis Date...: 06/19/03	
Prep Batch #....: 3170611		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061603-BW-029

GC/MS Volatiles

Lot-Sample #....: A3F170129-005 Work Order #....: FQMNC1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
1,2-Dichloroethane-d4	71	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F170129-006	Work Order #....: PQMND1AA	Matrix.....: WQ
Date Sampled....: 06/16/03	Date Received...: 06/17/03	
Prep Date.....: 06/18/03	Analysis Date...: 06/18/03	
Prep Batch #....: 3170611		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F170129-006 Work Order #....: FQMND1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	71	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	84	(74 - 116)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3F170129
MB Lot-Sample #: A3F190000-611

Work Order #...: FQWF61AA

Matrix.....: WATER

Analysis Date...: 06/18/03
Dilution Factor: 1

Prep Date.....: 06/18/03

Final Wgt/Vol...: 5 mL

Prep Batch #...: 3170611

Initial Wgt/Vol: 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F170129

Work Order #....: FQWF61AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F170129 Work Order #....: FQWF61AC Matrix.....: WATER
 LCS Lot-Sample#: A3F190000-611
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3170611
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Benzene	10	9.6	ug/L	96	SW846 8260B
Chlorobenzene	10	9.7	ug/L	97	SW846 8260B
1,1-Dichloroethene	10	9.3	ug/L	93	SW846 8260B
Toluene	10	10	ug/L	100	SW846 8260B
Trichloroethene	10	9.3	ug/L	93	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	87	(73 - 122)
1,2-Dichloroethane-d4	76	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F170129 Work Order #....: FQWF61AC Matrix.....: WATER
 LCS Lot-Sample#: A3F190000-611
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3170611
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Benzene	96	(80 - 116)	SW846 8260B
Chlorobenzene	97	(76 - 117)	SW846 8260B
1,1-Dichloroethene	93	(63 - 130)	SW846 8260B
Toluene	100	(74 - 119)	SW846 8260B
Trichloroethene	93	(75 - 122)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	87	(73 - 122)
1,2-Dichloroethane-d4	76	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F170129 Work Order #....: FQMM61AC-MS Matrix.....: WG
 MS Lot-Sample #: A3F170129-002 FQMM61AD-MSD
 Date Sampled...: 06/16/03 10:10 Date Received...: 06/17/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3170611
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD
Benzene	ND	10	11	ug/L	105		SW846 8260B
	ND	10	11	ug/L	106	0.33	SW846 8260B
Chlorobenzene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	10	ug/L	100	2.8	SW846 8260B
1,1-Dichloroethene	ND	10	10	ug/L	100		SW846 8260B
	ND	10	9.6	ug/L	96	3.5	SW846 8260B
Toluene	ND	10	11	ug/L	106		SW846 8260B
	ND	10	11	ug/L	105	0.20	SW846 8260B
Trichloroethene	ND	10	9.7	ug/L	97		SW846 8260B
	ND	10	9.9	ug/L	99	1.9	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	79	(61 - 128)
	73	(61 - 128)
Toluene-d8	96	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F170129 Work Order #....: FQMM61AC-MS Matrix.....: WG
 MS Lot-Sample #: A3F170129-002 FQMM61AD-MSD
 Date Sampled....: 06/16/03 10:10 Date Received...: 06/17/03
 Prep Date.....: 06/18/03 Analysis Date...: 06/18/03
 Prep Batch #....: 3170611
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	105	(78 - 118)			SW846 8260B
	106	(78 - 118)	0.33	(0-20)	SW846 8260B
Chlorobenzene	102	(76 - 117)			SW846 8260B
	100	(76 - 117)	2.8	(0-20)	SW846 8260B
1,1-Dichloroethene	100	(62 - 130)			SW846 8260B
	96	(62 - 130)	3.5	(0-20)	SW846 8260B
Toluene	106	(70 - 119)			SW846 8260B
	105	(70 - 119)	0.20	(0-20)	SW846 8260B
Trichloroethene	97	(62 - 130)			SW846 8260B
	99	(62 - 130)	1.9	(0-20)	SW846 8260B

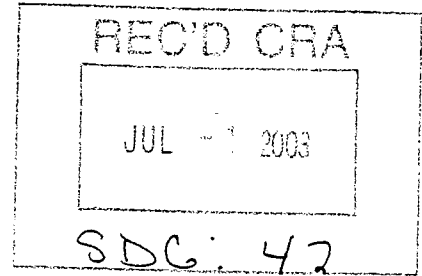
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	79	(61 - 128)
	73	(61 - 128)
Toluene-d8	96	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

END OF REPORT



ANALYTICAL REPORT

PROJECT NO. 17360

GM GRAND RAPIDS METAL

Lot #: A3F180106

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360 Lab#: A3F180106

Name: GM GR

Description

Event: _____

SEVERN TRENT LABORATORIES, INC. Samples: 10 water

Analysis: TCL VOC

TAT: 2 day

Lab: STL

Amy L. McCormick

Amy L. McCormick
Project Manager

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: 10/21/03

Invoice Approval Date: _____

Comments: _____

June 29, 2003

Severn Trent Laboratories, Inc.

STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720

Tel 330 497 9396 Fax 330 497 0772 • www.stl-inc.com

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL

REFERENCE NUMBER:

17360

PROJECT NAME:

Gun Grand Rapids Metal

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: *[Signature]* PRINTED NAME: *Baet Williams*

PARAMETERS

*Tel
VOC*

REMARKS

48 h-TAT

SEQ. No.	DATE	TIME	SAMPLE TYPE	No. OF CONTAINERS

<i>6/17/03</i>	<i>0835</i>	<i>612-17360-061703-312-030</i>	<i>H2O</i>	<i>3</i>
<i>1025</i>				<i>3</i>
<i>1041</i>				<i>3</i>
<i>1128</i>				<i>3</i>
<i>1230</i>				<i>3</i>
<i>1240</i>				<i>3</i>
<i>1423</i>				<i>3</i>
<i>1555</i>				<i>3</i>
<i>1602</i>				<i>3</i>
		<i>7K: Blank</i>	<i>H2O</i>	<i>1</i>

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:	DATE: <i>6/17/03</i>	RECEIVED BY:	DATE:
1. <i>[Signature]</i>	TIME: <i>1900</i>	1. _____	TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
2. _____	TIME:	2. _____	TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
3. _____	TIME:	1. _____	TIME:

METHOD OF SHIPMENT: *Fed Ex*

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM:

23829

RECEIVED FOR LABORATORY BY: *[Signature]*
DATE: *6/18/03* TIME: *9:20*



CASE NARRATIVE

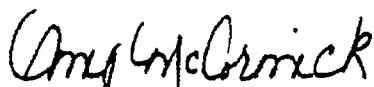
CASE NARRATIVE

A3F180106

The following report contains the analytical results for nine water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Metal Site, project number 17360. The samples were received June 18, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameter listed on the analytical methods summary page in accordance with the method indicated. Preliminary results were provided to the Chemistry Department on June 20, 2003. A summary of QC data for these analyses is included at the rear of the report.

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.



Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride
Acetone
2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper
Iron
Zinc
Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is repped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be repped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.



STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), Ohio VAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\HerrenD\Narrative\QCinsSW846.doc, Revised: 07/24/01

METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A3F180106

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

SAMPLE SUMMARY

A3F180106

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQPQC	001	GW-17360-061703-BW-030	06/17/03	09:35
FQPQJ	002	GW-17360-061703-BW-031	06/17/03	10:25
FQPQK	003	GW-17360-061703-BW-032	06/17/03	10:41
FQPQL	004	GW-17360-061703-BW-033	06/17/03	11:28
FQPQM	005	GW-17360-061703-BW-034	06/17/03	12:30
FQPQN	006	GW-17360-061703-BW-035	06/17/03	12:40
FQPQP	007	GW-17360-061703-BW-036	06/17/03	14:23
FQPQQ	008	GW-17360-061703-BW-037	06/17/03	15:55
FQPQR	009	GW-17360-061703-BW-038	06/17/03	16:02
FQPQT	010	TRIP BLANK	06/17/03	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.



SHIPPING AND RECEIVING DOCUMENTS

CONESTOGA-HOVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

572

17360

GIN GRAND RAPIDS METAL

CHAIN OF CUSTODY RECORD

SAMPLER'S PRINTED NAME:
SIGNATURE: _____

PRINTED
NAME: _____

PARAMETERS

Tel
v3c

REMARKS

SEQ. No.	DATE	TIME	SAMPLE TYPE	% CONT.	REMARKS
617/63	0335	612-17360-061703-1812-030	H2O	3	X
	1025			3	X
	1041			3	X
	1128			3	X
	1230			3	X
	1240			3	X
	1423			3	X
	1555			3	X
	1600			3	X
		7:00 Blank	H2O	1	X

TOTAL NUMBER OF CONTAINERS

REIMBURSED BY

DATE: 6/17/03

RECEIVED BY:

DATE:

RELINQUISHED BY:

DATE:

RECEIVED BY:

DATE:

PRINTED BY

DATE:	

RECEIVED BY:

DATE:

METHOD OF SHIPMENT: b7c

AIR BILL NO.

114-416
Full-Featured Color
Black
Electronic Color

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

Goldenrod	-Sample Copy
-Receiving Laboratory Copy	-Sample Copy
-If any Excavated Copy	-Sample Copy
Yellow	
Yellow	

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22

23829

DATE: 6/18/03 TIME: 9:20

RSR280
Client:

57787

Lot #:

A3F180106

Case Number/SDG:

17360

Storage Location: MS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FQPOC	EARLES	6/18/03	Yes		Storage	
FQPOJ	EARLES	6/18/03	Yes		Storage	
FQPOK	EARLES	6/18/03	Yes		Storage	
FQPOL	EARLES	6/18/03	Yes		Storage	
FQPOM	EARLES	6/18/03	Yes		Storage	
FQPON	EARLES	6/18/03	Yes		Storage	
FQPOP	EARLES	6/18/03	Yes		Storage	
FQPOQ	EARLES	6/18/03	Yes		Storage	
FQPOR	EARLES	6/18/03	Yes		Storage	
FQPOI	EARLES	6/18/03	Yes		Storage	

STL Cooler Receipt Form/Narrative North Canton Facility

Lot Number: A3F08006

Client: CRA

Project: _____

Quote#: _____

Cooler Received on: 6/18/03

Opened on: 6/18/03

by: R. Miller

(Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: _____

Cooler ☐ Safe ☐ Foam Box ☐ Client Cooler ☒ Other: _____

STL Shipper No#: _____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒

If YES, Quantity _____ Location _____

Were the custody seals signed and dated? _____

Intact? Yes ☐ No ☐ NA ☒

Yes ☐ No ☐ NA ☒

2. Shipper's packing slip attached to this form? _____

Yes ☒ No ☐

3. Were custody papers included inside the cooler and relinquished? _____

Yes ☒ No ☐

4. Did you sign the custody papers in the appropriate place? _____

Yes ☒ No ☐

5. Packing material used:

Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____

6. Cooler temperature upon receipt 3.8 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H₂O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

Yes ☒ No ☐

7. Did all bottles arrive in good condition (Unbroken)? _____

Yes ☒ No ☐

8. Did all bottle labels and tags agree with the custody papers? _____

Yes ☒ No ☐

9. Were samples at the correct pH? (record on back) _____

Yes ☐ No ☐ NA ☒

10. Were correct bottles used for the tests indicated? _____

Yes ☒ No ☐

11. Were air bubbles >6 mm in any VOA vials? _____

Yes ☐ No ☒ NA ☐

12. Was a sufficient amount of sample sent in each bottle? _____

Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning: _____

☒ MACRO ☐ MACRO

1. CHAIN OF CUSTODY

SR1A

The chain of custody and sample bottles did not agree. The following discrepancies occurred _____

2. SAMPLE CONDITION

SR2A

Sample(s) _____ were received or requested after the recommended holding time had expired.

SR2B

Sample(s) _____ were received with insufficient volume.

SR2C

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

SR3A

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).

Nitric Acid Lot # 012203-HNO₃; Sulfuric Acid Lot # 112801-H₂SO₄; Sodium Hydroxide Lot # 011102-NaOH; Hydrochloric Acid Lot # 020501-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH₃COO₂ZN/NaOH

SR3B

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

STL Cooler Receipt Form/Narrative North Canton Facility			
<u>Client ID</u>	<u>pH</u>	<u>Date</u>	<u>Initials</u>
<u>Cooler</u>	<u>Temp</u>	<u>Method</u>	<u>Coolant</u>
<u>Discrepancies Cont.</u>			
Macro Name:			
Macro Name:			
Macro Name:			
Other Anomalies:			

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-030

GC/MS Volatiles

Lot-Sample #....: A3F180106-001 Work Order #....: FQPQC1AA Matrix.....: WG
 Date Sampled....: 06/17/03 09:35 Date Received...: 06/18/03
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-030

GC/MS Volatiles

Lot-Sample #: A3F180106-001 Work Order #: FQPQC1AA Matrix: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-031

GC/MS Volatiles

Lot-Sample #....: A3F180106-002 Work Order #....: FQPQJ1AA Matrix.....: WG
 Date Sampled....: 06/17/03 10:25 Date Received...: 06/18/03
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-031

GC/MS Volatiles

Lot-Sample #....: A3F180106-002 Work Order #....: FQPQJ1AA Matrix.....: WG

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	1.5	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-032

GC/MS Volatiles

Lot-Sample #....: A3F180106-003	Work Order #....: FQPQK1AA	Matrix.....: WG
Date Sampled....: 06/17/03 10:41	Date Received...: 06/18/03	
Prep Date.....: 06/19/03	Analysis Date...: 06/19/03	
Prep Batch #....: 3170631		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-032

GC/MS Volatiles

Lot-Sample #: A3F180106-003 Work Order #: FQPQK1AA Matrix: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Dibromofluoromethane	110	(73 - 122)	
1,2-Dichloroethane-d4	105	(61 - 128)	
Toluene-d8	102	(76 - 110)	
4-Bromofluorobenzene	91	(74 - 116)	

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-033

GC/MS Volatiles

Lot-Sample #....: A3F180106-004	Work Order #....: FQPQL1AA	Matrix.....: WG
Date Sampled....: 06/17/03 11:28	Date Received...: 06/18/03	
Prep Date.....: 06/19/03	Analysis Date...: 06/19/03	
Prep Batch #....: 3170631		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	1.8	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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COMESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-033

GC/MS Volatiles

Lot-Sample #....: A3F180106-004 Work Order #....: FQPQL1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	2.2	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	89	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-034

GC/MS Volatiles

Lot-Sample #....: A3F180106-005	Work Order #....: FQPQM1AA	Matrix.....: WG
Date Sampled....: 06/17/03 12:30	Date Received...: 06/18/03	
Prep Date.....: 06/19/03	Analysis Date...: 06/19/03	
Prep Batch #....: 3170631		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	2.0	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-034

GC/MS Volatiles

Lot-Sample #....: A3F180106-005 Work Order #....: FQPQM1AA Matrix.....: WG

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	1.9	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
Dibromofluoromethane	108	(73 - 122)	
1,2-Dichloroethane-d4	107	(61 - 128)	
Toluene-d8	102	(76 - 110)	
4-Bromofluorobenzene	92	(74 - 116)	

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-035

GC/MS Volatiles

Lot-Sample #....: A3F180106-006 Work Order #....: FQPQN1AA Matrix.....: WG
 Date Sampled....: 06/17/03 12:40 Date Received...: 06/18/03
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	1.9	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-035

GC/MS Volatiles

Lot-Sample #....: A3F180106-006 Work Order #....: FQPQN1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	1.8	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
1,2-Dichloroethane-d4	108	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-036

GC/MS Volatiles

Lot-Sample #....: A3F180106-007	Work Order #....: FQPQP1AA	Matrix.....: WG
Date Sampled....: 06/17/03 14:23	Date Received...: 06/18/03	
Prep Date.....: 06/19/03	Analysis Date...: 06/19/03	
Prep Batch #....: 3170631		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	1.9	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-036

GC/MS Volatiles

Lot-Sample #....: A3F180106-007 Work Order #....: FQPOP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	1.5	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-037

GC/MS Volatiles

Lot-Sample #....: A3F180106-008	Work Order #....: FQPQQ1AA	Matrix.....: WG
Date Sampled....: 06/17/03 15:55	Date Received...: 06/18/03	
Prep Date.....: 06/19/03	Analysis Date...: 06/19/03	
Prep Batch #....: 3170631		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	1.0	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-037

GC/MS Volatiles

Lot-Sample #....: A3F180106-008 Work Order #....: FQPQQ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	103	(76 - 110)
4-Bromofluorobenzene	92	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-038

GC/MS Volatiles

Lot-Sample #....: A3F180106-009	Work Order #....: FQPQR1AA	Matrix.....: WG
Date Sampled....: 06/17/03 16:02	Date Received...: 06/18/03	
Prep Date.....: 06/19/03	Analysis Date...: 06/19/03	
Prep Batch #....: 3170631		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	7.3	1.0	ug/L
Bromoform	1.0	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	9.5	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	3.6	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-061703-BW-038

GC/MS Volatiles

Lot-Sample #: A3F180106-009 Work Order #: FQPQR1AA Matrix: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F180106-010 Work Order #....: FQPQT1AA Matrix.....: WQ
 Date Sampled....: 06/17/03 Date Received...: 06/18/03
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	25	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	25	ug/L
Carbon disulfide	ND	5.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	50	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	5.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	50	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #....: A3F180106-010 Work Order #....: FQPQT1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F180106
MB Lot-Sample #: A3F190000-631

Work Order #....: FQWJF1AA

Matrix.....: WATER

Analysis Date...: 06/19/03
Dilution Factor: 1

Prep Date.....: 06/19/03
Prep Batch #....: 3170631
Initial Wgt/Vol: 5 mL

Final Wgt/Vol...: 5 mL

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	25	ug/L		SW846 8260B
Benzene	ND	1.0	ug/L		SW846 8260B
Bromodichloromethane	ND	1.0	ug/L		SW846 8260B
Bromoform	ND	1.0	ug/L		SW846 8260B
Bromomethane	ND	1.0	ug/L		SW846 8260B
2-Butanone	ND	25	ug/L		SW846 8260B
Carbon disulfide	ND	5.0	ug/L		SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L		SW846 8260B
Chlorobenzene	ND	1.0	ug/L		SW846 8260B
Chloroethane	ND	1.0	ug/L		SW846 8260B
Chloroform	ND	1.0	ug/L		SW846 8260B
Chloromethane	ND	1.0	ug/L		SW846 8260B
Cyclohexane	ND	1.0	ug/L		SW846 8260B
Dibromochloromethane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L		SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L		SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
Ethylbenzene	ND	1.0	ug/L		SW846 8260B
2-Hexanone	ND	50	ug/L		SW846 8260B
Isopropylbenzene	ND	5.0	ug/L		SW846 8260B
Methyl acetate	ND	10	ug/L		SW846 8260B
Methylene chloride	ND	5.0	ug/L		SW846 8260B
Methylcyclohexane	ND	1.0	ug/L		SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L		SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L		SW846 8260B
Styrene	ND	1.0	ug/L		SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L		SW846 8260B
Tetrachloroethene	ND	1.0	ug/L		SW846 8260B
Toluene	ND	1.0	ug/L		SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3F180106

Work Order #....: FQWJF1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro- benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	108	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F180106 Work Order #....: FQWJF1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F190000-631 FQWJF1AD-LCSD
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	11	ug/L	106		SW846 8260B
	10	11	ug/L	106	0.17	SW846 8260B
Chlorobenzene	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	105	1.1	SW846 8260B
1,1-Dichloroethene	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	104	0.28	SW846 8260B
Toluene	10	11	ug/L	105		SW846 8260B
	10	11	ug/L	106	0.59	SW846 8260B
Trichloroethene	10	10	ug/L	105		SW846 8260B
	10	11	ug/L	105	0.17	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
	104	(61 - 128)
Toluene-d8	103	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F180106 Work Order #....: FQWJF1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3F190000-631 FQWJF1AD-LCSD
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	106	(80 - 116)			SW846 8260B
	106	(80 - 116)	0.17	(0-20)	SW846 8260B
Chlorobenzene	104	(76 - 117)			SW846 8260B
	105	(76 - 117)	1.1	(0-20)	SW846 8260B
1,1-Dichloroethene	104	(63 - 130)			SW846 8260B
	104	(63 - 130)	0.28	(0-20)	SW846 8260B
Toluene	105	(74 - 119)			SW846 8260B
	106	(74 - 119)	0.59	(0-20)	SW846 8260B
Trichloroethene	105	(75 - 122)			SW846 8260B
	105	(75 - 122)	0.17	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
	102	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
	104	(61 - 128)
Toluene-d8	103	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	103	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F180106 Work Order #....: FP7921AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F100102-001 FP7921AD-MSD
 Date Sampled....: 06/09/03 09:50 Date Received...: 06/10/03
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	11	ug/L	107		SW846 8260B
	ND	10	11	ug/L	108	1.1	SW846 8260B
Chlorobenzene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	11	ug/L	107	3.5	SW846 8260B
1,1-Dichloroethene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	11	ug/L	105	1.2	SW846 8260B
Toluene	1.2	10	12	ug/L	106		SW846 8260B
	1.2	10	12	ug/L	109	2.2	SW846 8260B
Trichloroethene	ND	10	10	ug/L	104		SW846 8260B
	ND	10	11	ug/L	109	4.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
	106	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
	108	(61 - 128)
Toluene-d8	101	(76 - 110)
	104	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F180106 Work Order #....: FP7921AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3F100102-001 FP7921AD-MSD
 Date Sampled...: 06/09/03 09:50 Date Received...: 06/10/03
 Prep Date.....: 06/19/03 Analysis Date...: 06/19/03
 Prep Batch #....: 3170631
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	107	(78 - 118)			SW846 8260B
	108	(78 - 118)	1.1	(0-20)	SW846 8260B
Chlorobenzene	104	(76 - 117)			SW846 8260B
	107	(76 - 117)	3.5	(0-20)	SW846 8260B
1,1-Dichloroethene	104	(62 - 130)			SW846 8260B
	105	(62 - 130)	1.2	(0-20)	SW846 8260B
Toluene	106	(70 - 119)			SW846 8260B
	109	(70 - 119)	2.2	(0-20)	SW846 8260B
Trichloroethene	104	(62 - 130)			SW846 8260B
	109	(62 - 130)	4.1	(0-20)	SW846 8260B

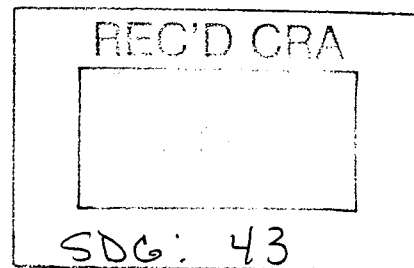
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
	106	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
	108	(61 - 128)
Toluene-d8	101	(76 - 110)
	104	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)
	104	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

END OF REPORT



ANALYTICAL REPORT

PROJECT NO. 17360

GM GRAND RAPIDS METAL

Lot #: A3F250310

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360 Lab#: A3F250310

Name: GM - GR

SEVERN TRENT LABORATORIES, INC.

Description

Event: WASTE CHAR.

Samples: 2 SOIL

Analysis: TCLP VOC, SVOC

RCE, MTLs

TAT: 14 day

Lab: STL

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: _____

Invoice Approval Date: _____

Comments: _____

Amy L. McCormick

Amy L. McCormick
Project Manager

July 23, 2003

Severn Trent Laboratories, Inc.
STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720
Tel 330 497 9396 Fax 330 497 0772 • www.stl-inc.com

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360

PROJECT NAME:

gun brand records metal

SAMPLER'S SIGNATURE: *[Signature]* PRINTED NAME: *Beth Williams*

SEQ. No.	DATE	TIME	SAMPLE TYPE	No. OF CONTAINERS
1	6/24/03	1300	5-17360-062403-BLW-039	5
2	6/24/03	1330	5-17360-062403-BLW-040	2

PARAMETERS	Telp	Voics	Telp	Voics	Recept	Corros	RCI
Telp	X	X	X	X	X	X	X
Voics	X	X	X	X	X	X	X
Recept	X	X	X	X	X	X	X
Corros	X	X	X	X	X	X	X
RCI	X	X	X	X	X	X	X

REMARKS
26KTA

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
1. <i>[Signature]</i>	6/24/03	1800	1. <i>[Signature]</i>		
2. _____	DATE:	TIME:	2. _____	DATE:	TIME:
3. _____	DATE:	TIME:	3. _____	DATE:	TIME:

METHOD OF SHIPMENT:

FEDX

AIR BILL NO.

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

23823

DATE: 6/25/03 TIME: 10:35

CASE NARRATIVE

A3F250310

The following report contains the analytical results for two solid samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Metal Site, project number 17360. The samples were received June 25, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to the Chemistry Department on July 9, 2003. A summary of QC data for these analyses is included at the rear of the report.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

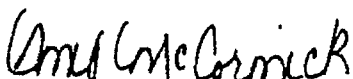
Samples were received at the laboratory at a temperature of 12.6° C. in water.

GENERAL CHEMISTRY

Matrix spike/spike duplicate spike recoveries were outside the acceptance limits for some analytes. The acceptable laboratory control sample analysis data indicated that the analytical system was operating within control and this condition is most likely due to matrix interference. See the Matrix Spike Report for the affected analytes, which have been flagged with "N".

The Flashpoint sample/sample duplicate associated with batch 3188487 also supports samples in batch 3188488.

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.


Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride

Acetone

2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper

Iron

Zinc

Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)



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ANALYTICAL METHODS SUMMARY

A3F250310

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Corrosivity	SW846 9045C
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Pensky-Martens Method for Determining Ignitability	SW846 1010
Reactive Cyanide	SW846 7.3.3
Reactive Sulfide	SW846 7.3.4
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A3F250310

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQ7MA	001	S-17360-062403-BW-039	06/24/03	13:00
FQ7MH	002	S-17360-062403-BW-040	06/24/03	13:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: S-17360-062403-BW-039

TCLP GC/MS Volatiles

Lot-Sample #....: A3F250310-001	Work Order #....: FQ7MA1AA	Matrix.....: SO
Date Sampled....: 06/24/03 13:00	Date Received...: 06/25/03	
Leach Date.....: 06/26/03	Prep Date.....: 07/01/03	Analysis Date...: 07/01/03
Leach Batch #...: P317712	Prep Batch #....: 3183288	
Dilution Factor: 1		
* Moisture.....:	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.025	mg/L
Carbon tetrachloride	ND	0.025	mg/L
Chlorobenzene	ND	0.025	mg/L
Chloroform	ND	0.025	mg/L
1,2-Dichloroethane	ND	0.025	mg/L
1,1-Dichloroethylene	ND	0.070	mg/L
Methyl ethyl ketone	ND	0.050	mg/L
Tetrachloroethylene	ND	0.070	mg/L
Trichloroethylene	ND	0.050	mg/L
Vinyl chloride	ND	0.050	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(59 - 138)
1,2-Dichloroethane-d4	81	(61 - 130)
Toluene-d8	89	(60 - 143)
4-Bromofluorobenzene	90	(47 - 158)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: S-17360-062403-BW-040

TCLP GC/MS Volatiles

Lot-Sample #....: A3F250310-002 Work Order #....: FQ7MH1AA Matrix.....: SO
 Date Sampled...: 06/24/03 13:30 Date Received...: 06/25/03
 Leach Date.....: 06/26/03 Prep Date.....: 07/01/03 Analysis Date...: 07/01/03
 Leach Batch #...: P317712 Prep Batch #....: 3183288
 Dilution Factor: 1
 % Moisture.....: Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.025	mg/L
Carbon tetrachloride	ND	0.025	mg/L
Chlorobenzene	ND	0.025	mg/L
Chloroform	ND	0.025	mg/L
1,2-Dichloroethane	ND	0.025	mg/L
1,1-Dichloroethylene	ND	0.070	mg/L
Methyl ethyl ketone	ND	0.050	mg/L
Tetrachloroethylene	ND	0.070	mg/L
Trichloroethylene	ND	0.050	mg/L
Vinyl chloride	ND	0.050	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(59 - 138)
1,2-Dichloroethane-d4	91	(61 - 130)
Toluene-d8	100	(60 - 143)
4-Bromofluorobenzene	98	(47 - 158)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: S-17360-062403-BW-039

TCLP GC/MS Semivolatiles

Lot-Sample #....: A3F250310-001 Work Order #....: FQ7MA1AD Matrix.....: SO
 Date Sampled....: 06/24/03 13:00 Date Received...: 06/25/03
 Leach Date.....: 06/30/03 Prep Date.....: 07/01/03 Analysis Date...: 07/07/03
 Leach Batch #...: P318202 Prep Batch #....: 3182273
 Dilution Factor: 1
 * Moisture.....: Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
o-Cresol	ND	0.050	mg/L
m-Cresol & p-Cresol	ND	0.10	mg/L
1,4-Dichlorobenzene	ND	0.050	mg/L
2,4-Dinitrotoluene	ND	0.050	mg/L
Hexachlorobenzene	ND	0.050	mg/L
Hexachlorobutadiene	ND	0.050	mg/L
Hexachloroethane	ND	0.050	mg/L
Nitrobenzene	ND	0.050	mg/L
Pentachlorophenol	ND	0.10	mg/L
Pyridine	ND	0.10	mg/L
2,4,5-Trichloro-phenol	ND	0.25	mg/L
2,4,6-Trichloro-phenol	ND	0.050	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(32 - 112)
2-Fluorobiphenyl	50	(30 - 110)
Terphenyl-d14	95	(10 - 144)
Phenol-d5	48	(10 - 113)
2-Fluorophenol	33	(13 - 110)
2,4,6-Tribromophenol	52	(21 - 122)

NOTE(S) :

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: S-17360-062403-BW-040

TCLP GC/MS Semivolatiles

Lot-Sample #....: A3F250310-002 Work Order #....: FQ7MH1AD Matrix.....: SO
 Date Sampled....: 06/24/03 13:30 Date Received...: 06/25/03
 Leach Date.....: 06/30/03 Prep Date.....: 07/01/03 Analysis Date...: 07/07/03
 Leach Batch #...: P318202 Prep Batch #....: 3182273
 Dilution Factor: 1
 % Moisture.....: Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
o-Cresol	ND	0.050	mg/L
m-Cresol & p-Cresol	ND	0.10	mg/L
1,4-Dichlorobenzene	ND	0.050	mg/L
2,4-Dinitrotoluene	ND	0.050	mg/L
Hexachlorobenzene	ND	0.050	mg/L
Hexachlorobutadiene	ND	0.050	mg/L
Hexachloroethane	ND	0.050	mg/L
Nitrobenzene	ND	0.050	mg/L
Pentachlorophenol	ND	0.10	mg/L
Pyridine	ND	0.10	mg/L
2,4,5-Trichloro-phenol	ND	0.25	mg/L
2,4,6-Trichloro-phenol	ND	0.050	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(32 - 112)
2-Fluorobiphenyl	61	(30 - 110)
Terphenyl-d14	107	(10 - 144)
Phenol-d5	67	(10 - 113)
2-Fluorophenol	55	(13 - 110)
2,4,6-Tribromophenol	70	(21 - 122)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: S-17360-062403-BW-039

TCLP Metals

Lot-Sample #....: A3F250310-001

Matrix.....: SO

Date Sampled....: 06/24/03 13:00 Date Received...: 06/25/03

Leach Date.....: 06/30/03 Leach Batch #...: P318202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3183111						
Arsenic	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MA1AE
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	07/02-07/03/03	FQ7MA1AF
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	07/02-07/03/03	FQ7MA1AG
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MA1AH
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MA1AJ
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	07/02-07/03/03	FQ7MA1AK
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MA1AL
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	07/02-07/03/03	FQ7MA1AM
		Dilution Factor: 1				

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: S-17360-062403-BW-040

TCLP Metals

Lot-Sample #....: A3F250310-002

Matrix.....: SO

Date Sampled....: 06/24/03 13:30 Date Received...: 06/25/03

Leach Date.....: 06/30/03 Leach Batch #...: P318202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3183111						
Arsenic	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MH1AE
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	07/02-07/03/03	FQ7MH1AF
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	07/02-07/03/03	FQ7MH1AG
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MH1AH
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MH1AJ
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	07/02-07/03/03	FQ7MH1AK
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FQ7MH1AL
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	07/02-07/03/03	FQ7MH1AM
		Dilution Factor: 1				

