LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A7G120192 **Work Order #...:** J3GPQ1AA **Matrix.....:** SOLID
LCS Lot-Sample#: A7G240000-474
Prep Date.....: 07/24/07 **Analysis Date..:** 07/24/07
Prep Batch #...: 7205474
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**97**	**(76 - 118)**	**SW846 8260B**
Carbon tetrachloride	74	(71 - 124)	SW846 8260B
Chlorobenzene	**102**	**(76 - 113)**	**SW846 8260B**
Chloroform	105	(82 - 117)	SW846 8260B
1,2-Dichloroethane	105	(78 - 122)	SW846 8260B
1,1-Dichloroethylene	**114**	**(67 - 128)**	**SW846 8260B**
Methyl ethyl ketone	81	(40 - 110)	SW846 8260B
Tetrachloroethylene	99	(64 - 121)	SW846 8260B
Trichloroethylene	**108**	**(76 - 119)**	**SW846 8260B**
Vinyl chloride	93	(47 - 123)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(86 - 124)
1,2-Dichloroethane-d4	97	(80 - 122)
Toluene-d8	102	(90 - 122)
4-Bromofluorobenzene	106	(84 - 125)

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 #...: A7G120192 **Work Order #...:** J3GPQ1AA **Matrix.....:** SOLID
LCS Lot-Sample#: A7G240000-474
Prep Date.....: 07/24/07 **Analysis Date..:** 07/24/07
Prep Batch #...: 7205474
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**1.0**	**0.97**	**mg/L**	**97**	**SW846 8260B**
Carbon tetrachloride	1.0	0.74	mg/L	74	SW846 8260B
Chlorobenzene	**1.0**	**1.0**	**mg/L**	**102**	**SW846 8260B**
Chloroform	1.0	1.0	mg/L	105	SW846 8260B
1,2-Dichloroethane	1.0	1.1	mg/L	105	SW846 8260B
1,1-Dichloroethylene	**1.0**	**1.1**	**mg/L**	**114**	**SW846 8260B**
Methyl ethyl ketone	1.0	0.81	mg/L	81	SW846 8260B
Tetrachloroethylene	1.0	0.99	mg/L	99	SW846 8260B
Trichloroethylene	**1.0**	**1.1**	**mg/L**	**108**	**SW846 8260B**
Vinyl chloride	1.0	0.93	mg/L	93	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	111	(86 - 124)
1,2-Dichloroethane-d4	97	(80 - 122)
Toluene-d8	102	(90 - 122)
4-Bromofluorobenzene	106	(84 - 125)

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 #...: A7G120192 **Work Order #...:** J2QQ01AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7G120000-343
Prep Date.....: 07/12/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7193343
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	**86**	**(46 - 110)**	**SW846 8270C**
Acenaphthylene	85	(47 - 110)	SW846 8270C
Anthracene	97	(56 - 111)	SW846 8270C
Benzo(a)anthracene	100	(58 - 111)	SW846 8270C
Benzo(a)pyrene	91	(44 - 115)	SW846 8270C
Benzo(b)fluoranthene	96	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	89	(44 - 120)	SW846 8270C
Benzo(k)fluoranthene	89	(38 - 122)	SW846 8270C
Chrysene	101	(56 - 111)	SW846 8270C
Dibenz(a,h)anthracene	92	(45 - 122)	SW846 8270C
Fluoranthene	98	(55 - 118)	SW846 8270C
Fluorene	87	(51 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	90	(45 - 121)	SW846 8270C
2-Methylnaphthalene	91	(46 - 110)	SW846 8270C
Naphthalene	81	(42 - 110)	SW846 8270C
Phenanthrene	98	(54 - 110)	SW846 8270C
Pyrene	**99**	**(58 - 113)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	81	(24 - 112)
2-Fluorobiphenyl	88	(34 - 110)
Terphenyl-d14	110	(41 - 119)
Phenol-d5	86	(28 - 110)
2-Fluorophenol	90	(26 - 110)
2,4,6-Tribromophenol	74	(10 - 118)

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 Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QQ01AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7G120000-343
Prep Date.....: 07/12/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7193343
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	**670**	**570**	**ug/kg**	**86**	**SW846 8270C**
Acenaphthylene	670	570	ug/kg	85	SW846 8270C
Anthracene	670	650	ug/kg	97	SW846 8270C
Benzo(a)anthracene	670	670	ug/kg	100	SW846 8270C
Benzo(a)pyrene	670	610	ug/kg	91	SW846 8270C
Benzo(b)fluoranthene	670	640	ug/kg	96	SW846 8270C
Benzo(ghi)perylene	670	590	ug/kg	89	SW846 8270C
Benzo(k)fluoranthene	670	600	ug/kg	89	SW846 8270C
Chrysene	670	670	ug/kg	101	SW846 8270C
Dibenz(a,h)anthracene	670	610	ug/kg	92	SW846 8270C
Fluoranthene	670	650	ug/kg	98	SW846 8270C
Fluorene	670	580	ug/kg	87	SW846 8270C
Indeno(1,2,3-cd)pyrene	670	600	ug/kg	90	SW846 8270C
2-Methylnaphthalene	670	610	ug/kg	91	SW846 8270C
Naphthalene	670	540	ug/kg	81	SW846 8270C
Phenanthrene	670	650	ug/kg	98	SW846 8270C
Pyrene	**670**	**660**	**ug/kg**	**99**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	81	(24 - 112)
2-Fluorobiphenyl	88	(34 - 110)
Terphenyl-d14	110	(41 - 119)
Phenol-d5	86	(28 - 110)
2-Fluorophenol	90	(26 - 110)
2,4,6-Tribromophenol	74	(10 - 118)

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 #...: A7G120192 **Work Order #...:** J2W5G1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7G140000-031
Prep Date.....: 07/14/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195031
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	**84**	**(46 - 110)**	**SW846 8270C**
Acenaphthylene	84	(47 - 110)	SW846 8270C
Anthracene	95	(56 - 111)	SW846 8270C
Benzo(a)anthracene	97	(58 - 111)	SW846 8270C
Benzo(a)pyrene	91	(44 - 115)	SW846 8270C
Benzo(b)fluoranthene	92	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	89	(44 - 120)	SW846 8270C
Benzo(k)fluoranthene	87	(38 - 122)	SW846 8270C
Chrysene	99	(56 - 111)	SW846 8270C
Dibenz(a,h)anthracene	94	(45 - 122)	SW846 8270C
Fluoranthene	99	(55 - 118)	SW846 8270C
Fluorene	87	(51 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	91	(45 - 121)	SW846 8270C
2-Methylnaphthalene	92	(46 - 110)	SW846 8270C
Naphthalene	82	(42 - 110)	SW846 8270C
Phenanthrene	96	(54 - 110)	SW846 8270C
Pyrene	**102**	**(58 - 113)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(24 - 112)
2-Fluorobiphenyl	75	(34 - 110)
Terphenyl-d14	95	(41 - 119)
Phenol-d5	71	(28 - 110)
2-Fluorophenol	74	(26 - 110)
2,4,6-Tribromophenol	31	(10 - 118)

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 Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2W5G1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7G140000-031
Prep Date.....: 07/14/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195031
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	**670**	**560**	**ug/kg**	**84**	**SW846 8270C**
Acenaphthylene	670	560	ug/kg	84	SW846 8270C
Anthracene	670	640	ug/kg	95	SW846 8270C
Benzo(a)anthracene	670	650	ug/kg	97	SW846 8270C
Benzo(a)pyrene	670	600	ug/kg	91	SW846 8270C
Benzo(b)fluoranthene	670	610	ug/kg	92	SW846 8270C
Benzo(ghi)perylene	670	590	ug/kg	89	SW846 8270C
Benzo(k)fluoranthene	670	580	ug/kg	87	SW846 8270C
Chrysene	670	660	ug/kg	99	SW846 8270C
Dibenz(a,h)anthracene	670	620	ug/kg	94	SW846 8270C
Fluoranthene	670	660	ug/kg	99	SW846 8270C
Fluorene	670	580	ug/kg	87	SW846 8270C
Indeno(1,2,3-cd)pyrene	670	610	ug/kg	91	SW846 8270C
2-Methylnaphthalene	670	610	ug/kg	92	SW846 8270C
Naphthalene	670	550	ug/kg	82	SW846 8270C
Phenanthrene	670	640	ug/kg	96	SW846 8270C
Pyrene	**670**	**680**	**ug/kg**	**102**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(24 - 112)
2-Fluorobiphenyl	75	(34 - 110)
Terphenyl-d14	95	(41 - 119)
Phenol-d5	71	(28 - 110)
2-Fluorophenol	74	(26 - 110)
2,4,6-Tribromophenol	31	(10 - 118)

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 #...: A7G120192 **Work Order #...:** J2XFT1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7G140000-088
Prep Date.....: 07/15/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195088
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	**63**	**(46 - 110)**	**SW846 8270C**
Acenaphthylene	64	(47 - 110)	SW846 8270C
Anthracene	87	(56 - 111)	SW846 8270C
Benzo(a)anthracene	83	(58 - 111)	SW846 8270C
Benzo(a)pyrene	76	(44 - 115)	SW846 8270C
Benzo(b)fluoranthene	84	(43 - 124)	SW846 8270C
Benzo(ghi)perylene	75	(44 - 120)	SW846 8270C
Benzo(k)fluoranthene	71	(38 - 122)	SW846 8270C
Chrysene	84	(56 - 111)	SW846 8270C
Dibenz(a,h)anthracene	79	(45 - 122)	SW846 8270C
Fluoranthene	89	(55 - 118)	SW846 8270C
Fluorene	72	(51 - 110)	SW846 8270C
Indeno(1,2,3-cd)pyrene	80	(45 - 121)	SW846 8270C
2-Methylnaphthalene	66	(46 - 110)	SW846 8270C
Naphthalene	60	(42 - 110)	SW846 8270C
Phenanthrene	85	(54 - 110)	SW846 8270C
Pyrene	**84**	**(58 - 113)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	91	(41 - 119)
Phenol-d5	59	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	54	(10 - 118)

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 Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2XFT1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7G140000-088
Prep Date.....: 07/15/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195088
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	**670**	**420**	**ug/kg**	**63**	**SW846 8270C**
Acenaphthylene	670	430	ug/kg	64	SW846 8270C
Anthracene	670	580	ug/kg	87	SW846 8270C
Benzo(a)anthracene	670	550	ug/kg	83	SW846 8270C
Benzo(a)pyrene	670	500	ug/kg	76	SW846 8270C
Benzo(b)fluoranthene	670	560	ug/kg	84	SW846 8270C
Benzo(ghi)perylene	670	500	ug/kg	75	SW846 8270C
Benzo(k)fluoranthene	670	470	ug/kg	71	SW846 8270C
Chrysene	670	560	ug/kg	84	SW846 8270C
Dibenz(a,h)anthracene	670	530	ug/kg	79	SW846 8270C
Fluoranthene	670	600	ug/kg	89	SW846 8270C
Fluorene	670	480	ug/kg	72	SW846 8270C
Indeno(1,2,3-cd)pyrene	670	540	ug/kg	80	SW846 8270C
2-Methylnaphthalene	670	440	ug/kg	66	SW846 8270C
Naphthalene	670	400	ug/kg	60	SW846 8270C
Phenanthrene	670	560	ug/kg	85	SW846 8270C
Pyrene	**670**	**560**	**ug/kg**	**84**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	91	(41 - 119)
Phenol-d5	59	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	54	(10 - 118)

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 #...: A7G120192 **Work Order #...:** J24VH1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A7G190000-054 J24VH1AD-LCSD
Prep Date.....: 07/19/07 **Analysis Date..:** 07/20/07
Prep Batch #...: 7200054
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Cresol	**85**	**(24 - 110)**			**SW846 8270C**
	90	**(24 - 110)**	**6.0**	**(0-30)**	**SW846 8270C**
m-Cresol & p-Cresol	**72**	**(27 - 110)**			**SW846 8270C**
	81	**(27 - 110)**	**11**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**59**	**(16 - 110)**			**SW846 8270C**
	59	**(16 - 110)**	**1.1**	**(0-30)**	**SW846 8270C**
2,4-Dinitrotoluene	**95**	**(45 - 126)**			**SW846 8270C**
	98	**(45 - 126)**	**2.3**	**(0-30)**	**SW846 8270C**
Hexachlorobenzene	**75**	**(47 - 116)**			**SW846 8270C**
	85	**(47 - 116)**	**13**	**(0-30)**	**SW846 8270C**
Hexachlorobutadiene	**66**	**(10 - 110)**			**SW846 8270C**
	66	**(10 - 110)**	**0.19**	**(0-30)**	**SW846 8270C**
Hexachloroethane	**65**	**(10 - 110)**			**SW846 8270C**
	65	**(10 - 110)**	**1.1**	**(0-30)**	**SW846 8270C**
Nitrobenzene	**99**	**(35 - 117)**			**SW846 8270C**
	107	**(35 - 117)**	**8.1**	**(0-30)**	**SW846 8270C**
Pentachlorophenol	**68**	**(12 - 110)**			**SW846 8270C**
	71	**(12 - 110)**	**4.3**	**(0-30)**	**SW846 8270C**
Pyridine	**57**	**(10 - 110)**			**SW846 8270C**
	59	**(10 - 110)**	**2.6**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	**77**	**(35 - 111)**			**SW846 8270C**
	87	**(35 - 111)**	**12**	**(0-30)**	**SW846 8270C**
2,4,6-Trichloro-phenol	**83**	**(32 - 110)**			**SW846 8270C**
	85	**(32 - 110)**	**2.0**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	99	(29 - 111)
	109	(29 - 111)
2-Fluorobiphenyl	73	(22 - 110)
	79	(22 - 110)
Terphenyl-d14	92	(40 - 119)
	99	(40 - 119)
Phenol-d5	56	(10 - 110)
	44	(10 - 110)
2-Fluorophenol	58	(10 - 110)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J24VH1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A7G190000-054 J24VH1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	60	(10 - 110)
2,4,6-Tribromophenol	93	(17 - 117)
	95	(17 - 117)

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 Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J24VH1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A7G190000-054 J24VH1AD-LCSD
Prep Date.....: 07/19/07 **Analysis Date..:** 07/20/07
Prep Batch #...: 7200054
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
o-Cresol	**0.080**	**0.068**	**mg/L**	**85**		**SW846 8270C**
	0.080	**0.072**	**mg/L**	**90**	**6.0**	**SW846 8270C**
m-Cresol & p-Cresol	**0.16**	**0.12**	**mg/L**	**72**		**SW846 8270C**
	0.16	**0.13**	**mg/L**	**81**	**11**	**SW846 8270C**
1,4-Dichlorobenzene	**0.080**	**0.048**	**mg/L**	**59**		**SW846 8270C**
	0.080	**0.047**	**mg/L**	**59**	**1.1**	**SW846 8270C**
2,4-Dinitrotoluene	**0.080**	**0.076**	**mg/L**	**95**		**SW846 8270C**
	0.080	**0.078**	**mg/L**	**98**	**2.3**	**SW846 8270C**
Hexachlorobenzene	**0.080**	**0.060**	**mg/L**	**75**		**SW846 8270C**
	0.080	**0.068**	**mg/L**	**85**	**13**	**SW846 8270C**
Hexachlorobutadiene	**0.080**	**0.052**	**mg/L**	**66**		**SW846 8270C**
	0.080	**0.053**	**mg/L**	**66**	**0.19**	**SW846 8270C**
Hexachloroethane	**0.080**	**0.052**	**mg/L**	**65**		**SW846 8270C**
	0.080	**0.052**	**mg/L**	**65**	**1.1**	**SW846 8270C**
Nitrobenzene	**0.080**	**0.079**	**mg/L**	**99**		**SW846 8270C**
	0.080	**0.086**	**mg/L**	**107**	**8.1**	**SW846 8270C**
Pentachlorophenol	**0.080**	**0.054**	**mg/L**	**68**		**SW846 8270C**
	0.080	**0.056**	**mg/L**	**71**	**4.3**	**SW846 8270C**
Pyridine	**0.080**	**0.046**	**mg/L**	**57**		**SW846 8270C**
	0.080	**0.047**	**mg/L**	**59**	**2.6**	**SW846 8270C**
2,4,5-Trichloro-phenol	**0.080**	**0.062**	**mg/L**	**77**		**SW846 8270C**
	0.080	**0.069**	**mg/L**	**87**	**12**	**SW846 8270C**
2,4,6-Trichloro-phenol	**0.080**	**0.067**	**mg/L**	**83**		**SW846 8270C**
	0.080	**0.068**	**mg/L**	**85**	**2.0**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	99	(29 - 111)
	109	(29 - 111)
2-Fluorobiphenyl	73	(22 - 110)
	79	(22 - 110)
Terphenyl-d14	92	(40 - 119)
	99	(40 - 119)
Phenol-d5	56	(10 - 110)
	44	(10 - 110)
2-Fluorophenol	58	(10 - 110)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J24VH1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A7G190000-054 J24VH1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	60	(10 - 110)
2,4,6-Tribromophenol	93	(17 - 117)
	95	(17 - 117)