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

Client Sample ID: S-17360-062403-BW-039

Lot-Sample #...: A3F250310-001 Work Order #...: FQ7MA Matrix.....: SO
Date Sampled...: 06/24/03 13:00 Date Received...: 06/25/03
% Moisture.....:

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Corrosivity	9.4		No Units	SW846 9045C	06/25/03	3176643
			Dilution Factor: 1			
Flashpoint	>180		deg F	SW846 1010	07/07/03	3188488
			Dilution Factor: 1			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	07/02/03	3183306
			Dilution Factor: 1			
Reactive Sulfide	ND	500	mg/kg	SW846 7.3.4	07/02/03	3183304
			Dilution Factor: 1			

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: S-17360-062403-BW-040

General Chemistry

Lot-Sample #....: A3F250310-002 Work Order #....: FQ7MH Matrix.....: SO
 Date Sampled....: 06/24/03 13:30 Date Received...: 06/25/03
 % Moisture.....:

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Corrosivity	9.3		No Units	SW846 9045C	06/25/03	3176643
			Dilution Factor: 1			
Flashpoint	>180		deg F	SW846 1010	07/07/03	3188488
			Dilution Factor: 1			
Reactive Cyanide	ND	200	mg/kg	SW846 7.3.3	07/02/03	3183306
			Dilution Factor: 1			
Reactive Sulfide	ND	500	mg/kg	SW846 7.3.4	07/02/03	3183304
			Dilution Factor: 1			

QUALITY CONTROL SECTION

METHOD BLANK REPORT

TCLP GC/MS Volatiles

Client Lot #....: A3F250310
 MB Lot-Sample #: A3F260000-414
 Leach Date.....: 06/26/03
 Leach Batch #...: P317712
 Dilution Factor: 1

Work Order #....: FQ9Q71AA
 Prep Date.....: 07/01/03
 Prep Batch #....: 3183288

Matrix.....: SOLID

Analysis Date...: 07/01/03

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Benzene	ND	0.025	mg/L		SW846 8260B
Carbon tetrachloride	ND	0.025	mg/L		SW846 8260B
Chlorobenzene	ND	0.025	mg/L		SW846 8260B
Chloroform	ND	0.025	mg/L		SW846 8260B
1,2-Dichloroethane	ND	0.025	mg/L		SW846 8260B
1,1-Dichloroethylene	ND	0.070	mg/L		SW846 8260B
Methyl ethyl ketone	ND	0.050	mg/L		SW846 8260B
Tetrachloroethylene	ND	0.070	mg/L		SW846 8260B
Trichloroethylene	ND	0.050	mg/L		SW846 8260B
Vinyl chloride	ND	0.050	mg/L		SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	97	(59 - 138)
1,2-Dichloroethane-d4	90	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	101	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3F250310 Work Order #....: FRLWT1AA Matrix.....: SOLID
 LCS Lot-Sample#: A3G020000-288
 Prep Date.....: 07/01/03 Analysis Date...: 07/01/03
 Prep Batch #....: 3183288
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
Benzene	0.25	0.25	mg/L	100	SW846 8260B
Chlorobenzene	0.25	0.26	mg/L	104	SW846 8260B
1,1-Dichloroethylene	0.25	0.24	mg/L	98	SW846 8260B
Trichloroethylene	0.25	0.25	mg/L	100	SW846 8260B
Toluene	0.25	0.27	mg/L	108	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	95	(59 - 138)
1,2-Dichloroethane-d4	90	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	106	(47 - 158)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3F250310 Work Order #....: FRLWT1AA Matrix.....: SOLID
 LCS Lot-Sample#: A3G020000-288
 Prep Date.....: 07/01/03 Analysis Date...: 07/01/03
 Prep Batch #....: 3183288
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Benzene	100	(75 - 129)	SW846 8260B
Chlorobenzene	104	(75 - 127)	SW846 8260B
1,1-Dichloroethylene	98	(55 - 142)	SW846 8260B
Trichloroethylene	100	(70 - 131)	SW846 8260B
Toluene	108	(71 - 130)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	95	(59 - 138)
1,2-Dichloroethane-d4	90	(61 - 130)
Toluene-d8	98	(60 - 143)
4-Bromofluorobenzene	106	(47 - 158)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

TCLP GC/MS Volatiles

Client Lot #....: A3F250310 Work Order #....: FQ7MH1AV-MS Matrix.....: SO
 MS Lot-Sample #: A3F250310-002 FQ7MH1AW-MSD
 Date Sampled....: 06/24/03 13:30 Date Received...: 06/25/03
 Leach Date.....: 06/26/03 Prep Date.....: 07/01/03 Analysis Date...: 07/01/03
 Leach Batch #...: P317712 Prep Batch #....: 3183288
 Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	0.25	0.22	mg/L	89		SW846 8260B
	ND	0.25	0.24	mg/L	96	7.4	SW846 8260B
Chlorobenzene	ND	0.25	0.23	mg/L	94		SW846 8260B
	ND	0.25	0.25	mg/L	99	5.4	SW846 8260B
1,1-Dichloroethylene	ND	0.25	0.21	mg/L	86		SW846 8260B
	ND	0.25	0.23	mg/L	93	8.3	SW846 8260B
Trichloroethylene	ND	0.25	0.21	mg/L	85		SW846 8260B
	ND	0.25	0.24	mg/L	94	11	SW846 8260B
Toluene	ND	0.25	0.24	mg/L	96		SW846 8260B
	ND	0.25	0.26	mg/L	101	5.8	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(59 - 138)
	93	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
	88	(61 - 130)
Toluene-d8	90	(60 - 143)
	96	(60 - 143)
4-Bromofluorobenzene	99	(47 - 158)
	104	(47 - 158)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP GC/MS Volatiles

Client Lot #...: A3F250310 Work Order #...: FQ7MH1AV-MS Matrix.....: SO
 MS Lot-Sample #: A3F250310-002 FQ7MH1AW-MSD
 Date Sampled...: 06/24/03 13:30 Date Received...: 06/25/03
 Leach Date.....: 06/26/03 Prep Date.....: 07/01/03 Analysis Date...: 07/01/03
 Leach Batch #...: P317712 Prep Batch #...: 3183288
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	89	(55 - 138)			SW846 8260B
	96	(55 - 138)	7.4	(0-20)	SW846 8260B
Chlorobenzene	94	(49 - 139)			SW846 8260B
	99	(49 - 139)	5.4	(0-22)	SW846 8260B
1,1-Dichloroethylene	86	(43 - 147)			SW846 8260B
	93	(43 - 147)	8.3	(0-27)	SW846 8260B
Trichloroethylene	85	(46 - 143)			SW846 8260B
	94	(46 - 143)	11	(0-23)	SW846 8260B
Toluene	96	(46 - 147)			SW846 8260B
	101	(46 - 147)	5.8	(0-24)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	87	(59 - 138)
	93	(59 - 138)
1,2-Dichloroethane-d4	83	(61 - 130)
	88	(61 - 130)
Toluene-d8	90	(60 - 143)
	96	(60 - 143)
4-Bromofluorobenzene	99	(47 - 158)
	104	(47 - 158)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

TCLP GC/MS Semivolatiles

Client Lot #...: A3F250310
 MB Lot-Sample #: A3G010000-273
 Leach Date.....: 06/30/03
 Leach Batch #...: P318202
 Dilution Factor: 1

Work Order #...: FRJGH1AA
 Prep Date.....: 07/01/03
 Prep Batch #...: 3182273

Matrix.....: SOLID
 Analysis Date...: 07/07/03

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
o-Cresol	ND	0.050	mg/L		SW846 8270C
m-Cresol & p-Cresol	ND	0.10	mg/L		SW846 8270C
1,4-Dichlorobenzene	ND	0.050	mg/L		SW846 8270C
2,4-Dinitrotoluene	ND	0.050	mg/L		SW846 8270C
Hexachlorobenzene	ND	0.050	mg/L		SW846 8270C
Hexachlorobutadiene	ND	0.050	mg/L		SW846 8270C
Hexachloroethane	ND	0.050	mg/L		SW846 8270C
Nitrobenzene	ND	0.050	mg/L		SW846 8270C
Pentachlorophenol	ND	0.10	mg/L		SW846 8270C
Pyridine	ND	0.10	mg/L		SW846 8270C
2,4,5-Trichloro-phenol	ND	0.25	mg/L		SW846 8270C
2,4,6-Trichloro-phenol	ND	0.050	mg/L		SW846 8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Nitrobenzene-d5	58	(32 - 112)
2-Fluorobiphenyl	51	(30 - 110)
Terphenyl-d14	91	(10 - 144)
Phenol-d5	60	(10 - 113)
2-Fluorophenol	49	(13 - 110)
2,4,6-Tribromophenol	58	(21 - 122)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: A3F250310 Work Order #....: FRJGHIAC-LCS Matrix.....: SOLID
 LCS Lot-Sample#: A3G010000-273 FRJGHIAD-LCSD
 Prep Date.....: 07/01/03 Analysis Date...: 07/07/03
 Prep Batch #....: 3182273
 Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
o-Cresol	0.080	0.049	mg/L	62		SW846 8270C
	0.080	0.054	mg/L	67	8.1	SW846 8270C
m-Cresol & p-Cresol	0.16	0.10	mg/L	65		SW846 8270C
	0.16	0.11	mg/L	71	8.6	SW846 8270C
1,4-Dichlorobenzene	0.080	0.056	mg/L	69		SW846 8270C
	0.080	0.057	mg/L	72	3.3	SW846 8270C
2,4-Dinitrotoluene	0.080	0.058	mg/L	73		SW846 8270C
	0.080	0.060	mg/L	75	3.2	SW846 8270C
Hexachlorobenzene	0.080	0.058	mg/L	73		SW846 8270C
	0.080	0.061	mg/L	76	3.9	SW846 8270C
Hexachlorobutadiene	0.080	0.047	mg/L	59		SW846 8270C
	0.080	0.048	mg/L	60	1.9	SW846 8270C
Hexachloroethane	0.080	0.050	mg/L	63		SW846 8270C
	0.080	0.052	mg/L	66	4.6	SW846 8270C
Nitrobenzene	0.080	0.062	mg/L	78		SW846 8270C
	0.080	0.064	mg/L	80	2.5	SW846 8270C
Pentachlorophenol	0.080	0.036	mg/L	44		SW846 8270C
	0.080	0.049	mg/L	62	33	SW846 8270C
Pyridine	0.080	0.062	mg/L	78		SW846 8270C
	0.080	0.065	mg/L	82	5.0	SW846 8270C
2,4,5-Trichloro-phenol	0.080	0.048	mg/L	60		SW846 8270C
	0.080	0.055	mg/L	69	14	SW846 8270C
2,4,6-Trichloro-phenol	0.080	0.046	mg/L	58		SW846 8270C
	0.080	0.054	mg/L	68	15	SW846 8270C
Cresols (total)	0.24	0.15	mg/L	64		SW846 8270C
	0.24	0.17	mg/L	69	8.4	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	74	(32 - 112)
	77	(32 - 112)
2-Fluorobiphenyl	65	(30 - 110)
	66	(30 - 110)
Terphenyl-d14	101	(10 - 144)
	107	(10 - 144)
Phenol-d5	57	(10 - 113)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: A3F250310 Work Order #....: FRJGH1AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: A3G010000-273 FRJGH1AD-LCSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
	68	(10 - 113)
2-Fluorophenol	39	(13 - 110)
	49	(13 - 110)
2,4,6-Tribromophenol	68	(21 - 122)
	75	(21 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: A3F250310 Work Order #....: FRJGH1AC-LCS Matrix.....: SOLID
 LCS Lot-Sample#: A3G010000-273 FRJGH1AD-LCSD
 Prep Date.....: 07/01/03 Analysis Date...: 07/07/03
 Prep Batch #....: 3182273
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Cresol	62	(33 - 115)			SW846 8270C
	67	(33 - 115)	8.1	(0-31)	SW846 8270C
m-Cresol & p-Cresol	65	(46 - 109)			SW846 8270C
	71	(46 - 109)	8.6	(0-32)	SW846 8270C
1,4-Dichlorobenzene	69	(28 - 110)			SW846 8270C
	72	(28 - 110)	3.3	(0-36)	SW846 8270C
2,4-Dinitrotoluene	73	(47 - 131)			SW846 8270C
	75	(47 - 131)	3.2	(0-32)	SW846 8270C
Hexachlorobenzene	73	(57 - 128)			SW846 8270C
	76	(57 - 128)	3.9	(0-22)	SW846 8270C
Hexachlorobutadiene	59	(36 - 116)			SW846 8270C
	60	(36 - 116)	1.9	(0-32)	SW846 8270C
Hexachloroethane	63	(30 - 110)			SW846 8270C
	66	(30 - 110)	4.6	(0-33)	SW846 8270C
Nitrobenzene	78	(45 - 130)			SW846 8270C
	80	(45 - 130)	2.5	(0-50)	SW846 8270C
Pentachlorophenol	44	(10 - 140)			SW846 8270C
	62	(10 - 140)	33	(0-56)	SW846 8270C
Pyridine	78	(10 - 148)			SW846 8270C
	82	(10 - 148)	5.0	(0-65)	SW846 8270C
2,4,5-Trichloro-phenol	60	(41 - 125)			SW846 8270C
	69	(41 - 125)	14	(0-22)	SW846 8270C
2,4,6-Trichloro-phenol	58	(46 - 135)			SW846 8270C
	68	(46 - 135)	15	(0-27)	SW846 8270C
Cresols (total)	64	(46 - 109)			SW846 8270C
	69	(46 - 109)	8.4	(0-32)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	74	(32 - 112)
	77	(32 - 112)
2-Fluorobiphenyl	65	(30 - 110)
	66	(30 - 110)
Terphenyl-d14	101	(10 - 144)
	107	(10 - 144)
Phenol-d5	57	(10 - 113)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A3F250310 Work Order #...: FRJGH1AC-LCS Matrix.....: SOLID
 LCS Lot-Sample#: A3G010000-273 FRJGH1AD-LCSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
	68	(10 - 113)
2-Fluorophenol	39	(13 - 110)
	49	(13 - 110)
2,4,6-Tribromophenol	68	(21 - 122)
	75	(21 - 122)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

TCLP Metals

Client Lot #....: A3F250310

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A3G010000-122 Prep Batch #....: 3183111 Leach Date.....: 06/30/03 Leach Batch #...: P318202						
Arsenic	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRHW01AA
Dilution Factor: 1						
Barium	ND	10.0	mg/L	SW846 6010B	07/02-07/03/03	FRHW01AC
Dilution Factor: 1						
Cadmium	ND	0.10	mg/L	SW846 6010B	07/02-07/03/03	FRHW01AD
Dilution Factor: 1						
Chromium	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRHW01AE
Dilution Factor: 1						
Lead	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRHW01AF
Dilution Factor: 1						
Selenium	ND	0.25	mg/L	SW846 6010B	07/02-07/03/03	FRHW01AG
Dilution Factor: 1						
Silver	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRHW01AH
Dilution Factor: 1						
Mercury	ND	0.0020	mg/L	SW846 7470A	07/02-07/03/03	FRHW01AJ
Dilution Factor: 1						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TCLP Metals

Client Lot #....: A3F250310

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A3G020000-111 Prep Batch #....: 3183111						
Arsenic	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRLD81AC
		Dilution Factor: 1				
Barium	ND	10.0	mg/L	SW846 6010B	07/02-07/03/03	FRLD81AD
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	07/02-07/03/03	FRLD81A8
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRLD81AL
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRLD81AF
		Dilution Factor: 1				
Selenium	ND	0.25	mg/L	SW846 6010B	07/02-07/03/03	FRLD81AH
		Dilution Factor: 1				
Silver	ND	0.50	mg/L	SW846 6010B	07/02-07/03/03	FRLD81A9
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	07/02-07/03/03	FRLD81AM
		Dilution Factor: 1				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TCLP Metals

Client Lot #....: A3F250310

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A3G020000-111 Prep Batch #....: 3183111							
Arsenic	2.0	2.0	mg/L	102	SW846 6010B	07/02-07/03/03	FRLD81AT
			Dilution Factor: 1				
Barium	2.0	2.1	mg/L	106	SW846 6010B	07/02-07/03/03	FRLD81AU
			Dilution Factor: 1				
Cadmium	0.050	0.053	mg/L	105	SW846 6010B	07/02-07/03/03	FRLD81CA
			Dilution Factor: 1				
Chromium	0.20	0.21	mg/L	106	SW846 6010B	07/02-07/03/03	FRLD81A3
			Dilution Factor: 1				
Lead	0.50	0.52	mg/L	104	SW846 6010B	07/02-07/03/03	FRLD81AW
			Dilution Factor: 1				
Selenium	2.0	2.1	mg/L	104	SW846 6010B	07/02-07/03/03	FRLD81A0
			Dilution Factor: 1				
Silver	0.050	0.058	mg/L	116	SW846 6010B	07/02-07/03/03	FRLD81CC
			Dilution Factor: 1				
Mercury	0.0050	0.0061	mg/L	122	SW846 7470A	07/02-07/03/03	FRLD81A4
			Dilution Factor: 1				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A3F250310

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: A3G020000-111 Prep Batch #...: 3183111					
Arsenic	102	(50 - 150)	SW846 6010B	07/02-07/03/03	FRLD81AT
		Dilution Factor: 1			
Barium	106	(50 - 150)	SW846 6010B	07/02-07/03/03	FRLD81AU
		Dilution Factor: 1			
Cadmium	105	(50 - 150)	SW846 6010B	07/02-07/03/03	FRLD81CA
		Dilution Factor: 1			
Chromium	106	(50 - 150)	SW846 6010B	07/02-07/03/03	FRLD81A3
		Dilution Factor: 1			
Lead	104	(50 - 150)	SW846 6010B	07/02-07/03/03	FRLD81AW
		Dilution Factor: 1			
Selenium	104	(50 - 150)	SW846 6010B	07/02-07/03/03	FRLD81A0
		Dilution Factor: 1			
Silver	116	(50 - 150)	SW846 6010B	07/02-07/03/03	FRLD81CC
		Dilution Factor: 1			
Mercury	122	(50 - 150)	SW846 7470A	07/02-07/03/03	FRLD81A4
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #....: A3F250310

Matrix.....: SOLID

Date Sampled....: 06/26/03 08:10 Date Received...: 06/26/03

PARAMETER	AMOUNT	SAMPLE SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3F260238-001 Prep Batch #....: 3183111									
Leach Date.....: 06/30/03 Leach Batch #...: P318202									
Arsenic									
ND		5.0	5.7	mg/L	113		SW846 6010B	07/02-07/03/03	FQ9EG1CW
ND		5.0	5.8	mg/L	116	2.5	SW846 6010B	07/02-07/03/03	FQ9EG1CX
Dilution Factor: 5									
Barium									
ND		50.0	56.8	mg/L	109		SW846 6010B	07/02-07/03/03	FQ9EG1C0
ND		50.0	58.0	mg/L	111	2.0	SW846 6010B	07/02-07/03/03	FQ9EG1C1
Dilution Factor: 5									
Cadmium									
ND		1.0	1.1	mg/L	111		SW846 6010B	07/02-07/03/03	FQ9EG1DT
ND		1.0	1.1	mg/L	114	2.3	SW846 6010B	07/02-07/03/03	FQ9EG1DU
Dilution Factor: 5									
Chromium									
ND		5.0	5.7	mg/L	113		SW846 6010B	07/02-07/03/03	FQ9EG1DF
ND		5.0	5.8	mg/L	115	2.3	SW846 6010B	07/02-07/03/03	FQ9EG1DG
Dilution Factor: 5									
Lead									
ND		5.0	5.7	mg/L	112		SW846 6010B	07/02-07/03/03	FQ9EG1C4
ND		5.0	5.8	mg/L	115	2.3	SW846 6010B	07/02-07/03/03	FQ9EG1C5
Dilution Factor: 5									
Selenium									
ND		1.0	1.2	mg/L	115		SW846 6010B	07/02-07/03/03	FQ9EG1C8
ND		1.0	1.2	mg/L	117	1.8	SW846 6010B	07/02-07/03/03	FQ9EG1C9
Dilution Factor: 5									
Silver									
ND		1.0	1.1	mg/L	109		SW846 6010B	07/02-07/03/03	FQ9EG1DW
ND		1.0	1.1	mg/L	112	1.9	SW846 6010B	07/02-07/03/03	FQ9EG1DX
Dilution Factor: 5									
Mercury									
ND		0.0050	0.0054	mg/L	105		SW846 7470A	07/02-07/03/03	FQ9EG1DH
ND		0.0050	0.0055	mg/L	106	0.54	SW846 7470A	07/02-07/03/03	FQ9EG1DJ
Dilution Factor: 1									

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #....: A3F250310

Matrix.....: SOLID

Date Sampled....: 06/26/03 08:10 Date Received...: 06/26/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3F260238-001 Prep Batch #....: 3183111						
Leach Date.....: 06/30/03 Leach Batch #...: P318202						
Arsenic	113	(50 - 150)		SW846 6010B	07/02-07/03/03	FQ9EG1CW
	116	(50 - 150)	2.5 (0-20)	SW846 6010B	07/02-07/03/03	FQ9EG1CX
Dilution Factor: 5						
Barium	109	(50 - 150)		SW846 6010B	07/02-07/03/03	FQ9EG1C0
	111	(50 - 150)	2.0 (0-20)	SW846 6010B	07/02-07/03/03	FQ9EG1C1
Dilution Factor: 5						
Cadmium	111	(50 - 150)		SW846 6010B	07/02-07/03/03	FQ9EG1DT
	114	(50 - 150)	2.3 (0-20)	SW846 6010B	07/02-07/03/03	FQ9EG1DU
Dilution Factor: 5						
Chromium	113	(50 - 150)		SW846 6010B	07/02-07/03/03	FQ9EG1DF
	115	(50 - 150)	2.3 (0-20)	SW846 6010B	07/02-07/03/03	FQ9EG1DG
Dilution Factor: 5						
Lead	112	(50 - 150)		SW846 6010B	07/02-07/03/03	FQ9EG1C4
	115	(50 - 150)	2.3 (0-20)	SW846 6010B	07/02-07/03/03	FQ9EG1C5
Dilution Factor: 5						
Selenium	115	(50 - 150)		SW846 6010B	07/02-07/03/03	FQ9EG1C8
	117	(50 - 150)	1.8 (0-20)	SW846 6010B	07/02-07/03/03	FQ9EG1C9
Dilution Factor: 5						
Silver	109	(50 - 150)		SW846 6010B	07/02-07/03/03	FQ9EG1DW
	112	(50 - 150)	1.9 (0-20)	SW846 6010B	07/02-07/03/03	FQ9EG1DX
Dilution Factor: 5						
Mercury	105	(50 - 150)		SW846 7470A	07/02-07/03/03	FQ9EG1DH
	106	(50 - 150)	0.54 (0-20)	SW846 7470A	07/02-07/03/03	FQ9EG1DJ
Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A3F250310

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide	ND	Work Order #: FRNAG1AA 200	mg/kg	MB Lot-Sample #: SW846 7.3.3	A3G020000-306 07/02/03	3183306
		Dilution Factor: 1				
Reactive Sulfide	ND	Work Order #: FRNAP1AA 500	mg/kg	MB Lot-Sample #: SW846 7.3.4	A3G020000-304 07/02/03	3183304
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #....: A3F250310

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Corrosivity	8.1	8.0	No Units	99	SW846 9045C	06/25-06/26/03	3176643
Work Order #: FQ75A1AA LCS Lot-Sample#: A3F250000-643							
Dilution Factor: 1							
Reactive Cyanide	1000	200	mg/kg	20	SW846 7.3.3	07/02/03	3183306
Work Order #: FRNAG1AC LCS Lot-Sample#: A3G020000-306							
Dilution Factor: 1							
Reactive Sulfide	1000	450	mg/kg	45	SW846 7.3.4	07/02/03	3183304
Work Order #: FRNAP1AC LCS Lot-Sample#: A3G020000-304							
Dilution Factor: 1							

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A3F250310

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Corrosivity	99	Work Order #: FQ75A1AA (97 - 103)	LCS Lot-Sample#: A3F250000-643 SW846 9045C	06/25-06/26/03	3176643
		Dilution Factor: 1			
Reactive Cyanide	20	Work Order #: FRNAG1AC (10 - 200)	LCS Lot-Sample#: A3G020000-306 SW846 7.3.3	07/02/03	3183306
		Dilution Factor: 1			
Reactive Sulfide	45	Work Order #: FRNAP1AC (10 - 200)	LCS Lot-Sample#: A3G020000-304 SW846 7.3.4	07/02/03	3183304
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A3F250310

Matrix.....: SO

Date Sampled...: 06/24/03 13:00 Date Received...: 06/25/03

PARAMETER	AMOUNT	SAMPLE SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide			WO#: FQ7MA1AU-MS		FQ7MA1AV-MSD		MS Lot-Sample #:	A3F250310-001	
ND	1000		62 N	mg/kg	5.0		SW846 7.3.3	07/02/03	3183306
ND	1000		62 N	mg/kg	5.0	0.0	SW846 7.3.3	07/02/03	3183306

Dilution Factor: 1

Reactive Sulfide			WO#: FQ7MA1AW-MS		FQ7MA1AX-MSD		MS Lot-Sample #:	A3F250310-001	
ND	1000		130	mg/kg	13		SW846 7.3.4	07/02/03	3183304
ND	1000		160	mg/kg	16	21	SW846 7.3.4	07/02/03	3183304

Dilution Factor: 1

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A3F250310

Matrix.....: SO

Date Sampled...: 06/24/03 13:00 Date Received...: 06/25/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Reactive Cyanide			WO#:	FQ7MA1AU-MS/FQ7MA1AV-MSD	MS	Lot-Sample #:	A3F250310-001
5.0 N	(10 - 200)			SW846 7.3.3		07/02/03	3183306
5.0 N	(10 - 200)	0.0	(0-100)	SW846 7.3.3		07/02/03	3183306
Dilution Factor: 1							

Reactive Sulfide			WO#:	FQ7MA1AW-MS/FQ7MA1AX-MSD	MS	Lot-Sample #:	A3F250310-001
13	(10 - 200)			SW846 7.3.4		07/02/03	3183304
16	(10 - 200)	21	(0-100)	SW846 7.3.4		07/02/03	3183304
Dilution Factor: 1							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Matrix.....: SO

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Corrosivity						SD Lot-Sample #:	A3F250310-002	
9.3	9.3	No Units	0.11	(0-20)	SW846 9045C	06/25/03	3176643	
		Dilution Factor: 1						

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: A3F250310

Work Order #....: FQJWX-SMP
FQJWX-DUP

Matrix.....: WASTE

Date Sampled....: 06/11/03 10:45 Date Received...: 06/13/03

% Moisture.....: 0.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Flashpoint	144	143	deg F	0.35	(0-20)	SD Lot-Sample #: C3F130341-001 SW846 1010	07/07/03	3188487

Dilution Factor: 1

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360

PROJECT NAME:

Cam Grand Rapids Mefar

SAMPLER'S SIGNATURE: *[Signature]* PRINTED NAME: *Bret Williams*

SEQ. No.	DATE	TIME	SAMPLE TYPE	% OF CONTAINERS	PARAMETERS	REMARKS

6/24/08 1300 5-17360-062403-BLW-039
1330.5-17360-062403-BLW-040

Seal 5
✓ X X X X X
✓ X X X X X

PARAMETERS
TCLP VOCs
TCLP SVOCs
Residuals
PCB
REMARKS
26.1 TA

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: <i>[Signature]</i>	DATE: 6/24/08	TIME: 1800	RECEIVED BY: 1.	DATE:	TIME:
RELINQUISHED BY: 2.	DATE:	TIME:	RECEIVED BY: 2.	DATE:	TIME:
RELINQUISHED BY: 3.	DATE:	TIME:	RECEIVED BY: 1.	DATE:	TIME:

METHOD OF SHIPMENT:

FEDEX

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldenrod - Sampler Copy

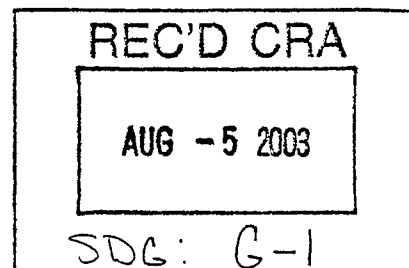
SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

DATE: 6/25/08 TIME: 10:55

23823

END OF REPORT



ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A3G150131

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360-09 Lab#: A3G150131

Name: GM GR

Description

SEVERN TRENT LABORATORIES, INC. Event: GW Monitoring

Samples: 14 water

Analysis: VOC, diss gas,
TOC, Hardness, Sulfide mtl

TAT: 14 day

Lab: STL

Amy L. McCormick

Amy L. McCormick
Project Manager

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: 8/28/03

Invoice Approval Date: _____

Comments: _____

July 31, 2003

Severn Trent Laboratories, Inc.

STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720

Tel 330 497 9396 Fax 330 497 0772 • www.stl-inc.com

CRA CONESTOGA-ROVERS & ASSOCIATES, INC. 14496 Sheldon Road, Suite 200 Plymouth, MI 48170 • (734) 453-5123	SHIPPED TO (Laboratory Name): <i>STL - North Canton</i>	
	REFERENCE NUMBER:	PROJECT NAME:

[illegible]



CASE NARRATIVE

CASE NARRATIVE

A3G150131

The following report contains the analytical results for thirteen water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM Grand Rapids Site, project number 17360-09. The samples were received July 15, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to the Chemistry Department on July 29, 2003. A summary of QC data for these analyses is included at the rear of the report.

SUPPLEMENTAL QC INFORMATION

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

METALS

ICP Trace Form IX was not provided for batch 3198099. The serial dilution was performed on an unrelated sample from the same batch.

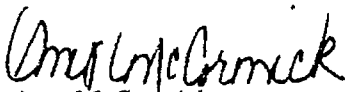
Samples that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are $\pm$ the standard reporting limit (SRL).

GENERAL CHEMISTRY

Samples that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are $\pm$ the standard reporting limit (SRL).

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.


Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride

Acetone

2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper

Iron

Zinc

Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is repped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be repped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)





METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A3G150131

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Alkalinity	MCAWW 310.1
Chloride	MCAWW 300.0A
Dissolved Gases in Water	RSK SOP-175
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Nitrate as N	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A
Sulfate	MCAWW 300.0A
Sulfide	MCAWW 376.1
Total Hardness (Titrimetric, EDTA)	MCAWW 130.2
Total Organic Carbon	MCAWW 415.1
Volatile Organics by GC/MS	SW846 8260B

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- RSK Sample Prep and Calculations for Dissolved Gas Analysis
in Water Samples Using a GC Headspace Equilibration
Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.



SAMPLE SUMMARY

SAMPLE SUMMARY

A3G150131

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FR962	001	GW-17360-071403-SP-041	07/14/03	
FR97A	002	GW-17360-071403-SP-042	07/14/03	
FR97D	003	GW-17360-071403-SP-043	07/14/03	
FR97E	004	GW-17360-071403-SP-044	07/14/03	
FR97F	005	GW-17360-071403-SP-045	07/14/03	
FR97G	006	GW-17360-071403-SP-046	07/14/03	
FR97H	007	GW-17360-071403-SP-047	07/14/03	
FR97K	008	GW-17360-071403-SP-048	07/14/03	
FR97M	009	GW-17360-071403-SP-049	07/14/03	
FR97N	010	GW-17360-071403-SP-050	07/14/03	
FR97P	011	GW-17360-071403-SP-051	07/14/03	
FR97R	012	GW-17360-071403-SP-052	07/14/03	
FR97T	013	GW-17360-071403-SP-053	07/14/03	
FR97W	014	TB-17360-071403-SP-054	07/14/03	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.



SHIPPING AND RECEIVING DOCUMENTS

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17306-09

PROJECT NAME:

GM-Grand Rapids

SAMPLER'S SIGNATURE: S. Foster PRINTED NAME: Steve Foster

SEQ. No.	DATE	TIME	SAMPLE TYPE	NO. OF CONTAINERS
1	07/14/03		GUO-17360-071403-SP-041	11
2			-042	11
3			-043	11
4			-044	11
5			-045	11
6			-046	11
7			-047	11
8			-048	11
9			-049	11
10			-050	11
11			-051	11
12			-052	11
13			-053	11
14			TB-17360-071403-SP-054	3

TOTAL NUMBER OF CONTAINERS

146

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
1. <u>S. Foster</u>	07/14/03	1900	1. <u>S. Foster</u>		
2. _____	DATE:	TIME:	2. _____	DATE:	TIME:
3. _____	DATE:	TIME:	3. _____	DATE:	TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL NO. 6384 6514 0250

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldend - Sampler Copy

SAMPLE TEAM: S. Foster, Joe Branch

RECEIVED FOR LABORATORY BY: Paul Williams

25115

DATE: 7/15/03 TIME: 9:15

PARAMETERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Dispersed Solids	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DOC	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Nitrate	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hardness	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sulphate	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Metals	X	X	X	X	X	X	X	X	X	X	X	X	X	X

*Nitrite, Sulfate, Alkalinity, chloride

Note: Profile labels shall have 17360 before date in sample ID

Standard TM
CRA Contact:
Paul Williams

RSR280

Client:

Severn Trent Laboratories, Inc.
Sample Control Record

57787

Lot #:

A3G150131

Case Number/SDG:

17306-09

Storage Location: MS/W76 S36 MS GCS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FR962	EARLES	7/15/03	Yes		Storage	
FR97A	EARLES	7/15/03	Yes		Storage	
FR97D	EARLES	7/15/03	Yes		Storage	
FR97E	EARLES	7/15/03	Yes		Storage	
FR97F	EARLES	7/15/03	Yes		Storage	
FR97G	EARLES	7/15/03	Yes		Storage	
FR97H	EARLES	7/15/03	Yes		Storage	
FR97K	EARLES	7/15/03	Yes		Storage	
FR97M	EARLES	7/15/03	Yes		Storage	
FR97N	EARLES	7/15/03	Yes		Storage	
FR97P	EARLES	7/15/03	Yes		Storage	
FR97R	EARLES	7/15/03	Yes		Storage	
FR97T	EARLES	7/15/03	Yes		Storage	
FR97W	EARLES	7/15/03	Yes		Storage	

STL Cooler Receipt Form/Narrative

North Canton Facility

Lot Number: A36 150131

Client: CRA Project: GM-Grand Rapids Quote#: 50154

Cooler Received on: 7/15/03 Opened on: 7/15/03 by: 22 [Signature]
(Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: _____
Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____

STL Shipper No#: see back

- Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
If YES, Quantity _____ Location _____
Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
- Shipper's packing slip attached to this form? Yes ☒ No ☐
- Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
- Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
- Packing material used:
Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____
- Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temp)
METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H₂O Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
- Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
- Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
- Were samples at the correct pH? (record on back) Yes ☒ No ☐ NA ☐
- Were correct bottles used for the tests indicated? Yes ☒ No ☐
- Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
- Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

☒ MACRO ☐ MACRO

1. CHAIN OF CUSTODY

SR1A	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____ _____ _____ _____

2. SAMPLE CONDITION

SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
SR2B	Sample(s) _____ were received with insufficient volume.
SR2C	Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). Nitric Acid Lot # 061603-HNO₃; Sulfuric Acid Lot # 112801-H₂SO₄; Sodium Hydroxide Lot # 011102-NaOH; Hydrochloric Acid Lot # 020501-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH₃COO₂Zn/NaOH
SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

STL Cooler Receipt Form/Narrative North Canton Facility

Client ID	pH	Date	Initials
41	<2 <2 >9	7/15/03	KW
42	<2 <2 >9		
43	<2 <2 >9		
44	<2 <2 >9		
45	<2 <2 >9		
46	<2 <2 >9		
47	<2 <2 >9		
48	<2 <2 >9		
49	<2 <2 >9		
50	<2 <2 >9		
51	<2 <2 >9		
52	<2 <2 >9		
53	<2 <2 >9		
~~54~~	~~<2 <2 >9~~	<del></del>	<del></del>

Cooler	Temp	Method	Coolant
M-60	4.8	IR	wet ice
M-208	5.4	✓	✓
M-120	2.7		

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:



GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-041

GC/MS Volatiles

Lot-Sample #....: A3G150131-001 Work Order #....: FR9621AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	0.42 J	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-041

GC/MS Volatiles

Lot-Sample #....: A3G150131-001 Work Order #....: FR9621AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	ND	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	100	(73 - 122)		
1,2-Dichloroethane-d4	111	(61 - 128)		
Toluene-d8	101	(76 - 110)		
4-Bromofluorobenzene	99	(74 - 116)		

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-042

GC/MS Volatiles

Lot-Sample #....: A3G150131-002 Work Order #....: FR97A1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	0.76 J	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	0.39 J	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-042

GC/MS Volatiles

Lot-Sample #....: A3G150131-002 Work Order #....: FR97A1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	0.55 J	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	7.4	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	106	(61 - 128)
Toluene-d8	102	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-043

GC/MS Volatiles

Lot-Sample #....: A3G150131-003 Work Order #....: FR97D1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	2.1	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	11	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	0.50 J	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-043

GC/MS Volatiles

Lot-Sample #....: A3G150131-003 Work Order #....: FR97D1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	0.58 J	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	2.0	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-044

GC/MS Volatiles

Lot-Sample #....: A3G150131-004 Work Order #....: FR97E1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-044

GC/MS Volatiles

Lot-Sample #....: A3G150131-004 Work Order #....: FR97E1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	14	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	ND	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	99	(73 - 122)		
1,2-Dichloroethane-d4	108	(61 - 128)		
Toluene-d8	100	(76 - 110)		
4-Bromofluorobenzene	102	(74 - 116)		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-045

GC/MS Volatiles

Lot-Sample #....: A3G150131-005 Work Order #....: FR97F1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 2 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	50	ug/L	2.2
Benzene	ND	2.0	ug/L	0.74
Bromodichloromethane	ND	2.0	ug/L	0.64
Bromoform	ND	2.0	ug/L	0.74
Bromomethane	ND	2.0	ug/L	0.60
2-Butanone	ND	50	ug/L	1.2
Carbon disulfide	ND	10	ug/L	0.48
Carbon tetrachloride	ND	2.0	ug/L	0.74
Chlorobenzene	ND	2.0	ug/L	0.76
Chloroethane	ND	2.0	ug/L	0.58
Chloroform	ND	2.0	ug/L	0.70
Chloromethane	ND	2.0	ug/L	0.98
Cyclohexane	ND	2.0	ug/L	0.66
Dibromochloromethane	ND	2.0	ug/L	0.74
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	1.6
1,2-Dibromoethane	ND	2.0	ug/L	0.68
1,2-Dichlorobenzene	ND	2.0	ug/L	0.76
1,3-Dichlorobenzene	ND	2.0	ug/L	0.76
1,4-Dichlorobenzene	ND	2.0	ug/L	0.76
Dichlorodifluoromethane	ND	2.0	ug/L	0.98
1,1-Dichloroethane	ND	2.0	ug/L	0.60
1,2-Dichloroethane	ND	2.0	ug/L	0.56
1,1-Dichloroethene	ND	2.0	ug/L	0.62
cis-1,2-Dichloroethene	2.7	2.0	ug/L	0.70
trans-1,2-Dichloroethene	ND	2.0	ug/L	0.66
1,2-Dichloropropane	ND	2.0	ug/L	0.82
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.70
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.70
Ethylbenzene	ND	2.0	ug/L	0.82
2-Hexanone	ND	100	ug/L	1.2
Isopropylbenzene	ND	10	ug/L	0.78
Methyl acetate	ND	20	ug/L	1.1
Methylene chloride	ND	10	ug/L	0.58
Methylcyclohexane	ND	2.0	ug/L	0.84
4-Methyl-2-pentanone	ND	100	ug/L	0.52
Methyl tert-butyl ether	ND	10	ug/L	0.54
Styrene	ND	2.0	ug/L	0.70

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-045

GC/MS Volatiles

Lot-Sample #....: A3G150131-005 Work Order #....: FR97F1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.72
Tetrachloroethene	72	2.0	ug/L	0.84
Toluene	ND	2.0	ug/L	0.78
1,2,4-Trichloro- benzene	ND	10	ug/L	0.80
1,1,1-Trichloroethane	ND	2.0	ug/L	0.78
1,1,2-Trichloroethane	ND	2.0	ug/L	0.72
Trichloroethene	1.6 J	2.0	ug/L	0.84
Trichlorofluoromethane	ND	2.0	ug/L	1.1
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	2.0	ug/L	0.64
Vinyl chloride	ND	2.0	ug/L	0.72
Xylenes (total)	ND	6.0	ug/L	0.88
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	99	(73 - 122)		
1,2-Dichloroethane-d4	107	(61 - 128)		
Toluene-d8	99	(76 - 110)		
4-Bromofluorobenzene	101	(74 - 116)		

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-046

GC/MS Volatiles

Lot-Sample #....: A3G150131-006 Work Order #....: FR97G1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	1.5	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	0.51 J	1.0	ug/L	0.31
cis-1,2-Dichloroethene	1.6	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-046

GC/MS Volatiles

Lot-Sample #....: A3G150131-006 Work Order #....: FR97G1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	1.8	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	27	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	111	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-047

GC/MS Volatiles

Lot-Sample #....: A3G150131-007 Work Order #....: FR97H1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 2 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	2.6 J	50	ug/L	2.2
Benzene	ND	2.0	ug/L	0.74
Bromodichloromethane	ND	2.0	ug/L	0.64
Bromoform	ND	2.0	ug/L	0.74
Bromomethane	ND	2.0	ug/L	0.60
2-Butanone	ND	50	ug/L	1.2
Carbon disulfide	ND	10	ug/L	0.48
Carbon tetrachloride	ND	2.0	ug/L	0.74
Chlorobenzene	ND	2.0	ug/L	0.76
Chloroethane	ND	2.0	ug/L	0.58
Chloroform	ND	2.0	ug/L	0.70
Chloromethane	ND	2.0	ug/L	0.98
Cyclohexane	ND	2.0	ug/L	0.66
Dibromochloromethane	ND	2.0	ug/L	0.74
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	1.6
1,2-Dibromoethane	ND	2.0	ug/L	0.68
1,2-Dichlorobenzene	ND	2.0	ug/L	0.76
1,3-Dichlorobenzene	ND	2.0	ug/L	0.76
1,4-Dichlorobenzene	ND	2.0	ug/L	0.76
Dichlorodifluoromethane	ND	2.0	ug/L	0.98
1,1-Dichloroethane	ND	2.0	ug/L	0.60
1,2-Dichloroethane	ND	2.0	ug/L	0.56
1,1-Dichloroethene	ND	2.0	ug/L	0.62
cis-1,2-Dichloroethene	42	2.0	ug/L	0.70
trans-1,2-Dichloroethene	ND	2.0	ug/L	0.66
1,2-Dichloropropane	ND	2.0	ug/L	0.82
cis-1,3-Dichloropropene	ND	2.0	ug/L	0.70
trans-1,3-Dichloropropene	ND	2.0	ug/L	0.70
Ethylbenzene	ND	2.0	ug/L	0.82
2-Hexanone	ND	100	ug/L	1.2
Isopropylbenzene	ND	10	ug/L	0.78
Methyl acetate	ND	20	ug/L	1.1
Methylene chloride	ND	10	ug/L	0.58
Methylcyclohexane	ND	2.0	ug/L	0.84
4-Methyl-2-pentanone	ND	100	ug/L	0.52
Methyl tert-butyl ether	ND	10	ug/L	0.54
Styrene	ND	2.0	ug/L	0.70

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-047

GC/MS Volatiles

Lot-Sample #....: A3G150131-007 Work Order #....: FR97H1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	0.72
Tetrachloroethene	ND	2.0	ug/L	0.84
Toluene	ND	2.0	ug/L	0.78
1,2,4-Trichloro- benzene	ND	10	ug/L	0.80
1,1,1-Trichloroethane	ND	2.0	ug/L	0.78
1,1,2-Trichloroethane	ND	2.0	ug/L	0.72
Trichloroethene	28	2.0	ug/L	0.84
Trichlorofluoromethane	ND	2.0	ug/L	1.1
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	2.0	ug/L	0.64
Vinyl chloride	3.7	2.0	ug/L	0.72
Xylenes (total)	ND	6.0	ug/L	0.88

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	108	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-048

GC/MS Volatiles

Lot-Sample #....: A3G150131-008 Work Order #....: FR97K1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	4.2	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-048

GC/MS Volatiles

Lot-Sample #....: A3G150131-008 Work Order #....: FR97K1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	2.9	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	1.9	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	0.43 J	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	110	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-049

GC/MS Volatiles

Lot-Sample #....: A3G150131-009 Work Order #....: FR97M1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-049

GC/MS Volatiles

Lot-Sample #....: A3G150131-009 Work Order #....: FR97M1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	1.6	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	100	(73 - 122)		
1,2-Dichloroethane-d4	108	(61 - 128)		
Toluene-d8	102	(76 - 110)		
4-Bromofluorobenzene	98	(74 - 116)		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-050

GC/MS Volatiles

Lot-Sample #....: A3G150131-010 Work Order #....: FR97N1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-050

GC/MS Volatiles

Lot-Sample #....: A3G150131-010 Work Order #....: FR97N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	ND	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	101	(73 - 122)		
1,2-Dichloroethane-d4	107	(61 - 128)		
Toluene-d8	99	(76 - 110)		
4-Bromofluorobenzene	97	(74 - 116)		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-051

GC/MS Volatiles

Lot-Sample #....: A3G150131-011 Work Order #....: FR97P1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	3.5	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-051

GC/MS Volatiles

Lot-Sample #....: A3G150131-011 Work Order #....: FR97P1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	0.89 J	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	1.6	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	107	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-052

GC/MS Volatiles

Lot-Sample #....: A3G150131-012 Work Order #....: FR97R1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	7.4	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-052

GC/MS Volatiles

Lot-Sample #....: A3G150131-012 Work Order #....: FR97R1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	2.3	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	1.6	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	1.1	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-053

GC/MS Volatiles

Lot-Sample #....: A3G150131-013 Work Order #....: FR97T1AA Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	1.5	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-053

GC/MS Volatiles

Lot-Sample #....: A3G150131-013 Work Order #....: FR97T1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	4.3	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	104	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TB-17360-071403-SP-054

GC/MS Volatiles

Lot-Sample #....: A3G150131-014 Work Order #....: FR97W1AA Matrix.....: WQ
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	2.3 J	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	1.1 J	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TB-17360-071403-SP-054

GC/MS Volatiles

Lot-Sample #...: A3G150131-014 Work Order #...: FR97W1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	ND	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	103	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	101	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3G150131
MB Lot-Sample #: A3G220000-654

Work Order #....: FTVPR1AA

Matrix.....: WATER

Analysis Date...: 07/21/03
Dilution Factor: 1

Prep Date.....: 07/21/03
Prep Batch #....: 3203654
Initial Wgt/Vol: 5 mL

Final Wgt/Vol...: 5 mL

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	25	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	1.0	ug/L	SW846	8260B
2-Butanone	ND	25	ug/L	SW846	8260B
Carbon disulfide	ND	5.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	1.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
Chloromethane	ND	1.0	ug/L	SW846	8260B
Cyclohexane	ND	1.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	SW846	8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	50	ug/L	SW846	8260B
Isopropylbenzene	ND	5.0	ug/L	SW846	8260B
Methyl acetate	ND	10	ug/L	SW846	8260B
Methylene chloride	ND	5.0	ug/L	SW846	8260B
Methylcyclohexane	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846	8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3G150131

Work Order #....: FTVPR1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2,4-Trichloro- benzene	0.80 J	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	108	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	100	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3G150131 Work Order #....: FTVPR1AC Matrix.....: WATER
 LCS Lot-Sample#: A3G220000-654
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
Benzene	10	10	ug/L	102	SW846 8260B
Chlorobenzene	10	9.9	ug/L	99	SW846 8260B
1,1-Dichloroethene	10	10	ug/L	104	SW846 8260B
Toluene	10	9.9	ug/L	99	SW846 8260B
Trichloroethene	10	8.8	ug/L	88	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	115	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3G150131 Work Order #....: FTVPR1AC Matrix.....: WATER
 LCS Lot-Sample#: A3G220000-654
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Benzene	102	(80 - 116)	SW846 8260B
Chlorobenzene	99	(76 - 117)	SW846 8260B
1,1-Dichloroethene	104	(63 - 130)	SW846 8260B
Toluene	99	(74 - 119)	SW846 8260B
Trichloroethene	88	(75 - 122)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	115	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	102	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3G150131 Work Order #....: FR9881AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3G150140-001 FR9881AD-MSD
 Date Sampled...: 07/14/03 10:00 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 6.67 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	67	64	ug/L	97		SW846 8260B
	ND	67	63	ug/L	95	1.6	SW846 8260B
Chlorobenzene	ND	67	65	ug/L	97		SW846 8260B
	ND	67	64	ug/L	97	0.05	SW846 8260B
1,1-Dichloroethene	ND	67	63	ug/L	94		SW846 8260B
	ND	67	60	ug/L	90	4.5	SW846 8260B
Toluene	ND	67	52	ug/L	78		SW846 8260B
	ND	67	50	ug/L	75	3.8	SW846 8260B
Trichloroethene	ND	67	55	ug/L	83		SW846 8260B
	ND	67	55	ug/L	83	0.01	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	111	(61 - 128)
Toluene-d8	101	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)
	104	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3G150131 Work Order #....: FR9881AC-MS Matrix.....: WATER
 MS Lot-Sample #: A3G150140-001 FR9881AD-MSD
 Date Sampled....: 07/14/03 10:00 Date Received...: 07/15/03
 Prep Date.....: 07/21/03 Analysis Date...: 07/21/03
 Prep Batch #....: 3203654
 Dilution Factor: 6.67 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	97	(78 - 118)			SW846 8260B
	95	(78 - 118)	1.6	(0-20)	SW846 8260B
Chlorobenzene	97	(76 - 117)			SW846 8260B
	97	(76 - 117)	0.05	(0-20)	SW846 8260B
1,1-Dichloroethene	94	(62 - 130)			SW846 8260B
	90	(62 - 130)	4.5	(0-20)	SW846 8260B
Toluene	78	(70 - 119)			SW846 8260B
	75	(70 - 119)	3.8	(0-20)	SW846 8260B
Trichloroethene	83	(62 - 130)			SW846 8260B
	83	(62 - 130)	0.01	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
	111	(61 - 128)
Toluene-d8	101	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	104	(74 - 116)
	104	(74 - 116)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DISSOLVED GASES/RSK DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-041

GC Volatiles

Lot-Sample #....: A3G150131-001 Work Order #....: FR9621AK Matrix.....: WG
Date Sampled....: 07/14/03 Date Received...: 07/15/03
Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
Prep Batch #....: 3203120
Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
Method.....: RSK SOP-175

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-042

GC Volatiles

Lot-Sample #....: A3G150131-002	Work Order #....: FR97A1AK	Matrix.....: WG
Date Sampled....: 07/14/03	Date Received...: 07/15/03	
Prep Date.....: 07/22/03	Analysis Date...: 07/22/03	
Prep Batch #....: 3203120		
Dilution Factor: 1	Initial Wgt/Vol: 1 mL	Final Wgt/Vol...: 1 mL
	Method.....: RSK SOP-175	

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-043

GC Volatiles

Lot-Sample #....: A3G150131-003 Work Order #....: FR97D1AK Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-044

GC Volatiles

Lot-Sample #....: A3G150131-004 Work Order #....: FR97E1AK Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-045

GC Volatiles

Lot-Sample #....: A3G150131-005 Work Order #....: FR97F1AK Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-046

GC Volatiles

Lot-Sample #....: A3G150131-006 Work Order #....: FR97G1AK Matrix.....: WG
 Date Sampled...: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-047

GC Volatiles

Lot-Sample #...: A3G150131-007 Work Order #...: FR97H1AK Matrix.....: WG
 Date Sampled...: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #...: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-048

GC Volatiles

Lot-Sample #....: A3G150131-008 Work Order #....: FR97K1AK Matrix.....: WG
 Date Sampled...: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	2.1	0.50	ug/L	0.39

Client Sample ID: GW-17360-071403-SP-049

Lot-Sample #....	A3G150131-009	Work Order #....	FR97M1AK	Matrix.....	WG
Date Sampled....	07/14/03	Date Received...	07/15/03		
Prep Date.....	07/22/03	Analysis Date...	07/22/03		
Prep Batch #....	3203120				
Dilution Factor:	1	Initial Wgt/Vol:	1 mL	Final Wgt/Vol...	1 mL
		Method.....	RSK SOP-175		

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-050

GC Volatiles

Lot-Sample #....: A3G150131-010 Work Order #....: FR97N1AK Matrix.....: WG
Date Sampled....: 07/14/03 Date Received...: 07/15/03
Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
Prep Batch #....: 3203120
Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	2.5	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-051

GC Volatiles

Lot-Sample #...: A3G150131-011 Work Order #...: FR97P1AK Matrix.....: WG
Date Sampled...: 07/14/03 Date Received...: 07/15/03
Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
Prep Batch #...: 3203120
Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
Method.....: RSK SOP-175

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	1.7	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-052

GC Volatiles

Lot-Sample #....: A3G150131-012 Work Order #....: FR97R1AK Matrix.....: WG
 Date Sampled...: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-053

GC Volatiles

Lot-Sample #....: A3G150131-013 Work Order #....: FR97T1AK Matrix.....: WG
 Date Sampled...: 07/14/03 Date Received...: 07/15/03
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A3G150131
 MB Lot-Sample #: A3G220000-120
 Analysis Date...: 07/22/03
 Dilution Factor: 1

Work Order #...: FTQV71AA
 Prep Date.....: 07/22/03
 Prep Batch #...: 3203120
 Initial Wgt/Vol: 1 mL

Matrix.....: WATER
 Final Wgt/Vol...: 1 mL

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Methane	ND	0.50	ug/L	RSK SOP-175
Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #....: A3G150131 Work Order #....: FTQV71AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G220000-120 FTQV71AD-LCSD
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3203120
 Dilution Factor: 1 Final Wgt/Vol...: 1 mL
 Initial Wgt/Vol: 1 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	73	66	ug/L	90		RSK SOP-175
	73	68	ug/L	93	3.0	RSK SOP-175
Ethane	140	120	ug/L	88		RSK SOP-175
	140	120	ug/L	91	3.3	RSK SOP-175
Ethene	130	110	ug/L	87		RSK SOP-175
	130	110	ug/L	90	3.5	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A3G150131 Work Order #...: FTQV71AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G220000-120 FTQV71AD-LCSD
 Prep Date.....: 07/22/03 Analysis Date...: 07/22/03
 Prep Batch #...: 3203120
 Dilution Factor: 1 Final Wgt/Vol...: 1 mL
 Initial Wgt/Vol: 1 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	90	(70 - 130)			RSK SOP-175
	93	(70 - 130)	3.0	(0-30)	RSK SOP-175
Ethane	88	(70 - 130)			RSK SOP-175
	91	(70 - 130)	3.3	(0-30)	RSK SOP-175
Ethene	87	(70 - 130)			RSK SOP-175
	90	(70 - 130)	3.5	(0-30)	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters



METALS DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-041

TOTAL Metals

Lot-Sample #...: A3G150131-001

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 3198099						
Calcium	89.1	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR9621AL
		Dilution Factor: 1		Analysis Time...: 15:24	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	18.8	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR9621AM
		Dilution Factor: 1		Analysis Time...: 15:24	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.0032 B	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR9621AN
		Dilution Factor: 1		Analysis Time...: 15:24	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

NOTE(S) :

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-042

TOTAL Metals

Lot-Sample #....: A3G150131-002

Matrix.....: WG

Date Sampled....: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198099						
Calcium	95.9	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97A1AL
		Dilution Factor: 1		Analysis Time...: 15:40	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.059		
Magnesium	21.7	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97A1AM
		Dilution Factor: 1		Analysis Time...: 15:40	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.035		
Manganese	0.0028 B	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97A1AN
		Dilution Factor: 1		Analysis Time...: 15:40	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.00068		

NOTE(S):

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-043

TOTAL Metals

Lot-Sample #....: A3G150131-003

Matrix.....: WG

Date Sampled....: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198099						
Calcium	68.2	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97D1AL
		Dilution Factor: 1		Analysis Time...: 15:45	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	15.2	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97D1AM
		Dilution Factor: 1		Analysis Time...: 15:45	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.023	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97D1AN
		Dilution Factor: 1		Analysis Time...: 15:45	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-044

TOTAL Metals

Lot-Sample #...: A3G150131-004

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 3198099						
Calcium	97.9	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97E1AL
		Dilution Factor: 1		Analysis Time...: 15:49	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	17.2	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97E1AM
		Dilution Factor: 1		Analysis Time...: 15:49	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.022	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97E1AN
		Dilution Factor: 1		Analysis Time...: 15:49	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-045

TOTAL Metals

Lot-Sample #....: A3G150131-005

Matrix.....: WG

Date Sampled....: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198099						
Calcium	102	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97F1AL
		Dilution Factor: 1		Analysis Time...: 15:54		Analyst ID.....: 001644
		Instrument ID...: IS		MDL.....: 0.059		
Magnesium	25.2	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97F1AM
		Dilution Factor: 1		Analysis Time...: 15:54		Analyst ID.....: 001644
		Instrument ID...: IS		MDL.....: 0.035		
Manganese	0.033	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97F1AN
		Dilution Factor: 1		Analysis Time...: 15:54		Analyst ID.....: 001644
		Instrument ID...: IS		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-046

TOTAL Metals

Lot-Sample #....: A3G150131-006

Matrix.....: WG

Date Sampled....: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198099						
Calcium	95.3	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97G1AL
		Dilution Factor: 1		Analysis Time...: 15:59	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	21.0	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97G1AM
		Dilution Factor: 1		Analysis Time...: 15:59	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.0074 B	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97G1AN
		Dilution Factor: 1		Analysis Time...: 15:59	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

NOTE(S):

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-047

TOTAL Metals

Lot-Sample #...: A3G150131-007

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 3198099						
Calcium	104	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97HLAL
		Dilution Factor: 1		Analysis Time...: 16:03	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.059		
Magnesium	23.5	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97HLAM
		Dilution Factor: 1		Analysis Time...: 16:03	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.035		
Manganese	0.071	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97HLAN
		Dilution Factor: 1		Analysis Time...: 16:03	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-048

TOTAL Metals

Lot-Sample #...: A3G150131-008

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3198099						
Calcium	63.6	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97KIAL
		Dilution Factor: 1		Analysis Time...: 16:08	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	12.8	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97KIAM
		Dilution Factor: 1		Analysis Time...: 16:08	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.12	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97KLAN
		Dilution Factor: 1		Analysis Time...: 16:08	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-049

TOTAL Metals

Lot-Sample #...: A3G150131-009

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3198099						
Calcium	118	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97MLAL
		Dilution Factor: 1		Analysis Time...: 16:12	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	27.4	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97MLAM
		Dilution Factor: 1		Analysis Time...: 16:12	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.019	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97MLAN
		Dilution Factor: 1		Analysis Time...: 16:12	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-050

TOTAL Metals

Lot-Sample #...: A3G150131-010

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3198099						
Calcium	80.6	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97NLAL
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	17.0	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97NLAM
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.056	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97NLAN
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-051

TOTAL Metals

Lot-Sample #...: A3G150131-011

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3198099						
Calcium	96.1	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97P1AL
		Dilution Factor: 1		Analysis Time...: 16:21	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.059		
Magnesium	19.4	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97P1AM
		Dilution Factor: 1		Analysis Time...: 16:21	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.035		
Manganese	0.064	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97P1AN
		Dilution Factor: 1		Analysis Time...: 16:21	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-052

TOTAL Metals

Lot-Sample #....: A3G150131-012

Matrix.....: WG

Date Sampled....: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198099						
Calcium	87.7	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97RLAL
		Dilution Factor: 1		Analysis Time...: 16:38	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	17.5	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97RLAM
		Dilution Factor: 1		Analysis Time...: 16:38	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.078	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97RLAN
		Dilution Factor: 1		Analysis Time...: 16:38	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-053

TOTAL Metals

Lot-Sample #....: A3G150131-013

Matrix.....: WG

Date Sampled....: 07/14/03

Date Received...: 07/15/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198099						
Calcium	102	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97T1AL
		Dilution Factor: 1		Analysis Time...: 16:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	27.6	5.0	mg/L	SW846 6010B	07/17-07/18/03	FR97T1AM
		Dilution Factor: 1		Analysis Time...: 16:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	ND	0.015	mg/L	SW846 6010B	07/17-07/18/03	FR97T1AN
		Dilution Factor: 1		Analysis Time...: 16:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: A3G150131

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A3G170000-099 Prep Batch #....: 3198099						
Calcium	ND	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTF1L1AD
		Dilution Factor: 1				
		Analysis Time...: 15:14		Analyst ID.....: 001644		Instrument ID...: IS
Magnesium	ND	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTF1L1AE
		Dilution Factor: 1				
		Analysis Time...: 15:14		Analyst ID.....: 001644		Instrument ID...: IS
Manganese	ND	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTF1L1AF
		Dilution Factor: 1				
		Analysis Time...: 15:14		Analyst ID.....: 001644		Instrument ID...: IS

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A3G150131

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A3G170000-099 Prep Batch #....: 3198099							
Calcium	50.0	49.5	mg/L	99	SW846 6010B	07/17-07/18/03	FTF1L1AG
				Dilution Factor: 1	Analysis Time...: 15:18		Analyst ID.....: 001644
				Instrument ID...: I5			
Magnesium	50.0	47.3	mg/L	95	SW846 6010B	07/17-07/18/03	FTF1L1AH
				Dilution Factor: 1	Analysis Time...: 15:18		Analyst ID.....: 001644
				Instrument ID...: I5			
Manganese	0.50	0.51	mg/L	101	SW846 6010B	07/17-07/18/03	FTF1L1AJ
				Dilution Factor: 1	Analysis Time...: 15:18		Analyst ID.....: 001644
				Instrument ID...: I5			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A3G150131

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: A3G170000-099 Prep Batch #...: 3198099					
Calcium	99	(80 - 120)	SW846 6010B	07/17-07/18/03	FTF1L1AG
		Dilution Factor: 1	Analysis Time...: 15:18	Analyst ID.....: 001644	
		Instrument ID...: I5			
Magnesium	95	(80 - 120)	SW846 6010B	07/17-07/18/03	FTF1L1AH
		Dilution Factor: 1	Analysis Time...: 15:18	Analyst ID.....: 001644	
		Instrument ID...: I5			
Manganese	101	(80 - 120)	SW846 6010B	07/17-07/18/03	FTF1L1AJ
		Dilution Factor: 1	Analysis Time...: 15:18	Analyst ID.....: 001644	
		Instrument ID...: I5			

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #....: A3G150131

Matrix.....: WATER

Date Sampled....: 07/14/03

Date Received...: 07/16/03

PARAMETER	AMOUNT	AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3G160292-011 Prep Batch #....: 3198099									
Calcium									
	8.4	50.0	58.0	mg/L	99		SW846 6010B	07/17-07/18/03	FTFAC1AF
	8.4	50.0	57.8	mg/L	99	0.38	SW846 6010B	07/17-07/18/03	FTFAC1AG
Dilution Factor: 1									
Analysis Time...: 17:01 Instrument ID...: I5 Analyst ID.....: 001644									
Magnesium									
	1.4	50.0	49.1	mg/L	95		SW846 6010B	07/17-07/18/03	FTFAC1AJ
	1.4	50.0	49.0	mg/L	95	0.20	SW846 6010B	07/17-07/18/03	FTFAC1AK
Dilution Factor: 1									
Analysis Time...: 17:01 Instrument ID...: I5 Analyst ID.....: 001644									
Manganese									
	0.021	0.50	0.52	mg/L	101		SW846 6010B	07/17-07/18/03	FTFAC1AM
	0.021	0.50	0.52	mg/L	100	0.40	SW846 6010B	07/17-07/18/03	FTFAC1AN
Dilution Factor: 1									
Analysis Time...: 17:01 Instrument ID...: I5 Analyst ID.....: 001644									