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 #...: A7G120192 **Work Order #...:** J24XK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G190000-055 J24XK1AD-LCSD
Prep Date.....: 07/19/07 **Analysis Date..:** 07/20/07
Prep Batch #...: 7200055
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
o-Cresol	**85**	**(23 - 110)**			**SW846 8270C**
	90	**(23 - 110)**	**6.0**	**(0-30)**	**SW846 8270C**
m-Cresol & p-Cresol	**72**	**(28 - 110)**			**SW846 8270C**
	81	**(28 - 110)**	**11**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**59**	**(13 - 110)**			**SW846 8270C**
	59	**(13 - 110)**	**1.1**	**(0-30)**	**SW846 8270C**
2,4-Dinitrotoluene	**95**	**(45 - 119)**			**SW846 8270C**
	98	**(45 - 119)**	**2.3**	**(0-30)**	**SW846 8270C**
Hexachlorobenzene	**75**	**(46 - 112)**			**SW846 8270C**
	85	**(46 - 112)**	**13**	**(0-30)**	**SW846 8270C**
Hexachlorobutadiene	**66**	**(10 - 110)**			**SW846 8270C**
	66	**(10 - 110)**	**0.19**	**(0-30)**	**SW846 8270C**
Hexachloroethane	**65**	**(10 - 110)**			**SW846 8270C**
	65	**(10 - 110)**	**1.1**	**(0-30)**	**SW846 8270C**
Nitrobenzene	**99**	**(29 - 118)**			**SW846 8270C**
	107	**(29 - 118)**	**8.1**	**(0-30)**	**SW846 8270C**
Pentachlorophenol	**68**	**(10 - 116)**			**SW846 8270C**
	71	**(10 - 116)**	**4.3**	**(0-30)**	**SW846 8270C**
Pyridine	**57**	**(15 - 110)**			**SW846 8270C**
	59	**(15 - 110)**	**2.6**	**(0-30)**	**SW846 8270C**
2,4,5-Trichloro-phenol	**77**	**(36 - 110)**			**SW846 8270C**
	87	**(36 - 110)**	**12**	**(0-30)**	**SW846 8270C**
2,4,6-Trichloro-phenol	**83**	**(32 - 110)**			**SW846 8270C**
	85	**(32 - 110)**	**2.0**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	99	(27 - 110)
	109	(27 - 110)
2-Fluorobiphenyl	73	(20 - 110)
	79	(20 - 110)
Terphenyl-d14	92	(44 - 110)
	99	(44 - 110)
Phenol-d5	56	(10 - 110)
	44	(10 - 110)
2-Fluorophenol	58	(10 - 110)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J24XK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G190000-055 J24XK1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	60	(10 - 110)
2,4,6-Tribromophenol	93	(28 - 110)
	95	(28 - 110)

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 Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J24XK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G190000-055 J24XK1AD-LCSD
Prep Date.....: 07/19/07 **Analysis Date..:** 07/20/07
Prep Batch #...: 7200055
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
o-Cresol	**0.080**	**0.068**	**mg/L**	**85**		**SW846 8270C**
	0.080	**0.072**	**mg/L**	**90**	**6.0**	**SW846 8270C**
m-Cresol & p-Cresol	**0.16**	**0.12**	**mg/L**	**72**		**SW846 8270C**
	0.16	**0.13**	**mg/L**	**81**	**11**	**SW846 8270C**
1,4-Dichlorobenzene	**0.080**	**0.048**	**mg/L**	**59**		**SW846 8270C**
	0.080	**0.047**	**mg/L**	**59**	**1.1**	**SW846 8270C**
2,4-Dinitrotoluene	**0.080**	**0.076**	**mg/L**	**95**		**SW846 8270C**
	0.080	**0.078**	**mg/L**	**98**	**2.3**	**SW846 8270C**
Hexachlorobenzene	**0.080**	**0.060**	**mg/L**	**75**		**SW846 8270C**
	0.080	**0.068**	**mg/L**	**85**	**13**	**SW846 8270C**
Hexachlorobutadiene	**0.080**	**0.052**	**mg/L**	**66**		**SW846 8270C**
	0.080	**0.053**	**mg/L**	**66**	**0.19**	**SW846 8270C**
Hexachloroethane	**0.080**	**0.052**	**mg/L**	**65**		**SW846 8270C**
	0.080	**0.052**	**mg/L**	**65**	**1.1**	**SW846 8270C**
Nitrobenzene	**0.080**	**0.079**	**mg/L**	**99**		**SW846 8270C**
	0.080	**0.086**	**mg/L**	**107**	**8.1**	**SW846 8270C**
Pentachlorophenol	**0.080**	**0.054**	**mg/L**	**68**		**SW846 8270C**
	0.080	**0.056**	**mg/L**	**71**	**4.3**	**SW846 8270C**
Pyridine	**0.080**	**0.046**	**mg/L**	**57**		**SW846 8270C**
	0.080	**0.047**	**mg/L**	**59**	**2.6**	**SW846 8270C**
2,4,5-Trichloro-phenol	**0.080**	**0.062**	**mg/L**	**77**		**SW846 8270C**
	0.080	**0.069**	**mg/L**	**87**	**12**	**SW846 8270C**
2,4,6-Trichloro-phenol	**0.080**	**0.067**	**mg/L**	**83**		**SW846 8270C**
	0.080	**0.068**	**mg/L**	**85**	**2.0**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	99	(27 - 110)
	109	(27 - 110)
2-Fluorobiphenyl	73	(20 - 110)
	79	(20 - 110)
Terphenyl-d14	92	(44 - 110)
	99	(44 - 110)
Phenol-d5	56	(10 - 110)
	44	(10 - 110)
2-Fluorophenol	58	(10 - 110)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J24XK1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A7G190000-055 J24XK1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	60	(10 - 110)
2,4,6-Tribromophenol	93	(28 - 110)
	95	(28 - 110)

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

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G160000-050 **Prep Batch #...:** 7197050					
Mercury	112	(81 - 116)	SW846 7471A Dilution Factor: 1	07/16/07	J2X1C1A3
Aluminum	90	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1A4
Barium	96	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1A5
Beryllium	96	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1A6
Cadmium	92	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1A7
Calcium	93	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1A8
Cobalt	93	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1A9
Copper	94	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1CA
Iron	99	(73 - 137)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1CC
Magnesium	90	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1CD
Manganese	102	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1CE
Nickel	94	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1CF
Potassium	93	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1CG
Sodium	93	(80 - 120)	SW846 6010B Dilution Factor: 1	07/16/07	J2X1C1CH

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	93	(80 - 120)	SW846 6010B	07/16/07	J2X1C1CJ
		Dilution Factor: 1			
Chromium	93	(80 - 120)	SW846 6010B	07/16/07	J2X1C1CK
		Dilution Factor: 1			
Lead	93	(80 - 120)	SW846 6010B	07/16/07	J2X1C1CL
		Dilution Factor: 1			
Antimony	94	(75 - 110)	SW846 6020	07/16-07/18/07	J2X1C1CM
		Dilution Factor: 1			
Arsenic	90	(74 - 110)	SW846 6020	07/16-07/18/07	J2X1C1CN
		Dilution Factor: 1			
Selenium	89	(73 - 110)	SW846 6020	07/16-07/18/07	J2X1C1CP
		Dilution Factor: 1			
Silver	87	(71 - 110)	SW846 6020	07/16-07/18/07	J2X1C1CQ
		Dilution Factor: 1			
Thallium	87	(75 - 110)	SW846 6020	07/16-07/18/07	J2X1C1CR
		Dilution Factor: 1			
Zinc	91	(73 - 114)	SW846 6020	07/16-07/18/07	J2X1C1CT
		Dilution Factor: 1			
LCS Lot-Sample#: A7G160000-070 **Prep Batch #...:** 7197070					
Arsenic	90	(74 - 110)	SW846 6020	07/16-07/18/07	J2X2A1A3
		Dilution Factor: 1			
Selenium	89	(73 - 110)	SW846 6020	07/16-07/18/07	J2X2A1A4
		Dilution Factor: 1			
Silver	89	(71 - 110)	SW846 6020	07/16-07/18/07	J2X2A1A5
		Dilution Factor: 1			
Thallium	93	(75 - 110)	SW846 6020	07/16-07/18/07	J2X2A1A6
		Dilution Factor: 1			
Zinc	92	(73 - 114)	SW846 6020	07/16-07/18/07	J2X2A1A7
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Mercury	114	(81 - 116)	SW846 7471A	07/16/07	J2X2A1A8
		Dilution Factor: 1			
Aluminum	94	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1A9
		Dilution Factor: 1			
Barium	95	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CA
		Dilution Factor: 1			
Beryllium	95	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CC
		Dilution Factor: 1			
Cadmium	95	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CD
		Dilution Factor: 1			
Calcium	95	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CE
		Dilution Factor: 1			
Cobalt	96	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CF
		Dilution Factor: 1			
Copper	93	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CG
		Dilution Factor: 1			
Iron	100	(73 - 137)	SW846 6010B	07/16-07/17/07	J2X2A1CH
		Dilution Factor: 1			
Magnesium	94	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CJ
		Dilution Factor: 1			
Manganese	97	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CK
		Dilution Factor: 1			
Nickel	99	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CL
		Dilution Factor: 1			
Potassium	97	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CM
		Dilution Factor: 1			
Sodium	92	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CN
		Dilution Factor: 1			
Vanadium	94	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CP
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	95	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CQ
		Dilution Factor: 1			
Lead	96	(80 - 120)	SW846 6010B	07/16-07/17/07	J2X2A1CR
		Dilution Factor: 1			
Antimony	91	(75 - 110)	SW846 6020	07/16-07/18/07	J2X2A1CT
		Dilution Factor: 1			
LCS Lot-Sample#: A7G180000-022 **Prep Batch #...:** 7199022					
Arsenic	85	(74 - 110)	SW846 6020	07/18/07	J23JL1A3
		Dilution Factor: 1			
Selenium	84	(73 - 110)	SW846 6020	07/18/07	J23JL1A4
		Dilution Factor: 1			
Silver	84	(71 - 110)	SW846 6020	07/18/07	J23JL1A5
		Dilution Factor: 1			
Thallium	88	(75 - 110)	SW846 6020	07/18/07	J23JL1A6
		Dilution Factor: 1			
Zinc	90	(73 - 114)	SW846 6020	07/18/07	J23JL1A7
		Dilution Factor: 1			
Mercury	100	(81 - 116)	SW846 7471A	07/18/07	J23JL1A8
		Dilution Factor: 1			
Aluminum	90	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1A9
		Dilution Factor: 1			
Barium	91	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CA
		Dilution Factor: 1			
Beryllium	89	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CC
		Dilution Factor: 1			
Cadmium	90	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CD
		Dilution Factor: 1			
Calcium	92	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CE
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	90	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CF
		Dilution Factor: 1			
Copper	89	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CG
		Dilution Factor: 1			
Iron	93	(73 - 137)	SW846 6010B	07/18-07/19/07	J23JL1CH
		Dilution Factor: 1			
Magnesium	90	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CJ
		Dilution Factor: 1			
Manganese	91	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CK
		Dilution Factor: 1			
Nickel	93	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CL
		Dilution Factor: 1			
Potassium	96	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CM
		Dilution Factor: 1			
Sodium	88	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CN
		Dilution Factor: 1			
Vanadium	88	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CP
		Dilution Factor: 1			
Chromium	90	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CQ
		Dilution Factor: 1			
Lead	89	(80 - 120)	SW846 6010B	07/18-07/19/07	J23JL1CR
		Dilution Factor: 1			
Antimony	89	(75 - 110)	SW846 6020	07/18/07	J23JL1CT
		Dilution Factor: 1			

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G160000-050 **Prep Batch #...:** 7197050							
Mercury	0.83	0.93	mg/kg	112	SW846 7471A	07/16/07	J2X1C1A3
			Dilution Factor: 1				
Aluminum	200	180	mg/kg	90	SW846 6010B	07/16/07	J2X1C1A4
			Dilution Factor: 1				
Barium	200	193	mg/kg	96	SW846 6010B	07/16/07	J2X1C1A5
			Dilution Factor: 1				
Beryllium	5.0	4.8	mg/kg	96	SW846 6010B	07/16/07	J2X1C1A6
			Dilution Factor: 1				
Cadmium	5.0	4.6	mg/kg	92	SW846 6010B	07/16/07	J2X1C1A7
			Dilution Factor: 1				
Calcium	5000	4670	mg/kg	93	SW846 6010B	07/16/07	J2X1C1A8
			Dilution Factor: 1				
Cobalt	50.0	46.6	mg/kg	93	SW846 6010B	07/16/07	J2X1C1A9
			Dilution Factor: 1				
Copper	25.0	23.6	mg/kg	94	SW846 6010B	07/16/07	J2X1C1CA
			Dilution Factor: 1				
Iron	100	98.7	mg/kg	99	SW846 6010B	07/16/07	J2X1C1CC
			Dilution Factor: 1				
Magnesium	5000	4510	mg/kg	90	SW846 6010B	07/16/07	J2X1C1CD
			Dilution Factor: 1				
Manganese	50.0	51.0	mg/kg	102	SW846 6010B	07/16/07	J2X1C1CE
			Dilution Factor: 1				
Nickel	50.0	47.1	mg/kg	94	SW846 6010B	07/16/07	J2X1C1CF
			Dilution Factor: 1				
Potassium	5000	4640	mg/kg	93	SW846 6010B	07/16/07	J2X1C1CG
			Dilution Factor: 1				
Sodium	5000	4640	mg/kg	93	SW846 6010B	07/16/07	J2X1C1CH
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	50.0	46.6	mg/kg	93	SW846 6010B	07/16/07	J2X1C1CJ
			Dilution Factor: 1				
Chromium	20.0	18.7	mg/kg	93	SW846 6010B	07/16/07	J2X1C1CK
			Dilution Factor: 1				
Lead	50.0	46.3	mg/kg	93	SW846 6010B	07/16/07	J2X1C1CL
			Dilution Factor: 1				
Antimony	10.0	9.4	mg/kg	94	SW846 6020	07/16-07/18/07	J2X1C1CM
			Dilution Factor: 1				
Arsenic	10.0	9.0	mg/kg	90	SW846 6020	07/16-07/18/07	J2X1C1CN
			Dilution Factor: 1				
Selenium	10.0	8.9	mg/kg	89	SW846 6020	07/16-07/18/07	J2X1C1CP
			Dilution Factor: 1				
Silver	10.0	8.7	mg/kg	87	SW846 6020	07/16-07/18/07	J2X1C1CQ
			Dilution Factor: 1				
Thallium	10.0	8.7	mg/kg	87	SW846 6020	07/16-07/18/07	J2X1C1CR
			Dilution Factor: 1				
Zinc	10.0	9.1	mg/kg	91	SW846 6020	07/16-07/18/07	J2X1C1CT
			Dilution Factor: 1				
LCS Lot-Sample#: A7G160000-070 **Prep Batch #...:** 7197070							
Arsenic	10.0	9.0	mg/kg	90	SW846 6020	07/16-07/18/07	J2X2A1A3
			Dilution Factor: 1				
Selenium	10.0	8.9	mg/kg	89	SW846 6020	07/16-07/18/07	J2X2A1A4
			Dilution Factor: 1				
Silver	10.0	8.9	mg/kg	89	SW846 6020	07/16-07/18/07	J2X2A1A5
			Dilution Factor: 1				
Thallium	10.0	9.3	mg/kg	93	SW846 6020	07/16-07/18/07	J2X2A1A6
			Dilution Factor: 1				
Zinc	10.0	9.2	mg/kg	92	SW846 6020	07/16-07/18/07	J2X2A1A7
			Dilution Factor: 1				