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: A3G150131

Matrix.....: WATER

Date Sampled....: 07/14/03

Date Received...: 07/16/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3G160292-011 Prep Batch #....: 3198099						
Calcium	99	(75 - 125)		SW846 6010B	07/17-07/18/03	FTFAC1AF
	99	(75 - 125)	0.38 (0-20)	SW846 6010B	07/17-07/18/03	FTFAC1AG
Dilution Factor: 1						
		Analysis Time...: 17:01	Instrument ID...: I5		Analyst ID.....: 001644	
Magnesium	95	(75 - 125)		SW846 6010B	07/17-07/18/03	FTFAC1AJ
	95	(75 - 125)	0.20 (0-20)	SW846 6010B	07/17-07/18/03	FTFAC1AK
Dilution Factor: 1						
		Analysis Time...: 17:01	Instrument ID...: I5		Analyst ID.....: 001644	
Manganese	101	(75 - 125)		SW846 6010B	07/17-07/18/03	FTFAC1AM
	100	(75 - 125)	0.40 (0-20)	SW846 6010B	07/17-07/18/03	FTFAC1AN
Dilution Factor: 1						
		Analysis Time...: 17:01	Instrument ID...: I5		Analyst ID.....: 001644	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

GENERAL CHEMISTRY DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-041

General Chemistry

Lot-Sample #....: A3G150131-001 Work Order #....: FR962 Matrix.....: WG
Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	194	1.0	mg/L	MCAWW 300.0A	07/16/03	3197409
				Dilution Factor: 1	MDL.....: 0.094	
Hardness, as CaCO3	360	5	mg/L	MCAWW 130.2	07/17/03	3198509
				Dilution Factor: 1	MDL.....: 2	
Nitrate as N	6.0	0.10	mg/L	MCAWW 300.0A	07/16/03	3197411
				Dilution Factor: 1	MDL.....: 0.0076	
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/16/03	3197410
				Dilution Factor: 1	MDL.....: 0.020	
Sulfate	30.0	1.0	mg/L	MCAWW 300.0A	07/16/03	3197412
				Dilution Factor: 1	MDL.....: 0.11	
Total Alkalinity	260 J	5.0	mg/L	MCAWW 310.1	07/16/03	3197611
				Dilution Factor: 1	MDL.....: 1.3	
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1	07/22/03	3203436
				Dilution Factor: 1	MDL.....: 0.7	
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	07/18/03	3199568
				Dilution Factor: 1	MDL.....: 0.25	

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-042

General Chemistry

Lot-Sample #....: A3G150131-002 Work Order #....: FR97A Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	176	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.094	07/16/03	3197409
Hardness, as CaCO3	400	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/17/03	3198509
Nitrate as N	1.8	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/16/03	3197411
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/16/03	3197410
Sulfate	37.0	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/16/03	3197412
Total Alkalinity	300 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3197611
Total Organic Carbon 3 J		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/22/03	3203436
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/18/03	3199568

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-043

General Chemistry

Lot-Sample #....: A3G150131-003 Work Order #....: FR97D Matrix.....: WG
Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	151	1.0	mg/L	MCAWW 300.0A	07/16/03	3197409
		Dilution Factor: 1		MDL.....: 0.094		
Hardness, as CaCO ₃	300	5	mg/L	MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 1		MDL.....: 2		
Nitrate as N	2.2	0.10	mg/L	MCAWW 300.0A	07/16/03	3197411
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/16/03	3197410
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	33.7	1.0	mg/L	MCAWW 300.0A	07/16/03	3197412
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	260 J	5.0	mg/L	MCAWW 310.1	07/16/03	3197611
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1	07/22/03	3203436
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	07/18/03	3199568
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-044

General Chemistry

Lot-Sample #....: A3G150131-004 Work Order #....: FR97E Matrix.....: WG
Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	346	10.0	mg/L	MCAWW 300.0A MDL.....: 0.94	07/16/03	3197409
		Dilution Factor: 10				
Hardness, as CaCO3	370	5	mg/L	MCAWW 130.2 MDL.....: 2	07/17/03	3198509
		Dilution Factor: 1				
Nitrate as N	5.4	0.10	mg/L	MCAWW 300.0A MDL.....: 0.0076	07/16/03	3197411
		Dilution Factor: 1				
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A MDL.....: 0.020	07/16/03	3197410
		Dilution Factor: 1				
Sulfate	34.6	1.0	mg/L	MCAWW 300.0A MDL.....: 0.11	07/16/03	3197412
		Dilution Factor: 1				
Total Alkalinity	330 J	5.0	mg/L	MCAWW 310.1 MDL.....: 1.3	07/16/03	3197611
		Dilution Factor: 1				
Total Organic Carbon 3 J		1	mg/L	MCAWW 415.1 MDL.....: 0.7	07/22/03	3203436
		Dilution Factor: 1				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1 MDL.....: 0.25	07/18/03	3199568
		Dilution Factor: 1				

NOTE(S) :

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-045

General Chemistry

Lot-Sample #....: A3G150131-005 Work Order #....: FR97F Matrix.....: WG
Date Sampled...: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	147	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.094	07/16/03	3197409
Hardness, as CaCO ₃	420	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/17/03	3198509
Nitrate as N	2.5	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/16/03	3197411
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/16/03	3197410
Sulfate	35.6	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/16/03	3197412
Total Alkalinity	300 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3197611
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/22/03	3203436
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/18/03	3199568

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-046

General Chemistry

Lot-Sample #....: A3G150131-006 Work Order #....: FR97G Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	229	5.0	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.47	07/16/03	3197409
Hardness, as CaCO ₃	410	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/17/03	3198509
Nitrate as N	1.7	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/16/03	3197411
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/16/03	3197410
Sulfate	43.1	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/16/03	3197412
Total Alkalinity	300 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3197611
Total Organic Carbon 3 J		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/22/03	3203436
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/18/03	3199568

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-047

General Chemistry

Lot-Sample #....: A3G150131-007 Work Order #....: FR97H Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride	142	1.0	mg/L	MCAWW 300.0A	07/16/03	3197409
		Dilution Factor: 1		MDL.....: 0.094		
Hardness, as CaCO3	410	10	mg/L	MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 2		MDL.....: 4		
Nitrate as N	0.15	0.10	mg/L	MCAWW 300.0A	07/16/03	3197411
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/16/03	3197410
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	95.0	1.0	mg/L	MCAWW 300.0A	07/16/03	3197412
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	270 J	5.0	mg/L	MCAWW 310.1	07/16/03	3197611
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon 2		1	mg/L	MCAWW 415.1	07/22/03	3204442
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	0.27 B	1.0	mg/L	MCAWW 376.1	07/18/03	3199568
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S) :

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-048

General Chemistry

Lot-Sample #....: A3G150131-008 Work Order #....: FR97K Matrix.....: WG
Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	152	1.0	mg/L	MCAWW 300.0A	07/16/03	3197409
		Dilution Factor: 1		MDL.....: 0.094		
Hardness, as CaCO3	250	5	mg/L	MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 1		MDL.....: 2		
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	07/16/03	3197411
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/16/03	3197410
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	35.6	1.0	mg/L	MCAWW 300.0A	07/16/03	3197412
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	180 J	5.0	mg/L	MCAWW 310.1	07/16/03	3197611
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon 5		1	mg/L	MCAWW 415.1	07/22/03	3204442
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	07/18/03	3199568
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-049

General Chemistry

Lot-Sample #....: A3G150131-009 Work Order #....: FR97M Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	214	5.0	mg/L	MCAWW 300.0A	07/16/03	3197409
		Dilution Factor: 5		MDL.....: 0.47		
Hardness, as CaCO ₃	430	10	mg/L	MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 2		MDL.....: 4		
Nitrate as N	3.0	0.10	mg/L	MCAWW 300.0A	07/16/03	3197411
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	0.22	0.10	mg/L	MCAWW 300.0A	07/16/03	3197410
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	78.9	1.0	mg/L	MCAWW 300.0A	07/16/03	3197412
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	300 J	5.0	mg/L	MCAWW 310.1	07/16/03	3197611
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon 2		1	mg/L	MCAWW 415.1	07/22/03	3204442
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	07/18/03	3199568
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-050

General Chemistry

Lot-Sample #...: A3G150131-010 Work Order #...: FR97N Matrix.....: WG
Date Sampled...: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	198	1.0	mg/L	MCAWW 300.0A	07/16/03	3197409
		Dilution Factor: 1		MDL.....: 0.094		
Hardness, as CaCO3	300	5	mg/L	MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 1		MDL.....: 2		
Nitrate as N	2.1	0.10	mg/L	MCAWW 300.0A	07/16/03	3197411
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	0.14	0.10	mg/L	MCAWW 300.0A	07/16/03	3197410
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	42.4	1.0	mg/L	MCAWW 300.0A	07/16/03	3197412
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	200 J	5.0	mg/L	MCAWW 310.1	07/16/03	3197611
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon 5		1	mg/L	MCAWW 415.1	07/22/03	3204442
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	0.75 B	1.0	mg/L	MCAWW 376.1	07/18/03	3199568
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-051

General Chemistry

Lot-Sample #...: A3G150131-011 Work Order #...: FR97P Matrix.....: WG
Date Sampled...: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	229	5.0	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.47	07/16/03	3197409
Hardness, as CaCO ₃	380	5	mg/L	MCAWW 130.2 Dilution Factor: 1 MDL.....: 2	07/17/03	3198509
Nitrate as N	1.9	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/16/03	3197411
Nitrite as N	0.14	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/16/03	3197410
Sulfate	66.2	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/16/03	3197412
Total Alkalinity	250 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3197611
Total Organic Carbon 4		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/22/03	3204442
Total Sulfide	0.91 B	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/18/03	3199568

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-052

General Chemistry

Lot-Sample #....: A3G150131-012 Work Order #....: FR97R Matrix.....: WG
 Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	242	5.0	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.47	07/16/03	3197409
Hardness, as CaCO3	370	5	mg/L	MCAWW 130.2 Dilution Factor: 1 MDL.....: 2	07/17/03	3198509
Nitrate as N	2.0	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/16/03	3197411
Nitrite as N	0.14	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/16/03	3197410
Sulfate	54.9	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/16/03	3197412
Total Alkalinity	230 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3197611
Total Organic Carbon 4		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/22/03	3204442
Total Sulfide	0.27 B	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/18/03	3199568

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071403-SP-053

General Chemistry

Lot-Sample #....: A3G150131-013 Work Order #....: FR97T Matrix.....: WG
Date Sampled....: 07/14/03 Date Received...: 07/15/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	328	10.0	mg/L	MCAWW 300.0A Dilution Factor: 10 MDL.....: 0.94	07/16/03	3197409
Hardness, as CaCO3	420	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/18/03	3199463
Nitrate as N	3.5	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/16/03	3197411
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/16/03	3197410
Sulfate	40.7	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/16/03	3197412
Total Alkalinity	260 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3197611
Total Organic Carbon 2		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/22/03	3204442
Total Sulfide	0.91 B	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/18/03	3199568

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #....: A3G150131

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: FTCL81AA 1.0	mg/L	MB Lot-Sample #: A3G160000-409 MCAWW 300.0A	07/15/03	3197409
		Dilution Factor: 1				
Hardness, as CaCO3	ND	Work Order #: FTK6F1AA 5	mg/L	MB Lot-Sample #: A3G170000-509 MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 1				
Hardness, as CaCO3	ND	Work Order #: FTLLT1AA 5	mg/L	MB Lot-Sample #: A3G180000-463 MCAWW 130.2	07/18/03	3199463
		Dilution Factor: 1				
Nitrate as N	ND	Work Order #: FTEMJ1AA 0.10	mg/L	MB Lot-Sample #: A3G160000-411 MCAWW 300.0A	07/15/03	3197411
		Dilution Factor: 1				
Nitrite as N	ND	Work Order #: FTEMD1AA 0.10	mg/L	MB Lot-Sample #: A3G160000-410 MCAWW 300.0A	07/15/03	3197410
		Dilution Factor: 1				
Sulfate	ND	Work Order #: FTEMK1AA 1.0	mg/L	MB Lot-Sample #: A3G160000-412 MCAWW 300.0A	07/15/03	3197412
		Dilution Factor: 1				
Total Alkalinity	3.5 B	Work Order #: FTFV61AA 5.0	mg/L	MB Lot-Sample #: A3G160000-611 MCAWW 310.1	07/15/03	3197611
		Dilution Factor: 1				
Total Organic Carbon	0.7 B	Work Order #: FTTC21AA 1	mg/L	MB Lot-Sample #: A3G220000-436 MCAWW 415.1	07/21/03	3203436
		Dilution Factor: 1				
Total Organic Carbon	ND	Work Order #: FTW271AA 1	mg/L	MB Lot-Sample #: A3G230000-442 MCAWW 415.1	07/22/03	3204442
		Dilution Factor: 1				
Total Sulfide	ND	Work Order #: FTMKG1AA 1.0	mg/L	MB Lot-Sample #: A3G180000-568 MCAWW 376.1	07/18/03	3199568
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #....: A3G150131

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride								
WO#:FTEL81AC-LCS/FTEL81AD-LCSD LCS Lot-Sample#: A3G160000-409								
	50.0	49.2	mg/L	98		MCAWW 300.0A	07/15/03	3197409
	50.0	49.1	mg/L	98	0.06	MCAWW 300.0A	07/15/03	3197409
Dilution Factor: 1								
Nitrate as N								
WO#:FTEMJ1AC-LCS/FTEMJ1AD-LCSD LCS Lot-Sample#: A3G160000-411								
	2.5	2.5	mg/L	100		MCAWW 300.0A	07/15/03	3197411
	2.5	2.5	mg/L	101	0.79	MCAWW 300.0A	07/15/03	3197411
Dilution Factor: 1								
Nitrite as N								
WO#:FTEMJ1AC-LCS/FTEMJ1AD-LCSD LCS Lot-Sample#: A3G160000-410								
	2.5	2.5	mg/L	98		MCAWW 300.0A	07/15/03	3197410
	2.5	2.4	mg/L	98	0.40	MCAWW 300.0A	07/15/03	3197410
Dilution Factor: 1								
Sulfate								
WO#:FTEMK1AC-LCS/FTEMK1AD-LCSD LCS Lot-Sample#: A3G160000-412								
	50.0	48.9	mg/L	98		MCAWW 300.0A	07/15/03	3197412
	50.0	48.8	mg/L	98	0.16	MCAWW 300.0A	07/15/03	3197412
Dilution Factor: 1								
Total Sulfide								
WO#:FTMKGLAC-LCS/FTMKGLAD-LCSD LCS Lot-Sample#: A3G180000-568								
	18	18	mg/L	99		MCAWW 376.1	07/18/03	3199568
	18	18	mg/L	99	0.88	MCAWW 376.1	07/18/03	3199568
Dilution Factor: 1								

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: A3G150131

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride		WO#:FTEL81AC-LCS/FTEL81AD-LCSD LCS Lot-Sample#: A3G160000-409					
	98	(90 - 110)			MCAWW 300.0A	07/15/03	3197409
	98	(90 - 110)	0.06	(0-20)	MCAWW 300.0A	07/15/03	3197409
		Dilution Factor: 1					
Nitrate as N		WO#:FTEMJ1AC-LCS/FTEMJ1AD-LCSD LCS Lot-Sample#: A3G160000-411					
	100	(90 - 110)			MCAWW 300.0A	07/15/03	3197411
	101	(90 - 110)	0.79	(0-20)	MCAWW 300.0A	07/15/03	3197411
		Dilution Factor: 1					
Nitrite as N		WO#:FTEMD1AC-LCS/FTEMD1AD-LCSD LCS Lot-Sample#: A3G160000-410					
	98	(88 - 110)			MCAWW 300.0A	07/15/03	3197410
	98	(88 - 110)	0.40	(0-20)	MCAWW 300.0A	07/15/03	3197410
		Dilution Factor: 1					
Sulfate		WO#:FTEMK1AC-LCS/FTEMK1AD-LCSD LCS Lot-Sample#: A3G160000-412					
	98	(90 - 110)			MCAWW 300.0A	07/15/03	3197412
	98	(90 - 110)	0.16	(0-20)	MCAWW 300.0A	07/15/03	3197412
		Dilution Factor: 1					
Total Sulfide		WO#:FTMKG1AC-LCS/FTMKG1AD-LCSD LCS Lot-Sample#: A3G180000-568					
	99	(79 - 104)			MCAWW 376.1	07/18/03	3199568
	99	(79 - 104)	0.88	(0-20)	MCAWW 376.1	07/18/03	3199568
		Dilution Factor: 1					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #....: A3G150131

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	200	210	mg/L	101	MCAWW 130.2	07/17/03	3198509
Work Order #: FTK6F1AC LCS Lot-Sample#: A3G170000-509 Dilution Factor: 1							
Hardness, as CaCO3	200	200	mg/L	100	MCAWW 130.2	07/18/03	3199463
Work Order #: FTLLT1AC LCS Lot-Sample#: A3G180000-463 Dilution Factor: 1							
Total Alkalinity	84	85	mg/L	101	MCAWW 310.1	07/15/03	3197611
Work Order #: FTFV61AC LCS Lot-Sample#: A3G160000-611 Dilution Factor: 1							
Total Organic Carbon	31	32	mg/L	103	MCAWW 415.1	07/21/03	3203436
Work Order #: FTTC21AC LCS Lot-Sample#: A3G220000-436 Dilution Factor: 1							
Total Organic Carbon	31	33	mg/L	105	MCAWW 415.1	07/22/03	3204442
Work Order #: FTW271AC LCS Lot-Sample#: A3G230000-442 Dilution Factor: 1							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: A3G150131

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3	101	(84 - 116)	MCAWW 130.2 Dilution Factor: 1	07/17/03	3198509
Hardness, as CaCO3	100	(84 - 116)	MCAWW 130.2 Dilution Factor: 1	07/18/03	3199463
Total Alkalinity	101	(90 - 127)	MCAWW 310.1 Dilution Factor: 1	07/15/03	3197611
Total Organic Carbon	103	(88 - 115)	MCAWW 415.1 Dilution Factor: 1	07/21/03	3203436
Total Organic Carbon	105	(88 - 115)	MCAWW 415.1 Dilution Factor: 1	07/22/03	3204442

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #....: A3G150131

Matrix.....: WATER

Date Sampled....: 07/17/03 14:00 Date Received...: 07/19/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3			WO#: FTEKR1CW-MS/FTEKR1CX-MSD MS Lot-Sample #: A3G160206-003						
	400	200	640	mg/L	120		MCAWW 130.2	07/17/03	3198509
	400	200	660	mg/L	128	2.4	MCAWW 130.2	07/17/03	3198509
	Dilution Factor: 1								
Hardness, as CaCO3			WO#: FTEKT1CJ-MS/FTEKT1CK-MSD MS Lot-Sample #: A3G160206-004						
	400	400	780	mg/L	95		MCAWW 130.2	07/18/03	3199463
	400	400	770	mg/L	91	2.1	MCAWW 130.2	07/18/03	3199463
	Dilution Factor: 1								
Total Organic Carbon			WO#: FTNDV1AF-MS/FTNDV1AG-MSD MS Lot-Sample #: A3G190164-004						
	3	25	29	mg/L	104		MCAWW 415.1	07/22/03	3204442
	3	25	30	mg/L	107	1.9	MCAWW 415.1	07/22/03	3204442
	Dilution Factor: 1								

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A3G150131

Matrix.....: WATER

Date Sampled...: 07/17/03 14:00 Date Received...: 07/19/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hardness, as CaCO3			WO#:	FTEKR1CW-MS/FTEKR1CX-MSD	MS Lot-Sample #:	A3G160206-003	
	120	(10 - 176)			MCAWW 130.2	07/17/03	3198509
	128	(10 - 176)	2.4	(0-23)	MCAWW 130.2	07/17/03	3198509
				Dilution Factor:	1		
Hardness, as CaCO3			WO#:	FTEKT1CJ-MS/FTEKT1CK-MSD	MS Lot-Sample #:	A3G160206-004	
	95	(10 - 176)			MCAWW 130.2	07/18/03	3199463
	91	(10 - 176)	2.1	(0-23)	MCAWW 130.2	07/18/03	3199463
				Dilution Factor:	1		
Total Organic Carbon			WO#:	FTNDV1AF-MS/FTNDV1AG-MSD	MS Lot-Sample #:	A3G190164-004	
	104	(72 - 136)			MCAWW 415.1	07/22/03	3204442
	107	(72 - 136)	1.9	(0-20)	MCAWW 415.1	07/22/03	3204442
				Dilution Factor:	1		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #....: A3G150131

Matrix.....: WG

Date Sampled....: 07/14/03

Date Received...: 07/15/03

PARAMETER	AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity									
WO#: FR9621AQ-MS/FR9621AR-MSD MS Lot-Sample #: A3G150131-001									
	260	500	560	mg/L	59		MCAWW 310.1	07/16/03	3197611
	260	500	530	mg/L	53	5.5	MCAWW 310.1	07/16/03	3197611
Dilution Factor: 1									
Total Organic Carbon									
WO#: FR9621AT-MS/FR9621AU-MSD MS Lot-Sample #: A3G150131-001									
	2	25	26	mg/L	97		MCAWW 415.1	07/21/03	3203436
	2	25	24	mg/L	89	7.6	MCAWW 415.1	07/21/03	3203436
Dilution Factor: 1									

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A3G150131

Matrix.....: WG

Date Sampled...: 07/14/03

Date Received...: 07/15/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity			WO#: FR9621AQ-MS/FR9621AR-MSD			MS Lot-Sample #: A3G150131-001	
59	(10 - 160)				MCAWW 310.1	07/16/03	3197611
53	(10 - 160)		5.5 (0-24)		MCAWW 310.1	07/16/03	3197611
			Dilution Factor: 1				
Total Organic Carbon			WO#: FR9621AT-MS/FR9621AU-MSD			MS Lot-Sample #: A3G150131-001	
97	(72 - 136)				MCAWW 415.1	07/21/03	3203436
89	(72 - 136)		7.6 (0-20)		MCAWW 415.1	07/21/03	3203436
			Dilution Factor: 1				

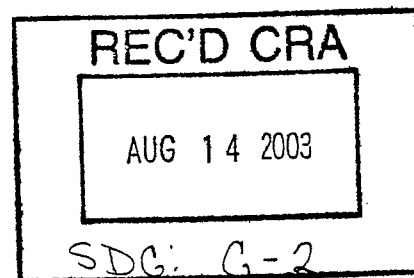
NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.



STL

END OF REPORT



ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A3G160206

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360-09 Lab#: A3G160206

Name: GM - GR

Description

Event: GW - Monitoring

SEVERN TRENT LABORATORIES, INC. Samples: 12 water

Analysis: Quarterly

Parameter

TAT: 14 day

Lab: STL

Amy L. McCormick

Amy L. McCormick
Project Manager

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: 8/28/03

Invoice Approval Date: _____

Comments: _____

August 13, 2003

Severn Trent Laboratories, Inc.

STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720

Tel 330 497 9396 Fax 330 497 0772 • www.stl-inc.com

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL - North Canton

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: J. Foster PRINTED NAME: Steve Foster

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS	REMARKS
1	07/15/03	0816	GU - 17360 - 071503-SP-053	W	7	X X X X	
2		0830			7	X X X X	
3		0926			7	X X X X	
4		1015			7	X X X X	
5		1211			7	X X X X	
6		1152			7	X X X X	
7		1501			7	X X X X	
8		1531			7	X X X X	
9		1620			7	X X X X	Standard TAT 2 week
10		1711			7	X X X X	
11			HB-17360-071503-SP-066		1	X	CRA Contact Paul Whelan

TOTAL NUMBER OF CONTAINERS

71

RELINQUISHED BY: J. Foster DATE: 07/15/03 TIME: 1900 RECEIVED BY: 1. _____ DATE: _____ TIME: _____

RELINQUISHED BY: 2. _____ DATE: _____ TIME: _____ RECEIVED BY: 2. _____ DATE: _____ TIME: _____

RELINQUISHED BY: 3. _____ DATE: _____ TIME: _____ RECEIVED BY: 1. _____ DATE: _____ TIME: _____

METHOD OF SHIPMENT: Fed Ex

AIR BILL NO. 8384 6514 0191

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM:

S. Foster, Joe Branch

RECEIVED FOR LABORATORY BY:

DATE: 7/14/03 TIME: 9:30

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL-North Canton

Page 1 of 1 Cooler # M-97

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM-Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLERS SIGNATURE: S. Boer PRINTED NAME: Steve Boer

SEQ. No. DATE TIME

1 07/15/03 0926 GU-17360-071503-SR-057

2 " 1015 " -058 W

SAMPLE TYPE

No. OF CONTAINERS

PARAMETERS

Nitrate
Hardness
Sulfide
Metals

MS/MSD
MS/MSD

REMARKS

* Nitrate Sulfate
Alkalinity, Chloride

Standard 2 week
TAT

CRA Contact:
Paul Wilsen

TOTAL NUMBER OF CONTAINERS

16

RELINQUISHED BY: S. Boer DATE: 07/15/03 RECEIVED BY: 1. DATE: 07/15/03 TIME: 1900
RELINQUISHED BY: 2. DATE: TIME: RECEIVED BY: 2. DATE: TIME:
RELINQUISHED BY: 3. DATE: TIME: RECEIVED BY: 1. DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 8384 6574 0206

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: Steve Boer

RECEIVED FOR LABORATORY BY: 22 22 Williams

25117

Joe Branch

DATE: 7/14/03 TIME: 9:30

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

St. North Canton

Page 1 of 1

Coaler # M-66

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM-Grand Rapids

SAMPLERS SIGNATURE: J. P. Pader PRINTED NAME: Steve Pader

SEQ. No.	DATE	TIME	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS	REMARKS

1	07/15/03	0816	EW - 17360-071503-SF-055	4	☒ Vol ☒ Dissolved ☒ Tot ☒ Nitrate ☒ Hardness ☒ Sulfide ☒ Metals	* Nitrate, sulfate, Alkalinity, Chloride
2		0830		4		
3		1211	-056	4		
4		1152	-059	4		
5		1501	-060	4		
6		1531	-061	4		
7		1620	-062	4		
8		1711	-063	4		
			-065	4		

TOTAL NUMBER OF CONTAINERS

32

RELINQUISHED BY: 1. <u>J. P. Pader</u>	DATE: 07/15/03	TIME: 1400	RECEIVED BY: 1. _____	DATE: _____	TIME: _____
RELINQUISHED BY: 2. _____	DATE: _____	TIME: _____	RECEIVED BY: 2. _____	DATE: _____	TIME: _____
RELINQUISHED BY: 3. _____	DATE: _____	TIME: _____	RECEIVED BY: 1. _____	DATE: _____	TIME: _____

METHOD OF SHIPMENT: Fed Ex

AIR BILL NO. 8384 6514 0180

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldendred - Sampler Copy

SAMPLE TEAM: S. Pader, Joe Branch

RECEIVED FOR LABORATORY BY: Paul Wisman

25118

DATE: 7/16/03 TIME: 9:30

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360-09

PROJECT NAME:

EN - Grand Rapids

SAMPLER'S SIGNATURE: J. P. Baker PRINTED NAME: Steve Baker

PARAMETERS

SEQ. No. DATE TIME

SAMPLE TYPE

No. OF CONTAINERS

REMARKS

1 07/15/03 1310

651-17360-071503-SF-004

W

2

X

Standard 2 tubes
TAT

CRA Contact
Paul W. Johnson

TOTAL NUMBER OF CONTAINERS

2

RELINQUISHED BY:

J. P. Baker

DATE: 07/15/03
TIME: 1400

RECEIVED BY:

DATE:

1.

TIME:

RELINQUISHED BY:

DATE:

RECEIVED BY:

DATE:

RELINQUISHED BY:

DATE:

RECEIVED BY:

DATE:

RELINQUISHED BY:

DATE:

RECEIVED BY:

DATE:

METHOD OF SHIPMENT:

Fed Ex

AIR BILL No. 8384 6514 0217

White

-Fully Executed Copy
Yellow

Pink

-Receiving Laboratory Copy
Goldenrod

-Shipper Copy
-Sampler Copy

SAMPLE TEAM:

Steve Baker
Joe Branch

RECEIVED FOR LABORATORY BY:

DATE: 7/16/03 TIME: 9:30

CASE NARRATIVE

CASE NARRATIVE

A3G160206

The following report contains the analytical results for eleven water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received July 16, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to the Chemistry Department on July 30, 2003. A summary of QC data for these analyses is included at the rear of the report.

SUPPLEMENTAL QC INFORMATION

GC/MS VOLATILES

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

GC/MS SEMIVOLATILES

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

Sample(s) that contain results between the MDL and the RL were flagged with "J". There is the possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

Sample SP-064 had elevated reporting limits due to sample matrix.

METALS

ICP Trace Form IX was not provided for batch 3198098. The serial dilution was performed on an unrelated sample from the same batch.

CASE NARRATIVE (continued)

METALS (continued)

Samples that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are $\pm$ the standard reporting limit (SRL).

GENERAL CHEMISTRY

Samples that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are $\pm$ the standard reporting limit (SRL).

Sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

The sample(s) had elevated reporting limits due to matrix interferences. Refer to the sample report pages for the affected analyte(s) flagged with "G".

Matrix spike/spike duplicate spike recoveries were outside the acceptance limits for some analytes. The acceptable laboratory control sample analysis data indicated that the analytical system was operating within control and this condition is most likely due to matrix interference. See the Matrix Spike Report for the affected analytes, which have been flagged with "N".

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.


Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride
Acetone
2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper
Iron
Zinc
Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is repped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be repped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence - Participating Lab Status Award (#82)



Y:\HerrenD\Narrative\QCinsSW846.doc, Revised: 07/24/01



STL

METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A3G160206

PARAMETER	ANALYTICAL METHOD
Alkalinity	MCAWW 310.1
Chloride	MCAWW 300.0A
Dissolved Gases in Water	RSK SOP-175
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Nitrate as N	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Sulfate	MCAWW 300.0A
Sulfide	MCAWW 376.1
Total Hardness (Titrimetric, EDTA)	MCAWW 130.2
Total Organic Carbon	MCAWW 415.1
Volatile Organics by GC/MS	SW846 8260B

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- RSK Sample Prep and Calculations for Dissolved Gas Analysis
in Water Samples Using a GC Headspace Equilibration
Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

SAMPLE SUMMARY

A3G160206

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FTEKE	001	GW-17360-071503-SP-055	07/15/03	08:16
FTEKQ	002	GW-17360-071503-SP-056	07/15/03	08:30
FTEKR	003	GW-17360-071503-SP-057	07/15/03	09:26
FTEKT	004	GW-17360-071503-SP-058	07/15/03	10:15
FTEKV	005	GW-17360-071503-SP-059	07/15/03	12:11
FTEKW	006	GW-17360-071503-SP-060	07/15/03	11:52
FTEKX	007	GW-17360-071503-SP-061	07/15/03	15:01
FTEK0	008	GW-17360-071503-SP-062	07/15/03	15:31
FTEK1	009	GW-17360-071503-SP-063	07/15/03	16:20
FTEK2	010	GW-17360-071503-SP-065	07/15/03	17:11
FTEK3	011	GW-17360-071503-SP-064	07/15/03	13:10
FTEK6	012	TB-17360-071503-SP-066	07/15/03	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

***SHIPPING
AND
RECEIVING DOCUMENTS***

Page 1 of 1
Cooder # M-316

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): **STL North Canton**
REFERENCE NUMBER: **17360-09**
PROJECT NAME: **GM-Grand Rapids**

SAMPLER'S SIGNATURE: *J. Foster* PRINTED NAME: **Steve Foster**

SEQ. No.	DATE	TIME	SAMPLE TYPE	NO. OF CONTAINERS	PARAMETERS	REMARKS
1	6/5/83	0616	W	7	X X X X X X X	
2		0830		7	X X X X X X X	
3		0926		7	X X X X X X X	
4		1617		7	X X X X X X X	
5		1211		7	X X X X X X X	
6		1152		7	X X X X X X X	
7		1521		7	X X X X X X X	
8		1531		7	X X X X X X X	
9		1620		7	X X X X X X X	
10		1711		7	X X X X X X X	
11				1	X	

TOTAL NUMBER OF CONTAINERS **71**

RELINQUISHED BY: <i>J. Foster</i>	DATE: 01/5/83	TIME: 1900	RECEIVED BY: 1.	DATE: _____	TIME: _____
RELINQUISHED BY: 2.	DATE: _____	TIME: _____	RECEIVED BY: 2.	DATE: _____	TIME: _____
RELINQUISHED BY: 3.	DATE: _____	TIME: _____	RECEIVED BY: 1.	DATE: _____	TIME: _____

METHOD OF SHIPMENT: **Fed Ex**

AIR BILL No. **6384 6514 0191**

White - Fully Executed Copy Pink - Shipper Copy
Yellow - Receiving Laboratory Copy Goldend - Sampler Copy

SAMPLE TEAM: *J. Foster, Joe Branch*

RECEIVED FOR LABORATORY BY: *[Signature]*
DATE: *7/14/83* TIME: *9:30*

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name):

STL-North Canton

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM-Grand Rapids

SAMPLER'S SIGNATURE: *[Signature]* PRINTED NAME: Steve Butler

PARAMETERS

Nitrate
Hardness
Sulfate
Metals

REMARKS

MS/MSD

SEQ. No. DATE TIME

SAMPLE TYPE

MS/MSD

*Nitrate Sulfate
Alkalinity, Calcium

1 01/03/03 06:00 17360-091503-50-057 W 03

2 " 10:15 " " " " "

MS/MSD

Standard Zinc
TAR

TOTAL NUMBER OF CONTAINERS

16

RELINQUISHED BY:

[Signature]

DATE: 01/15/03 RECEIVED BY:

1. TIME: 19:00

RELINQUISHED BY:

DATE: TIME: RECEIVED BY:

2. TIME: DATE: RECEIVED BY:

RELINQUISHED BY:

DATE: TIME: RECEIVED BY:

1. TIME: DATE: RECEIVED BY:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 83846574 0206

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Goldened - Sampler Copy

RECEIVED FOR LABORATORY BY:

DATE: 01/16/03 TIME: 9:30

25117

Steve Butler
Joe Branch

CRA

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14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL - North Canton

Page 1 of 1

Cooler # M-66

REFERENCE NUMBER:

17360-09

PROJECT NAME:

6M-Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: Steve Pater PRINTED NAME: Steve Pater

SEQ. No.	DATE	TIME	SAMPLE TYPE	NO. OF CONTAINERS

1	6/5/03	0816	Geo - 17360-01503-SP-055	4
2		0833	-056	4
3		1211	-059	4
4		1152	-060	4
5		1521	-061	4
6		1521	-062	4
7		1610	-063	4
8		1711	-065	4

PARAMETERS	Vol	Dissolved Gases	Alkalinity	Hardness	Calcium	Magnesium	Sulfate	Chloride	Metals	REMARKS

	X	X	X	X	X	X	X	X	X	* Nitrate, sulfate, Alkalinity, Chloride
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X	

Standard TAT
2 week

CRA Contact:
Paul Wisman

TOTAL NUMBER OF CONTAINERS 32

RELINQUISHED BY: <u>g. Pater</u>	DATE: <u>01/13/03</u>	TIME: <u>1400</u>	RECEIVED BY: <u>1</u>	DATE: <u>01/13/03</u>	TIME: <u>1400</u>
RELINQUISHED BY: <u>2</u>	DATE: <u>01/13/03</u>	TIME: <u>1400</u>	RECEIVED BY: <u>2</u>	DATE: <u>01/13/03</u>	TIME: <u>1400</u>
RELINQUISHED BY: <u>3</u>	DATE: <u>01/13/03</u>	TIME: <u>1400</u>	RECEIVED BY: <u>1</u>	DATE: <u>01/13/03</u>	TIME: <u>1400</u>

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 8384 6514 0180

White - Fully Executed Copy	Pink - Shipper Copy	SAMPLE TEAM: <u>S. Pater, Joe Branch</u>	RECEIVED FOR LABORATORY BY: <u>Joe Branch</u>
Yellow - Receiving Laboratory Copy	Goldendrod - Sampler Copy	DATE: <u>01/13/03</u>	TIME: <u>1400</u>

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CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL - North Canton

REFERENCE NUMBER:

17360-09

PROJECT NAME:

EM - Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLERS SIGNATURE: [Signature] PRINTED NAME: Steve Poles

PARAMETERS

COB

REMARKS

SEQ. No. DATE TIME

SAMPLE TYPE NO. OF CONTAINERS

1 07/15/03 1316 G-1-17360-07503-SF-054

W 2

X

Standard 2 libel
TAT

CRA Contact
Paul W. Johnson

TOTAL NUMBER OF CONTAINERS

2

RELINQUISHED BY: [Signature]

DATE: 07/15/03
TIME: 1400

RECEIVED BY: 1.

DATE: TIME:

RELINQUISHED BY: 2.

DATE: TIME:

RECEIVED BY: 2.

DATE: TIME:

RELINQUISHED BY: 3.

DATE: TIME:

RECEIVED BY: 1.

DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 8384 6514 0217

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldendrod - Sampler Copy

SAMPLE TEAM:

Steve Poles

RECEIVED FOR LABORATORY BY:

[Signature]

24 July

Joe Branch

DATE: 7/16/03 TIME: 9:30

RSR280

Client:

57787

Lot #:

A3G160206

Case Number/SDG:

17360-09

Storage Location: MS/W81/W81 S33 MS GCS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FTEKE	STILLERJ	7/16/03	Yes		Storage	
FTEKQ	STILLERJ	7/16/03	Yes		Storage	
FTEKR	STILLERJ	7/16/03	Yes		Storage	
FTEKT	STILLERJ	7/16/03	Yes		Storage	
FTEKV	STILLERJ	7/16/03	Yes		Storage	
FTEKW	STILLERJ	7/16/03	Yes		Storage	
FTEKX	STILLERJ	7/16/03	Yes		Storage	
FTEKO	STILLERJ	7/16/03	Yes		Storage	
FTEK1	STILLERJ	7/16/03	Yes		Storage	
FTEK2	STILLERJ	7/16/03	Yes		Storage	
FTEK3	STILLERJ	7/16/03	Yes		Storage	
FTEK6	STILLERJ	7/16/03	Yes		Storage	

STL Cooler Receipt Form/Narrative North Canton Facility

Lot Number: 436160206

Client: CRA Project: GM Grand Prix Note#: 52154
Cooler Received on: 7/16/03 Opened on: 7/16/03 by: 72 Will
(Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: _____
Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____

STL Shipper No#: See back

1. Were custody seals on the outside of the cooler? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
If YES, Quantity _____ Location _____
Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐

5. Packing material used:

Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____

6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H₂O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
9. Were samples at the correct pH? (record on back) Yes ☒ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning:

✓ ☒ MACRO ☐ MACRO

1. CHAIN OF CUSTODY

SR1A The chain of custody and sample bottles did not agree. The following discrepancies occurred Rec'd MSIMSD volume for VOC, ac + diss
gases for -057 & -058, not marked on COC, will
log. 7-16-03

2. SAMPLE CONDITION

SR2A Sample(s) _____ were received or requested after the recommended holding time had expired.

SR2B Sample(s) _____ were received with insufficient volume.

SR2C Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

SR3A Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).
Nitric Acid Lot # 061603-HNO₃; Sulfuric Acid Lot # 112801-H₂SO₄; Sodium Hydroxide Lot # 011102-NaOH; Hydrochloric Acid Lot # 020501-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH₃COO₂Zn/NaOH

SR3B Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

STL Cooler Receipt Form/Narrative North Canton Facility

[illegible]Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other anomalies:

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-055

GC/MS Volatiles

Lot-Sample #....: A3G160206-001	Work Order #....: FTEKE1AA	Matrix.....: WG
Date Sampled....: 07/15/03 08:16	Date Received...: 07/16/03	
Prep Date.....: 07/23/03	Analysis Date...: 07/23/03	
Prep Batch #....: 3205241		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	0.32 J	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	2.0	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-055

GC/MS Volatiles

Lot-Sample #....: A3G160206-001 Work Order #....: FTEKE1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	0.79 J	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	91	(73 - 122)		
1,2-Dichloroethane-d4	82	(61 - 128)		
Toluene-d8	100	(76 - 110)		
4-Bromofluorobenzene	87	(74 - 116)		

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-056

GC/MS Volatiles

Lot-Sample #....: A3G160206-002 Work Order #....: FTEKQ1AA Matrix.....: WG
 Date Sampled....: 07/15/03 08:30 Date Received...: 07/16/03
 Prep Date.....: 07/23/03 Analysis Date...: 07/23/03
 Prep Batch #....: 3205241
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	2.1	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-056

GC/MS Volatiles

Lot-Sample #....: A3G160206-002 Work Order #....: FTEKQ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	0.88 J	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-057

GC/MS Volatiles

Lot-Sample #....: A3G160206-003 Work Order #....: FTEKR1AA Matrix.....: WG
 Date Sampled....: 07/15/03 09:26 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206166
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	0.67 J	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	1.9	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-057

GC/MS Volatiles

Lot-Sample #....: A3G160206-003 Work Order #....: FTEKR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	3.4	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	0.54 J	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
1,2-Dichloroethane-d4	82	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-058

GC/MS Volatiles

Lot-Sample #....: A3G160206-004 Work Order #....: FTEKT1AA Matrix.....: WG
 Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206213
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	0.44 J	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	3.0	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-058

GC/MS Volatiles

Lot-Sample #....: A3G160206-004 Work Order #....: FTEKT1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	0.57 J	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	3.0	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	120	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-059

GC/MS Volatiles

Lot-Sample #....: A3G160206-005	Work Order #....: FTEKV1AA	Matrix.....: WG
Date Sampled....: 07/15/03 12:11	Date Received...: 07/16/03	
Prep Date.....: 07/23/03	Analysis Date...: 07/23/03	
Prep Batch #....: 3205241		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	1.3	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-059

GC/MS Volatiles

Lot-Sample #....: A3G160206-005 Work Order #....: FTEKV1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	ND	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	83	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-060

GC/MS Volatiles

Lot-Sample #....: A3G160206-006 Work Order #....: FTEKW1AA Matrix.....: WG
 Date Sampled....: 07/15/03 11:52 Date Received...: 07/16/03
 Prep Date.....: 07/23/03 Analysis Date...: 07/23/03
 Prep Batch #....: 3205241
 Dilution Factor: 4 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	100	ug/L	4.4
Benzene	ND	4.0	ug/L	1.5
Bromodichloromethane	ND	4.0	ug/L	1.3
Bromoform	ND	4.0	ug/L	1.5
Bromomethane	ND	4.0	ug/L	1.2
2-Butanone	ND	100	ug/L	2.4
Carbon disulfide	ND	20	ug/L	0.96
Carbon tetrachloride	ND	4.0	ug/L	1.5
Chlorobenzene	ND	4.0	ug/L	1.5
Chloroethane	ND	4.0	ug/L	1.2
Chloroform	ND	4.0	ug/L	1.4
Chloromethane	ND	4.0	ug/L	2.0
Cyclohexane	ND	4.0	ug/L	1.3
Dibromochloromethane	ND	4.0	ug/L	1.5
1,2-Dibromo-3-chloro- propane	ND	4.0	ug/L	3.3
1,2-Dibromoethane	ND	4.0	ug/L	1.4
1,2-Dichlorobenzene	ND	4.0	ug/L	1.5
1,3-Dichlorobenzene	ND	4.0	ug/L	1.5
1,4-Dichlorobenzene	ND	4.0	ug/L	1.5
Dichlorodifluoromethane	ND	4.0	ug/L	2.0
1,1-Dichloroethane	6.9	4.0	ug/L	1.2
1,2-Dichloroethane	ND	4.0	ug/L	1.1
1,1-Dichloroethene	ND	4.0	ug/L	1.2
cis-1,2-Dichloroethene	33	4.0	ug/L	1.4
trans-1,2-Dichloroethene	13	4.0	ug/L	1.3
1,2-Dichloropropane	ND	4.0	ug/L	1.6
cis-1,3-Dichloropropene	ND	4.0	ug/L	1.4
trans-1,3-Dichloropropene	ND	4.0	ug/L	1.4
Ethylbenzene	ND	4.0	ug/L	1.6
2-Hexanone	ND	200	ug/L	2.3
Isopropylbenzene	ND	20	ug/L	1.6
Methyl acetate	ND	40	ug/L	2.2
Methylene chloride	ND	20	ug/L	1.2
Methylcyclohexane	ND	4.0	ug/L	1.7
4-Methyl-2-pentanone	ND	200	ug/L	1.0
Methyl tert-butyl ether	ND	20	ug/L	1.1
Styrene	ND	4.0	ug/L	1.4

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-060

GC/MS Volatiles

Lot-Sample #....: A3G160206-006 Work Order #....: FTEKW1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	4.0	ug/L	1.4
Tetrachloroethene	ND	4.0	ug/L	1.7
Toluene	ND	4.0	ug/L	1.6
1,2,4-Trichloro- benzene	ND	20	ug/L	1.6
1,1,1-Trichloroethane	3.4 J	4.0	ug/L	1.6
1,1,2-Trichloroethane	ND	4.0	ug/L	1.4
Trichloroethene	ND	4.0	ug/L	1.7
Trichlorofluoromethane	ND	4.0	ug/L	2.2
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	4.0	ug/L	1.3
Vinyl chloride	130	4.0	ug/L	1.4
Xylenes (total)	ND	12	ug/L	1.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	90	(73 - 122)
1,2-Dichloroethane-d4	82	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-061

GC/MS Volatiles

Lot-Sample #....: A3G160206-007	Work Order #....: FTEKX1AA	Matrix.....: WG
Date Sampled...: 07/15/03 15:01	Date Received...: 07/16/03	
Prep Date.....: 07/23/03	Analysis Date...: 07/23/03	
Prep Batch #....: 3205241		
Dilution Factor: 2.5	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	62	ug/L	2.8
Benzene	ND	2.5	ug/L	0.92
Bromodichloromethane	ND	2.5	ug/L	0.80
Bromoform	ND	2.5	ug/L	0.92
Bromomethane	ND	2.5	ug/L	0.75
2-Butanone	ND	62	ug/L	1.5
Carbon disulfide	ND	12	ug/L	0.60
Carbon tetrachloride	ND	2.5	ug/L	0.92
Chlorobenzene	ND	2.5	ug/L	0.95
Chloroethane	ND	2.5	ug/L	0.72
Chloroform	ND	2.5	ug/L	0.88
Chloromethane	ND	2.5	ug/L	1.2
Cyclohexane	ND	2.5	ug/L	0.82
Dibromochloromethane	ND	2.5	ug/L	0.92
1,2-Dibromo-3-chloro- propane	ND	2.5	ug/L	2.0
1,2-Dibromoethane	ND	2.5	ug/L	0.85
1,2-Dichlorobenzene	ND	2.5	ug/L	0.95
1,3-Dichlorobenzene	ND	2.5	ug/L	0.95
1,4-Dichlorobenzene	ND	2.5	ug/L	0.95
Dichlorodifluoromethane	ND	2.5	ug/L	1.2
1,1-Dichloroethane	3.7	2.5	ug/L	0.75
1,2-Dichloroethane	ND	2.5	ug/L	0.70
1,1-Dichloroethene	2.4 J	2.5	ug/L	0.78
cis-1,2-Dichloroethene	50	2.5	ug/L	0.88
trans-1,2-Dichloroethene	3.3	2.5	ug/L	0.82
1,2-Dichloropropane	ND	2.5	ug/L	1.0
cis-1,3-Dichloropropene	ND	2.5	ug/L	0.88
trans-1,3-Dichloropropene	ND	2.5	ug/L	0.88
Ethylbenzene	ND	2.5	ug/L	1.0
2-Hexanone	ND	120	ug/L	1.4
Isopropylbenzene	ND	12	ug/L	0.98
Methyl acetate	ND	25	ug/L	1.4
Methylene chloride	ND	12	ug/L	0.72
Methylcyclohexane	ND	2.5	ug/L	1.0
4-Methyl-2-pentanone	ND	120	ug/L	0.65
Methyl tert-butyl ether	ND	12	ug/L	0.68
Styrene	ND	2.5	ug/L	0.88

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-061

GC/MS Volatiles

Lot-Sample #....: A3G160206-007 Work Order #....: FTEKX1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	0.90
Tetrachloroethene	ND	2.5	ug/L	1.0
Toluene	ND	2.5	ug/L	0.98
1,2,4-Trichloro- benzene	ND	12	ug/L	1.0
1,1,1-Trichloroethane	ND	2.5	ug/L	0.98
1,1,2-Trichloroethane	ND	2.5	ug/L	0.90
Trichloroethene	55	2.5	ug/L	1.0
Trichlorofluoromethane	ND	2.5	ug/L	1.4
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	2.5	ug/L	0.80
Vinyl chloride	7.2	2.5	ug/L	0.90
Xylenes (total)	ND	7.5	ug/L	1.1
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	92	(73 - 122)		
1,2-Dichloroethane-d4	81	(61 - 128)		
Toluene-d8	99	(76 - 110)		
4-Bromofluorobenzene	85	(74 - 116)		

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-062

GC/MS Volatiles

Lot-Sample #....: A3G160206-008	Work Order #....: FTEK01AA	Matrix.....: WG
Date Sampled....: 07/15/03 15:31	Date Received...: 07/16/03	
Prep Date.....: 07/23/03	Analysis Date...: 07/23/03	
Prep Batch #....: 3205241		
Dilution Factor: 1	Initial Wgt/Vol: 5 mL	Final Wgt/Vol...: 5 mL
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	23	1.0	ug/L	0.35
trans-1,2-Dichloroethene	2.4	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	0.67 J	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-062

GC/MS Volatiles

Lot-Sample #....: A3G160206-008 Work Order #....: FTEK01AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	26	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(73 - 122)
1,2-Dichloroethane-d4	83	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-063

GC/MS Volatiles

Lot-Sample #....: A3G160206-009 Work Order #....: FTEK11AA Matrix.....: WG
 Date Sampled....: 07/15/03 16:20 Date Received...: 07/16/03
 Prep Date.....: 07/23/03 Analysis Date...: 07/23/03
 Prep Batch #....: 3205241
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	1.5	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	0.64 J	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-063

GC/MS Volatiles

Lot-Sample #....: A3G160206-009 Work Order #....: FTEK11AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	3.3	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-065

GC/MS Volatiles

Lot-Sample #....: A3G160206-010 Work Order #....: FTEK21AA Matrix.....: WG
 Date Sampled....: 07/15/03 17:11 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3205241
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	ND	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	0.36 J	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-065

GC/MS Volatiles

Lot-Sample #....: A3G160206-010 Work Order #....: FTEK21AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	0.85 J	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	ND	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TB-17360-071503-SP-066

GC/MS Volatiles

Lot-Sample #....: A3G160206-012 Work Order #....: FTEK61AA Matrix.....: WQ
 Date Sampled....: 07/15/03 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3205241
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	2.0 J	25	ug/L	1.1
Benzene	ND	1.0	ug/L	0.37
Bromodichloromethane	ND	1.0	ug/L	0.32
Bromoform	ND	1.0	ug/L	0.37
Bromomethane	ND	1.0	ug/L	0.30
2-Butanone	0.86 J	25	ug/L	0.59
Carbon disulfide	ND	5.0	ug/L	0.24
Carbon tetrachloride	ND	1.0	ug/L	0.37
Chlorobenzene	ND	1.0	ug/L	0.38
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.35
Chloromethane	ND	1.0	ug/L	0.49
Cyclohexane	ND	1.0	ug/L	0.33
Dibromochloromethane	ND	1.0	ug/L	0.37
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.82
1,2-Dibromoethane	ND	1.0	ug/L	0.34
1,2-Dichlorobenzene	ND	1.0	ug/L	0.38
1,3-Dichlorobenzene	ND	1.0	ug/L	0.38
1,4-Dichlorobenzene	ND	1.0	ug/L	0.38
Dichlorodifluoromethane	ND	1.0	ug/L	0.49
1,1-Dichloroethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	1.0	ug/L	0.28
1,1-Dichloroethene	ND	1.0	ug/L	0.31
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.35
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.33
1,2-Dichloropropane	ND	1.0	ug/L	0.41
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.35
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.35
Ethylbenzene	ND	1.0	ug/L	0.41
2-Hexanone	ND	50	ug/L	0.58
Isopropylbenzene	ND	5.0	ug/L	0.39
Methyl acetate	ND	10	ug/L	0.54
Methylene chloride	ND	5.0	ug/L	0.29
Methylcyclohexane	ND	1.0	ug/L	0.42
4-Methyl-2-pentanone	ND	50	ug/L	0.26
Methyl tert-butyl ether	ND	5.0	ug/L	0.27
Styrene	ND	1.0	ug/L	0.35

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: TB-17360-071503-SP-066

GC/MS Volatiles

Lot-Sample #....: A3G160206-012 Work Order #....: FTEK61AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.36
Tetrachloroethene	ND	1.0	ug/L	0.42
Toluene	ND	1.0	ug/L	0.39
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.40
1,1,1-Trichloroethane	ND	1.0	ug/L	0.39
1,1,2-Trichloroethane	ND	1.0	ug/L	0.36
Trichloroethene	ND	1.0	ug/L	0.42
Trichlorofluoromethane	ND	1.0	ug/L	0.54
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.32
Vinyl chloride	ND	1.0	ug/L	0.36
Xylenes (total)	ND	3.0	ug/L	0.44
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	91	(73 - 122)		
1,2-Dichloroethane-d4	83	(61 - 128)		
Toluene-d8	97	(76 - 110)		
4-Bromofluorobenzene	86	(74 - 116)		

NOTE(S) :

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3G160206
 MB Lot-Sample #: A3G240000-241

Work Order #....: FT04L1AA

Matrix.....: WATER

Analysis Date...: 07/23/03
 Dilution Factor: 1

Prep Date.....: 07/23/03

Final Wgt/Vol...: 5 mL

Prep Batch #....: 3205241

Initial Wgt/Vol: 5 mL

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Acetone	ND	25	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	25	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Isopropylbenzene	ND	5.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	0.35 J	5.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3G160206

Work Order #...: FT04L1AA

Matrix.....: WATER

		REPORTING		
<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
1,2,4-Trichloro-benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
		PERCENT	RECOVERY	
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>		
Dibromofluoromethane	92	(73 - 122)		
1,2-Dichloroethane-d4	85	(61 - 128)		
Toluene-d8	99	(76 - 110)		
4-Bromofluorobenzene	87	(74 - 116)		

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3G160206
MB Lot-Sample #: A3G250000-166

Work Order #...: FT3GN1AA

Matrix.....: WATER

Analysis Date...: 07/24/03
Dilution Factor: 1

Prep Date.....: 07/24/03
Prep Batch #...: 3206166
Initial Wgt/Vol: 5 mL

Final Wgt/Vol...: 5 mL

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	25	ug/L		SW846 8260B
Benzene	ND	1.0	ug/L		SW846 8260B
Bromodichloromethane	ND	1.0	ug/L		SW846 8260B
Bromoform	ND	1.0	ug/L		SW846 8260B
Bromomethane	ND	1.0	ug/L		SW846 8260B
2-Butanone	ND	25	ug/L		SW846 8260B
Carbon disulfide	ND	5.0	ug/L		SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L		SW846 8260B
Chlorobenzene	ND	1.0	ug/L		SW846 8260B
Chloroethane	ND	1.0	ug/L		SW846 8260B
Chloroform	ND	1.0	ug/L		SW846 8260B
Chloromethane	ND	1.0	ug/L		SW846 8260B
Cyclohexane	ND	1.0	ug/L		SW846 8260B
Dibromochloromethane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L		SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L		SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
Ethylbenzene	ND	1.0	ug/L		SW846 8260B
2-Hexanone	ND	50	ug/L		SW846 8260B
Isopropylbenzene	ND	5.0	ug/L		SW846 8260B
Methyl acetate	ND	10	ug/L		SW846 8260B
Methylene chloride	ND	5.0	ug/L		SW846 8260B
Methylcyclohexane	ND	1.0	ug/L		SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L		SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L		SW846 8260B
Styrene	ND	1.0	ug/L		SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L		SW846 8260B
Tetrachloroethene	ND	1.0	ug/L		SW846 8260B
Toluene	ND	1.0	ug/L		SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3G160206

Work Order #...: FT3GN1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro- benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	90		(73 - 122)	
1,2-Dichloroethane-d4	83		(61 - 128)	
Toluene-d8	99		(76 - 110)	
4-Bromofluorobenzene	88		(74 - 116)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3G160206
MB Lot-Sample #: A3G250000-213

Work Order #...: FT3NQ1AA

Matrix.....: WATER

Analysis Date...: 07/24/03
Dilution Factor: 1

Prep Date.....: 07/24/03
Prep Batch #...: 3206213
Initial Wgt/Vol: 5 mL

Final Wgt/Vol...: 5 mL

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	25	ug/L		SW846 8260B
Benzene	ND	1.0	ug/L		SW846 8260B
Bromodichloromethane	ND	1.0	ug/L		SW846 8260B
Bromoform	ND	1.0	ug/L		SW846 8260B
Bromomethane	ND	1.0	ug/L		SW846 8260B
2-Butanone	ND	25	ug/L		SW846 8260B
Carbon disulfide	ND	5.0	ug/L		SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L		SW846 8260B
Chlorobenzene	ND	1.0	ug/L		SW846 8260B
Chloroethane	ND	1.0	ug/L		SW846 8260B
Chloroform	ND	1.0	ug/L		SW846 8260B
Chloromethane	ND	1.0	ug/L		SW846 8260B
Cyclohexane	ND	1.0	ug/L		SW846 8260B
Dibromochloromethane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L		SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L		SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
Ethylbenzene	ND	1.0	ug/L		SW846 8260B
2-Hexanone	ND	50	ug/L		SW846 8260B
Isopropylbenzene	ND	5.0	ug/L		SW846 8260B
Methyl acetate	ND	1.0	ug/L		SW846 8260B
Methylene chloride	0.46 J	5.0	ug/L		SW846 8260B
Methylcyclohexane	ND	1.0	ug/L		SW846 8260B
4-Methyl-2-pentanone	ND	50	ug/L		SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L		SW846 8260B
Styrene	ND	1.0	ug/L		SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L		SW846 8260B
Tetrachloroethene	ND	1.0	ug/L		SW846 8260B
Toluene	ND	1.0	ug/L		SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: A3G160206

Work Order #....: FT3NQ1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro- benzene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	102		(73 - 122)	
1,2-Dichloroethane-d4	115		(61 - 128)	
Toluene-d8	98		(76 - 110)	
4-Bromofluorobenzene	100		(74 - 116)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A3G160206 Work Order #...: FT04L1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G240000-241 FT04L1AD-LCSD
 Prep Date.....: 07/23/03 Analysis Date...: 07/23/03
 Prep Batch #...: 3205241
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.4	ug/L	94		SW846 8260B
	10	9.5	ug/L	95	1.7	SW846 8260B
Chlorobenzene	10	10	ug/L	104		SW846 8260B
	10	11	ug/L	106	2.2	SW846 8260B
1,1-Dichloroethene	10	9.6	ug/L	96		SW846 8260B
	10	9.7	ug/L	97	1.3	SW846 8260B
Toluene	10	10	ug/L	101		SW846 8260B
	10	10	ug/L	103	1.9	SW846 8260B
Trichloroethene	10	8.4	ug/L	84		SW846 8260B
	10	8.8	ug/L	88	4.7	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(73 - 122)
	87	(73 - 122)
1,2-Dichloroethane-d4	79	(61 - 128)
	84	(61 - 128)
Toluene-d8	99	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	101	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A3G160206 Work Order #...: FT04L1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G240000-241 FT04L1AD-LCSD
 Prep Date.....: 07/23/03 Analysis Date...: 07/23/03
 Prep Batch #...: 3205241
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	94	(80 - 116)			SW846 8260B
	95	(80 - 116)	1.7	(0-20)	SW846 8260B
Chlorobenzene	104	(76 - 117)			SW846 8260B
	106	(76 - 117)	2.2	(0-20)	SW846 8260B
1,1-Dichloroethene	96	(63 - 130)			SW846 8260B
	97	(63 - 130)	1.3	(0-20)	SW846 8260B
Toluene	101	(74 - 119)			SW846 8260B
	103	(74 - 119)	1.9	(0-20)	SW846 8260B
Trichloroethene	84	(75 - 122)			SW846 8260B
	88	(75 - 122)	4.7	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	86	(73 - 122)
	87	(73 - 122)
1,2-Dichloroethane-d4	79	(61 - 128)
	84	(61 - 128)
Toluene-d8	99	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	101	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A3G160206 Work Order #...: FT3GN1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G250000-166 FT3GN1AD-LCSD
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #...: 3206166
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
Benzene	10	9.2	ug/L	92		SW846 8260B
	10	9.5	ug/L	95	2.8	SW846 8260B
Chlorobenzene	10	10	ug/L	104		SW846 8260B
	10	11	ug/L	107	2.6	SW846 8260B
1,1-Dichloroethene	10	9.3	ug/L	93		SW846 8260B
	10	9.5	ug/L	95	2.3	SW846 8260B
Toluene	10	10	ug/L	102		SW846 8260B
	10	10	ug/L	104	2.1	SW846 8260B
Trichloroethene	10	8.3	ug/L	83		SW846 8260B
	10	8.6	ug/L	86	4.5	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	87	(73 - 122)
	88	(73 - 122)
1,2-Dichloroethane-d4	84	(61 - 128)
	81	(61 - 128)
Toluene-d8	100	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	101	(74 - 116)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3G160206 Work Order #....: FT3GN1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G250000-166 FT3GN1AD-LCSD
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206166
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Benzene	92	(80 - 116)			SW846 8260B
	95	(80 - 116)	2.8	(0-20)	SW846 8260B
Chlorobenzene	104	(76 - 117)			SW846 8260B
	107	(76 - 117)	2.6	(0-20)	SW846 8260B
1,1-Dichloroethene	93	(63 - 130)			SW846 8260B
	95	(63 - 130)	2.3	(0-20)	SW846 8260B
Toluene	102	(74 - 119)			SW846 8260B
	104	(74 - 119)	2.1	(0-20)	SW846 8260B
Trichloroethene	83	(75 - 122)			SW846 8260B
	86	(75 - 122)	4.5	(0-20)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	87	(73 - 122)
	88	(73 - 122)
1,2-Dichloroethane-d4	84	(61 - 128)
	81	(61 - 128)
Toluene-d8	100	(76 - 110)
	100	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	101	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3G160206 Work Order #....: FT3NQLAC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G250000-213 FT3NQLAD-LCSD
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206213
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	10	ug/L	102		SW846 8260B
	10	11	ug/L	113	9.8	SW846 8260B
Chlorobenzene	10	9.8	ug/L	98		SW846 8260B
	10	11	ug/L	106	8.4	SW846 8260B
1,1-Dichloroethene	10	10	ug/L	102		SW846 8260B
	10	11	ug/L	107	4.9	SW846 8260B
Toluene	10	9.9	ug/L	99		SW846 8260B
	10	11	ug/L	110	9.9	SW846 8260B
Trichloroethene	10	9.0	ug/L	90		SW846 8260B
	10	9.7	ug/L	97	7.8	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
	112	(61 - 128)
Toluene-d8	100	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	113	(74 - 116)
	113	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3G160206 Work Order #....: FT3NQ1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G250000-213 FT3NQ1AD-LCSD
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206213
 Dilution Factor: 1 Final Wgt/Vol...: 5 mL
 Initial Wgt/Vol: 5 mL