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Mercury	0.83	0.95	mg/kg	114	SW846 7471A	07/16/07	J2X2A1A8
			Dilution Factor: 1				
Aluminum	200	188	mg/kg	94	SW846 6010B	07/16-07/17/07	J2X2A1A9
			Dilution Factor: 1				
Barium	200	190	mg/kg	95	SW846 6010B	07/16-07/17/07	J2X2A1CA
			Dilution Factor: 1				
Beryllium	5.0	4.8	mg/kg	95	SW846 6010B	07/16-07/17/07	J2X2A1CC
			Dilution Factor: 1				
Cadmium	5.0	4.8	mg/kg	95	SW846 6010B	07/16-07/17/07	J2X2A1CD
			Dilution Factor: 1				
Calcium	5000	4770	mg/kg	95	SW846 6010B	07/16-07/17/07	J2X2A1CE
			Dilution Factor: 1				
Cobalt	50.0	48.0	mg/kg	96	SW846 6010B	07/16-07/17/07	J2X2A1CF
			Dilution Factor: 1				
Copper	25.0	23.3	mg/kg	93	SW846 6010B	07/16-07/17/07	J2X2A1CG
			Dilution Factor: 1				
Iron	100	99.9	mg/kg	100	SW846 6010B	07/16-07/17/07	J2X2A1CH
			Dilution Factor: 1				
Magnesium	5000	4700	mg/kg	94	SW846 6010B	07/16-07/17/07	J2X2A1CJ
			Dilution Factor: 1				
Manganese	50.0	48.4	mg/kg	97	SW846 6010B	07/16-07/17/07	J2X2A1CK
			Dilution Factor: 1				
Nickel	50.0	49.4	mg/kg	99	SW846 6010B	07/16-07/17/07	J2X2A1CL
			Dilution Factor: 1				
Potassium	5000	4830	mg/kg	97	SW846 6010B	07/16-07/17/07	J2X2A1CM
			Dilution Factor: 1				
Sodium	5000	4600	mg/kg	92	SW846 6010B	07/16-07/17/07	J2X2A1CN
			Dilution Factor: 1				
Vanadium	50.0	47.2	mg/kg	94	SW846 6010B	07/16-07/17/07	J2X2A1CP
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	20.0	19.1	mg/kg	95	SW846 6010B	07/16-07/17/07	J2X2A1CQ
			Dilution Factor: 1				
Lead	50.0	47.8	mg/kg	96	SW846 6010B	07/16-07/17/07	J2X2A1CR
			Dilution Factor: 1				
Antimony	10.0	9.1	mg/kg	91	SW846 6020	07/16-07/18/07	J2X2A1CT
			Dilution Factor: 1				

LCS Lot-Sample#: A7G180000-022 **Prep Batch #...:** 7199022

Arsenic	10.0	8.5	mg/kg	85	SW846 6020	07/18/07	J23JL1A3
			Dilution Factor: 1				
Selenium	10.0	8.4	mg/kg	84	SW846 6020	07/18/07	J23JL1A4
			Dilution Factor: 1				
Silver	10.0	8.4	mg/kg	84	SW846 6020	07/18/07	J23JL1A5
			Dilution Factor: 1				
Thallium	10.0	8.8	mg/kg	88	SW846 6020	07/18/07	J23JL1A6
			Dilution Factor: 1				
Zinc	10.0	9.0	mg/kg	90	SW846 6020	07/18/07	J23JL1A7
			Dilution Factor: 1				
Mercury	0.83	0.84	mg/kg	100	SW846 7471A	07/18/07	J23JL1A8
			Dilution Factor: 1				
Aluminum	200	180	mg/kg	90	SW846 6010B	07/18-07/19/07	J23JL1A9
			Dilution Factor: 1				
Barium	200	182	mg/kg	91	SW846 6010B	07/18-07/19/07	J23JL1CA
			Dilution Factor: 1				
Beryllium	5.0	4.5	mg/kg	89	SW846 6010B	07/18-07/19/07	J23JL1CC
			Dilution Factor: 1				
Cadmium	5.0	4.5	mg/kg	90	SW846 6010B	07/18-07/19/07	J23JL1CD
			Dilution Factor: 1				
Calcium	5000	4580	mg/kg	92	SW846 6010B	07/18-07/19/07	J23JL1CE
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	50.0	44.9	mg/kg	90	SW846 6010B	07/18-07/19/07	J23JL1CF
			Dilution Factor: 1				
Copper	25.0	22.2	mg/kg	89	SW846 6010B	07/18-07/19/07	J23JL1CG
			Dilution Factor: 1				
Iron	100	92.7	mg/kg	93	SW846 6010B	07/18-07/19/07	J23JL1CH
			Dilution Factor: 1				
Magnesium	5000	4490	mg/kg	90	SW846 6010B	07/18-07/19/07	J23JL1CJ
			Dilution Factor: 1				
Manganese	50.0	45.5	mg/kg	91	SW846 6010B	07/18-07/19/07	J23JL1CK
			Dilution Factor: 1				
Nickel	50.0	46.4	mg/kg	93	SW846 6010B	07/18-07/19/07	J23JL1CL
			Dilution Factor: 1				
Potassium	5000	4790	mg/kg	96	SW846 6010B	07/18-07/19/07	J23JL1CM
			Dilution Factor: 1				
Sodium	5000	4410	mg/kg	88	SW846 6010B	07/18-07/19/07	J23JL1CN
			Dilution Factor: 1				
Vanadium	50.0	44.1	mg/kg	88	SW846 6010B	07/18-07/19/07	J23JL1CP
			Dilution Factor: 1				
Chromium	20.0	17.9	mg/kg	90	SW846 6010B	07/18-07/19/07	J23JL1CQ
			Dilution Factor: 1				
Lead	50.0	44.3	mg/kg	89	SW846 6010B	07/18-07/19/07	J23JL1CR
			Dilution Factor: 1				
Antimony	10.0	8.9	mg/kg	89	SW846 6020	07/18/07	J23JL1CT
			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 #...: A7G120192 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G190000-015 **Prep Batch #...:** 7200015					
Arsenic	102	(50 - 150)	SW846 6010B	07/19-07/20/07	J24MJ1AL
		Dilution Factor: 1			
Barium	106	(50 - 150)	SW846 6010B	07/19-07/20/07	J24MJ1AM
		Dilution Factor: 1			
Cadmium	107	(50 - 150)	SW846 6010B	07/19-07/20/07	J24MJ1AN
		Dilution Factor: 1			
Chromium	107	(50 - 150)	SW846 6010B	07/19-07/20/07	J24MJ1AP
		Dilution Factor: 1			
Lead	105	(50 - 150)	SW846 6010B	07/19-07/20/07	J24MJ1AQ
		Dilution Factor: 1			
Selenium	102	(50 - 150)	SW846 6010B	07/19-07/20/07	J24MJ1AR
		Dilution Factor: 1			
Silver	116	(50 - 150)	SW846 6010B	07/19-07/20/07	J24MJ1AT
		Dilution Factor: 1			
Mercury	102	(50 - 150)	SW846 7470A	07/19-07/20/07	J24MJ1AK
		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 #...: A7G120192 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G190000-015 **Prep Batch #...:** 7200015							
Arsenic	2.0	2.0	mg/L	102	SW846 6010B	07/19-07/20/07	J24MJ1AL
			Dilution Factor: 1				
Barium	2.0	2.1	mg/L	106	SW846 6010B	07/19-07/20/07	J24MJ1AM
			Dilution Factor: 1				
Cadmium	0.050	0.053	mg/L	107	SW846 6010B	07/19-07/20/07	J24MJ1AN
			Dilution Factor: 1				
Chromium	0.20	0.21	mg/L	107	SW846 6010B	07/19-07/20/07	J24MJ1AP
			Dilution Factor: 1				
Lead	0.50	0.52	mg/L	105	SW846 6010B	07/19-07/20/07	J24MJ1AQ
			Dilution Factor: 1				
Selenium	2.0	2.0	mg/L	102	SW846 6010B	07/19-07/20/07	J24MJ1AR
			Dilution Factor: 1				
Silver	0.050	0.058	mg/L	116	SW846 6010B	07/19-07/20/07	J24MJ1AT
			Dilution Factor: 1				
Mercury	0.0050	0.0051	mg/L	102	SW846 7470A	07/19-07/20/07	J24MJ1AK
			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 #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G190000-065 **Prep Batch #...:** 7200065					
Mercury	94	(50 - 150)	SW846 7470A	07/19-07/20/07	J24V91AK
		Dilution Factor: 1			
Arsenic	102	(50 - 150)	SW846 6010B	07/19/07	J24V91AL
		Dilution Factor: 1			
Barium	106	(50 - 150)	SW846 6010B	07/19/07	J24V91AM
		Dilution Factor: 1			
Cadmium	106	(50 - 150)	SW846 6010B	07/19/07	J24V91AN
		Dilution Factor: 1			
Chromium	107	(50 - 150)	SW846 6010B	07/19/07	J24V91AP
		Dilution Factor: 1			
Lead	104	(50 - 150)	SW846 6010B	07/19/07	J24V91AQ
		Dilution Factor: 1			
Selenium	103	(50 - 150)	SW846 6010B	07/19/07	J24V91AR
		Dilution Factor: 1			
Silver	117	(50 - 150)	SW846 6010B	07/19/07	J24V91AT
		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 #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7G190000-065 **Prep Batch #...:** 7200065							
Mercury	0.0050	0.0047	mg/L	94	SW846 7470A	07/19-07/20/07	J24V91AK
			Dilution Factor: 1				
Arsenic	2.0	2.0	mg/L	102	SW846 6010B	07/19/07	J24V91AL
			Dilution Factor: 1				
Barium	2.0	2.1	mg/L	106	SW846 6010B	07/19/07	J24V91AM
			Dilution Factor: 1				
Cadmium	0.050	0.053	mg/L	106	SW846 6010B	07/19/07	J24V91AN
			Dilution Factor: 1				
Chromium	0.20	0.21	mg/L	107	SW846 6010B	07/19/07	J24V91AP
			Dilution Factor: 1				
Lead	0.50	0.52	mg/L	104	SW846 6010B	07/19/07	J24V91AQ
			Dilution Factor: 1				
Selenium	2.0	2.1	mg/L	103	SW846 6010B	07/19/07	J24V91AR
			Dilution Factor: 1				
Silver	0.050	0.059	mg/L	117	SW846 6010B	07/19/07	J24V91AT
			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 #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Corrosivity		Work Order #: J2RNC1AA	LCS Lot-Sample#: A7G120000-545		
	101	(97 - 103)	SW846 9045A	07/12-07/13/07	7193545
		Dilution Factor: 1			
Reactive Cyanide		Work Order #: J3EA71AC	LCS Lot-Sample#: A7G230000-350		
	175	(10 - 200)	SW846 7.3.3	07/23/07	7204350
		Dilution Factor: 1			
Reactive Sulfide		Work Order #: J3EA81AC	LCS Lot-Sample#: A7G230000-351		
	138	(10 - 200)	SW846 7.3.4	07/23/07	7204351
		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 #...: A7G120192 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Corrosivity			Work Order #: J2RNC1AA	LCS Lot-Sample#: A7G120000-545			
	5.3	5.3	No Units	101	SW846 9045A	07/12-07/13/07	7193545
			Dilution Factor: 1				
Reactive Cyanide			Work Order #: J3EA71AC	LCS Lot-Sample#: A7G230000-350			
	100	180	mg/kg	175	SW846 7.3.3	07/23/07	7204350
			Dilution Factor: 1				
Reactive Sulfide			Work Order #: J3EA81AC	LCS Lot-Sample#: A7G230000-351			
	250	350	mg/kg	138	SW846 7.3.4	07/23/07	7204351
			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 #...: A7G120192 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Flashpoint	WO#:J3K0G1AA-LCS/J3K0G1AC-LCSD					LCS Lot-Sample#: C7G260000-148	
	100	(96 - 103)			SW846 1010	07/26/07	7207148
	103	(96 - 103)	2.4	(0-10)	SW846 1010	07/26/07	7207148

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

Lot-Sample #...: A7G120192 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Flashpoint		WO#:J3K0G1AA-LCS/J3K0G1AC-LCSD				LCS Lot-Sample#: C7G260000-148		
	81	81	deg F	100		SW846 1010	07/26/07	7207148
	81	83	deg F	103	2.4	SW846 1010	07/26/07	7207148

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 #...: A7G120192 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Corrosivity		Work Order #: J2RNG1AA	LCS Lot-Sample#: A7G120000-546		
	101	(97 - 103)	SW846 9045A	07/12/07	7193546
		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 #...: A7G120192 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Corrosivity	Work Order #: J2RNG1AA			LCS Lot-Sample#: A7G120000-546			
	5.3	5.3	No Units	101	SW846 9045A	07/12/07	7193546
			Dilution Factor: 1				

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP GC/MS Volatiles

Client Lot #...: A7G120192 **Work Order #...:** J2PKK1A4-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7G120118-001 J2PKK1A5-MSD
Date Sampled...: 07/11/07 10:10 **Date Received..:** 07/11/07
Leach Date.....: 07/23/07 **Prep Date.....:** 07/24/07 **Analysis Date..:** 07/24/07
Leach Batch #..: P720417 **Prep Batch #...:** 7205474
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**98**	**(76 - 117)**			**SW846 8260B**
	97	**(76 - 117)**	**0.45**	**(0-30)**	**SW846 8260B**
Carbon tetrachloride	72	(72 - 124)			SW846 8260B
	69 a	(72 - 124)	3.8	(0-30)	SW846 8260B
Chlorobenzene	**103**	**(72 - 114)**			**SW846 8260B**
	104	**(72 - 114)**	**0.70**	**(0-30)**	**SW846 8260B**
Chloroform	109	(82 - 117)			SW846 8260B
	105	(82 - 117)	3.2	(0-30)	SW846 8260B
1,2-Dichloroethane	107	(80 - 120)			SW846 8260B
	105	(80 - 120)	1.4	(0-30)	SW846 8260B
1,1-Dichloroethylene	**112**	**(67 - 129)**			**SW846 8260B**
	109	**(67 - 129)**	**2.4**	**(0-30)**	**SW846 8260B**
Methyl ethyl ketone	87	(37 - 110)			SW846 8260B
	73	(37 - 110)	17	(0-30)	SW846 8260B
Tetrachloroethylene	102	(60 - 119)			SW846 8260B
	99	(60 - 119)	2.6	(0-30)	SW846 8260B
Trichloroethylene	**111**	**(72 - 121)**			**SW846 8260B**
	110	**(72 - 121)**	**0.45**	**(0-30)**	**SW846 8260B**
Vinyl chloride	94	(54 - 118)			SW846 8260B
	91	(54 - 118)	3.0	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(86 - 125)
	112	(86 - 125)
1,2-Dichloroethane-d4	104	(80 - 122)
	102	(80 - 122)
Toluene-d8	103	(90 - 122)
	108	(90 - 122)
4-Bromofluorobenzene	109	(84 - 125)
	109	(84 - 125)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

TCLP GC/MS Volatiles

Client Lot #...: A7G120192 **Work Order #...:** J2PKK1A4-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7G120118-001 J2PKK1A5-MSD
Date Sampled...: 07/11/07 10:10 **Date Received..:** 07/11/07
Leach Date.....: 07/23/07 **Prep Date.....:** 07/24/07 **Analysis Date..:** 07/24/07
Leach Batch #..: P720417 **Prep Batch #...:** 7205474
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**1.0**	**0.98**	**mg/L**	**98**		**SW846 8260B**
	ND	**1.0**	**0.97**	**mg/L**	**97**	**0.45**	**SW846 8260B**
Carbon tetrachloride	ND	1.0	0.72	mg/L	72		SW846 8260B
	ND	1.0	0.69	mg/L	69 a	3.8	SW846 8260B
Chlorobenzene	**ND**	**1.0**	**1.0**	**mg/L**	**103**		**SW846 8260B**
	ND	**1.0**	**1.0**	**mg/L**	**104**	**0.70**	**SW846 8260B**
Chloroform	ND	1.0	1.1	mg/L	109		SW846 8260B
	ND	1.0	1.1	mg/L	105	3.2	SW846 8260B
1,2-Dichloroethane	ND	1.0	1.1	mg/L	107		SW846 8260B
	ND	1.0	1.1	mg/L	105	1.4	SW846 8260B
1,1-Dichloroethylene	**ND**	**1.0**	**1.1**	**mg/L**	**112**		**SW846 8260B**
	ND	**1.0**	**1.1**	**mg/L**	**109**	**2.4**	**SW846 8260B**
Methyl ethyl ketone	ND	1.0	0.87	mg/L	87		SW846 8260B
	ND	1.0	0.73	mg/L	73	17	SW846 8260B
Tetrachloroethylene	ND	1.0	1.0	mg/L	102		SW846 8260B
	ND	1.0	0.99	mg/L	99	2.6	SW846 8260B
Trichloroethylene	**ND**	**1.0**	**1.1**	**mg/L**	**111**		**SW846 8260B**
	ND	**1.0**	**1.1**	**mg/L**	**110**	**0.45**	**SW846 8260B**
Vinyl chloride	ND	1.0	0.94	mg/L	94		SW846 8260B
	ND	1.0	0.91	mg/L	91	3.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	108	(86 - 125)
	112	(86 - 125)
1,2-Dichloroethane-d4	104	(80 - 122)
	102	(80 - 122)
Toluene-d8	103	(90 - 122)
	108	(90 - 122)
4-Bromofluorobenzene	109	(84 - 125)
	109	(84 - 125)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2P691A5-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-001 J2P691A6-MSD
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07
Prep Date.....: 07/12/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7193343
Dilution Factor: 25