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Benzene	102	(80 - 116)			SW846 8260B
	113	(80 - 116)	9.8	(0-20)	SW846 8260B
Chlorobenzene	98	(76 - 117)			SW846 8260B
	106	(76 - 117)	8.4	(0-20)	SW846 8260B
1,1-Dichloroethene	102	(63 - 130)			SW846 8260B
	107	(63 - 130)	4.9	(0-20)	SW846 8260B
Toluene	99	(74 - 119)			SW846 8260B
	110	(74 - 119)	9.9	(0-20)	SW846 8260B
Trichloroethene	90	(75 - 122)			SW846 8260B
	97	(75 - 122)	7.8	(0-20)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
	112	(61 - 128)
Toluene-d8	100	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	113	(74 - 116)
	113	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3G160206 Work Order #....: FTEKR1AC-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-003 FTEKR1AD-MSD
 Date Sampled...: 07/15/03 09:26 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206166
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	9.6	ug/L	96		SW846 8260B
	ND	10	9.8	ug/L	98	2.0	SW846 8260B
Chlorobenzene	ND	10	11	ug/L	107		SW846 8260B
	ND	10	11	ug/L	106	1.1	SW846 8260B
1,1-Dichloroethene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	10	ug/L	100	1.9	SW846 8260B
Toluene	ND	10	11	ug/L	104		SW846 8260B
	ND	10	11	ug/L	104	0.48	SW846 8260B
Trichloroethene	0.54	10	9.1	ug/L	86		SW846 8260B
	0.54	10	9.3	ug/L	88	2.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
	88	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
	85	(61 - 128)
Toluene-d8	101	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	99	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: A3G160206 Work Order #....: FTEKR1AC-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-003 FTEKR1AD-MSD
 Date Sampled...: 07/15/03 09:26 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206166
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	96	(78 - 118)			SW846 8260B
	98	(78 - 118)	2.0	(0-20)	SW846 8260B
Chlorobenzene	107	(76 - 117)			SW846 8260B
	106	(76 - 117)	1.1	(0-20)	SW846 8260B
1,1-Dichloroethene	102	(62 - 130)			SW846 8260B
	100	(62 - 130)	1.9	(0-20)	SW846 8260B
Toluene	104	(70 - 119)			SW846 8260B
	104	(70 - 119)	0.48	(0-20)	SW846 8260B
Trichloroethene	86	(62 - 130)			SW846 8260B
	88	(62 - 130)	2.1	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	89	(73 - 122)
	88	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
	85	(61 - 128)
Toluene-d8	101	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	98	(74 - 116)
	99	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: A3G160206 Work Order #....: FTEKT1AC-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-004 FTEKT1AD-MSD
 Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #....: 3206213
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	10	ug/L	103		SW846 8260B
	ND	10	10	ug/L	102	1.3	SW846 8260B
Chlorobenzene	ND	10	9.3	ug/L	93		SW846 8260B
	ND	10	9.2	ug/L	92	0.93	SW846 8260B
1,1-Dichloroethene	ND	10	11	ug/L	106		SW846 8260B
	ND	10	10	ug/L	103	3.5	SW846 8260B
Toluene	ND	10	9.9	ug/L	99		SW846 8260B
	ND	10	9.8	ug/L	98	0.76	SW846 8260B
Trichloroethene	3.0	10	11	ug/L	84		SW846 8260B
	3.0	10	11	ug/L	85	0.42	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	104	(73 - 122)
1,2-Dichloroethane-d4	119	(61 - 128)
	120	(61 - 128)
Toluene-d8	100	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	113	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A3G160206 Work Order #...: FTEKT1AC-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-004 FTEKT1AD-MSD
 Date Sampled...: 07/15/03 10:15 Date Received...: 07/16/03
 Prep Date.....: 07/24/03 Analysis Date...: 07/24/03
 Prep Batch #...: 3206213
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	103	(78 - 118)			SW846 8260B
	102	(78 - 118)	1.3	(0-20)	SW846 8260B
Chlorobenzene	93	(76 - 117)			SW846 8260B
	92	(76 - 117)	0.93	(0-20)	SW846 8260B
1,1-Dichloroethene	106	(62 - 130)			SW846 8260B
	103	(62 - 130)	3.5	(0-20)	SW846 8260B
Toluene	99	(70 - 119)			SW846 8260B
	98	(70 - 119)	0.76	(0-20)	SW846 8260B
Trichloroethene	84	(62 - 130)			SW846 8260B
	85	(62 - 130)	0.42	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	104	(73 - 122)
1,2-Dichloroethane-d4	119	(61 - 128)
	120	(61 - 128)
Toluene-d8	100	(76 - 110)
	102	(76 - 110)
4-Bromofluorobenzene	112	(74 - 116)
	113	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

GCMS SEMIVOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-064

GC/MS Semivolatiles

Lot-Sample #....: A3G160206-011 Work Order #....: FTEK31AA Matrix.....: WG
 Date Sampled....: 07/15/03 13:10 Date Received...: 07/16/03
 Prep Date.....: 07/17/03 Analysis Date...: 07/23/03
 Prep Batch #....: 3198113
 Dilution Factor: 50 Initial Wgt/Vol: 1000 mL Final Wgt/Vol...: 2 mL
 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	250	ug/L	34
Acenaphthylene	ND	250	ug/L	20
Acetophenone	ND	250	ug/L	32
Anthracene	ND	250	ug/L	30
Atrazine	ND	250	ug/L	18
Benzo(a)anthracene	ND	200	ug/L	34
Benzo(a)pyrene	ND	200	ug/L	26
Benzo(b)fluoranthene	ND	200	ug/L	36
Benzo(ghi)perylene	ND	250	ug/L	35
Benzo(k)fluoranthene	ND	250	ug/L	32
Benzaldehyde	ND	500	ug/L	30
1,1'-Biphenyl	ND	500	ug/L	32
bis(2-Chloroethoxy) methane	ND	250	ug/L	50
bis(2-Chloroethyl)- ether	ND	200	ug/L	85
bis(2-Ethylhexyl) phthalate	20 J,B	250	ug/L	10
4-Bromophenyl phenyl ether	ND	250	ug/L	39
Butyl benzyl phthalate	ND	250	ug/L	12
Caprolactam	ND	500	ug/L	22
Carbazole	ND	500	ug/L	30
4-Chloroaniline	ND	1000	ug/L	45
4-Chloro-3-methylphenol	ND	250	ug/L	28
2-Chloronaphthalene	ND	250	ug/L	36
2-Chlorophenol	ND	250	ug/L	65
4-Chlorophenyl phenyl ether	ND	250	ug/L	33
Chrysene	ND	250	ug/L	34
Dibenz(a,h)anthracene	ND	200	ug/L	34
Dibenzofuran	ND	250	ug/L	33
3,3'-Dichlorobenzidine	ND	200	ug/L	24
2,4-Dichlorophenol	ND	500	ug/L	35
Diethyl phthalate	ND	250	ug/L	12
2,4-Dimethylphenol	ND	250	ug/L	50
Dimethyl phthalate	ND	250	ug/L	10
Di-n-butyl phthalate	ND	250	ug/L	18

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-064

GC/MS Semivolatiles

Lot-Sample #....: A3G160206-011 Work Order #....: FTEK31AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
4,6-Dinitro- 2-methylphenol	ND	1000	ug/L	100
2,4-Dinitrophenol	ND	1000	ug/L	160
2,4-Dinitrotoluene	ND	250	ug/L	23
2,6-Dinitrotoluene	ND	250	ug/L	36
Di-n-octyl phthalate	ND	250	ug/L	34
Fluoranthene	ND	250	ug/L	36
Fluorene	ND	250	ug/L	38
Hexachlorobenzene	ND	250	ug/L	38
Hexachlorobutadiene	ND	250	ug/L	75
Hexachlorocyclopenta- diene	ND	250	ug/L	55
Hexachloroethane	ND	250	ug/L	80
Indeno (1,2,3-cd) pyrene	ND	200	ug/L	34
Isophorone	ND	250	ug/L	43
2-Methylnaphthalene	ND	250	ug/L	46
2-Methylphenol	ND	250	ug/L	45
4-Methylphenol	ND	250	ug/L	36
Naphthalene	ND	250	ug/L	65
2-Nitroaniline	ND	1000	ug/L	24
3-Nitroaniline	ND	1000	ug/L	24
4-Nitroaniline	ND	1000	ug/L	30
Nitrobenzene	ND	200	ug/L	65
2-Nitrophenol	ND	250	ug/L	48
4-Nitrophenol	ND	1000	ug/L	180
N-Nitrosodi-n-propyl- amine	ND	250	ug/L	55
N-Nitrosodiphenylamine	ND	250	ug/L	32
2,2'-oxybis (1-Chloropropane)	ND	250	ug/L	90
Pentachlorophenol	ND	1000	ug/L	130
Phenanthrene	ND	250	ug/L	34
Phenol	ND	250	ug/L	65
Pyrene	ND	250	ug/L	32
2,4,5-Trichloro- phenol	ND	250	ug/L	43
2,4,6-Trichloro- phenol	ND	200	ug/L	36
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Nitrobenzene-d5	0.0 DIL, *	(32 - 112)		
2-Fluorobiphenyl	0.0 DIL, *	(30 - 110)		
Terphenyl-d14	0.0 DIL, *	(10 - 144)		
Phenol-d5	70 DIL	(10 - 113)		
2-Fluorophenol	0.0 DIL, *	(13 - 110)		
2,4,6-Tribromophenol	0.0 DIL, *	(21 - 122)		

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-064

GC/MS Semivolatiles

Lot-Sample #....: A3G160206-011 Work Order #....: FTEK31AA Matrix.....: WG

NOTE(S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #....: A3G160206
MB Lot-Sample #: A3G170000-113

Work Order #....: FTF2M1AA

Matrix.....: WATER

Analysis Date...: 07/22/03
Dilution Factor: 1

Prep Date.....: 07/17/03
Prep Batch #....: 3198113
Initial Wgt/Vol: 1000 mL

Final Wgt/Vol...: 2 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.0	ug/L	SW846 8270C
Acenaphthylene	ND	5.0	ug/L	SW846 8270C
Acetophenone	ND	5.0	ug/L	SW846 8270C
Anthracene	ND	5.0	ug/L	SW846 8270C
Atrazine	ND	5.0	ug/L	SW846 8270C
Benzo(a)anthracene	ND	4.0	ug/L	SW846 8270C
Benzo(a)pyrene	ND	4.0	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	4.0	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	5.0	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	5.0	ug/L	SW846 8270C
Benzaldehyde	ND	10	ug/L	SW846 8270C
1,1'-Biphenyl	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	5.0	ug/L	SW846 8270C
bis(2-Chloroethyl)- ether	ND	4.0	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	0.83 J	5.0	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	5.0	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	5.0	ug/L	SW846 8270C
Caprolactam	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	20	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	5.0	ug/L	SW846 8270C
2-Chloronaphthalene	ND	5.0	ug/L	SW846 8270C
2-Chlorophenol	ND	5.0	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	5.0	ug/L	SW846 8270C
Chrysene	ND	5.0	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	4.0	ug/L	SW846 8270C
Dibenzofuran	ND	5.0	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	4.0	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	5.0	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	5.0	ug/L	SW846 8270C
Dimethyl phthalate	ND	5.0	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	5.0	ug/L	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	20	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	20	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #....: A3G160206

Work Order #....: FTF2M1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrotoluene	ND	5.0	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	5.0	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	5.0	ug/L	SW846 8270C
Fluoranthene	ND	5.0	ug/L	SW846 8270C
Fluorene	ND	5.0	ug/L	SW846 8270C
Hexachlorobenzene	ND	5.0	ug/L	SW846 8270C
Hexachlorobutadiene	ND	5.0	ug/L	SW846 8270C
Hexachlorocyclopenta- diene	ND	5.0	ug/L	SW846 8270C
Hexachloroethane	ND	5.0	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	4.0	ug/L	SW846 8270C
Isophorone	ND	5.0	ug/L	SW846 8270C
2-Methylnaphthalene	ND	5.0	ug/L	SW846 8270C
2-Methylphenol	ND	5.0	ug/L	SW846 8270C
4-Methylphenol	ND	5.0	ug/L	SW846 8270C
Naphthalene	ND	5.0	ug/L	SW846 8270C
2-Nitroaniline	ND	20	ug/L	SW846 8270C
3-Nitroaniline	ND	20	ug/L	SW846 8270C
4-Nitroaniline	ND	20	ug/L	SW846 8270C
Nitrobenzene	ND	4.0	ug/L	SW846 8270C
2-Nitrophenol	ND	5.0	ug/L	SW846 8270C
4-Nitrophenol	ND	20	ug/L	SW846 8270C
N-Nitrosodi-n-propyl- amine	ND	5.0	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	5.0	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	5.0	ug/L	SW846 8270C
Pentachlorophenol	ND	20	ug/L	SW846 8270C
Phenanthrene	ND	5.0	ug/L	SW846 8270C
Phenol	ND	5.0	ug/L	SW846 8270C
Pyrene	ND	5.0	ug/L	SW846 8270C
2,4,5-Trichloro- phenol	ND	5.0	ug/L	SW846 8270C
2,4,6-Trichloro- phenol	ND	4.0	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(32 - 112)
2-Fluorobiphenyl	55	(30 - 110)
Terphenyl-d14	61	(10 - 144)
Phenol-d5	69	(10 - 113)
2-Fluorophenol	60	(13 - 110)
2,4,6-Tribromophenol	60	(21 - 122)

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #....: A3G160206

Work Order #....: FTF2MLAA

Matrix.....: WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A3G160206 Work Order #...: FTF2MLAC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G170000-113 FTF2MLAD-LCSD
 Prep Date.....: 07/17/03 Analysis Date...: 07/22/03
 Prep Batch #...: 3198113
 Dilution Factor: 1 Final Wgt/Vol...: 2 mL
 Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	20	15	ug/L	73		SW846 8270C
	20	14	ug/L	70	4.5	SW846 8270C
1,2,4-Trichloro- benzene	20	14	ug/L	69		SW846 8270C
	20	13	ug/L	66	5.1	SW846 8270C
1,4-Dichlorobenzene	20	15	ug/L	73		SW846 8270C
	20	14	ug/L	70	3.5	SW846 8270C
4-Chloro-3-methylphenol	20	16	ug/L	78		SW846 8270C
	20	15	ug/L	73	6.7	SW846 8270C
2-Chlorophenol	20	15	ug/L	73		SW846 8270C
	20	14	ug/L	70	3.7	SW846 8270C
2,4-Dinitrotoluene	20	15	ug/L	77		SW846 8270C
	20	15	ug/L	75	1.8	SW846 8270C
4-Nitrophenol	20	16	ug/L	79		SW846 8270C
	20	15	ug/L	73	7.3	SW846 8270C
N-Nitrosodi-n-propyl- amine	20	16	ug/L	78		SW846 8270C
	20	15	ug/L	77	1.8	SW846 8270C
Pentachlorophenol	20	16	ug/L	81		SW846 8270C
	20	15	ug/L	77	5.7	SW846 8270C
Phenol	20	13	ug/L	66		SW846 8270C
	20	12	ug/L	61	9.0	SW846 8270C
Pyrene	20	13	ug/L	64		SW846 8270C
	20	12	ug/L	62	2.4	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	86	(32 - 112)
	82	(32 - 112)
2-Fluorobiphenyl	70	(30 - 110)
	68	(30 - 110)
Terphenyl-d14	71	(10 - 144)
	67	(10 - 144)
Phenol-d5	79	(10 - 113)
	71	(10 - 113)
2-Fluorophenol	72	(13 - 110)
	66	(13 - 110)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: A3G160206 Work Order #....: FTF2M1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A3G170000-113 FTF2M1AD-LCSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2,4,6-Tribromophenol	79	(21 - 122)
	75	(21 - 122)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: A3G160206 Work Order #....: FTF2M1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A3G170000-113 FTF2M1AD-LCSD
 Prep Date.....: 07/17/03 Analysis Date...: 07/22/03
 Prep Batch #....: 3198113
 Dilution Factor: 1 Final Wgt/Vol...: 2 mL
 Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	73	(39 - 118)			SW846 8270C
	70	(39 - 118)	4.5	(0-35)	SW846 8270C
1,2,4-Trichloro- benzene	69	(31 - 110)			SW846 8270C
	66	(31 - 110)	5.1	(0-37)	SW846 8270C
1,4-Dichlorobenzene	73	(28 - 110)			SW846 8270C
	70	(28 - 110)	3.5	(0-36)	SW846 8270C
4-Chloro-3-methylphenol	78	(29 - 124)			SW846 8270C
	73	(29 - 124)	6.7	(0-55)	SW846 8270C
2-Chlorophenol	73	(19 - 124)			SW846 8270C
	70	(19 - 124)	3.7	(0-43)	SW846 8270C
2,4-Dinitrotoluene	77	(47 - 131)			SW846 8270C
	75	(47 - 131)	1.8	(0-32)	SW846 8270C
4-Nitrophenol	79	(19 - 144)			SW846 8270C
	73	(19 - 144)	7.3	(0-34)	SW846 8270C
N-Nitrosodi-n-propyl- amine	78	(30 - 115)			SW846 8270C
	77	(30 - 115)	1.8	(0-36)	SW846 8270C
Pentachlorophenol	81	(10 - 140)			SW846 8270C
	77	(10 - 140)	5.7	(0-56)	SW846 8270C
Phenol	66	(10 - 131)			SW846 8270C
	61	(10 - 131)	9.0	(0-43)	SW846 8270C
Pyrene	64	(46 - 130)			SW846 8270C
	62	(46 - 130)	2.4	(0-31)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	86	(32 - 112)
	82	(32 - 112)
2-Fluorobiphenyl	70	(30 - 110)
	68	(30 - 110)
Terphenyl-d14	71	(10 - 144)
	67	(10 - 144)
Phenol-d5	79	(10 - 113)
	71	(10 - 113)
2-Fluorophenol	72	(13 - 110)
	66	(13 - 110)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: A3G160206 Work Order #....: FTF2M1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A3G170000-113 FTF2M1AD-LCSD

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
2,4,6-Tribromophenol	79	(21 - 122)
	75	(21 - 122)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DISSOLVED GASES/RSK DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-055

GC Volatiles

Lot-Sample #....: A3G160206-001 Work Order #....: FTEKE1AK Matrix.....: WG
 Date Sampled....: 07/15/03 08:16 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-056

GC Volatiles

Lot-Sample #...: A3G160206-002 Work Order #...: FTEKQ1AK Matrix.....: WG
Date Sampled...: 07/15/03 08:30 Date Received...: 07/16/03
Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
Prep Batch #...: 3209119
Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-057

GC Volatiles

Lot-Sample #....: A3G160206-003 Work Order #....: FTEKR1A4 Matrix.....: WG
 Date Sampled....: 07/15/03 09:26 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-058

GC Volatiles

Lot-Sample #....: A3G160206-004 Work Order #....: FTEXT1A4 Matrix.....: WG
Date Sampled...: 07/15/03 10:15 Date Received...: 07/16/03
Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
Prep Batch #....: 3209119
Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
Method.....: RSK SOP-175

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-059

GC Volatiles

Lot-Sample #...: A3G160206-005 Work Order #...: FTEKVLAK Matrix.....: WG
 Date Sampled...: 07/15/03 12:11 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #...: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-060

GC Volatiles

Lot-Sample #....: A3G160206-006 Work Order #....: FTEKW1AK Matrix.....: WG
 Date Sampled...: 07/15/03 11:52 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	0.68	0.50	ug/L	0.29
Methane	73	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-061

GC Volatiles

Lot-Sample #....: A3G160206-007 Work Order #....: FTEKX1AK Matrix.....: WG
 Date Sampled....: 07/15/03 15:01 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	88	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-062

GC Volatiles

Lot-Sample #....: A3G160206-008 Work Order #....: FTEK01AK Matrix.....: WG
Date Sampled....: 07/15/03 15:31 Date Received...: 07/16/03
Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
Prep Batch #....: 3209119
Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	0.86	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-063

GC Volatiles

Lot-Sample #....: A3G160206-009 Work Order #....: FTEK11AK Matrix.....: WG
 Date Sampled....: 07/15/03 16:20 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-065

GC Volatiles

Lot-Sample #....: A3G160206-010 Work Order #....: FTEK21AK Matrix.....: WG
 Date Sampled....: 07/15/03 17:11 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL
 Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Ethane	ND	0.50	ug/L	0.30
Ethene	ND	0.50	ug/L	0.29
Methane	ND	0.50	ug/L	0.39

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: A3G160206 Work Order #...: FT6QD1AA Matrix.....: WATER
 MB Lot-Sample #: A3G280000-119 Prep Date.....: 07/28/03 Final Wgt/Vol...: 1 mL
 Analysis Date...: 07/28/03 Prep Batch #...: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Methane	ND	0.50	ug/L	RSK SOP-175
Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A3G160206 Work Order #...: FT6QD1AC Matrix.....: WATER
 LCS Lot-Sample#: A3G280000-119
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #...: 3209119
 Dilution Factor: 1 Final Wgt/Vol...: 1 mL
 Initial Wgt/Vol: 1 mL

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Methane	73	72	ug/L	99	RSK SOP-175
Ethane	140	140	ug/L	102	RSK SOP-175
Ethene	130	130	ug/L	101	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #....: A3G160206 Work Order #....: FT6QD1AC Matrix.....: WATER
 LCS Lot-Sample#: A3G2800000-119
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Final Wgt/Vol...: 1 mL
 Initial Wgt/Vol: 1 mL

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Methane	99	(70 - 130)	RSK SOP-175
Ethane	102	(70 - 130)	RSK SOP-175
Ethene	101	(70 - 130)	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: A3G160206 Work Order #...: FTEKR1A5-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-003 FTEKR1A6-MSD
 Date Sampled...: 07/15/03 09:26 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #...: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Methane	ND	73	72	ug/L	99		RSK SOP-175
	ND	73	71	ug/L	97	2.0	RSK SOP-175
Ethane	ND	140	140	ug/L	103		RSK SOP-175
	ND	140	140	ug/L	101	2.2	RSK SOP-175
Ethene	ND	130	130	ug/L	104		RSK SOP-175
	ND	130	130	ug/L	101	2.5	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: A3G160206 Work Order #...: FTEKR1A5-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-003 FTEKR1A6-MSD
 Date Sampled...: 07/15/03 09:26 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #...: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	99	(70 - 130)			RSK SOP-175
	97	(70 - 130)	2.0	(0-30)	RSK SOP-175
Ethane	103	(70 - 130)			RSK SOP-175
	101	(70 - 130)	2.2	(0-30)	RSK SOP-175
Ethene	104	(70 - 130)			RSK SOP-175
	101	(70 - 130)	2.5	(0-30)	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #....: A3G160206 Work Order #....: FTEKT1A5-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-004 FTEKT1A6-MSD
 Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Methane	ND	73	73	ug/L	100		RSK SOP-175
	ND	73	72	ug/L	99	0.44	RSK SOP-175
Ethane	ND	140	140	ug/L	104		RSK SOP-175
	ND	140	140	ug/L	103	0.56	RSK SOP-175
Ethene	ND	130	130	ug/L	104		RSK SOP-175
	ND	130	130	ug/L	103	1.2	RSK SOP-175

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #....: A3G160206 Work Order #....: FTEKT1A5-MS Matrix.....: WG
 MS Lot-Sample #: A3G160206-004 FTEKT1A6-MSD
 Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03
 Prep Date.....: 07/28/03 Analysis Date...: 07/28/03
 Prep Batch #....: 3209119
 Dilution Factor: 1 Initial Wgt/Vol: 1 mL Final Wgt/Vol...: 1 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	100	(70 - 130)			RSK SOP-175
	99	(70 - 130)	0.44	(0-30)	RSK SOP-175
Ethane	104	(70 - 130)			RSK SOP-175
	103	(70 - 130)	0.56	(0-30)	RSK SOP-175
Ethene	104	(70 - 130)			RSK SOP-175
	103	(70 - 130)	1.2	(0-30)	RSK SOP-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

METALS DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-055

TOTAL Metals

Lot-Sample #....: A3G160206-001

Matrix.....: WG

Date Sampled....: 07/15/03 08:16 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198098						
Calcium	100	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKEIAL
		Dilution Factor: 1		Analysis Time...: 17:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	21.2	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKEIAM
		Dilution Factor: 1		Analysis Time...: 17:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.0033 B	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEKEIAN
		Dilution Factor: 1		Analysis Time...: 17:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

NOTE(S) :

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: CW-17360-071503-SP-056

TOTAL Metals

Lot-Sample #....: A3G160206-002

Matrix.....: WG

Date Sampled...: 07/15/03 08:30 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198098						
Calcium	109	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKQ1AL
		Dilution Factor: 1		Analysis Time...: 17:48	Analyst ID.....: 001644	
		Instrument ID...: 15		MDL.....: 0.059		
Magnesium	23.1	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKQ1AM
		Dilution Factor: 1		Analysis Time...: 17:48	Analyst ID.....: 001644	
		Instrument ID...: 15		MDL.....: 0.035		
Manganese	0.0021 B	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEKQ1AN
		Dilution Factor: 1		Analysis Time...: 17:48	Analyst ID.....: 001644	
		Instrument ID...: 15		MDL.....: 0.00068		

NOTE(S) :

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-057

TOTAL Metals

Lot-Sample #...: A3G160206-003

Matrix.....: WG

Date Sampled...: 07/15/03 09:26 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3198098						
Calcium	80.5	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKR1A7
		Dilution Factor: 1		Analysis Time...: 17:52	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	17.0	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKR1CA
		Dilution Factor: 1		Analysis Time...: 17:52	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.020	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEKR1CE
		Dilution Factor: 1		Analysis Time...: 17:52	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-058

TOTAL Metals

Lot-Sample #....: A3G160206-004

Matrix.....: WG

Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #....: 3198098						
Calcium	105	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKTLA7
		Dilution Factor: 1		Analysis Time...: 18:07	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	22.9	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKTLCA
		Dilution Factor: 1		Analysis Time...: 18:07	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	ND	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEKTLCE
		Dilution Factor: 1		Analysis Time...: 18:07	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-059

TOTAL Metals

Lot-Sample #...: A3G160206-005

Matrix.....: WG

Date Sampled...: 07/15/03 12:11 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3198098						
Calcium	88.7	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKVLAL
		Dilution Factor: 1		Analysis Time...: 18:21	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.059		
Magnesium	20.4	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKVLAM
		Dilution Factor: 1		Analysis Time...: 18:21	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.035		
Manganese	0.0081 B	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEKVLAM
		Dilution Factor: 1		Analysis Time...: 18:21	Analyst ID.....: 001644	
		Instrument ID...: IS		MDL.....: 0.00068		

NOTE(S) :

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-060

TOTAL Metals

Lot-Sample #...: A3G160206-006

Matrix.....: WG

Date Sampled...: 07/15/03 11:52 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3198098						
Calcium	84.9	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKWIAL
		Dilution Factor: 1		Analysis Time...: 18:38		Analyst ID.....: 001644
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	22.5	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEKWIAM
		Dilution Factor: 1		Analysis Time...: 18:38		Analyst ID.....: 001644
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.040	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEKWIAN
		Dilution Factor: 1		Analysis Time...: 18:38		Analyst ID.....: 001644
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-061

TOTAL Metals

Lot-Sample #....: A3G160206-007

Matrix.....: WG

Date Sampled....: 07/15/03 15:01 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198098						
Calcium	89.7	5.0	mg/L	SW846 6010B	07/17-07/18/03 FTEKX1AL	
		Dilution Factor: 1		Analysis Time...: 18:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	24.0	5.0	mg/L	SW846 6010B	07/17-07/18/03 FTEKX1AM	
		Dilution Factor: 1		Analysis Time...: 18:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.54	0.015	mg/L	SW846 6010B	07/17-07/18/03 FTEKX1AN	
		Dilution Factor: 1		Analysis Time...: 18:43	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-062

TOTAL Metals

Lot-Sample #....: A3G160206-008

Matrix.....: WG

Date Sampled...: 07/15/03 15:31 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198098						
Calcium	88.8	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEK01AL
		Dilution Factor: 1		Analysis Time...: 18:47		Analyst ID.....: 001644
		Instrument ID...: IS		MDL.....: 0.059		
Magnesium	26.6	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEK01AM
		Dilution Factor: 1		Analysis Time...: 18:47		Analyst ID.....: 001644
		Instrument ID...: IS		MDL.....: 0.035		
Manganese	0.073	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEK01AN
		Dilution Factor: 1		Analysis Time...: 18:47		Analyst ID.....: 001644
		Instrument ID...: IS		MDL.....: 0.00068		

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-063

TOTAL Metals

Lot-Sample #....: A3G160206-009

Matrix.....: WG

Date Sampled....: 07/15/03 16:20 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198098						
Calcium	92.6	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEK11AL
		Dilution Factor: 1		Analysis Time...: 18:52	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	22.7	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEK11AM
		Dilution Factor: 1		Analysis Time...: 18:52	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.0012 B	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEK11AN
		Dilution Factor: 1		Analysis Time...: 18:52	Analyst ID.....: 001644	
		Instrument ID...: I5		MDL.....: 0.00068		

NOTE(S):

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-065

TOTAL Metals

Lot-Sample #....: A3G160206-010

Matrix.....: WG

Date Sampled....: 07/15/03 17:11 Date Received...: 07/16/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 3198098						
Calcium	97.8	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEK21AL
		Dilution Factor: 1		Analysis Time...: 18:56		Analyst ID.....: 001644
		Instrument ID...: I5		MDL.....: 0.059		
Magnesium	23.4	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTEK21AM
		Dilution Factor: 1		Analysis Time...: 18:56		Analyst ID.....: 001644
		Instrument ID...: I5		MDL.....: 0.035		
Manganese	0.020	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTEK21AN
		Dilution Factor: 1		Analysis Time...: 18:56		Analyst ID.....: 001644
		Instrument ID...: I5		MDL.....: 0.00068		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: A3G160206

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A3G170000-098 Prep Batch #....: 3198098						
Calcium	ND	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTFLJ1AA
		Dilution Factor: 1				
		Analysis Time...: 17:21		Analyst ID.....: 001644		Instrument ID...: I5
Magnesium	ND	5.0	mg/L	SW846 6010B	07/17-07/18/03	FTFLJ1AC
		Dilution Factor: 1				
		Analysis Time...: 17:21		Analyst ID.....: 001644		Instrument ID...: I5
Manganese	ND	0.015	mg/L	SW846 6010B	07/17-07/18/03	FTFLJ1AD
		Dilution Factor: 1				
		Analysis Time...: 17:21		Analyst ID.....: 001644		Instrument ID...: I5

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #....: A3G160206

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A3G170000-098 Prep Batch #....: 3198098							
Calcium	50.0	50.0	mg/L	100	SW846 6010B	07/17-07/18/03	FTFLJ1AE
			Dilution Factor: 1		Analysis Time...: 17:38	Analyst ID.....: 001644	
			Instrument ID...: I5				
Magnesium	50.0	47.8	mg/L	96	SW846 6010B	07/17-07/18/03	FTFLJ1AF
			Dilution Factor: 1		Analysis Time...: 17:38	Analyst ID.....: 001644	
			Instrument ID...: I5				
Manganese	0.50	0.51	mg/L	101	SW846 6010B	07/17-07/18/03	FTFLJ1AG
			Dilution Factor: 1		Analysis Time...: 17:38	Analyst ID.....: 001644	
			Instrument ID...: I5				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: A3G160206

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A3G170000-098 Prep Batch #....: 3198098					
Calcium	100	(80 - 120)	SW846 6010B	07/17-07/18/03	FTF1J1AE
		Dilution Factor: 1	Analysis Time...: 17:38	Analyst ID.....: 001644	
		Instrument ID...: I5			
Magnesium	96	(80 - 120)	SW846 6010B	07/17-07/18/03	FTF1J1AF
		Dilution Factor: 1	Analysis Time...: 17:38	Analyst ID.....: 001644	
		Instrument ID...: I5			
Manganese	101	(80 - 120)	SW846 6010B	07/17-07/18/03	FTF1J1AG
		Dilution Factor: 1	Analysis Time...: 17:38	Analyst ID.....: 001644	
		Instrument ID...: I5			

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A3G160206

Matrix.....: WG

Date Sampled...: 07/15/03 09:26 Date Received...: 07/16/03

PARAMETER	AMOUNT	AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3G160206-003 Prep Batch #...: 3198098									
Calcium									
	80.5	50.0	133	mg/L	105		SW846 6010B	07/17-07/18/03	FTEKR1A8
	80.5	50.0	128	mg/L	94	4.1	SW846 6010B	07/17-07/18/03	FTEKR1A9
Dilution Factor: 1									
Analysis Time...: 17:57 Instrument ID...: I5 Analyst ID.....: 001644									
Magnesium									
	17.0	50.0	67.1	mg/L	100		SW846 6010B	07/17-07/18/03	FTEKR1CC
	17.0	50.0	65.6	mg/L	97	2.3	SW846 6010B	07/17-07/18/03	FTEKR1CD
Dilution Factor: 1									
Analysis Time...: 17:57 Instrument ID...: I5 Analyst ID.....: 001644									
Manganese									
	0.020	0.50	0.54	mg/L	104		SW846 6010B	07/17-07/18/03	FTEKR1CF
	0.020	0.50	0.53	mg/L	102	1.3	SW846 6010B	07/17-07/18/03	FTEKR1CG
Dilution Factor: 1									
Analysis Time...: 17:57 Instrument ID...: I5 Analyst ID.....: 001644									

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: A3G160206

Matrix.....: WG

Date Sampled....: 07/15/03 09:26 Date Received...: 07/16/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3G160206-003 Prep Batch #....: 3198098						
Calcium	105	(75 - 125)		SW846 6010B	07/17-07/18/03	FTEKR1A8
	94	(75 - 125) 4.1	(0-20)	SW846 6010B	07/17-07/18/03	FTEKR1A9
Dilution Factor: 1						
Analysis Time...: 17:57 Instrument ID...: I5 Analyst ID.....: 001644						
Magnesium	100	(75 - 125)		SW846 6010B	07/17-07/18/03	FTEKR1CC
	97	(75 - 125) 2.3	(0-20)	SW846 6010B	07/17-07/18/03	FTEKR1CD
Dilution Factor: 1						
Analysis Time...: 17:57 Instrument ID...: I5 Analyst ID.....: 001644						
Manganese	104	(75 - 125)		SW846 6010B	07/17-07/18/03	FTEKR1CF
	102	(75 - 125) 1.3	(0-20)	SW846 6010B	07/17-07/18/03	FTEKR1CG
Dilution Factor: 1						
Analysis Time...: 17:57 Instrument ID...: I5 Analyst ID.....: 001644						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #....: A3G160206

Matrix.....: WG

Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03

PARAMETER	AMOUNT	SAMPLE SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3G160206-004 Prep Batch #....: 3198098									
Calcium									
105	50.0	147	mg/L	86			SW846 6010B	07/17-07/18/03	FTEKT1A8
105	50.0	149	mg/L	89	1.2		SW846 6010B	07/17-07/18/03	FTEKT1A9
Dilution Factor: 1									
Analysis Time...: 18:11 Instrument ID...: I5 Analyst ID.....: 001644									
Magnesium									
22.9	50.0	69.5	mg/L	93			SW846 6010B	07/17-07/18/03	FTEKT1CC
22.9	50.0	70.7	mg/L	96	1.6		SW846 6010B	07/17-07/18/03	FTEKT1CD
Dilution Factor: 1									
Analysis Time...: 18:11 Instrument ID...: I5 Analyst ID.....: 001644									
Manganese									
ND	0.50	0.50	mg/L	99			SW846 6010B	07/17-07/18/03	FTEKT1CF
ND	0.50	0.51	mg/L	101	1.7		SW846 6010B	07/17-07/18/03	FTEKT1CG
Dilution Factor: 1									
Analysis Time...: 18:11 Instrument ID...: I5 Analyst ID.....: 001644									

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: A3G160206

Matrix.....: WG

Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A3G160206-004 Prep Batch #....: 3198098						
Calcium	86	(75 - 125)		SW846 6010B	07/17-07/18/03	FTEKT1A8
	89	(75 - 125)	1.2 (0-20)	SW846 6010B	07/17-07/18/03	FTEKT1A9
		Dilution Factor: 1				
		Analysis Time...: 18:11		Instrument ID...: IS	Analyst ID.....: 001644	
Magnesium	93	(75 - 125)		SW846 6010B	07/17-07/18/03	FTEKT1CC
	96	(75 - 125)	1.6 (0-20)	SW846 6010B	07/17-07/18/03	FTEKT1CD
		Dilution Factor: 1				
		Analysis Time...: 18:11		Instrument ID...: IS	Analyst ID.....: 001644	
Manganese	99	(75 - 125)		SW846 6010B	07/17-07/18/03	FTEKT1CF
	101	(75 - 125)	1.7 (0-20)	SW846 6010B	07/17-07/18/03	FTEKT1CG
		Dilution Factor: 1				
		Analysis Time...: 18:11		Instrument ID...: IS	Analyst ID.....: 001644	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

GENERAL CHEMISTRY DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-055

General Chemistry

Lot-Sample #....: A3G160206-001 Work Order #....: FTEKE Matrix.....: WG
Date Sampled....: 07/15/03 08:16 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	253	5.0	mg/L	MCAWW 300.0A	07/17/03	3198364
			Dilution Factor: 5	MDL.....: 0.47		
Hardness, as CaCO3	450	10	mg/L	MCAWW 130.2	07/18/03	3199463
			Dilution Factor: 2	MDL.....: 4		
Nitrate as N	9.7 J	0.10	mg/L	MCAWW 300.0A	07/17/03	3198367
			Dilution Factor: 1	MDL.....: 0.0076		
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/17/03	3198366
			Dilution Factor: 1	MDL.....: 0.020		
Sulfate	45.2	1.0	mg/L	MCAWW 300.0A	07/17/03	3198369
			Dilution Factor: 1	MDL.....: 0.11		
Total Alkalinity	250 J	5.0	mg/L	MCAWW 310.1	07/16/03	3198582
			Dilution Factor: 1	MDL.....: 1.3		
Total Organic Carbon 3 J		1	mg/L	MCAWW 415.1	07/23/03	3205394
			Dilution Factor: 1	MDL.....: 0.7		
Total Sulfide	1.2	1.0	mg/L	MCAWW 376.1	07/21/03	3202471
			Dilution Factor: 1	MDL.....: 0.25		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-056

General Chemistry

Lot-Sample #....: A3G160206-002 Work Order #....: FTEKQ Matrix.....: WG
Date Sampled....: 07/15/03 08:30 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	244	5.0	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.47	07/17/03	3198364
Hardness, as CaCO3	460	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/18/03	3199463
Nitrate as N	9.5 J	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/17/03	3198367
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/17/03	3198366
Sulfate	45.3	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/17/03	3198369
Total Alkalinity	250 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3198582
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/23/03	3205394
Total Sulfide	1.2	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/21/03	3202471

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-057

General Chemistry

Lot-Sample #....: A3G160206-003 Work Order #....: FTEKR Matrix.....: WG
Date Sampled....: 07/15/03 09:26 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	351	5.0	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.47	07/17/03	3198364
Hardness, as CaCO ₃	400	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/17/03	3198509
Nitrate as N	7.3 J	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/17/03	3198367
Nitrite as N	ND G	0.50	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.10	07/17/03	3198366
Sulfate	53.2	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/17/03	3198369
Total Alkalinity	300 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3198582
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/23/03	3205394
Total Sulfide	0.70 B	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/21/03	3202471

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-058

General Chemistry

Lot-Sample #....: A3G160206-004 Work Order #....: FTEKT Matrix.....: WG
 Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride	203	5.0	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.47	07/17/03	3198364
Hardness, as CaCO ₃	400	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/18/03	3199463
Nitrate as N	3.8 J	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/17/03	3198367
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/17/03	3198366
Sulfate	61.2	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/17/03	3198369
Total Alkalinity	260 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/16/03	3198582
Total Organic Carbon 2		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/23/03	3205395
Total Sulfide	0.70 B	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/21/03	3202471

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-059

General Chemistry

Lot-Sample #....: A3G160206-005 Work Order #....: FTEKV Matrix.....: WG
Date Sampled....: 07/15/03 12:11 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	219	5.0	mg/L	MCAWW 300.0A	07/17/03	3198364
		Dilution Factor: 5		MDL.....: 0.47		
Hardness, as CaCO ₃	380	5	mg/L	MCAWW 130.2	07/18/03	3199463
		Dilution Factor: 1		MDL.....: 2		
Nitrate as N	3.3 J	0.10	mg/L	MCAWW 300.0A	07/17/03	3198367
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/17/03	3198366
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	33.0	1.0	mg/L	MCAWW 300.0A	07/17/03	3198369
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	260 J	5.0	mg/L	MCAWW 310.1	07/16/03	3198582
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon	3 J	1	mg/L	MCAWW 415.1	07/23/03	3205394
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	1.2	1.0	mg/L	MCAWW 376.1	07/21/03	3202471
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-060

General Chemistry

Lot-Sample #....: A3G160206-006 Work Order #....: FTEKW Matrix.....: WG
 Date Sampled....: 07/15/03 11:52 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	174	1.0	mg/L	MCAWW 300.0A	07/17/03	3198364
		Dilution Factor: 1		MDL.....: 0.094		
Hardness, as CaCO ₃	380	5	mg/L	MCAWW 130.2	07/18/03	3199463
		Dilution Factor: 1		MDL.....: 2		
Nitrate as N	0.010 B,J	0.10	mg/L	MCAWW 300.0A	07/17/03	3198367
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/17/03	3198366
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	23.8	1.0	mg/L	MCAWW 300.0A	07/17/03	3198369
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	310 J	5.0	mg/L	MCAWW 310.1	07/16/03	3198582
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon 7 J		1	mg/L	MCAWW 415.1	07/23/03	3205394
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	2.0	1.0	mg/L	MCAWW 376.1	07/21/03	3202471
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-061

General Chemistry

Lot-Sample #....: A3G160206-007 Work Order #....: FTEKX Matrix.....: WG
Date Sampled....: 07/15/03 15:01 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	204	5.0	mg/L	MCAWW 300.0A MDL.....: 0.47	07/17/03	3198364
		Dilution Factor: 5				
Hardness, as CaCO ₃	410	10	mg/L	MCAWW 130.2 MDL.....: 4	07/18/03	3199463
		Dilution Factor: 2				
Nitrate as N	0.010 B,J	0.10	mg/L	MCAWW 300.0A MDL.....: 0.0076	07/17/03	3198367
		Dilution Factor: 1				
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A MDL.....: 0.020	07/17/03	3198366
		Dilution Factor: 1				
Sulfate	21.4	1.0	mg/L	MCAWW 300.0A MDL.....: 0.11	07/17/03	3198369
		Dilution Factor: 1				
Total Alkalinity	330 J	5.0	mg/L	MCAWW 310.1 MDL.....: 1.3	07/16/03	3198582
		Dilution Factor: 1				
Total Organic Carbon	5 J	1	mg/L	MCAWW 415.1 MDL.....: 0.7	07/23/03	3205394
		Dilution Factor: 1				
Total Sulfide	1.7	1.0	mg/L	MCAWW 376.1 MDL.....: 0.25	07/21/03	3202471
		Dilution Factor: 1				

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-062

General Chemistry

Lot-Sample #....: A3G160206-008 Work Order #....: FTEK0 Matrix.....: WG
Date Sampled....: 07/15/03 15:31 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	164	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.094	07/17/03	3198364
Hardness, as CaCO3	400	5	mg/L	MCAWW 130.2 Dilution Factor: 1 MDL.....: 2	07/18/03	3199463
Nitrate as N	0.33 J	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/17/03	3198367
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/17/03	3198366
Sulfate	50.5	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/17/03	3198369
Total Alkalinity	280 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/17/03	3198582
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/23/03	3205394
Total Sulfide	1.3	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/21/03	3202471

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-063

General Chemistry

Lot-Sample #....: A3G160206-009 Work Order #....: FTEK1 Matrix.....: WG
Date Sampled....: 07/15/03 16:20 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	177	1.0	mg/L	MCAWW 300.0A	07/17/03	3198364
		Dilution Factor: 1		MDL.....: 0.094		
Hardness, as CaCO3	360	5	mg/L	MCAWW 130.2	07/18/03	3199463
		Dilution Factor: 1		MDL.....: 2		
Nitrate as N	3.3 J	0.10	mg/L	MCAWW 300.0A	07/17/03	3198367
		Dilution Factor: 1		MDL.....: 0.0076		
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	07/17/03	3198366
		Dilution Factor: 1		MDL.....: 0.020		
Sulfate	39.6	1.0	mg/L	MCAWW 300.0A	07/17/03	3198369
		Dilution Factor: 1		MDL.....: 0.11		
Total Alkalinity	270 J	5.0	mg/L	MCAWW 310.1	07/17/03	3198582
		Dilution Factor: 1		MDL.....: 1.3		
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1	07/23/03	3205394
		Dilution Factor: 1		MDL.....: 0.7		
Total Sulfide	1.3	1.0	mg/L	MCAWW 376.1	07/21/03	3202471
		Dilution Factor: 1		MDL.....: 0.25		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-071503-SP-065

General Chemistry

Lot-Sample #....: A3G160206-010 Work Order #....: FTEK2 Matrix.....: WG
Date Sampled....: 07/15/03 17:11 Date Received...: 07/16/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	254	5.0	mg/L	MCAWW 300.0A Dilution Factor: 5 MDL.....: 0.47	07/17/03	3198364
Hardness, as CaCO3	420	10	mg/L	MCAWW 130.2 Dilution Factor: 2 MDL.....: 4	07/18/03	3199463
Nitrate as N	4.4 J	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.0076	07/17/03	3198367
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.020	07/17/03	3198366
Sulfate	35.8	1.0	mg/L	MCAWW 300.0A Dilution Factor: 1 MDL.....: 0.11	07/17/03	3198369
Total Alkalinity	320 J	5.0	mg/L	MCAWW 310.1 Dilution Factor: 1 MDL.....: 1.3	07/17/03	3198582
Total Organic Carbon 2 J		1	mg/L	MCAWW 415.1 Dilution Factor: 1 MDL.....: 0.7	07/23/03	3205394
Total Sulfide	2.1	1.0	mg/L	MCAWW 376.1 Dilution Factor: 1 MDL.....: 0.25	07/21/03	3202471

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A3G160206

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	ND	Work Order #: FTG6V1AA 1.0	mg/L	MB Lot-Sample #: A3G170000-364 MCAWW 300.0A	07/16/03	3198364
		Dilution Factor: 1				
Hardness, as CaCO3	ND	Work Order #: FTK6F1AA 5	mg/L	MB Lot-Sample #: A3G170000-509 MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 1				
Hardness, as CaCO3	ND	Work Order #: FTLLT1AA 5	mg/L	MB Lot-Sample #: A3G180000-463 MCAWW 130.2	07/18/03	3199463
		Dilution Factor: 1				
Nitrate as N	0.010 B	Work Order #: FTG7G1AA 0.10	mg/L	MB Lot-Sample #: A3G170000-367 MCAWW 300.0A	07/16/03	3198367
		Dilution Factor: 1				
Nitrite as N	ND	Work Order #: FTG7F1AA 0.10	mg/L	MB Lot-Sample #: A3G170000-366 MCAWW 300.0A	07/16/03	3198366
		Dilution Factor: 1				
Sulfate	ND	Work Order #: FTG7H1AA 1.0	mg/L	MB Lot-Sample #: A3G170000-369 MCAWW 300.0A	07/16/03	3198369
		Dilution Factor: 1				
Total Alkalinity	4.0 B	Work Order #: FTJRE1AA 5.0	mg/L	MB Lot-Sample #: A3G170000-582 MCAWW 310.1	07/16/03	3198582
		Dilution Factor: 1				
Total Organic Carbon	0.7 B	Work Order #: FT1RD1AA 1	mg/L	MB Lot-Sample #: A3G240000-394 MCAWW 415.1	07/23/03	3205394
		Dilution Factor: 1				
Total Organic Carbon	ND	Work Order #: FT1RF1AA 1	mg/L	MB Lot-Sample #: A3G240000-395 MCAWW 415.1	07/23/03	3205395
		Dilution Factor: 1				
Total Sulfide	ND	Work Order #: FTP811AA 1.0	mg/L	MB Lot-Sample #: A3G210000-471 MCAWW 376.1	07/21/03	3202471
		Dilution Factor: 1				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A3G160206

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	50.0	48.6	mg/L	97	MCAWW 300.0A	07/16/03	3198364
Work Order #: FTG6V1AC LCS Lot-Sample#: A3G170000-364 Dilution Factor: 1							
Hardness, as CaCO3	200	210	mg/L	101	MCAWW 130.2	07/17/03	3198509
Work Order #: FTK6F1AC LCS Lot-Sample#: A3G170000-509 Dilution Factor: 1							
Hardness, as CaCO3	200	200	mg/L	100	MCAWW 130.2	07/18/03	3199463
Work Order #: FTLLT1AC LCS Lot-Sample#: A3G180000-463 Dilution Factor: 1							
Nitrate as N	2.5	2.5	mg/L	100	MCAWW 300.0A	07/16/03	3198367
Work Order #: FTG7G1AC LCS Lot-Sample#: A3G170000-367 Dilution Factor: 1							
Nitrite as N	2.5	2.4	mg/L	97	MCAWW 300.0A	07/16/03	3198366
Work Order #: FTG7F1AC LCS Lot-Sample#: A3G170000-366 Dilution Factor: 1							
Sulfate	50.0	48.3	mg/L	97	MCAWW 300.0A	07/16/03	3198369
Work Order #: FTG7H1AC LCS Lot-Sample#: A3G170000-369 Dilution Factor: 1							
Total Alkalinity	84	85	mg/L	100	MCAWW 310.1	07/16/03	3198582
Work Order #: FTJRE1AC LCS Lot-Sample#: A3G170000-582 Dilution Factor: 1							
Total Organic Carbon	31	32	mg/L	102	MCAWW 415.1	07/23/03	3205394
Work Order #: FT1RD1AC LCS Lot-Sample#: A3G240000-394 Dilution Factor: 1							
Total Organic Carbon	31	31	mg/L	100	MCAWW 415.1	07/23/03	3205395
Work Order #: FT1RF1AC LCS Lot-Sample#: A3G240000-395 Dilution Factor: 1							
Total Sulfide	17	17	mg/L	101	MCAWW 376.1	07/21/03	3202471
Work Order #: FTP811AC LCS Lot-Sample#: A3G210000-471 Dilution Factor: 1							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: A3G160206

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride	97	Work Order #: FTG6V1AC (90 - 110)	LCS Lot-Sample#: A3G170000-364 MCAWW 300.0A	07/16/03	3198364
		Dilution Factor: 1			
Hardness, as CaCO ₃	101	Work Order #: FTK6F1AC (84 - 116)	LCS Lot-Sample#: A3G170000-509 MCAWW 130.2	07/17/03	3198509
		Dilution Factor: 1			
Hardness, as CaCO ₃	100	Work Order #: FTL1T1AC (84 - 116)	LCS Lot-Sample#: A3G180000-463 MCAWW 130.2	07/18/03	3199463
		Dilution Factor: 1			
Nitrate as N	100	Work Order #: FTG7G1AC (90 - 110)	LCS Lot-Sample#: A3G170000-367 MCAWW 300.0A	07/16/03	3198367
		Dilution Factor: 1			
Nitrite as N	97	Work Order #: FTG7F1AC (88 - 110)	LCS Lot-Sample#: A3G170000-366 MCAWW 300.0A	07/16/03	3198366
		Dilution Factor: 1			
Sulfate	97	Work Order #: FTG7H1AC (90 - 110)	LCS Lot-Sample#: A3G170000-369 MCAWW 300.0A	07/16/03	3198369
		Dilution Factor: 1			
Total Alkalinity	100	Work Order #: FTJRE1AC (90 - 127)	LCS Lot-Sample#: A3G170000-582 MCAWW 310.1	07/16/03	3198582
		Dilution Factor: 1			
Total Organic Carbon	102	Work Order #: FT1RD1AC (88 - 115)	LCS Lot-Sample#: A3G240000-394 MCAWW 415.1	07/23/03	3205394
		Dilution Factor: 1			
Total Organic Carbon	100	Work Order #: FT1RF1AC (88 - 115)	LCS Lot-Sample#: A3G240000-395 MCAWW 415.1	07/23/03	3205395
		Dilution Factor: 1			
Total Sulfide	101	Work Order #: FTP811AC (79 - 104)	LCS Lot-Sample#: A3G210000-471 MCAWW 376.1	07/21/03	3202471
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A3G160206

Matrix.....: WG

Date Sampled...: 07/15/03 10:15 Date Received...: 07/16/03

	SAMPLE	SPIKE	MEASRD	PERCNT	PREPARATION-	PREP		
PARAMETER	AMOUNT	AMT	AMOUNT	UNITS	RECVR Y RPD	METHOD	ANALYSIS DATE	BATCH #
Chloride			WO#: FTEKR1AF-MS/FTEKR1AG-MSD MS Lot-Sample #: A3G160206-003					
	351	50.0	386	mg/L		MCAWW 300.0A	07/17/03	3198364
			Qualifiers: NC,MSB					
	351	50.0	385	mg/L		MCAWW 300.0A	07/17/03	3198364
			Qualifiers: NC,MSB					
			Dilution Factor: 5					
Chloride			WO#: FTEKT1AF-MS/FTEKT1AG-MSD MS Lot-Sample #: A3G160206-004					
	203	50.0	247	mg/L		MCAWW 300.0A	07/17/03	3198364
			Qualifiers: NC,MSB					
	203	50.0	246	mg/L		MCAWW 300.0A	07/17/03	3198364
			Qualifiers: NC,MSB					
			Dilution Factor: 5					
Hardness, as CaCO3			WO#: FTEKR1CW-MS/FTEKR1CX-MSD MS Lot-Sample #: A3G160206-003					
	400	200	640	mg/L	120	MCAWW 130.2	07/17/03	3198509
	400	200	660	mg/L	128	2.4 MCAWW 130.2	07/17/03	3198509
			Dilution Factor: 1					
Hardness, as CaCO3			WO#: FTEKT1CJ-MS/FTEKT1CK-MSD MS Lot-Sample #: A3G160206-004					
	400	400	780	mg/L	95	MCAWW 130.2	07/18/03	3199463
	400	400	770	mg/L	91	2.1 MCAWW 130.2	07/18/03	3199463
			Dilution Factor: 1					
Nitrate as N			WO#: FTEKR1AJ-MS/FTEKR1AK-MSD MS Lot-Sample #: A3G160206-003					
	7.3	2.5	8.5 N	mg/L	46	MCAWW 300.0A	07/17/03	3198367
	7.3	2.5	8.5 N	mg/L	46	0.11 MCAWW 300.0A	07/17/03	3198367
			Dilution Factor: 1					
Nitrate as N			WO#: FTEKT1AJ-MS/FTEKT1AK-MSD MS Lot-Sample #: A3G160206-004					
	3.8	2.5	6.3	mg/L	103	MCAWW 300.0A	07/17/03	3198367
	3.8	2.5	6.3	mg/L	102	0.15 MCAWW 300.0A	07/17/03	3198367
			Dilution Factor: 1					
Nitrite as N			WO#: FTEKR1AM-MS/FTEKR1AN-MSD MS Lot-Sample #: A3G160206-003					
	ND	2.5	2.5	mg/L	101	MCAWW 300.0A	07/17/03	3198366
	ND	2.5	2.6	mg/L	104	2.3 MCAWW 300.0A	07/17/03	3198366
			Dilution Factor: 5					

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MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #....: A3G160206

Matrix.....: WG

Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrite as N									
WO#: FTEKT1AM-MS/FTEKT1AN-MSD MS Lot-Sample #: A3G160206-004									
ND	2.5		2.5	mg/L	102		MCAWW 300.0A	07/17/03	3198366
ND	2.5		2.6	mg/L	102	0.78	MCAWW 300.0A	07/17/03	3198366
Dilution Factor: 1									
Sulfate									
WO#: FTEKR1AQ-MS/FTEKR1AR-MSD MS Lot-Sample #: A3G160206-003									
53.2	50.0		107	mg/L	108		MCAWW 300.0A	07/17/03	3198369
53.2	50.0		107	mg/L	107	0.33	MCAWW 300.0A	07/17/03	3198369
Dilution Factor: 1									
Sulfate									
WO#: FTEKT1AQ-MS/FTEKT1AR-MSD MS Lot-Sample #: A3G160206-004									
61.2	50.0		114	mg/L	106		MCAWW 300.0A	07/17/03	3198369
61.2	50.0		114	mg/L	106	0.0	MCAWW 300.0A	07/17/03	3198369
Dilution Factor: 1									
Total Alkalinity									
WO#: FTEKR1AU-MS/FTEKR1AV-MSD MS Lot-Sample #: A3G160206-003									
300	500		600	mg/L	60		MCAWW 310.1	07/16/03	3198582
300	500		610	mg/L	61	0.74	MCAWW 310.1	07/16/03	3198582
Dilution Factor: 1									
Total Alkalinity									
WO#: FTEKT1AU-MS/FTEKT1AV-MSD MS Lot-Sample #: A3G160206-004									
260	500		690	mg/L	86		MCAWW 310.1	07/16/03	3198582
260	500		690	mg/L	86	0.07	MCAWW 310.1	07/16/03	3198582
Dilution Factor: 1									
Total Organic Carbon									
WO#: FTEKR1A2-MS/FTEKR1A3-MSD MS Lot-Sample #: A3G160206-003									
2	25		28	mg/L	105		MCAWW 415.1	07/23/03	3205394
2	25		29	mg/L	107	2.3	MCAWW 415.1	07/23/03	3205394
Dilution Factor: 1									
Total Organic Carbon									
WO#: FTEKT1A2-MS/FTEKT1A3-MSD MS Lot-Sample #: A3G160206-004									
2	25		28	mg/L	103		MCAWW 415.1	07/23/03	3205395
2	25		27	mg/L	101	1.8	MCAWW 415.1	07/23/03	3205395
Dilution Factor: 1									
Total Sulfide									
WO#: FTEKR1C0-MS/FTEKR1C1-MSD MS Lot-Sample #: A3G160206-003									
0.70	17		19	mg/L	104		MCAWW 376.1	07/21/03	3202471
0.70	17		19	mg/L	106	1.7	MCAWW 376.1	07/21/03	3202471
Dilution Factor: 1									
Total Sulfide									
WO#: FTEKT1CL-MS/FTEKT1CM-MSD MS Lot-Sample #: A3G160206-004									
0.70	17		20 N	mg/L	110		MCAWW 376.1	07/21/03	3202471
0.70	17		19 N	mg/L	108	1.6	MCAWW 376.1	07/21/03	3202471
Dilution Factor: 1									

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MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A3G160206

Matrix.....: WG

Date Sampled...: 07/15/03 10:15 Date Received...: 07/16/03

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: A3G160206

Matrix.....: WG

Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride			WO#: FTEKR1AF-MS/FTEKR1AG-MSD		MS Lot-Sample #: A3G160206-003		
	NC,MSB	(90 - 110)			MCAWW 300.0A	07/17/03	3198364
	NC,MSB	(90 - 110)		(0-20)	MCAWW 300.0A	07/17/03	3198364
			Dilution Factor: 5				
Chloride			WO#: FTEKT1AF-MS/FTEKT1AG-MSD		MS Lot-Sample #: A3G160206-004		
	NC,MSB	(90 - 110)			MCAWW 300.0A	07/17/03	3198364
	NC,MSB	(90 - 110)		(0-20)	MCAWW 300.0A	07/17/03	3198364
			Dilution Factor: 5				
Hardness, as CaCO3			WO#: FTEKR1CW-MS/FTEKR1CX-MSD		MS Lot-Sample #: A3G160206-003		
	120	(10 - 176)			MCAWW 130.2	07/17/03	3198509
	128	(10 - 176) 2.4	(0-23)		MCAWW 130.2	07/17/03	3198509
			Dilution Factor: 1				
Hardness, as CaCO3			WO#: FTEKT1CJ-MS/FTEKT1CK-MSD		MS Lot-Sample #: A3G160206-004		
	95	(10 - 176)			MCAWW 130.2	07/18/03	3199463
	91	(10 - 176) 2.1	(0-23)		MCAWW 130.2	07/18/03	3199463
			Dilution Factor: 1				
Nitrate as N			WO#: FTEKR1AJ-MS/FTEKR1AK-MSD		MS Lot-Sample #: A3G160206-003		
	46 N	(90 - 110)			MCAWW 300.0A	07/17/03	3198367
	46 N	(90 - 110) 0.11	(0-20)		MCAWW 300.0A	07/17/03	3198367
			Dilution Factor: 1				
Nitrate as N			WO#: FTEKT1AJ-MS/FTEKT1AK-MSD		MS Lot-Sample #: A3G160206-004		
	103	(90 - 110)			MCAWW 300.0A	07/17/03	3198367
	102	(90 - 110) 0.15	(0-20)		MCAWW 300.0A	07/17/03	3198367
			Dilution Factor: 1				
Nitrite as N			WO#: FTEKR1AM-MS/FTEKR1AN-MSD		MS Lot-Sample #: A3G160206-003		
	101	(90 - 110)			MCAWW 300.0A	07/17/03	3198366
	104	(90 - 110) 2.3	(0-20)		MCAWW 300.0A	07/17/03	3198366
			Dilution Factor: 5				
Nitrite as N			WO#: FTEKT1AM-MS/FTEKT1AN-MSD		MS Lot-Sample #: A3G160206-004		
	102	(90 - 110)			MCAWW 300.0A	07/17/03	3198366
	102	(90 - 110) 0.78	(0-20)		MCAWW 300.0A	07/17/03	3198366
			Dilution Factor: 1				

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MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: A3G160206

Matrix.....: WG

Date Sampled....: 07/15/03 10:15 Date Received...: 07/16/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Sulfate			WO#:	FTEKR1AQ-MS/FTEKR1AR-MSD	MS Lot-Sample #:	A3G160206-003	
	108	(90 - 110)			MCAWW 300.0A	07/17/03	3198369
	107	(90 - 110)	0.33	(0-20)	MCAWW 300.0A	07/17/03	3198369
			Dilution Factor: 1				
Sulfate			WO#:	FTEKT1AQ-MS/FTEKT1AR-MSD	MS Lot-Sample #:	A3G160206-004	
	106	(90 - 110)			MCAWW 300.0A	07/17/03	3198369
	106	(90 - 110)	0.0	(0-20)	MCAWW 300.0A	07/17/03	3198369
			Dilution Factor: 1				
Total Alkalinity			WO#:	FTEKR1AU-MS/FTEKR1AV-MSD	MS Lot-Sample #:	A3G160206-003	
	60	(10 - 160)			MCAWW 310.1	07/16/03	3198582
	61	(10 - 160)	0.74	(0-24)	MCAWW 310.1	07/16/03	3198582
			Dilution Factor: 1				
Total Alkalinity			WO#:	FTEKT1AU-MS/FTEKT1AV-MSD	MS Lot-Sample #:	A3G160206-004	
	86	(10 - 160)			MCAWW 310.1	07/16/03	3198582
	86	(10 - 160)	0.07	(0-24)	MCAWW 310.1	07/16/03	3198582
			Dilution Factor: 1				
Total Organic Carbon			WO#:	FTEKR1A2-MS/FTEKR1A3-MSD	MS Lot-Sample #:	A3G160206-003	
	105	(72 - 136)			MCAWW 415.1	07/23/03	3205394
	107	(72 - 136)	2.3	(0-20)	MCAWW 415.1	07/23/03	3205394
			Dilution Factor: 1				
Total Organic Carbon			WO#:	FTEKT1A2-MS/FTEKT1A3-MSD	MS Lot-Sample #:	A3G160206-004	
	103	(72 - 136)			MCAWW 415.1	07/23/03	3205395
	101	(72 - 136)	1.8	(0-20)	MCAWW 415.1	07/23/03	3205395
			Dilution Factor: 1				
Total Sulfide			WO#:	FTEKR1C0-MS/FTEKR1C1-MSD	MS Lot-Sample #:	A3G160206-003	
	104	(75 - 107)			MCAWW 376.1	07/21/03	3202471
	106	(75 - 107)	1.7	(0-20)	MCAWW 376.1	07/21/03	3202471
			Dilution Factor: 1				
Total Sulfide			WO#:	FTEKT1CL-MS/FTEKT1CM-MSD	MS Lot-Sample #:	A3G160206-004	
	110 N	(75 - 107)			MCAWW 376.1	07/21/03	3202471
	108 N	(75 - 107)	1.6	(0-20)	MCAWW 376.1	07/21/03	3202471
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

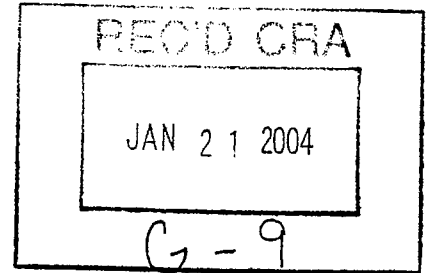
MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

N Spiked analyte recovery is outside stated control limits.