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	**0.0 DIL,a**	**(10 - 200)**			**SW846 8270C**
	0.0 DIL,a	**(10 - 200)**	**0.0**	**(0-30)**	**SW846 8270C**
Acenaphthylene	0.0 DIL,a	(10 - 200)			SW846 8270C
	0.0 DIL,a	(10 - 200)	0.0	(0-30)	SW846 8270C
Anthracene	127 DIL	(10 - 200)			SW846 8270C
	121 DIL	(10 - 200)	4.6	(0-30)	SW846 8270C
Benzo(a)anthracene	61 DIL	(10 - 200)			SW846 8270C
	40 DIL	(10 - 200)	13	(0-30)	SW846 8270C
Benzo(a)pyrene	144 DIL	(10 - 200)			SW846 8270C
	125 DIL	(10 - 200)	14	(0-30)	SW846 8270C
Benzo(b)fluoranthene	24 DIL	(10 - 200)			SW846 8270C
	0.0 DIL,a	(10 - 200)	0.0	(0-30)	SW846 8270C
Benzo(ghi)perylene	8.4 DIL,a	(10 - 200)			SW846 8270C
	0.0 DIL,a	(10 - 200)	0.0	(0-30)	SW846 8270C
Benzo(k)fluoranthene	0.0 DIL,a	(10 - 200)			SW846 8270C
	189 DIL,p	(10 - 200)	200	(0-30)	SW846 8270C
Chrysene	2.8 DIL,a	(10 - 200)			SW846 8270C
	0.0 DIL,a	(10 - 200)	0.0	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	105 DIL	(10 - 200)			SW846 8270C
	121 DIL	(10 - 200)	15	(0-30)	SW846 8270C
Fluoranthene	30 DIL	(10 - 200)			SW846 8270C
	3.9 DIL,a	(10 - 200)	12	(0-30)	SW846 8270C
Fluorene	101 DIL	(10 - 187)			SW846 8270C
	0.0	(10 - 187)	200	(0-30)	SW846 8270C
	Qualifiers: DIL,a,p				
Indeno(1,2,3-cd)pyrene	53 DIL	(10 - 200)			SW846 8270C
	14 DIL	(10 - 200)	29	(0-30)	SW846 8270C
2-Methylnaphthalene	112 DIL	(10 - 200)			SW846 8270C
	118 DIL	(10 - 200)	4.5	(0-30)	SW846 8270C
Naphthalene	0.0 DIL,a	(10 - 200)			SW846 8270C
	111 DIL,p	(10 - 200)	200	(0-30)	SW846 8270C
Phenanthrene	160 DIL	(10 - 200)			SW846 8270C
	172 DIL	(10 - 200)	7.2	(0-30)	SW846 8270C
Pyrene	**28 DIL**	**(10 - 200)**			**SW846 8270C**
	40 DIL	**(10 - 200)**	**7.4**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	0.0	(24 - 112)
	Qualifiers: DIL,*	
	0.0	(24 - 112)
	Qualifiers: DIL,*	

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2P691A5-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-001 J2P691A6-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	0.0	(34 - 110)
	Qualifiers: DIL,*	
	103 DIL	(34 - 110)
Terphenyl-d14	0.0	(41 - 119)
	Qualifiers: DIL,*	
	116 DIL	(41 - 119)
Phenol-d5	76 DIL	(28 - 110)
	86 DIL	(28 - 110)
2-Fluorophenol	68 DIL	(26 - 110)
	88 DIL	(26 - 110)
2,4,6-Tribromophenol	85 DIL	(10 - 118)
	0.0	(10 - 118)
	Qualifiers: DIL,*	

NOTE(S):

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

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

* Surrogate recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2P691A5-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-001 J2P691A6-MSD
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07
Prep Date.....: 07/12/07 **Analysis Date..:** 07/23/07
Prep Batch #...: 7193343
Dilution Factor: 25

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	**ND**	**760**	**0.0**	**ug/kg**	**0.0**		**SW846 8270C**
	Qualifiers: DIL,a						
	ND	**760**	**0.0**	**ug/kg**	**0.0**	**0.0**	**SW846 8270C**
	Qualifiers: DIL,a						
Acenaphthylene	ND	760	0.0	ug/kg	0.0		SW846 8270C
	Qualifiers: DIL,a						
	ND	760	0.0	ug/kg	0.0	0.0	SW846 8270C
	Qualifiers: DIL,a						
Anthracene	ND	760	970	ug/kg	127		SW846 8270C
	Qualifiers: DIL						
	ND	760	920	ug/kg	121	4.6	SW846 8270C
	Qualifiers: DIL						
Benzo(a)anthracene	ND	760	1300	ug/kg	61 DIL		SW846 8270C
	ND	760	1200	ug/kg	40 DIL	13	SW846 8270C
Benzo(a)pyrene	ND	760	1100	ug/kg	144		SW846 8270C
	Qualifiers: DIL						
	ND	760	950	ug/kg	125	14	SW846 8270C
	Qualifiers: DIL						
Benzo(b)fluoranthene	ND	760	1600	ug/kg	24 DIL		SW846 8270C
	ND	760	1400	ug/kg	0.0	0.0	SW846 8270C
	Qualifiers: DIL,a						
Benzo(ghi)perylene	ND	760	1300	ug/kg	8.4		SW846 8270C
	Qualifiers: DIL,a						
	ND	760	990	ug/kg	0.0	0.0	SW846 8270C
	Qualifiers: DIL,a						
Benzo(k)fluoranthene	ND	760	0.0	ug/kg	0.0		SW846 8270C
	Qualifiers: DIL,a						
	ND	760	1400	ug/kg	189	200	SW846 8270C
	Qualifiers: DIL,p						
Chrysene	ND	760	1700	ug/kg	2.8		SW846 8270C
	Qualifiers: DIL,a						
	ND	760	1600	ug/kg	0.0	0.0	SW846 8270C
	Qualifiers: DIL,a						
Dibenz(a,h)anthracene	ND	760	800	ug/kg	105		SW846 8270C
	Qualifiers: DIL						
	ND	760	920	ug/kg	121	15	SW846 8270C
	Qualifiers: DIL						
Fluoranthene	ND	760	1800	ug/kg	30 DIL		SW846 8270C
	ND	760	1600	ug/kg	3.9	12	SW846 8270C
	Qualifiers: DIL,a						

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2P691A5-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-001 J2P691A6-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Fluorene	ND	760	770	ug/kg	101		SW846 8270C
	Qualifiers: DIL						
	ND	760	0.0	ug/kg	0.0	200	SW846 8270C
	Qualifiers: DIL,a,p						
Indeno(1,2,3-cd)pyrene	ND	760	1200	ug/kg	53 DIL		SW846 8270C
	ND	760	870	ug/kg	14 DIL	29	SW846 8270C
2-Methylnaphthalene	ND	760	860	ug/kg	112		SW846 8270C
	Qualifiers: DIL						
	ND	760	890	ug/kg	118	4.5	SW846 8270C
	Qualifiers: DIL						
Naphthalene	ND	760	0.0	ug/kg	0.0		SW846 8270C
	Qualifiers: DIL,a						
	ND	760	850	ug/kg	111	200	SW846 8270C
	Qualifiers: DIL,p						
Phenanthrene	ND	760	1200	ug/kg	160		SW846 8270C
	Qualifiers: DIL						
	ND	760	1300	ug/kg	172	7.2	SW846 8270C
	Qualifiers: DIL						
Pyrene	**ND**	**760**	**1200**	**ug/kg**	**28 DIL**		**SW846 8270C**
	ND	**760**	**1300**	**ug/kg**	**40 DIL**	**7.4**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	0.0	(24 - 112)
	Qualifiers: DIL,*	
	0.0	(24 - 112)
	Qualifiers: DIL,*	
2-Fluorobiphenyl	0.0	(34 - 110)
	Qualifiers: DIL,*	
	103 DIL	(34 - 110)
Terphenyl-d14	0.0	(41 - 119)
	Qualifiers: DIL,*	
	116 DIL	(41 - 119)
Phenol-d5	76 DIL	(28 - 110)
	86 DIL	(28 - 110)
2-Fluorophenol	68 DIL	(26 - 110)
	88 DIL	(26 - 110)
2,4,6-Tribromophenol	85 DIL	(10 - 118)
	0.0	(10 - 118)
	Qualifiers: DIL,*	

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2P691A5-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-001 J2P691A6-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

* Surrogate recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QA51DR-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-036 J2QA51DT-MSD
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07
Prep Date.....: 07/14/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195031
Dilution Factor: 4

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	**79 DIL**	**(10 - 200)**			**SW846 8270C**
	78 DIL	**(10 - 200)**	**1.6**	**(0-30)**	**SW846 8270C**
Acenaphthylene	84 DIL	(10 - 200)			SW846 8270C
	79 DIL	(10 - 200)	5.9	(0-30)	SW846 8270C
Anthracene	94 DIL	(10 - 200)			SW846 8270C
	93 DIL	(10 - 200)	1.1	(0-30)	SW846 8270C
Benzo(a)anthracene	94 DIL	(10 - 200)			SW846 8270C
	101 DIL	(10 - 200)	7.2	(0-30)	SW846 8270C
Benzo(a)pyrene	71 DIL	(10 - 200)			SW846 8270C
	2.1	(10 - 200)	129	(0-30)	SW846 8270C
	Qualifiers: DIL,a,p				
Benzo(b)fluoranthene	74 DIL	(10 - 200)			SW846 8270C
	87 DIL	(10 - 200)	13	(0-30)	SW846 8270C
Benzo(ghi)perylene	76 DIL	(10 - 200)			SW846 8270C
	78 DIL	(10 - 200)	2.1	(0-30)	SW846 8270C
Benzo(k)fluoranthene	98 DIL	(10 - 200)			SW846 8270C
	87 DIL	(10 - 200)	12	(0-30)	SW846 8270C
Chrysene	88 DIL	(10 - 200)			SW846 8270C
	82 DIL	(10 - 200)	6.2	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	78 DIL	(10 - 200)			SW846 8270C
	77 DIL	(10 - 200)	1.2	(0-30)	SW846 8270C
Fluoranthene	96 DIL	(10 - 200)			SW846 8270C
	98 DIL	(10 - 200)	2.5	(0-30)	SW846 8270C
Fluorene	82 DIL	(10 - 187)			SW846 8270C
	77 DIL	(10 - 187)	6.1	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	82 DIL	(10 - 200)			SW846 8270C
	79 DIL	(10 - 200)	3.6	(0-30)	SW846 8270C
2-Methylnaphthalene	79 DIL	(10 - 200)			SW846 8270C
	93 DIL	(10 - 200)	13	(0-30)	SW846 8270C
Naphthalene	38 DIL	(10 - 200)			SW846 8270C
	37 DIL	(10 - 200)	1.4	(0-30)	SW846 8270C
Phenanthrene	86 DIL	(10 - 200)			SW846 8270C
	89 DIL	(10 - 200)	3.1	(0-30)	SW846 8270C
Pyrene	**83 DIL**	**(10 - 200)**			**SW846 8270C**
	79 DIL	**(10 - 200)**	**3.5**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	52 DIL	(24 - 112)
	50 DIL	(24 - 112)

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QA51DR-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-036 J2QA51DT-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	68 DIL	(34 - 110)
	64 DIL	(34 - 110)
Terphenyl-d14	75 DIL	(41 - 119)
	72 DIL	(41 - 119)
Phenol-d5	62 DIL	(28 - 110)
	60 DIL	(28 - 110)
2-Fluorophenol	51 DIL	(26 - 110)
	59 DIL	(26 - 110)
2,4,6-Tribromophenol	44 DIL	(10 - 118)
	38 DIL	(10 - 118)

NOTE(S):

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

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QA51DR-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-036 J2QA51DT-MSD
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07
Prep Date.....: 07/14/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195031
Dilution Factor: 4

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	**ND**	**710**	**560**	**ug/kg**	**79 DIL**		**SW846 8270C**
	ND	**710**	**550**	**ug/kg**	**78 DIL**	**1.6**	**SW846 8270C**
Acenaphthylene	ND	710	590	ug/kg	84 DIL		SW846 8270C
	ND	710	560	ug/kg	79 DIL	5.9	SW846 8270C
Anthracene	ND	710	660	ug/kg	94 DIL		SW846 8270C
	ND	710	650	ug/kg	93 DIL	1.1	SW846 8270C
Benzo(a)anthracene	ND	710	670	ug/kg	94 DIL		SW846 8270C
	ND	710	720	ug/kg	101	7.2	SW846 8270C
	Qualifiers:		DIL				
Benzo(a)pyrene	ND	710	620	ug/kg	71 DIL		SW846 8270C
	ND	710	130	ug/kg	2.1	129	SW846 8270C
	Qualifiers:		DIL,a,p				
Benzo(b)fluoranthene	ND	710	670	ug/kg	74 DIL		SW846 8270C
	ND	710	760	ug/kg	87 DIL	13	SW846 8270C
Benzo(ghi)perylene	ND	710	540	ug/kg	76 DIL		SW846 8270C
	ND	710	550	ug/kg	78 DIL	2.1	SW846 8270C
Benzo(k)fluoranthene	ND	710	690	ug/kg	98 DIL		SW846 8270C
	ND	710	610	ug/kg	87 DIL	12	SW846 8270C
Chrysene	ND	710	770	ug/kg	88 DIL		SW846 8270C
	ND	710	730	ug/kg	82 DIL	6.2	SW846 8270C
Dibenz(a,h)anthracene	ND	710	550	ug/kg	78 DIL		SW846 8270C
	ND	710	540	ug/kg	77 DIL	1.2	SW846 8270C
Fluoranthene	ND	710	840	ug/kg	96 DIL		SW846 8270C
	ND	710	870	ug/kg	98 DIL	2.5	SW846 8270C
Fluorene	ND	710	580	ug/kg	82 DIL		SW846 8270C
	ND	710	550	ug/kg	77 DIL	6.1	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	710	580	ug/kg	82 DIL		SW846 8270C
	ND	710	560	ug/kg	79 DIL	3.6	SW846 8270C
2-Methylnaphthalene	ND	710	700	ug/kg	79 DIL		SW846 8270C
	ND	710	800	ug/kg	93 DIL	13	SW846 8270C
Naphthalene	ND	710	640	ug/kg	38 DIL		SW846 8270C
	ND	710	630	ug/kg	37 DIL	1.4	SW846 8270C
Phenanthrene	ND	710	740	ug/kg	86 DIL		SW846 8270C
	ND	710	760	ug/kg	89 DIL	3.1	SW846 8270C
Pyrene	**ND**	**710**	**720**	**ug/kg**	**83 DIL**		**SW846 8270C**
	ND	**710**	**690**	**ug/kg**	**79 DIL**	**3.5**	**SW846 8270C**

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QA51DR-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-036 J2QA51DT-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	52 DIL	(24 - 112)
	50 DIL	(24 - 112)
2-Fluorobiphenyl	68 DIL	(34 - 110)
	64 DIL	(34 - 110)
Terphenyl-d14	75 DIL	(41 - 119)
	72 DIL	(41 - 119)
Phenol-d5	62 DIL	(28 - 110)
	60 DIL	(28 - 110)
2-Fluorophenol	51 DIL	(26 - 110)
	59 DIL	(26 - 110)
2,4,6-Tribromophenol	44 DIL	(10 - 118)
	38 DIL	(10 - 118)

NOTE(S):

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

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QCQ1DU-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-041 J2QCQ1DV-MSD
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07
Prep Date.....: 07/15/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195088
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	**75**	**(10 - 200)**			**SW846 8270C**
	71	**(10 - 200)**	**5.5**	**(0-30)**	**SW846 8270C**
Acenaphthylene	74	(10 - 200)			SW846 8270C
	71	(10 - 200)	4.0	(0-30)	SW846 8270C
Anthracene	85	(10 - 200)			SW846 8270C
	91	(10 - 200)	6.8	(0-30)	SW846 8270C
Benzo(a)anthracene	84	(10 - 200)			SW846 8270C
	81	(10 - 200)	3.1	(0-30)	SW846 8270C
Benzo(a)pyrene	79	(10 - 200)			SW846 8270C
	78	(10 - 200)	1.0	(0-30)	SW846 8270C
Benzo(b)fluoranthene	77	(10 - 200)			SW846 8270C
	73	(10 - 200)	5.3	(0-30)	SW846 8270C
Benzo(ghi)perylene	76	(10 - 200)			SW846 8270C
	78	(10 - 200)	2.4	(0-30)	SW846 8270C
Benzo(k)fluoranthene	77	(10 - 200)			SW846 8270C
	81	(10 - 200)	5.0	(0-30)	SW846 8270C
Chrysene	81	(10 - 200)			SW846 8270C
	83	(10 - 200)	2.3	(0-30)	SW846 8270C
Dibenz(a,h)anthracene	79	(10 - 200)			SW846 8270C
	79	(10 - 200)	0.52	(0-30)	SW846 8270C
Fluoranthene	83	(10 - 200)			SW846 8270C
	85	(10 - 200)	2.7	(0-30)	SW846 8270C
Fluorene	78	(10 - 187)			SW846 8270C
	79	(10 - 187)	0.55	(0-30)	SW846 8270C
Indeno(1,2,3-cd)pyrene	76	(10 - 200)			SW846 8270C
	79	(10 - 200)	3.8	(0-30)	SW846 8270C
2-Methylnaphthalene	80	(10 - 200)			SW846 8270C
	70	(10 - 200)	13	(0-30)	SW846 8270C
Naphthalene	68	(10 - 200)			SW846 8270C
	64	(10 - 200)	6.6	(0-30)	SW846 8270C
Phenanthrene	90	(10 - 200)			SW846 8270C
	93	(10 - 200)	3.3	(0-30)	SW846 8270C
Pyrene	**78**	**(10 - 200)**			**SW846 8270C**
	79	**(10 - 200)**	**0.81**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(24 - 112)
	58	(24 - 112)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QCQ1DU-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-041 J2QCQ1DV-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	76	(34 - 110)
	69	(34 - 110)
Terphenyl-d14	89	(41 - 119)
	88	(41 - 119)
Phenol-d5	78	(28 - 110)
	61	(28 - 110)
2-Fluorophenol	75	(26 - 110)
	61	(26 - 110)
2,4,6-Tribromophenol	61	(10 - 118)
	64	(10 - 118)

NOTE(S):

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

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QCQ1DU-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-041 J2QCQ1DV-MSD
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07
Prep Date.....: 07/15/07 **Analysis Date..:** 07/22/07
Prep Batch #...: 7195088
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	**ND**	**690**	**520**	**ug/kg**	**75**		**SW846 8270C**
	ND	**690**	**490**	**ug/kg**	**71**	**5.5**	**SW846 8270C**
Acenaphthylene	ND	690	510	ug/kg	74		SW846 8270C
	ND	690	490	ug/kg	71	4.0	SW846 8270C
Anthracene	ND	690	590	ug/kg	85		SW846 8270C
	ND	690	630	ug/kg	91	6.8	SW846 8270C
Benzo(a)anthracene	ND	690	600	ug/kg	84		SW846 8270C
	ND	690	590	ug/kg	81	3.1	SW846 8270C
Benzo(a)pyrene	ND	690	540	ug/kg	79		SW846 8270C
	ND	690	540	ug/kg	78	1.0	SW846 8270C
Benzo(b)fluoranthene	ND	690	570	ug/kg	77		SW846 8270C
	ND	690	540	ug/kg	73	5.3	SW846 8270C
Benzo(ghi)perylene	ND	690	530	ug/kg	76		SW846 8270C
	ND	690	540	ug/kg	78	2.4	SW846 8270C
Benzo(k)fluoranthene	ND	690	530	ug/kg	77		SW846 8270C
	ND	690	560	ug/kg	81	5.0	SW846 8270C
Chrysene	ND	690	590	ug/kg	81		SW846 8270C
	ND	690	600	ug/kg	83	2.3	SW846 8270C
Dibenz(a,h)anthracene	ND	690	540	ug/kg	79		SW846 8270C
	ND	690	540	ug/kg	79	0.52	SW846 8270C
Fluoranthene	ND	690	610	ug/kg	83		SW846 8270C
	ND	690	630	ug/kg	85	2.7	SW846 8270C
Fluorene	ND	690	540	ug/kg	78		SW846 8270C
	ND	690	540	ug/kg	79	0.55	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	690	520	ug/kg	76		SW846 8270C
	ND	690	540	ug/kg	79	3.8	SW846 8270C
2-Methylnaphthalene	ND	690	550	ug/kg	80		SW846 8270C
	ND	690	480	ug/kg	70	13	SW846 8270C
Naphthalene	ND	690	470	ug/kg	68		SW846 8270C
	ND	690	440	ug/kg	64	6.6	SW846 8270C
Phenanthrene	ND	690	620	ug/kg	90		SW846 8270C
	ND	690	640	ug/kg	93	3.3	SW846 8270C
Pyrene	**ND**	**690**	**580**	**ug/kg**	**78**		**SW846 8270C**
	ND	**690**	**580**	**ug/kg**	**79**	**0.81**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(24 - 112)
	58	(24 - 112)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: A7G120192 **Work Order #...:** J2QCQ1DU-MS **Matrix.....:** SO
MS Lot-Sample #: A7G120192-041 J2QCQ1DV-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	76	(34 - 110)
	69	(34 - 110)
Terphenyl-d14	89	(41 - 119)
	88	(41 - 119)
Phenol-d5	78	(28 - 110)
	61	(28 - 110)
2-Fluorophenol	75	(26 - 110)
	61	(26 - 110)
2,4,6-Tribromophenol	61	(10 - 118)
	64	(10 - 118)

NOTE(S):

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

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-001 **Prep Batch #...:** 7197050							
Aluminum	NC,MSB	(75 - 125)			SW846 6010B	07/16/07	J2P691A9
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16/07	J2P691CA
		Dilution Factor: 5					
Antimony	0.0 N	(70 - 130)			SW846 6020	07/16-07/18/07	J2P691DC
	35 N	(70 - 130)	0.0	(0-20)	SW846 6020	07/16-07/18/07	J2P691DD
		Dilution Factor: 5					
Arsenic	17 N	(70 - 130)			SW846 6020	07/16-07/18/07	J2P691DE
	77 *	(70 - 130)	37	(0-20)	SW846 6020	07/16-07/18/07	J2P691DF
		Dilution Factor: 5					
Barium	166 N	(75 - 125)			SW846 6010B	07/16/07	J2P691CC
	0.0 N	(75 - 125)	0.0	(0-20)	SW846 6010B	07/16/07	J2P691CD
		Dilution Factor: 5					
Beryllium	88	(75 - 125)			SW846 6010B	07/16/07	J2P691CE
	91	(75 - 125)	3.9	(0-20)	SW846 6010B	07/16/07	J2P691CF
		Dilution Factor: 5					
Cadmium	77	(75 - 125)			SW846 6010B	07/16/07	J2P691CG
	27 N,*	(75 - 125)	37	(0-20)	SW846 6010B	07/16/07	J2P691CH
		Dilution Factor: 5					
Calcium	35 N	(75 - 125)			SW846 6010B	07/16/07	J2P691CJ
	208 N,*	(75 - 125)	72	(0-20)	SW846 6010B	07/16/07	J2P691CK
		Dilution Factor: 5					
Chromium	NC,MSB	(75 - 125)			SW846 6010B	07/16/07	J2P691C7
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16/07	J2P691C8
		Dilution Factor: 5					
Cobalt	142 N	(75 - 125)			SW846 6010B	07/16/07	J2P691CL
	63 N,*	(75 - 125)	52	(0-20)	SW846 6010B	07/16/07	J2P691CM
		Dilution Factor: 5					
Copper	NC,MSB	(75 - 125)			SW846 6010B	07/16/07	J2P691CN
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16/07	J2P691CP
		Dilution Factor: 5					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	NC,MSB	(75 - 125)			SW846 6010B	07/16/07	J2P691CQ
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16/07	J2P691CR
		Dilution Factor: 5					
Lead	NC,MSB	(75 - 125)			SW846 6010B	07/16/07	J2P691C9
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16/07	J2P691DA
		Dilution Factor: 5					
Magnesium	63 N	(75 - 125)			SW846 6010B	07/16/07	J2P691CT
	145 N,*	(75 - 125)	53	(0-20)	SW846 6010B	07/16/07	J2P691CU
		Dilution Factor: 5					
Manganese	NC,MSB	(75 - 125)			SW846 6010B	07/16/07	J2P691CV
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16/07	J2P691CW
		Dilution Factor: 5					
Mercury	128	(11 - 192)			SW846 7471A	07/16/07	J2P691A7
	106	(11 - 192)	18	(0-20)	SW846 7471A	07/16/07	J2P691A8
		Dilution Factor: 1					
Nickel	NC,MSB	(75 - 125)			SW846 6010B	07/16/07	J2P691CX
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16/07	J2P691C0
		Dilution Factor: 5					
Potassium	104	(75 - 125)			SW846 6010B	07/16/07	J2P691C1
	100	(75 - 125)	4.0	(0-20)	SW846 6010B	07/16/07	J2P691C2
		Dilution Factor: 5					
Selenium	66 N	(70 - 130)			SW846 6020	07/16-07/18/07	J2P691DG
	55 N	(70 - 130)	17	(0-20)	SW846 6020	07/16-07/18/07	J2P691DH
		Dilution Factor: 5					
Silver	45 N	(70 - 130)			SW846 6020	07/16-07/18/07	J2P691DJ
	84 *	(70 - 130)	31	(0-20)	SW846 6020	07/16-07/18/07	J2P691DK
		Dilution Factor: 5					
Sodium	98	(75 - 125)			SW846 6010B	07/16/07	J2P691C3
	88	(75 - 125)	9.7	(0-20)	SW846 6010B	07/16/07	J2P691C4
		Dilution Factor: 5					
Thallium	90	(70 - 130)			SW846 6020	07/16-07/18/07	J2P691DL
	93	(70 - 130)	2.6	(0-20)	SW846 6020	07/16-07/18/07	J2P691DM
		Dilution Factor: 5					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	100	(75 - 125)			SW846 6010B	07/16/07	J2P691C5
	71 N,*	(75 - 125)	22	(0-20)	SW846 6010B	07/16/07	J2P691C6
		Dilution Factor: 5					
Zinc	NC,MSB	(70 - 130)			SW846 6020	07/16-07/18/07	J2P691DN
	NC,MSB	(70 - 130)		(0-20)	SW846 6020	07/16-07/18/07	J2P691DP
		Dilution Factor: 5					

NOTE(S):

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

* Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

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 DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-001 **Prep Batch #...:** 7197050									
Aluminum									
	2670	229	3060	mg/kg			SW846 6010B	07/16/07	J2P691A9
			Qualifiers: NC,MSB						
	2670	229	1920	mg/kg			SW846 6010B	07/16/07	J2P691CA
			Qualifiers: NC,MSB						
			Dilution Factor: 5						
Antimony									
	17.4	11.5	16.2 N	mg/kg	0.0		SW846 6020	07/16-07/18/07	J2P691DC
	17.4	11.5	21.4 N	mg/kg	35	0.0	SW846 6020	07/16-07/18/07	J2P691DD
			Dilution Factor: 5						
Arsenic									
	13.1	11.5	15.0 N	mg/kg	17		SW846 6020	07/16-07/18/07	J2P691DE
	13.1	11.5	21.9 *	mg/kg	77	37	SW846 6020	07/16-07/18/07	J2P691DF
			Dilution Factor: 5						
Barium									
	414	229	793 N	mg/kg	166		SW846 6010B	07/16/07	J2P691CC
	414	229	378 N	mg/kg	0.0	0.0	SW846 6010B	07/16/07	J2P691CD
			Dilution Factor: 5						
Beryllium									
	ND	5.7	5.0	mg/kg	88		SW846 6010B	07/16/07	J2P691CE
	ND	5.7	5.2	mg/kg	91	3.9	SW846 6010B	07/16/07	J2P691CF
			Dilution Factor: 5						
Cadmium									
	4.9	5.7	9.2	mg/kg	77		SW846 6010B	07/16/07	J2P691CG
	4.9	5.7	6.4 N,*	mg/kg	27	37	SW846 6010B	07/16/07	J2P691CH
			Dilution Factor: 5						
Calcium									
	6910	5730	8900 N	mg/kg	35		SW846 6010B	07/16/07	J2P691CJ
	6910	5730	18800	mg/kg	208	72	SW846 6010B	07/16/07	J2P691CK
			Qualifiers: N,*						
			Dilution Factor: 5						
Chromium									
	270	22.9	325	mg/kg			SW846 6010B	07/16/07	J2P691C7
			Qualifiers: NC,MSB						
	270	22.9	173	mg/kg			SW846 6010B	07/16/07	J2P691C8
			Qualifiers: NC,MSB						
			Dilution Factor: 5						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt									
	27.6	57.3	109 N	mg/kg	142		SW846 6010B	07/16/07	J2P691CL
	27.6	57.3	63.8	mg/kg	63	52	SW846 6010B	07/16/07	J2P691CM
			Qualifiers: N,*						
			Dilution Factor: 5						
Copper									
	985	28.6	1330	mg/kg			SW846 6010B	07/16/07	J2P691CN
			Qualifiers: NC,MSB						
	985	28.6	238	mg/kg			SW846 6010B	07/16/07	J2P691CP
			Qualifiers: NC,MSB						
			Dilution Factor: 5						
Iron									
	109000	115	202000	mg/kg			SW846 6010B	07/16/07	J2P691CQ
			Qualifiers: NC,MSB						
	109000	115	20100	mg/kg			SW846 6010B	07/16/07	J2P691CR
			Qualifiers: NC,MSB						
			Dilution Factor: 5						
Lead									
	904	57.3	914	mg/kg			SW846 6010B	07/16/07	J2P691C9
			Qualifiers: NC,MSB						
	904	57.3	283	mg/kg			SW846 6010B	07/16/07	J2P691DA
			Qualifiers: NC,MSB						
			Dilution Factor: 5						
Magnesium									
	2870	5730	6460 N	mg/kg	63		SW846 6010B	07/16/07	J2P691CT
	2870	5730	11200	mg/kg	145	53	SW846 6010B	07/16/07	J2P691CU
			Qualifiers: N,*						
			Dilution Factor: 5						
Manganese									
	1120	57.3	1140	mg/kg			SW846 6010B	07/16/07	J2P691CV
			Qualifiers: NC,MSB						
	1120	57.3	599	mg/kg			SW846 6010B	07/16/07	J2P691CW
			Qualifiers: NC,MSB						
			Dilution Factor: 5						
Mercury									
	ND	0.19	0.24	mg/kg	128		SW846 7471A	07/16/07	J2P691A7
	ND	0.19	0.20	mg/kg	106	18	SW846 7471A	07/16/07	J2P691A8
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel									
	255	57.3	420	mg/kg			SW846 6010B	07/16/07	J2P691CX
			Qualifiers: NC,MSB						
	255	57.3	155	mg/kg			SW846 6010B	07/16/07	J2P691C0
			Qualifiers: NC,MSB						
			Dilution Factor: 5						
Potassium									
	ND	5730	6110	mg/kg	104		SW846 6010B	07/16/07	J2P691C1
	ND	5730	5870	mg/kg	100	4.0	SW846 6010B	07/16/07	J2P691C2
			Dilution Factor: 5						
Selenium									
	0.52	11.5	8.1 N	mg/kg	66		SW846 6020	07/16-07/18/07	J2P691DG
	0.52	11.5	6.8 N	mg/kg	55	17	SW846 6020	07/16-07/18/07	J2P691DH
			Dilution Factor: 5						
Silver									
	7.0	11.5	12.2 N	mg/kg	45		SW846 6020	07/16-07/18/07	J2P691DJ
	7.0	11.5	16.6 *	mg/kg	84	31	SW846 6020	07/16-07/18/07	J2P691DK
			Dilution Factor: 5						
Sodium									
	524	5730	6130	mg/kg	98		SW846 6010B	07/16/07	J2P691C3
	524	5730	5560	mg/kg	88	9.7	SW846 6010B	07/16/07	J2P691C4
			Dilution Factor: 5						
Thallium									
	ND	11.5	10.4	mg/kg	90		SW846 6020	07/16-07/18/07	J2P691DL
	ND	11.5	10.7	mg/kg	93	2.6	SW846 6020	07/16-07/18/07	J2P691DM
			Dilution Factor: 5						
Vanadium									
	26.2	57.3	83.6	mg/kg	100		SW846 6010B	07/16/07	J2P691C5
	26.2	57.3	66.7	mg/kg	71	22	SW846 6010B	07/16/07	J2P691C6
			Qualifiers: N,*						
			Dilution Factor: 5						
Zinc									
	4090	11.5	655	mg/kg			SW846 6020	07/16-07/18/07	J2P691DN
			Qualifiers: NC,MSB						
	4090	11.5	2610	mg/kg			SW846 6020	07/16-07/18/07	J2P691DP
			Qualifiers: NC,MSB						
			Dilution Factor: 5						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 08:35 **Date Received..:** 07/11/07