STL

END OF REPORT



ANALYTICAL REPORT

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A3L200162

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 17360-09 Lab#: A3L200162

Name: GM-CRME

Description

Event: 1/4 Ly G.W. Monit.

Samples: 30 WATER

Analysis: VOC, SVOC

TAT: 14 day

Lab: STL

Checked Against Preliminary Data:

Date: _____ Init.: _____

Date of Validation Memo: 2/3/04

SEVERN TRENT LABORATORIES, INC.

Invoice Approval Date: _____

Comments: Revised

A handwritten signature in cursive script, reading "Amy L. McCormick".

Amy L. McCormick
Project Manager

January 20, 2004

Severn Trent Laboratories, Inc.

STL North Canton • 4101 Shuffel Drive NW, North Canton, OH 44720

Tel 330 497 9396 Fax 330 497 0772 • www.stl-inc.com



STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

REVISED

PROJECT NO. 17360-09

GM-GRAND RAPIDS

Lot #: A3L200162

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "Amy L. McCormick".

Amy L. McCormick
Project Manager

February 2, 2004

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

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STL - North Canton

Page 2 of 3

Cooler # M-337, M-284

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM - Grand Rapids

SAMPLER'S
SIGNATURE:

J. P. Peller

PRINTED
NAME:

Steve Peller

SEQ:
No.

DATE

TIME

SAMPLE
TYPE

NO. OF
CONTAINERS

PARAMETERS

REMARKS

15

12/18/03

1022

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

16

12/18/03

1107

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

17

12/18/03

0942

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

18

12/18/03

0958

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

19

12/18/03

0916

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

20

12/18/03

1032

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

21

12/18/03

1121

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

22

12/18/03

1207

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

23

12/18/03

1335

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

24

12/18/03

1347

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

25

12/18/03

1412

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

26

12/18/03

1502

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

27

12/18/03

1547

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

28

12/18/03

1607

EW-17360-121803-105

Water

3

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

TOTAL NUMBER OF CONTAINERS

45

RELINQUISHED BY:

J. P. Peller

DATE: 12/18/03

RECEIVED BY:

1.

TIME: 1500

DATE: 12/18/03

RECEIVED BY:

1.

TIME: 1100

DATE: 12/18/03

RECEIVED BY:

1.

TIME: 1100

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.

14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM-Grand Rapids

SAMPLER'S SIGNATURE: J. Roeler PRINTED NAME: Steve Roeler

SEQ. No. DATE TIME

SAMPLE TYPE

No. OF CONTAINERS

PARAMETERS

REMARKS

29 12/18/03 652 GW-17360-121803-JB-119
30 " - TB-17360-121803-JB-120

Water 3 1

X X

TRIP BLANK

TAT. Standard

CRA Contact
Paul W. Seaman

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:

1. J. Roeler

RELINQUISHED BY:

2. _____

RELINQUISHED BY:

3. _____

DATE: 12/19/03

TIME: 1500

DATE:

TIME:

DATE:

TIME:

RECEIVED BY:

1. _____

RECEIVED BY:

2. _____

RECEIVED BY:

1. _____

DATE:

TIME:

DATE:

TIME:

DATE:

TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No.

SAMPLE TEAM:

Joe Branch

RECEIVED FOR LABORATORY BY:

22 W. Seaman

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldenrod - Sampler Copy

25557

Steve Roeler

DATE: 12/20/03 TIME: 11:00



CASE NARRATIVE

CASE NARRATIVE

A3L200162

The following report contains the analytical results for twenty-nine water samples and one quality control sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Grand Rapids Site, project number 17360-09. The samples were received December 20, 2003, according to documented sample acceptance procedures.

The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided to the Chemistry Department on January 5, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

Surrogate recoveries were outside acceptance limits in sample GW-17360-121703-JB-100. Re-extraction and/or reanalysis achieved similar results; therefore, the original data has been reported.

CASE NARRATIVE (continued)

GC/MS VOLATILES

Samples GW-17360-121803-JB-103 and GW-17360-121803-JB-116 exhibited surrogate recoveries outside acceptance limits. Upon re-extraction and reanalysis, all surrogates were within acceptance limits; however, the recommended sample holding times had been exceeded. Both sets of results have been reported.

The matrix spike/matrix spike duplicate associated with batch 4002237, sample A3L230276-002, failed spike recovery criteria. The laboratory control sample/laboratory control sample duplicate and method blank associated with this batch were in control; therefore, no corrective action was necessary.

GC/MS SEMIVOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

Samples GW-17360-121703-JB-096 and GW-17360-121703-JB-098 had elevated reporting limits due to matrix interference.

STL utilizes USEPA approved methods in all analytical work. The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.



Amy McCormick
Project Manager

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)

Methylene chloride
Acetone
2-Butanone

Semivolatile (GC/MS)

Phthalate Esters

Metals

Copper
Iron
Zinc
Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*
- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS (Continued)

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, PAH, and Herbicide methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)



METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A3L200162

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.



STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A3L200162

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
F6639	001	GW-17360-121703-JB-091	12/18/03	10:45
F664E	002	GW-17360-121703-JB-092	12/18/03	11:30
F664F	003	GW-17360-121703-JB-093	12/18/03	11:45
F664H	004	GW-17360-121703-JB-094	12/18/03	10:14
F664K	005	GW-17360-121703-JB-095	12/18/03	13:47
F664M	006	GW-17360-121703-JB-097	12/18/03	13:50
F664P	007	GW-17360-121703-JB-096	12/18/03	13:12
F664W	008	GW-17360-121703-JB-098	12/18/03	13:27
F6640	009	GW-17360-121703-JB-099	12/18/03	13:30
F6643	010	GW-17360-121703-JB-100	12/18/03	15:12
F6646	011	GW-17360-121703-JB-101	12/18/03	16:07
F665C	012	GW-17360-121703-JB-102	12/18/03	16:57
F665F	013	GW-17360-121803-JB-103	12/18/03	09:10
F665G	014	GW-17360-121803-JB-104	12/18/03	09:57
F665H	015	GW-17360-121803-JB-105	12/18/03	10:22
F665J	016	GW-17360-121803-JB-106	12/18/03	11:07
F665K	017	GW-17360-121803-JB-107	12/18/03	09:42
F665L	018	GW-17360-121803-JB-108	12/18/03	09:58
F665M	019	GW-17360-121803-JB-109	12/18/03	09:16
F665N	020	GW-17360-121803-JB-110	12/18/03	10:32
F665P	021	GW-17360-121803-JB-111	12/18/03	11:21
F665Q	022	GW-17360-121803-JB-112	12/18/03	12:07
F665R	023	GW-17360-121803-JB-113	12/18/03	13:35
F665T	024	GW-17360-121803-JB-114	12/18/03	13:47
F665V	025	GW-17360-121803-JB-115	12/18/03	14:12
F665W	026	GW-17360-121803-JB-116	12/18/03	15:02
F665X	027	GW-17360-121803-JB-117	12/18/03	15:47
F6651	028	GW-17360-121803-JB-118	12/18/03	16:07
F6652	029	GW-17360-121803-JB-119	12/18/03	16:52
F6654	030	TB-17360-121803-JB-120	12/18/03	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

***SHIPPING
AND
RECEIVING DOCUMENTS***

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14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL-North Canton

Page 1 of 3 Cooks # M-337, M-284

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM-Grand Rapids

SAMPLER'S SIGNATURE: S. Poff PRINTED NAME: _____

Store Pölen

PARAMETERS

REMARKS

SEQ. No.	DATE	TIME	SAMPLE TYPE	% CONTAMINANT	VOC	NVOC	REMARKS
1	7/18/03	1045	(Water)	3	X		TAT: Standard
2		1130		M	X		
3		1145		M	X		
4		1014		M	X		
5		1347		M	X		
6		1350		M	X		
7		1312		Z	X		
8		1327		Z	X		
9		1330		Z	X		
10		1512		M	X		
11		1607		Z	X		
12		1657		M	X		
13		0910	GAL-17360-121803-JB	M	X		SEA Contact Paul Wiseman
14		0957	" "	M	X		

TOTAL NUMBER OF CONTAINERS

W
D

RELINQUISHED BY:

DATE: 12/19/03
TIME: 1500

RECEIVED BY: 1. _____

DATE: _____
TIME: _____

RELINQUISHED BY:

DATE:	
TIME:	

RECEIVED BY: 2. _____

DATE: _____
TIME: _____

RELINQUISHED BY:

DATE:	
TIME:	

RECEIVED BY: 1.

DATE: _____
TIME: _____

METHOD OF SHIPMENT: Fed Ex

AIR BILL NO.

White	-Fully Executed Copy	Pink	-Shipper Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

[illegible]

Joe Branch, 5. Feels

222

25554

Adam Eide

DATE: 12/29/03 TIME: 11:00

CRA

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14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name):

STL - North Canton

Page 2 of 3

Cooler # M-337, M-284

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

17360-09

PROJECT NAME:

GM-Grand Rapids

SAMPLERS SIGNATURE: J. Poole PRINTED NAME: Steve Poole

SEQ. No.	DATE	TIME	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS	REMARKS

15	12/16/03	1022	EW-17360-121803-105	3	X	
16		1107		3	X	
17		0942		3	X	
18		0958		3	X	
19		0916		3	X	
20		1032		3	X	
21		1121		3	X	
22		1207		3	X	
23		1335		3	X	
24		1344		3	X	
25		1412		3	X	
26		1502		3	X	
27		1544		3	X	
28		1607		3	X	

TOTAL NUMBER OF CONTAINERS

45

RELINQUISHED BY: J. Poole DATE: 12/16/03 TIME: 1500 RECEIVED BY: 1. DATE: TIME:

RELINQUISHED BY: DATE: TIME: RECEIVED BY: 2. DATE: TIME:

RELINQUISHED BY: DATE: TIME: RECEIVED BY: 1. DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL NO. 6247 7746 7108, 7093

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy

Pink - Shipper Copy
Goldend - Sampler Copy

SAMPLE TEAM:

Joe Branch

RECEIVED FOR LABORATORY BY:

22 M. Wila

25555

Steve Poole

DATE: 12/30/03 TIME: 11:00

RSR280

Client:

57787

Lot #:

A3L200162

Case Number/SDG:

17360-09

Storage location: C172/MS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
F6639	EARLES	12/20/03	Yes		Storage	
F664E	EARLES	12/20/03	Yes		Storage	
F664F	EARLES	12/20/03	Yes		Storage	
F664H	EARLES	12/20/03	Yes		Storage	
F664K	EARLES	12/20/03	Yes		Storage	
F664M	EARLES	12/20/03	Yes		Storage	
F664P	EARLES	12/20/03	Yes		Storage	
F664W	EARLES	12/20/03	Yes		Storage	
F6640	EARLES	12/20/03	Yes		Storage	
F6643	EARLES	12/20/03	Yes		Storage	
F6646	EARLES	12/20/03	Yes		Storage	
F665C	EARLES	12/20/03	Yes		Storage	
F665F	EARLES	12/20/03	Yes		Storage	
F665G	EARLES	12/20/03	Yes		Storage	
F665H	EARLES	12/20/03	Yes		Storage	
F665J	EARLES	12/20/03	Yes		Storage	
F665K	EARLES	12/20/03	Yes		Storage	
F665L	EARLES	12/20/03	Yes		Storage	
F665M	EARLES	12/20/03	Yes		Storage	
F665N	EARLES	12/20/03	Yes		Storage	
F665P	EARLES	12/20/03	Yes		Storage	
F665Q	EARLES	12/20/03	Yes		Storage	
F665R	EARLES	12/20/03	Yes		Storage	

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client:

57787

Lot #:

A3L200162

Case Number/SDG:

17360-09

Storage Location: C172/MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
F665T	EARLES	12/20/03	Yes		Storage	
F665V	EARLES	12/20/03	Yes		Storage	
F665W	EARLES	12/20/03	Yes		Storage	
F665X	EARLES	12/20/03	Yes		Storage	
F6651	EARLES	12/20/03	Yes		Storage	
F6652	EARLES	12/20/03	Yes		Storage	
F6654	EARLES	12/20/03	Yes		Storage	

STL Cooler Receipt Form/Narrative North Canton Facility

Lot Number: A3L 20162

Client: CRA

Project: GM-Grand Rapids

Quote#: 45813

Cooler Received on: 12/20/03

Opened on: 12/20/03

by: [Signature]
(Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ FAS ☐

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____

STL Cooler No#: See back

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐

If YES, Quantity 1

Were the custody seals signed and dated?

Intact? Yes ☒ No ☐ NA ☐

Yes ☒ No ☐ NA ☐

Yes ☒ No ☐ NA ☐

2. Shipper's packing slip attached to this form?

3. Were custody papers included inside the cooler and relinquished?

4. Did you sign the custody papers in the appropriate place?

5. Packing material used:

Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____

6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H₂O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)?

8. Did all bottle labels and tags agree with the custody papers?

9. Were samples at the correct pH? (record on back)

10. Were correct bottles used for the tests indicated?

11. Were air bubbles >6 mm in any VOA vials?

12. Was a sufficient amount of sample sent in each bottle?

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☐ No ☐ NA ☒

Yes ☒ No ☐

Yes ☐ No ☒ NA ☐

Yes ☒ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice-Mail ☐ Verbal ☐ Other ☐

Concerning:

☒ MACRO ☐ MACRO

1. CHAIN OF CUSTODY

SR1A The chain of custody and sample bottles did not agree. The following discrepancies occurred _____

2. SAMPLE CONDITION

SR2A Sample(s) _____ were received or requested after the recommended holding time had expired.
SR2B Sample(s) _____ were received with insufficient volume.
SR2C Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

SR3A Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s).
Nitric Acid Lot #120503-HNO₃; Sulfuric Acid Lot # 101503-H₂SO₄; Sodium Hydroxide Lot # 101503-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH₃COO₂ZN/NaOH
SR3B Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

COL 25555 Does not have JB in ID SHOW, will log with JB for consistency

STL Cooler Receipt Form/Narrative North Canton Facility

[illegible]



GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-091

GC/MS Volatiles

Lot-Sample #....: A3L200162-001 Work Order #....: F66391AA Matrix.....: WG
 Date Sampled....: 12/18/03 10:45 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	1.9	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-091

GC/MS Volatiles

Lot-Sample #....: A3L200162-001 Work Order #....: F66391AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	0.41 J	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	119	(73 - 122)
1,2-Dichloroethane-d4	110	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-092

GC/MS Volatiles

Lot-Sample #....: A3L200162-002 Work Order #....: F664E1AA Matrix.....: WG
 Date Sampled....: 12/18/03 11:30 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 3.33 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	3.9 J,B	83	ug/L	2.2
Benzene	ND	3.3	ug/L	0.67
Bromodichloromethane	ND	3.3	ug/L	0.67
Bromoform	ND	3.3	ug/L	1.1
Bromomethane	ND	3.3	ug/L	0.53
2-Butanone	ND	83	ug/L	1.2
Carbon disulfide	ND	17	ug/L	0.70
Carbon tetrachloride	ND	3.3	ug/L	0.60
Chlorobenzene	ND	3.3	ug/L	0.53
Chloroethane	ND	3.3	ug/L	0.73
Chloroform	ND	3.3	ug/L	0.70
Chloromethane	ND	3.3	ug/L	0.87
Cyclohexane	ND	3.3	ug/L	1.1
Dibromochloromethane	ND	3.3	ug/L	0.83
1,2-Dibromo-3-chloro- propane	ND	3.3	ug/L	1.8
1,2-Dibromoethane	ND	3.3	ug/L	0.73
1,2-Dichlorobenzene	ND	3.3	ug/L	0.50
1,3-Dichlorobenzene	ND	3.3	ug/L	0.67
1,4-Dichlorobenzene	ND	3.3	ug/L	0.53
Dichlorodifluoromethane	ND	3.3	ug/L	0.77
1,1-Dichloroethane	7.8	3.3	ug/L	0.87
1,2-Dichloroethane	ND	3.3	ug/L	0.73
1,1-Dichloroethene	ND	3.3	ug/L	0.73
cis-1,2-Dichloroethene	23	3.3	ug/L	0.83
trans-1,2-Dichloroethene	12	3.3	ug/L	0.80
1,2-Dichloropropane	ND	3.3	ug/L	0.60
cis-1,3-Dichloropropene	ND	3.3	ug/L	0.50
trans-1,3-Dichloropropene	ND	3.3	ug/L	0.57
Ethylbenzene	ND	3.3	ug/L	0.63
2-Hexanone	ND	170	ug/L	1.0
Isopropylbenzene	ND	17	ug/L	0.50
Methyl acetate	ND	33	ug/L	2.3
Methylene chloride	ND	17	ug/L	0.93
Methylcyclohexane	ND	3.3	ug/L	0.80
4-Methyl-2-pentanone	ND	170	ug/L	1.1
Methyl tert-butyl ether	ND	17	ug/L	0.70
Styrene	ND	3.3	ug/L	0.53

(Continued on next page)

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-092

GC/MS Volatiles

Lot-Sample #....: A3L200162-002 Work Order #....: F664E1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	3.3	ug/L	0.77
Tetrachloroethene	ND	3.3	ug/L	0.40
Toluene	ND	3.3	ug/L	0.57
1,2,4-Trichloro- benzene	ND	17	ug/L	0.50
1,1,1-Trichloroethane	3.2 J	3.3	ug/L	0.60
1,1,2-Trichloroethane	ND	3.3	ug/L	0.70
Trichloroethene	ND	3.3	ug/L	0.73
Trichlorofluoromethane	ND	3.3	ug/L	0.83
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	3.3	ug/L	0.77
Vinyl chloride	120	3.3	ug/L	0.87
Xylenes (total)	ND	10	ug/L	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	115	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-093

GC/MS Volatiles

Lot-Sample #....: A3L200162-003 Work Order #....: F664F1AA Matrix.....: WG
 Date Sampled....: 12/18/03 11:45 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 2.5 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	3.2 J,B	62	ug/L	1.6
Benzene	ND	2.5	ug/L	0.50
Bromodichloromethane	ND	2.5	ug/L	0.50
Bromoform	ND	2.5	ug/L	0.80
Bromomethane	ND	2.5	ug/L	0.40
2-Butanone	ND	62	ug/L	0.90
Carbon disulfide	ND	12	ug/L	0.52
Carbon tetrachloride	ND	2.5	ug/L	0.45
Chlorobenzene	ND	2.5	ug/L	0.40
Chloroethane	ND	2.5	ug/L	0.55
Chloroform	ND	2.5	ug/L	0.52
Chloromethane	ND	2.5	ug/L	0.65
Cyclohexane	ND	2.5	ug/L	0.85
Dibromochloromethane	ND	2.5	ug/L	0.62
1,2-Dibromo-3-chloro- propane	ND	2.5	ug/L	1.3
1,2-Dibromoethane	ND	2.5	ug/L	0.55
1,2-Dichlorobenzene	ND	2.5	ug/L	0.38
1,3-Dichlorobenzene	ND	2.5	ug/L	0.50
1,4-Dichlorobenzene	ND	2.5	ug/L	0.40
Dichlorodifluoromethane	ND	2.5	ug/L	0.58
1,1-Dichloroethane	4.2	2.5	ug/L	0.65
1,2-Dichloroethane	ND	2.5	ug/L	0.55
1,1-Dichloroethene	3.0	2.5	ug/L	0.55
cis-1,2-Dichloroethene	40	2.5	ug/L	0.62
trans-1,2-Dichloroethene	6.7	2.5	ug/L	0.60
1,2-Dichloropropane	ND	2.5	ug/L	0.45
cis-1,3-Dichloropropene	ND	2.5	ug/L	0.38
trans-1,3-Dichloropropene	ND	2.5	ug/L	0.42
Ethylbenzene	ND	2.5	ug/L	0.48
2-Hexanone	ND	120	ug/L	0.78
Isopropylbenzene	ND	12	ug/L	0.38
Methyl acetate	ND	25	ug/L	1.7
Methylene chloride	ND	12	ug/L	0.70
Methylcyclohexane	ND	2.5	ug/L	0.60
4-Methyl-2-pentanone	ND	120	ug/L	0.85
Methyl tert-butyl ether	ND	12	ug/L	0.52
Styrene	ND	2.5	ug/L	0.40

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-093

GC/MS Volatiles

Lot-Sample #....: A3L200162-003 Work Order #....: F664F1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	0.58
Tetrachloroethene	ND	2.5	ug/L	0.30
Toluene	ND	2.5	ug/L	0.42
1,2,4-Trichloro- benzene	ND	12	ug/L	0.38
1,1,1-Trichloroethane	ND	2.5	ug/L	0.45
1,1,2-Trichloroethane	ND	2.5	ug/L	0.52
Trichloroethene	76	2.5	ug/L	0.55
Trichlorofluoromethane	ND	2.5	ug/L	0.62
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	2.5	ug/L	0.58
Vinyl chloride	5.2	2.5	ug/L	0.65
Xylenes (total)	ND	7.5	ug/L	1.1
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	121	(73 - 122)		
1,2-Dichloroethane-d4	112	(61 - 128)		
Toluene-d8	101	(76 - 110)		
4-Bromofluorobenzene	80	(74 - 116)		

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-094

GC/MS Volatiles

Lot-Sample #....: A3L200162-004 Work Order #....: F664H1AA Matrix.....: WG
 Date Sampled....: 12/18/03 10:14 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	0.71 J,B	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	2.0	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	0.36 J	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	0.35 J	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-094

GC/MS Volatiles

Lot-Sample #....: A3L200162-004 Work Order #....: F664H1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	4.7	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	121	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-095

GC/MS Volatiles

Lot-Sample #....: A3L200162-005 Work Order #....: F664K1AA Matrix.....: WG
 Date Sampled....: 12/18/03 13:47 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	0.79 J,B	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	ND	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	23	1.0	ug/L	0.25
trans-1,2-Dichloroethene	3.1	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	0.62 J	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-095

GC/MS Volatiles

Lot-Sample #....: A3L200162-005 Work Order #....: F664K1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	35	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	120	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
Toluene-d8	101	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S) :

- J Estimated result. Result is less than RL.
B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-097

GC/MS Volatiles

Lot-Sample #....: A3L200162-006 Work Order #....: F664M1AA Matrix.....: WG
 Date Sampled....: 12/18/03 13:50 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	ND	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	23	1.0	ug/L	0.25
trans-1,2-Dichloroethene	2.9	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	0.53 J	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-097

GC/MS Volatiles

Lot-Sample #....: A3L200162-006 Work Order #....: F664M1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	33	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	116	(73 - 122)
1,2-Dichloroethane-d4	109	(61 - 128)
Toluene-d8	100	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-100

GC/MS Volatiles

Lot-Sample #....: A3L200162-010 Work Order #....: F66431AA Matrix.....: WG
 Date Sampled....: 12/18/03 15:12 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	0.33 J	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	2.2	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-100

GC/MS Volatiles

Lot-Sample #....: A3L200162-010 Work Order #....: F66431AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	0.86 J	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	125 *	(73 - 122)
1,2-Dichloroethane-d4	114	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE (S) :

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-102

GC/MS Volatiles

Lot-Sample #....: A3L200162-012 Work Order #....: F665C1AA Matrix.....: WG
 Date Sampled....: 12/18/03 16:57 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	1.6 J	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	1.3	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121703-JB-102

GC/MS Volatiles

Lot-Sample #....: A3L200162-012 Work Order #....: F665C1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	4.3	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	0.90 J	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	118	(73 - 122)
1,2-Dichloroethane-d4	113	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-103

GC/MS Volatiles

Lot-Sample #....: A3L200162-013 Work Order #....: F665F2AA Matrix.....: WG
 Date Sampled....: 12/18/03 09:10 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	0.72 J,B	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	0.23 J	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	0.78 J	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	0.49 J	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-103

GC/MS Volatiles

Lot-Sample #....: A3L200162-013 Work Order #....: F665F2AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	0.51 J	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	0.50 J	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	122	(73 - 122)
1,2-Dichloroethane-d4	112	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	73 *	(74 - 116)

NOTE (S) :

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-104

GC/MS Volatiles

Lot-Sample #....: A3L200162-014 Work Order #....: F665G1AA Matrix.....: WG
 Date Sampled....: 12/18/03 09:57 Date Received...: 12/20/03
 Prep Date.....: 12/31/03 Analysis Date...: 12/31/03
 Prep Batch #....: 3365170
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	1.7 J,B	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	0.38 J	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	2.5	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	0.38 J	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-104

GC/MS Volatiles

Lot-Sample #....: A3L200162-014 Work Order #....: F665G1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	2.1	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	119	(73 - 122)
1,2-Dichloroethane-d4	117	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S) :

- J Estimated result. Result is less than RL.
 B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-105

GC/MS Volatiles

Lot-Sample #....: A3L200162-015 Work Order #....: F665H1AA Matrix.....: WG
 Date Sampled....: 12/18/03 10:22 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	3.3 J	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	0.81 J	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	ND	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-105

GC/MS Volatiles

Lot-Sample #....: A3L200162-015 Work Order #....: F665H1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	0.25 J	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	0.53 J	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	98	(73 - 122)		
1,2-Dichloroethane-d4	89	(61 - 128)		
Toluene-d8	98	(76 - 110)		
4-Bromofluorobenzene	96	(74 - 116)		

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-106

GC/MS Volatiles

Lot-Sample #....: A3L200162-016 Work Order #....: F665J1AA Matrix.....: WG
 Date Sampled....: 12/18/03 11:07 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	0.72 J	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	0.58 J	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-106

GC/MS Volatiles

Lot-Sample #...: A3L200162-016 Work Order #...: F665J1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	0.78 J	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	1.2	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	101	(73 - 122)		
1,2-Dichloroethane-d4	88	(61 - 128)		
Toluene-d8	96	(76 - 110)		
4-Bromofluorobenzene	95	(74 - 116)		

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-107

GC/MS Volatiles

Lot-Sample #....: A3L200162-017 Work Order #....: F665K1AA Matrix.....: WG
 Date Sampled....: 12/18/03 09:42 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	1.3 J	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	0.44 J	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	0.51 J	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	0.60 J	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	0.34 J	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	0.27 J	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-107

GC/MS Volatiles

Lot-Sample #....: A3L200162-017 Work Order #....: F665K1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	0.60 J	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	ND	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	104	(73 - 122)		
1,2-Dichloroethane-d4	87	(61 - 128)		
Toluene-d8	98	(76 - 110)		
4-Bromofluorobenzene	96	(74 - 116)		

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-108

GC/MS Volatiles

Lot-Sample #....: A3L200162-018 Work Order #....: F665L1AA Matrix.....: WG
 Date Sampled....: 12/18/03 09:58 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	1.7 J	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	0.44 J	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	0.41 J	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	0.62 J	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	0.32 J	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	0.28 J	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-108

GC/MS Volatiles

Lot-Sample #...: A3L200162-018 Work Order #...: F665L1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	0.63 J	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	ND	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE (S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-109

GC/MS Volatiles

Lot-Sample #....: A3L200162-019 Work Order #....: F665M1AA Matrix.....: WG
 Date Sampled....: 12/18/03 09:16 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	1.4 J	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	0.39 J	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	0.67 J	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	0.34 J	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	0.30 J	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-109

GC/MS Volatiles

Lot-Sample #....: A3L200162-019 Work Order #....: F665M1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	0.61 J	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	ND	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	103	(73 - 122)		
1,2-Dichloroethane-d4	91	(61 - 128)		
Toluene-d8	97	(76 - 110)		
4-Bromofluorobenzene	96	(74 - 116)		

NOTE(S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-110

GC/MS Volatiles

Lot-Sample #....: A3L200162-020 Work Order #....: F665N1AA Matrix.....: WG
 Date Sampled....: 12/18/03 10:32 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	0.78 J	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	0.40 J	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	4.1 J	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	2.6	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-110

GC/MS Volatiles

Lot-Sample #....: A3L200162-020 Work Order #....: F665N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	0.14 J	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	0.55 J	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	1.7	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	94	(74 - 116)

NOTE (S) :

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-111

GC/MS Volatiles

Lot-Sample #....: A3L200162-021 Work Order #....: F665P1AA Matrix.....: WG
 Date Sampled....: 12/18/03 11:21 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	0.34 J	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-111

GC/MS Volatiles

Lot-Sample #....: A3L200162-021 Work Order #....: F665P1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	0.16 J	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	1.2	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	89	(61 - 128)
Toluene-d8	99	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-112

GC/MS Volatiles

Lot-Sample #....: A3L200162-022 Work Order #....: F665Q1AA Matrix.....: WG
 Date Sampled....: 12/18/03 12:07 Date Received...: 12/20/03
 Prep Date.....: 12/30/03 Analysis Date...: 12/30/03
 Prep Batch #....: 3365253
 Dilution Factor: 1 Initial Wgt/Vol: 5 mL Final Wgt/Vol...: 5 mL
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	0.86 J	25	ug/L	0.66
Benzene	ND	1.0	ug/L	0.20
Bromodichloromethane	ND	1.0	ug/L	0.20
Bromoform	ND	1.0	ug/L	0.32
Bromomethane	ND	1.0	ug/L	0.16
2-Butanone	ND	25	ug/L	0.36
Carbon disulfide	ND	5.0	ug/L	0.21
Carbon tetrachloride	ND	1.0	ug/L	0.18
Chlorobenzene	ND	1.0	ug/L	0.16
Chloroethane	ND	1.0	ug/L	0.22
Chloroform	ND	1.0	ug/L	0.21
Chloromethane	ND	1.0	ug/L	0.26
Cyclohexane	ND	1.0	ug/L	0.34
Dibromochloromethane	ND	1.0	ug/L	0.25
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.53
1,2-Dibromoethane	ND	1.0	ug/L	0.22
1,2-Dichlorobenzene	ND	1.0	ug/L	0.15
1,3-Dichlorobenzene	ND	1.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.16
Dichlorodifluoromethane	ND	1.0	ug/L	0.23
1,1-Dichloroethane	ND	1.0	ug/L	0.26
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.22
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.25
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.24
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.17
Ethylbenzene	ND	1.0	ug/L	0.19
2-Hexanone	ND	50	ug/L	0.31
Isopropylbenzene	ND	5.0	ug/L	0.15
Methyl acetate	ND	10	ug/L	0.68
Methylene chloride	ND	5.0	ug/L	0.28
Methylcyclohexane	ND	1.0	ug/L	0.24
4-Methyl-2-pentanone	ND	50	ug/L	0.34
Methyl tert-butyl ether	ND	5.0	ug/L	0.21
Styrene	ND	1.0	ug/L	0.16

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CONESTOGA ROVERS & ASSOC., INC.

Client Sample ID: GW-17360-121803-JB-112

GC/MS Volatiles

Lot-Sample #....: A3L200162-022 Work Order #....: F665Q1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.23
Tetrachloroethene	ND	1.0	ug/L	0.12
Toluene	ND	1.0	ug/L	0.17
1,2,4-Trichloro- benzene	ND	5.0	ug/L	0.15
1,1,1-Trichloroethane	0.21 J	1.0	ug/L	0.18
1,1,2-Trichloroethane	ND	1.0	ug/L	0.21
Trichloroethene	1.5	1.0	ug/L	0.22
Trichlorofluoromethane	ND	1.0	ug/L	0.25
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.23
Vinyl chloride	ND	1.0	ug/L	0.26
Xylenes (total)	ND	3.0	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	96	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.