NOTE(S):

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

* Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

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

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-036 **Prep Batch #...:** 7197070							
Aluminum	NC,MSB	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51A3
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16-07/17/07	J2QA51A4
		Dilution Factor: 1					
Antimony	30 N	(70 - 130)			SW846 6020	07/16-07/18/07	J2QA51DN
	43 N,*	(70 - 130)	34	(0-20)	SW846 6020	07/16-07/18/07	J2QA51DP
		Dilution Factor: 5					
Arsenic	93	(70 - 130)			SW846 6020	07/16-07/18/07	J2QA51AC
	88	(70 - 130)	4.7	(0-20)	SW846 6020	07/16-07/18/07	J2QA51AD
		Dilution Factor: 5					
Barium	90	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51A6
	91	(75 - 125)	1.3	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51A7
		Dilution Factor: 1					
Beryllium	84	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51A9
	83	(75 - 125)	1.2	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51CA
		Dilution Factor: 1					
Cadmium	86	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51CD
	87	(75 - 125)	0.53	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51CE
		Dilution Factor: 1					
Calcium	NC,MSB	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51CG
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16-07/17/07	J2QA51CH
		Dilution Factor: 2					
Chromium	90	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51DG
	117 *	(75 - 125)	22	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51DH
		Dilution Factor: 1					
Cobalt	87	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51CK
	95	(75 - 125)	8.0	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51CL
		Dilution Factor: 1					
Copper	90	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51CN
	141 N,*	(75 - 125)	36	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51CP
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	NC,MSB	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51CR
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/16-07/17/07	J2QA51CT
		Dilution Factor: 1					
Lead	85	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51DK
	90	(75 - 125)	5.2	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51DL
		Dilution Factor: 1					
Magnesium	333 N	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51CV
	45 N,*	(75 - 125)	73	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51CW
		Dilution Factor: 1					
Manganese	95	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51C0
	134 N	(75 - 125)	9.3	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51C1
		Dilution Factor: 1					
Mercury	117	(11 - 192)			SW846 7471A	07/16/07	J2QA51A0
	119	(11 - 192)	1.9	(0-20)	SW846 7471A	07/16/07	J2QA51A1
		Dilution Factor: 1					
Nickel	88	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51C3
	99	(75 - 125)	11	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51C4
		Dilution Factor: 1					
Potassium	101	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51C6
	97	(75 - 125)	3.6	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51C7
		Dilution Factor: 1					
Selenium	88	(70 - 130)			SW846 6020	07/16-07/18/07	J2QA51AF
	85	(70 - 130)	3.6	(0-20)	SW846 6020	07/16-07/18/07	J2QA51AG
		Dilution Factor: 5					
Silver	87	(70 - 130)			SW846 6020	07/16-07/18/07	J2QA51AJ
	86	(70 - 130)	1.4	(0-20)	SW846 6020	07/16-07/18/07	J2QA51AK
		Dilution Factor: 5					
Sodium	90	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51C9
	89	(75 - 125)	1.1	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51DA
		Dilution Factor: 1					
Thallium	90	(70 - 130)			SW846 6020	07/16-07/18/07	J2QA51AM
	92	(70 - 130)	3.0	(0-20)	SW846 6020	07/16-07/18/07	J2QA51AN
		Dilution Factor: 5					

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	89	(75 - 125)			SW846 6010B	07/16-07/17/07	J2QA51DD
	95	(75 - 125)	5.8	(0-20)	SW846 6010B	07/16-07/17/07	J2QA51DE
		Dilution Factor: 1					
Zinc	106	(70 - 130)			SW846 6020	07/16-07/18/07	J2QA51AQ
	74	(70 - 130)	11	(0-20)	SW846 6020	07/16-07/18/07	J2QA51AR
		Dilution Factor: 5					

NOTE(S):

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

Results and reporting limits have been adjusted for dry weight.

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.

* Relative percent difference (RPD) is outside stated control limits.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-036 **Prep Batch #...:** 7197070									
Aluminum									
	1770	212	2190	mg/kg			SW846 6010B	07/16-07/17/07	J2QA51A3
			Qualifiers: NC,MSB						
	1770	212	3130	mg/kg			SW846 6010B	07/16-07/17/07	J2QA51A4
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Antimony									
	ND	10.6	3.2 N	mg/kg	30		SW846 6020	07/16-07/18/07	J2QA51DN
	ND	10.6	4.5 N,*	mg/kg	43	34	SW846 6020	07/16-07/18/07	J2QA51DP
			Dilution Factor: 5						
Arsenic									
	2.3	10.6	12.2	mg/kg	93		SW846 6020	07/16-07/18/07	J2QA51AC
	2.3	10.6	11.6	mg/kg	88	4.7	SW846 6020	07/16-07/18/07	J2QA51AD
			Dilution Factor: 5						
Barium									
	9.2	212	201	mg/kg	90		SW846 6010B	07/16-07/17/07	J2QA51A6
	9.2	212	203	mg/kg	91	1.3	SW846 6010B	07/16-07/17/07	J2QA51A7
			Dilution Factor: 1						
Beryllium									
	ND	5.3	4.5	mg/kg	84		SW846 6010B	07/16-07/17/07	J2QA51A9
	ND	5.3	4.4	mg/kg	83	1.2	SW846 6010B	07/16-07/17/07	J2QA51CA
			Dilution Factor: 1						
Cadmium									
	ND	5.3	4.6	mg/kg	86		SW846 6010B	07/16-07/17/07	J2QA51CD
	ND	5.3	4.6	mg/kg	87	0.53	SW846 6010B	07/16-07/17/07	J2QA51CE
			Dilution Factor: 1						
Calcium									
	32500	5300	67500	mg/kg			SW846 6010B	07/16-07/17/07	J2QA51CG
			Qualifiers: NC,MSB						
	32500	5300	31400	mg/kg			SW846 6010B	07/16-07/17/07	J2QA51CH
			Qualifiers: NC,MSB						
			Dilution Factor: 2						
Chromium									
	4.5	21.2	23.6	mg/kg	90		SW846 6010B	07/16-07/17/07	J2QA51DG
	4.5	21.2	29.3 *	mg/kg	117	22	SW846 6010B	07/16-07/17/07	J2QA51DH
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt									
	2.2	53.0	48.3	mg/kg	87		SW846 6010B	07/16-07/17/07	J2QA51CK
	2.2	53.0	52.3	mg/kg	95	8.0	SW846 6010B	07/16-07/17/07	J2QA51CL
			Dilution Factor: 1						
Copper									
	6.5	26.5	30.3	mg/kg	90		SW846 6010B	07/16-07/17/07	J2QA51CN
	6.5	26.5	43.8	mg/kg	141	36	SW846 6010B	07/16-07/17/07	J2QA51CP
			Qualifiers: N,*						
			Dilution Factor: 1						
Iron									
	4790	106	4850	mg/kg			SW846 6010B	07/16-07/17/07	J2QA51CR
			Qualifiers: NC,MSB						
	4790	106	12200	mg/kg			SW846 6010B	07/16-07/17/07	J2QA51CT
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Lead									
	5.5	53.0	50.8	mg/kg	85		SW846 6010B	07/16-07/17/07	J2QA51DK
	5.5	53.0	53.5	mg/kg	90	5.2	SW846 6010B	07/16-07/17/07	J2QA51DL
			Dilution Factor: 1						
Magnesium									
	10900	5300	28500 N	mg/kg	333		SW846 6010B	07/16-07/17/07	J2QA51CV
	10900	5300	13200	mg/kg	45	73	SW846 6010B	07/16-07/17/07	J2QA51CW
			Qualifiers: N,*						
			Dilution Factor: 1						
Manganese									
	159	53.0	210	mg/kg	95		SW846 6010B	07/16-07/17/07	J2QA51C0
	159	53.0	230 N	mg/kg	134	9.3	SW846 6010B	07/16-07/17/07	J2QA51C1
			Dilution Factor: 1						
Mercury									
	ND	0.18	0.21	mg/kg	117		SW846 7471A	07/16/07	J2QA51A0
	ND	0.18	0.21	mg/kg	119	1.9	SW846 7471A	07/16/07	J2QA51A1
			Dilution Factor: 1						
Nickel									
	5.5	53.0	51.9	mg/kg	88		SW846 6010B	07/16-07/17/07	J2QA51C3
	5.5	53.0	58.2	mg/kg	99	11	SW846 6010B	07/16-07/17/07	J2QA51C4
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium									
	ND	5300	5590	mg/kg	101		SW846 6010B	07/16-07/17/07	J2QA51C6
	ND	5300	5390	mg/kg	97	3.6	SW846 6010B	07/16-07/17/07	J2QA51C7
			Dilution Factor: 1						
Selenium									
	ND	10.6	9.4	mg/kg	88		SW846 6020	07/16-07/18/07	J2QA51AF
	ND	10.6	9.1	mg/kg	85	3.6	SW846 6020	07/16-07/18/07	J2QA51AG
			Dilution Factor: 5						
Silver									
	ND	10.6	9.3	mg/kg	87		SW846 6020	07/16-07/18/07	J2QA51AJ
	ND	10.6	9.1	mg/kg	86	1.4	SW846 6020	07/16-07/18/07	J2QA51AK
			Dilution Factor: 5						
Sodium									
	99.1	5300	4860	mg/kg	90		SW846 6010B	07/16-07/17/07	J2QA51C9
	99.1	5300	4810	mg/kg	89	1.1	SW846 6010B	07/16-07/17/07	J2QA51DA
			Dilution Factor: 1						
Thallium									
	ND	10.6	9.5	mg/kg	90		SW846 6020	07/16-07/18/07	J2QA51AM
	ND	10.6	9.8	mg/kg	92	3.0	SW846 6020	07/16-07/18/07	J2QA51AN
			Dilution Factor: 5						
Vanadium									
	6.1	53.0	53.5	mg/kg	89		SW846 6010B	07/16-07/17/07	J2QA51DD
	6.1	53.0	56.7	mg/kg	95	5.8	SW846 6010B	07/16-07/17/07	J2QA51DE
			Dilution Factor: 1						
Zinc									
	21.4	10.6	32.7	mg/kg	106		SW846 6020	07/16-07/18/07	J2QA51AQ
	21.4	10.6	29.3	mg/kg	74	11	SW846 6020	07/16-07/18/07	J2QA51AR
			Dilution Factor: 5						

NOTE(S):

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

Results and reporting limits have been adjusted for dry weight.

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.

* Relative percent difference (RPD) is outside stated control limits.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-041 **Prep Batch #...:** 7199022							
Aluminum	NC,MSB	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1C1
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1C2
		Dilution Factor: 1					
Antimony	45 N	(70 - 130)			SW846 6020	07/18/07	J2QCQ1CE
	41 N	(70 - 130)	11	(0-20)	SW846 6020	07/18/07	J2QCQ1CF
		Dilution Factor: 5					
Arsenic	72	(70 - 130)			SW846 6020	07/18/07	J2QCQ1CG
	58 N	(70 - 130)	15	(0-20)	SW846 6020	07/18/07	J2QCQ1CH
		Dilution Factor: 5					
Barium	90	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1C3
	94	(75 - 125)	4.2	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1C4
		Dilution Factor: 1					
Beryllium	82	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1C5
	89	(75 - 125)	8.0	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1C6
		Dilution Factor: 1					
Cadmium	82	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1C7
	87	(75 - 125)	5.7	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1C8
		Dilution Factor: 1					
Calcium	NC,MSB	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1C9
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DA
		Dilution Factor: 1					
Chromium	87	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1A9
	93	(75 - 125)	5.6	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1CA
		Dilution Factor: 1					
Cobalt	84	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1DC
	89	(75 - 125)	5.8	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DD
		Dilution Factor: 1					
Copper	84	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1DE
	90	(75 - 125)	5.9	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DF
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	NC,MSB	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1DG
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DH
		Dilution Factor: 1					
Lead	81	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1CC
	85	(75 - 125)	4.2	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1CD
		Dilution Factor: 1					
Magnesium	0.0 N	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1DJ
	0.0 N	(75 - 125)	0.0	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DK
		Dilution Factor: 1					
Manganese	127 N	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1DL
	95	(75 - 125)	8.9	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DM
		Dilution Factor: 1					
Mercury	91	(11 - 192)			SW846 7471A	07/18/07	J2QCQ1CX
	92	(11 - 192)	0.38	(0-20)	SW846 7471A	07/18/07	J2QCQ1C0
		Dilution Factor: 1					
Nickel	86	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1DN
	93	(75 - 125)	6.7	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DP
		Dilution Factor: 1					
Potassium	100	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1DQ
	101	(75 - 125)	0.71	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1DR
		Dilution Factor: 1					
Selenium	84	(70 - 130)			SW846 6020	07/18/07	J2QCQ1CJ
	73	(70 - 130)	13	(0-20)	SW846 6020	07/18/07	J2QCQ1CK
		Dilution Factor: 5					
Silver	79	(70 - 130)			SW846 6020	07/18/07	J2QCQ1CL
	70	(70 - 130)	11	(0-20)	SW846 6020	07/18/07	J2QCQ1CM
		Dilution Factor: 5					
Sodium	87	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1A5
	92	(75 - 125)	5.3	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1A6
		Dilution Factor: 1					
Thallium	85	(70 - 130)			SW846 6020	07/18/07	J2QCQ1CN
	76	(70 - 130)	11	(0-20)	SW846 6020	07/18/07	J2QCQ1CP
		Dilution Factor: 5					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	82	(75 - 125)			SW846 6010B	07/18-07/19/07	J2QCQ1A7
	88	(75 - 125)	6.4	(0-20)	SW846 6010B	07/18-07/19/07	J2QCQ1A8
		Dilution Factor: 1					
Zinc	70	(70 - 130)			SW846 6020	07/18/07	J2QCQ1CQ
	52 N	(70 - 130)	8.8	(0-20)	SW846 6020	07/18/07	J2QCQ1CR
		Dilution Factor: 5					

NOTE(S):

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

Results and reporting limits have been adjusted for dry weight.

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 DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-041 **Prep Batch #...:** 7199022									
Aluminum									
	1600	207	2380	mg/kg			SW846 6010B	07/18-07/19/07	J2QCQ1C1
			Qualifiers: NC,MSB						
	1600	207	2280	mg/kg			SW846 6010B	07/18-07/19/07	J2QCQ1C2
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Antimony									
	ND	10.3	4.7 N	mg/kg	45		SW846 6020	07/18/07	J2QCQ1CE
	ND	10.3	4.2 N	mg/kg	41	11	SW846 6020	07/18/07	J2QCQ1CF
			Dilution Factor: 5						
Arsenic									
	2.6	10.3	10.1	mg/kg	72		SW846 6020	07/18/07	J2QCQ1CG
	2.6	10.3	8.6 N	mg/kg	58	15	SW846 6020	07/18/07	J2QCQ1CH
			Dilution Factor: 5						
Barium									
	9.3	207	195	mg/kg	90		SW846 6010B	07/18-07/19/07	J2QCQ1C3
	9.3	207	203	mg/kg	94	4.2	SW846 6010B	07/18-07/19/07	J2QCQ1C4
			Dilution Factor: 1						
Beryllium									
	ND	5.2	4.2	mg/kg	82		SW846 6010B	07/18-07/19/07	J2QCQ1C5
	ND	5.2	4.6	mg/kg	89	8.0	SW846 6010B	07/18-07/19/07	J2QCQ1C6
			Dilution Factor: 1						
Cadmium									
	ND	5.2	4.3	mg/kg	82		SW846 6010B	07/18-07/19/07	J2QCQ1C7
	ND	5.2	4.6	mg/kg	87	5.7	SW846 6010B	07/18-07/19/07	J2QCQ1C8
			Dilution Factor: 1						
Calcium									
	32900	5170	38700	mg/kg			SW846 6010B	07/18-07/19/07	J2QCQ1C9
			Qualifiers: NC,MSB						
	32900	5170	34700	mg/kg			SW846 6010B	07/18-07/19/07	J2QCQ1DA
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Chromium									
	3.9	20.7	21.8	mg/kg	87		SW846 6010B	07/18-07/19/07	J2QCQ1A9
	3.9	20.7	23.1	mg/kg	93	5.6	SW846 6010B	07/18-07/19/07	J2QCQ1CA
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt									
	2.3	51.7	45.6	mg/kg	84		SW846 6010B	07/18-07/19/07	J2QCQ1DC
	2.3	51.7	48.3	mg/kg	89	5.8	SW846 6010B	07/18-07/19/07	J2QCQ1DD
			Dilution Factor: 1						
Copper									
	5.8	25.9	27.5	mg/kg	84		SW846 6010B	07/18-07/19/07	J2QCQ1DE
	5.8	25.9	29.1	mg/kg	90	5.9	SW846 6010B	07/18-07/19/07	J2QCQ1DF
			Dilution Factor: 1						
Iron									
	4100	103	3950	mg/kg			SW846 6010B	07/18-07/19/07	J2QCQ1DG
			Qualifiers: NC,MSB						
	4100	103	3910	mg/kg			SW846 6010B	07/18-07/19/07	J2QCQ1DH
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Lead									
	7.1	51.7	49.0	mg/kg	81		SW846 6010B	07/18-07/19/07	J2QCQ1CC
	7.1	51.7	51.1	mg/kg	85	4.2	SW846 6010B	07/18-07/19/07	J2QCQ1CD
			Dilution Factor: 1						
Magnesium									
	15800	5170	14800 N	mg/kg	0.0		SW846 6010B	07/18-07/19/07	J2QCQ1DJ
	15800	5170	11700 N	mg/kg	0.0	0.0	SW846 6010B	07/18-07/19/07	J2QCQ1DK
			Dilution Factor: 1						
Manganese									
	127	51.7	193 N	mg/kg	127		SW846 6010B	07/18-07/19/07	J2QCQ1DL
	127	51.7	176	mg/kg	95	8.9	SW846 6010B	07/18-07/19/07	J2QCQ1DM
			Dilution Factor: 1						
Mercury									
	ND	0.17	0.18	mg/kg	91		SW846 7471A	07/18/07	J2QCQ1CX
	ND	0.17	0.18	mg/kg	92	0.38	SW846 7471A	07/18/07	J2QCQ1C0
			Dilution Factor: 1						
Nickel									
	3.7	51.7	48.4	mg/kg	86		SW846 6010B	07/18-07/19/07	J2QCQ1DN
	3.7	51.7	51.7	mg/kg	93	6.7	SW846 6010B	07/18-07/19/07	J2QCQ1DP
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7G120192 **Matrix.....:** SO
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium									
	ND	5170	5390	mg/kg	100		SW846 6010B	07/18-07/19/07	J2QCQ1DQ
	ND	5170	5430	mg/kg	101	0.71	SW846 6010B	07/18-07/19/07	J2QCQ1DR
			Dilution Factor: 1						
Selenium									
	ND	10.3	8.6	mg/kg	84		SW846 6020	07/18/07	J2QCQ1CJ
	ND	10.3	7.6	mg/kg	73	13	SW846 6020	07/18/07	J2QCQ1CK
			Dilution Factor: 5						
Silver									
	ND	10.3	8.1	mg/kg	79		SW846 6020	07/18/07	J2QCQ1CL
	ND	10.3	7.3	mg/kg	70	11	SW846 6020	07/18/07	J2QCQ1CM
			Dilution Factor: 5						
Sodium									
	ND	5170	4560	mg/kg	87		SW846 6010B	07/18-07/19/07	J2QCQ1A5
	ND	5170	4810	mg/kg	92	5.3	SW846 6010B	07/18-07/19/07	J2QCQ1A6
			Dilution Factor: 1						
Thallium									
	ND	10.3	8.9	mg/kg	85		SW846 6020	07/18/07	J2QCQ1CN
	ND	10.3	7.9	mg/kg	76	11	SW846 6020	07/18/07	J2QCQ1CP
			Dilution Factor: 5						
Vanadium									
	7.2	51.7	49.5	mg/kg	82		SW846 6010B	07/18-07/19/07	J2QCQ1A7
	7.2	51.7	52.8	mg/kg	88	6.4	SW846 6010B	07/18-07/19/07	J2QCQ1A8
			Dilution Factor: 1						
Zinc									
	14.5	10.3	21.7	mg/kg	70		SW846 6020	07/18/07	J2QCQ1CQ
	14.5	10.3	19.9 N	mg/kg	52	8.8	SW846 6020	07/18/07	J2QCQ1CR
			Dilution Factor: 5						

NOTE(S):

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

Results and reporting limits have been adjusted for dry weight.

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

TCLP Metals

Client Lot #...: A7G120192 **Matrix.....:** WG
Date Sampled...: 07/10/07 16:00 **Date Received..:** 07/11/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-046 **Prep Batch #...:** 7200015							
Leach Date.....: 07/18/07 **Leach Batch #..:** P719912							
Arsenic	109	(50 - 150)			SW846 6010B	07/19-07/20/07	J2QE11AV
	99	(50 - 150)	9.8	(0-20)	SW846 6010B	07/19-07/20/07	J2QE11AW
		Dilution Factor: 5					
Barium	108	(50 - 150)			SW846 6010B	07/19-07/20/07	J2QE11AX
	98	(50 - 150)	10	(0-20)	SW846 6010B	07/19-07/20/07	J2QE11A0
		Dilution Factor: 5					
Cadmium	112	(50 - 150)			SW846 6010B	07/19-07/20/07	J2QE11A1
	101	(50 - 150)	10	(0-20)	SW846 6010B	07/19-07/20/07	J2QE11A2
		Dilution Factor: 5					
Chromium	110	(50 - 150)			SW846 6010B	07/19-07/20/07	J2QE11A3
	99	(50 - 150)	11	(0-20)	SW846 6010B	07/19-07/20/07	J2QE11A4
		Dilution Factor: 5					
Lead	109	(50 - 150)			SW846 6010B	07/19-07/20/07	J2QE11A5
	99	(50 - 150)	10	(0-20)	SW846 6010B	07/19-07/20/07	J2QE11A6
		Dilution Factor: 5					
Selenium	107	(50 - 150)			SW846 6010B	07/19-07/20/07	J2QE11A7
	97	(50 - 150)	9.7	(0-20)	SW846 6010B	07/19-07/20/07	J2QE11A8
		Dilution Factor: 5					
Silver	113	(50 - 150)			SW846 6010B	07/19-07/20/07	J2QE11A9
	103	(50 - 150)	9.8	(0-20)	SW846 6010B	07/19-07/20/07	J2QE11CA
		Dilution Factor: 5					
Mercury	96	(50 - 150)			SW846 7470A	07/19-07/20/07	J2QE11AT
	101	(50 - 150)	5.0	(0-20)	SW846 7470A	07/19-07/20/07	J2QE11AU
		Dilution Factor: 10					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: A7G120192 **Matrix.....:** WG
Date Sampled...: 07/10/07 16:00 **Date Received..:** 07/11/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G120192-046 **Prep Batch #...:** 7200015									
Leach Date.....: 07/18/07 **Leach Batch #..:** P719912									
Arsenic									
	ND	5.0	5.5	mg/L	109		SW846 6010B	07/19-07/20/07	J2QE11AV
	ND	5.0	4.9	mg/L	99	9.8	SW846 6010B	07/19-07/20/07	J2QE11AW
			Dilution Factor: 5						
Barium									
	ND	50.0	54.2	mg/L	108		SW846 6010B	07/19-07/20/07	J2QE11AX
	ND	50.0	49.1	mg/L	98	10	SW846 6010B	07/19-07/20/07	J2QE11A0
			Dilution Factor: 5						
Cadmium									
	ND	1.0	1.1	mg/L	112		SW846 6010B	07/19-07/20/07	J2QE11A1
	ND	1.0	1.0	mg/L	101	10	SW846 6010B	07/19-07/20/07	J2QE11A2
			Dilution Factor: 5						
Chromium									
	ND	5.0	5.5	mg/L	110		SW846 6010B	07/19-07/20/07	J2QE11A3
	ND	5.0	5.0	mg/L	99	11	SW846 6010B	07/19-07/20/07	J2QE11A4
			Dilution Factor: 5						
Lead									
	ND	5.0	5.5	mg/L	109		SW846 6010B	07/19-07/20/07	J2QE11A5
	ND	5.0	5.0	mg/L	99	10	SW846 6010B	07/19-07/20/07	J2QE11A6
			Dilution Factor: 5						
Selenium									
	ND	1.0	1.1	mg/L	107		SW846 6010B	07/19-07/20/07	J2QE11A7
	ND	1.0	0.98	mg/L	97	9.7	SW846 6010B	07/19-07/20/07	J2QE11A8
			Dilution Factor: 5						
Silver									
	ND	1.0	1.1	mg/L	113		SW846 6010B	07/19-07/20/07	J2QE11A9
	ND	1.0	1.0	mg/L	103	9.8	SW846 6010B	07/19-07/20/07	J2QE11CA
			Dilution Factor: 5						
Mercury									
	ND	0.050	0.048	mg/L	96		SW846 7470A	07/19-07/20/07	J2QE11AT
	ND	0.050	0.050	mg/L	101	5.0	SW846 7470A	07/19-07/20/07	J2QE11AU
			Dilution Factor: 10						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID
Date Sampled...: 07/03/07 **Date Received..:** 07/13/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7G140103-001 **Prep Batch #...:** 7200065							
Leach Date.....: 07/18/07 **Leach Batch #..:** P719913							
Mercury	100	(50 - 150)			SW846 7470A	07/19-07/20/07	J2W551C7
	101	(50 - 150)	1.1	(0-20)	SW846 7470A	07/19-07/20/07	J2W551C8
		Dilution Factor: 1					
Arsenic	106	(50 - 150)			SW846 6010B	07/19/07	J2W551C9
	111	(50 - 150)	4.7	(0-20)	SW846 6010B	07/19/07	J2W551DA
		Dilution Factor: 10					
Barium	106	(50 - 150)			SW846 6010B	07/19/07	J2W551DC
	112	(50 - 150)	5.3	(0-20)	SW846 6010B	07/19/07	J2W551DD
		Dilution Factor: 10					
Cadmium	107	(50 - 150)			SW846 6010B	07/19/07	J2W551DE
	112	(50 - 150)	5.0	(0-20)	SW846 6010B	07/19/07	J2W551DF
		Dilution Factor: 10					
Chromium	106	(50 - 150)			SW846 6010B	07/19/07	J2W551DG
	112	(50 - 150)	5.0	(0-20)	SW846 6010B	07/19/07	J2W551DH
		Dilution Factor: 10					
Lead	106	(50 - 150)			SW846 6010B	07/19/07	J2W551DJ
	111	(50 - 150)	4.5	(0-20)	SW846 6010B	07/19/07	J2W551DK
		Dilution Factor: 10					
Selenium	105	(50 - 150)			SW846 6010B	07/19/07	J2W551DL
	110	(50 - 150)	4.5	(0-20)	SW846 6010B	07/19/07	J2W551DM
		Dilution Factor: 10					
Silver	79	(50 - 150)			SW846 6010B	07/19/07	J2W551DN
	89	(50 - 150)	11	(0-20)	SW846 6010B	07/19/07	J2W551DP
		Dilution Factor: 10					

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: A7G120192 **Matrix.....:** SOLID
Date Sampled...: 07/03/07 **Date Received..:** 07/13/07

MS Lot-Sample #: A7G140103-001 **Prep Batch #...:** 7200065
Leach Date.....: 07/18/07 **Leach Batch #..:** P719913

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Mercury									
	ND	0.0050	0.0050	mg/L	100		SW846 7470A	07/19-07/20/07	J2W551C7
	ND	0.0050	0.0051	mg/L	101	1.1	SW846 7470A	07/19-07/20/07	J2W551C8
			Dilution Factor: 1						
Arsenic									
	ND	5.0	5.3	mg/L	106		SW846 6010B	07/19/07	J2W551C9
	ND	5.0	5.6	mg/L	111	4.7	SW846 6010B	07/19/07	J2W551DA
			Dilution Factor: 10						
Barium									
	ND	50.0	53.0	mg/L	106		SW846 6010B	07/19/07	J2W551DC
	ND	50.0	55.9	mg/L	112	5.3	SW846 6010B	07/19/07	J2W551DD
			Dilution Factor: 10						
Cadmium									
	ND	1.0	1.1	mg/L	107		SW846 6010B	07/19/07	J2W551DE
	ND	1.0	1.1	mg/L	112	5.0	SW846 6010B	07/19/07	J2W551DF
			Dilution Factor: 10						
Chromium									
	ND	5.0	5.3	mg/L	106		SW846 6010B	07/19/07	J2W551DG
	ND	5.0	5.6	mg/L	112	5.0	SW846 6010B	07/19/07	J2W551DH
			Dilution Factor: 10						
Lead									
	ND	5.0	5.3	mg/L	106		SW846 6010B	07/19/07	J2W551DJ
	ND	5.0	5.6	mg/L	111	4.5	SW846 6010B	07/19/07	J2W551DK
			Dilution Factor: 10						
Selenium									
	ND	1.0	1.0	mg/L	105		SW846 6010B	07/19/07	J2W551DL
	ND	1.0	1.1	mg/L	110	4.5	SW846 6010B	07/19/07	J2W551DM
			Dilution Factor: 10						
Silver									
	ND	1.0	0.80	mg/L	79		SW846 6010B	07/19/07	J2W551DN
	ND	1.0	0.89	mg/L	89	11	SW846 6010B	07/19/07	J2W551DP
			Dilution Factor: 10						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Matrix.....:** SOLID
Date Sampled...: 07/18/07 10:30 **Date Received..:** 07/18/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
						% Moisture.....: 100	
Reactive Cyanide		WO#: J241K1A1-MS/J241K1A2-MSD				MS Lot-Sample #: A7G190140-001	
	25	(10 - 200)			SW846 7.3.3	07/23/07	7204350
	25	(10 - 200)	0.0	(0-100)	SW846 7.3.3	07/23/07	7204350
		Dilution Factor: 1					
						% Moisture.....: 100	
Reactive Sulfide		WO#: J241K1A3-MS/J241K1A4-MSD				MS Lot-Sample #: A7G190140-001	
	11	(10 - 200)			SW846 7.3.4	07/23/07	7204351
	15	(10 - 200)	31	(0-100)	SW846 7.3.4	07/23/07	7204351
		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 #...: A7G120192 **Matrix.....:** SOLID
Date Sampled...: 07/18/07 10:30 **Date Received..:** 07/18/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
							% Moisture.....: 100		
Reactive Cyanide			WO#: J241K1A1-MS/J241K1A2-MSD				MS Lot-Sample #: A7G190140-001		
	ND	100		mg/kg	25		SW846 7.3.3	07/23/07	7204350
	ND	100		mg/kg	25	0.0	SW846 7.3.3	07/23/07	7204350
			Dilution Factor: 1						
							% Moisture.....: 100		
Reactive Sulfide			WO#: J241K1A3-MS/J241K1A4-MSD				MS Lot-Sample #: A7G190140-001		
	ND	250		mg/kg	11		SW846 7.3.4	07/23/07	7204351
	ND	250		mg/kg	15	31	SW846 7.3.4	07/23/07	7204351
			Dilution Factor: 1						

NOTE(S):

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2QCQ-SMP **Matrix.....:** SO
J2QCQ-DUP
Date Sampled...: 07/10/07 15:09 **Date Received..:** 07/11/07
% Moisture.....: 3.4

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7G120192-041		
	96.6	95.9	%	0.81	(0-20)	MCAWW 160.3 MOD	07/12-07/13/07	7193523

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2RCW-SMP **Matrix.....:** SOLID
J2RCW-DUP
Date Sampled...: 07/10/07 10:35 **Date Received..:** 07/12/07
% Moisture.....: 19

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7G120317-002		
	80.7	82.1	%	1.7	(0-20)	MCAWW 160.3 MOD	07/12-07/13/07	7193523

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2QC4-SMP J2QC4-DUP **Matrix.....:** SO

Date Sampled...: 07/10/07 15:45 **Date Received..:** 07/11/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Corrosivity						SD Lot-Sample #: A7G120192-045		
	9.6	9.2	No Units	3.7	(0-20)	SW846 9045A	07/12/07	7193545

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2QE1-SMP **Matrix.....:** WG
J2QE1-DUP
Date Sampled...: 07/10/07 16:00 **Date Received..:** 07/11/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Corrosivity						SD Lot-Sample #: A7G120192-046		
	10.2	10.2	No Units	0.098	(0-20)	SW846 9045A	07/12/07	7193546

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2P7J-SMP **Matrix.....:** SO
J2P7J-DUP
Date Sampled...: 07/10/07 08:40 **Date Received..:** 07/11/07
% Moisture.....: 21

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7G120192-002		
	79.4	78.3	%	1.4	(0-20)	MCAWW 160.3 MOD	07/13-07/14/07	7194447

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2P88-SMP J2P88-DUP **Matrix.....:** SO

Date Sampled...: 07/10/07 11:20 **Date Received..:** 07/11/07

% Moisture.....: 4.6

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7G120192-020		
	95.4	94.4	%	0.97	(0-20)	MCAWW 160.3 MOD	07/13-07/14/07	7194447

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2P92-SMP **Matrix.....:** SO
J2P92-DUP
Date Sampled...: 07/10/07 12:25 **Date Received..:** 07/11/07
% Moisture.....: 4.3

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7G120192-022		
	95.7	95.4	%	0.29	(0-20)	MCAWW 160.3 MOD	07/13-07/14/07	7194448

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2QA5-SMP **Matrix.....:** SO
J2QA5-DUP
Date Sampled...: 07/10/07 14:29 **Date Received..:** 07/11/07
% Moisture.....: 5.7

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A7G120192-036		
	94.3	94.9	%	0.68	(0-20)	MCAWW 160.3 MOD	07/13-07/14/07	7194448

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7G120192 **Work Order #...:** J2XFD-SMP **Matrix.....:** SOLID
J2XFD-DUP
Date Sampled...: 07/13/07 11:30 **Date Received..:** 07/14/07
% Moisture.....: 23

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Flashpoint						SD Lot-Sample #: A7G140133-001		
	>180	>180	deg F	0.0	(0-20)	SW846 1010	07/16/07	7197350

Dilution Factor: 1

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CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 4

ID # Nº D 3668

SSOW Ref. Code: E030012

Required Client Information:

Company: CRA, Inc.	Report To: Kathy Sloan
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: GM G.Rapids
Fax: 734-453-5201	Project Number: 17360
Email:	

Laboratory:	STL (Test America)
Laboratory Location:	North Canton, OH
Laboratory Contact:	
Requested Due Date:	TAT: 2wk
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	PVOAS	TAL metals											Remarks/Lab ID
1.	SO-17360-071007-BW-618	SO	7/10/07	0835	1	1						X	X											
2.	619			0840	1	1						X	X											
3.	620			0845	1	1						X	X											
4.	621			0850	1	1						X	X											
5.	622			0855	1	1						X	X											
6.	623			0915	1	1						X	X											
7.	624			0920	1	1						X	X											
8.	625			0925	1	1						X	X											
9.	626			0930	1	1						X	X											
10.	627			0935	1	1						X	X											
11.	628			0955	1	1						X	X											
12.	629			1000	1	1						X	X											
13.	630			1005	1	1						X	X											
14.	631			1010	1	1						X	X											
15.	632			1015	1	1						X	X											
	TOTAL NUMBER OF CONTAINERS																							

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FED-EX	2		7/11/07	1700		7-12-07	9:40
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy; YELLOW - Receiving Laboratory Copy; PINK - Shipper; GOLDENROD - Sampler Copy

TestAmerica North Canton

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 2 OF 4

ID # Nº D 3669

SSOW Ref. Code: E030012

Required Client Information:

Company: CRA, Inc.	Report To: Kathy S Hall
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: Gm Grand Rap. DS
Fax: 734-453-5201	Project Number: 17360
Email:	

Laboratory:	STL
Laboratory Location:	North Canton, OH
Laboratory Contact:	
Requested Due Date:	TAT: 2wk
QA/QC Requirements:	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: PNAs	TAL metals	Remarks/Lab ID
1.	SO-17360-071007-BW-633	SO	7/10/07	1100	1	1						X	X	
2.	634			1105	1	1						X	X	
3.	635			1110	1	1						X	X	
4.	636			1115	1	1						X	X	
5.	637			1120	1	1						X	X	
6.	638			1270	1	1						X	X	
7.	639			1225	1	1						X	X	
8.	640			1230	1	1						X	X	
9.	641			1235	1	1						X	X	
10.	642			1240	1	1						X	X	
11.	643			1241	1	1						X	X	
12.	644			1300	1	1						X	X	
13.	645			1303	1	1						X	X	
14.	646			1306	1	1						X	X	
15.	647			1312	1	1						X	X	
	TOTAL NUMBER OF CONTAINERS													

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
	2		7/11/07	1700		7/12/07	9:40
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

TestAmerica North Canton

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6/04)

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 4

ID # Nº D 3671

SSOW Ref. Code: E03012

Required Client Information:

Company: CRA, Inc.	Report To: Kathy Stehr
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name:
Fax: 734-453-5201	Project Number: 17360
Email:	

Laboratory:	STL North Canton
Laboratory Location:	
Laboratory Contact:	
Requested Due Date:	TAT: 2wk
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	PNAs	TAL metals	Remarks/Lab ID
1. SO-17360-071007-BW-648	SO	7/10/07	1312	1	1						X	X	
2. -649			1313	1	1						X	X	
3. -650			1420	1	1						X	X	
4. -651			1422	1	1						X	X	
5. -652			1425	1	1						X	X	
6. -653			1429	2	1						X	X	MS/MSD
7. -654			1432	1	1						X	X	
8. -655			1433	1	1						X	X	
9. -656			1505	1	1						X	X	
10. 657			1507	1	1						X	X	
11. 658			1509	1	1						X	X	
12. 659			1511	1	1						X	X	
13. 660			1512	1	1						X	X	
14. 661			1514	1	1						X	X	
15.													
TOTAL NUMBER OF CONTAINERS													

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx	2		7/11/07	1700		7/12/07	9:40
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

TestAmerica North Canton

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6/04)

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CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 4 OF 4

ID # Nº D 3672

SSOW Ref. Code: E030012

Required Client Information:

Company: CRA, Inc.	Report To: Kathy Shaw
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: GM G.R metals
Fax: 734-453-5201	Project Number: 17360
Email:	

Laboratory:	STL
Laboratory Location:	
Laboratory Contact:	
Requested Due Date:	TAT: 2wk
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: TCL Metals	TCL VOCs	TCL SVOCs	RCI								Remarks/Lab ID
1.	SO-17360-071007-BW-662	SO	7/10/07	1545	2	✓						X	X	X	X								
2.	W-17360-071007-BW-663	W	7/10/07	1600	2	✓						X	X	X	X								
3.																							
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							
11.																							
12.																							
13.																							
14.																							
15.																							
	TOTAL NUMBER OF CONTAINERS																						

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Fedex	2		7/11/07	1700		7/12/07	9:40
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

TestAmerica North Canton

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6/04)

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: 47h120192

Client: CA Project: Quote#: 72004

Cooler Received on: 7-12-07 Opened on: 7-12-07 By: (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ TestAmerica Courier ☐

Stetson ☐ US Cargo ☐ Other:

TestAmerica Cooler No# DRW Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☒ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ 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/H_2O Slurry ☐

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

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH upon receipt? 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. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a Trip Blank present in the cooler? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☑

Contacted PM DDF Date: 7/12 by: CWM via Voice Mail ☐ Verbal ☒ Other ☐

Concerning: #'s

1. CHAIN OF CUSTODY

The following discrepancies occurred:

High temp on cooler 241-277 not enough Ice to cool samples in a larger cooler

Rec'd MS/MSD volume for -058 Will log.

2. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

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

3. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot* #042607-HNO3 - *Sulfuric Acid Lot* # 092006-*H2SO4; Sodium Hydroxide Lot* # 122805 -*NaOH; Hydrochloric Acid Lot* # 100504-*HCl; Sodium Hydroxide and Zinc Acetate Lot* # 050205-*CH3COO2ZN/NaOH*

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

4. Other (see below or back)

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

STL

END OF REPORT

ATTACHMENT C

DATA VALIDATION MEMORANDUM

CONESTOGA-ROVERS & ASSOCIATES

45 Farmington Valley Drive
Plainville, Connecticut 06062
Telephone: (860) 747-1800 Fax: (860) 747-1900
www.CRAworld.com

MEMORANDUM

TO:	Gary Klepper	REF. NO.:	17360
FROM:	Kathy Shaw/dy/2/CT	DATE:	March 23, 2006
RE:	Data Quality Assessment and Validation 2005 Second Soil Investigation General Motors Grand Rapids MFD Site - Grand Rapids, Michigan	SSOW:	17307-030002

The following details a quality assessment and validation of the analytical data resulting from the December 12, 2005, collection of 31 soil and two (2) quality control samples from the General Motors Grand Rapids MFD Site in Grand Rapids, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratories in North Canton, Ohio (STL) in accordance with the methodologies presented in Table 2.

The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

i. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999;

ii. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", EPA-540/R-94/013, February 1994.

These guidelines are collectively referred to as "NFGs" in this Memorandum.

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY ISO 9001 ENGINEERING DESIGN

The following elements are addressed in this memorandum with qualification if necessary in the identified tables:

	Data Review Element	Qualification Table
1	Sample Quantitation	NA
2	Sample Preservation and Holding Times	NA
3	Method Blank Samples	NA
4	Surrogate Compounds - Organic Analyses	Table 3
5	Matrix Spike/Matrix Spike Duplicate Analyses	NA
6	Laboratory Control Sample Analysis/Laboratory Control Duplicate	NA
7	Field Quality Assurance/Quality Control	NA

Sample Quantitation

The laboratory reported detected concentrations of polynuclear aromatics (PNA) and metals below the laboratory's report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J" or a "B" for PNA and metals respectively. These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum. The laboratory "B" flags may be disregarded.

The PNA sample analysis resulted in a number of concentrations reported in excess of the calibration range, which were flagged by the laboratory with an "E". These concentrations should be qualified as estimated (J) concentrations and should not be reported. The analytes with concentrations in excess of the calibration range were reanalyzed at appropriate dilutions; these values should be reported.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are presented in Table 2. Samples were prepared and/or analyzed within the specified holding time periods. The samples were shipped and maintained in accordance with the sample preservation requirements.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

The Method blank samples were reported to be free from detectable levels of target analytes, indicating no additional laboratory-attributable contamination occurred.

Surrogate Compounds - Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

The surrogate recovery acceptance criteria were met for all samples that could be evaluated with the exception of samples presented with qualifiers in Table 3.

Matrix Spike/Matrix Spike Duplicate Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the NFG, which require recoveries between 75 to 125 percent with RPDs less than 35 percent for soil samples. The sample selected for MS/MSD analysis is identified in Table 1. The MS/MSD percent recoveries and associated RPD acceptance criteria were met.

Laboratory Control Sample/Laboratory Control Duplicate Analysis

The laboratory control sample and laboratory control duplicate (LCS/LCD) analyses serve as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS/LCD percent recoveries were evaluated against method and laboratory established control limits. The LCS/LCD percent recoveries were within the laboratory control limits or did not warrant qualification, indicating that an acceptable level of overall performance was achieved.

Laboratory precision was verified by the relative percent difference (RPD) of the LCS/LCD when a matrix spike/matrix spike duplicate was not analyzed. The RPDs were within the laboratory control limits, indicating that an acceptable level of overall laboratory precision was achieved.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of two (2) field duplicate sample sets. Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 100 percent for soil samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is two times the RL value for soil samples. Table 4 presents the RPDs of detected analytes in duplicate sample sets. The data indicate that an adequate level of precision was achieved for the sampling event.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision based on the provided information and may be used with the qualifications noted.

TABLE 1
SAMPLE COLLECTION AND ANALYSIS SUMMARY
2005 SECOND SOIL INVESTIGATION
GENERAL MOTORS GRAND RAPIDS MFD SITE
GRAND RAPIDS, MICHIGAN

						Parameters	
Sample Identification	*Sample Location*	*Sample Depth Start - (ft-bgs) - End*		*Matrix*	*QC Sample*	*PNA*	*RCRA Metals*
SO-17360-121205-DCR-585	SB25-05	0	2	Soil		X	X
SO-17360-121205-DCR-586	SB25-05	2	4	Soil		X	X
SO-17360-121205-DCR-587	SB25-05	4	6	Soil		X	X
SO-17360-121205-DCR-588	SB25-05	6	8	Soil		X	X
SO-17360-121205-DCR-589	SB25-05	6	8	Soil	Duplicate (588)	X	X
SO-17360-121205-DCR-590	SB25-05	8	10	Soil		X	X
SO-17360-121205-DCR-591	SB24-05	0	2	Soil		X	X
SO-17360-121205-DCR-592	SB24-05	4	6	Soil		X	X
SO-17360-121205-DCR-593	SB24-05	8	10	Soil		X	X
SO-17360-121205-DCR-594	SB23-05	0	2	Soil		X	X
SO-17360-121205-DCR-595	SB23-05	4	6	Soil		X	X
SO-17360-121205-DCR-596	SB23-05	8	10	Soil		X	X
SO-17360-121205-DCR-597	SB22-05	0	2	Soil		X	X
SO-17360-121205-DCR-598	SB22-05	2	4	Soil		X	X
SO-17360-121205-DCR-599	SB22-05	4	6	Soil		X	X
SO-17360-121205-DCR-600	SB22-05	6	8	Soil		X	X
SO-17360-121205-DCR-601	SB22-05	8	10	Soil	MS/MSD	X	X
SO-17360-121205-DCR-602	SB21-05	0	2	Soil		X	X
SO-17360-121205-DCR-603	SB21-05	2	4	Soil		X	X
SO-17360-121205-DCR-604	SB21-05	4	6	Soil		X	X
SO-17360-121205-DCR-605	SB21-05	6	8	Soil		X	X
SO-17360-121205-DCR-606	SB21-05	8	10	Soil		X	X
SO-17360-121205-DCR-607	SB20-05	0	2	Soil		X	X
SO-17360-121205-DCR-608	SB20-05	2	4	Soil		X	X
SO-17360-121205-DCR-609	SB20-05	4	6	Soil		X	X
SO-17360-121205-DCR-610	SB20-05	6	8	Soil		X	X
SO-17360-121205-DCR-611	SB20-05	8	10	Soil		X	X
SO-17360-121205-DCR-612	SB19-05	0	2	Soil		X	X
SO-17360-121205-DCR-613	SB19-05	0	2	Soil	Duplicate (612)	X	X
SO-17360-121205-DCR-614	SB19-05	2	4	Soil		X	X
SO-17360-121205-DCR-615	SB19-05	4	6	Soil		X	X
SO-17360-121205-DCR-616	SB19-05	6	8	Soil		X	X
SO-17360-121205-DCR-617	SB19-05	8	10	Soil		X	X

Notes:

PNA- Polynuclear Aromactics
RCRA - Resource Conservation Recovery Act
QC - Quality Control
MS/MSD - Matrix Spike/ Matrix Splice Duplicate

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
2005 SECOND SOIL INVESTIGATION
GENERATL MOTORES GRAND RAPIDS MFD SITE
GRAND RAPIDS, MICHIGAN

Parameter	*Method*	*Matrix*	*Holding Time*	*Preservation*
PNA	SW-846 8270C	Soil	- 14 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, 4 ± 2° C
RCRA Metals		Soil	- 180 days from sample collection to completion of analysis	pH < 2 and Iced, 4 ± 2° C
Arsenic	SW-846 6010B			
Barium	SW-846 6010B			
Cadmium	SW-846 6010B			
Chromium Total	SW-846 6010B			
Lead	SW-846 6010B			
Selenium	SW-846 6010B			
Silver	SW-846 6010B			
Mercury	SW-846 7471A	Soil	- 28 days from sample collection to completion of analysis	pH < 2 and Iced, 4 ± 2° C

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", 3rd Edition, and Promulgated updates, November 1986

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF SURROGATE RECOVERY ACCEPTANCE CRITERIA
2005 SECOND SOIL INVESTIGATION
GENERAL MOTORS GRAND RAPIDS MFD SITE
GRAND RAPIDS, MICHIGAN

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
PNA	2,4,6-Tribromophenol	32	33-116	SO-17360-121205-DCR-602	2-Methylnaphthalene	130	µg/kg	J
					Acenaphthene	180	µg/kg	J
					Acenaphthylene	26	µg/kg	J
					Anthracene	570	µg/kg	J
					Benzo(g,h,i)perylene	1300	µg/kg	J
					Benzo(k)fluoranthene	820	µg/kg	J
					Dibenz(a,h)anthracene	430	µg/kg	J
					Fluorene	260	µg/kg	J
					Indeno(1,2,3-cd)pyrene	1100	µg/kg	J
					Naphthalene	92	µg/kg	J
PNA	2,4,6-Tribromophenol	31	33-116	SO-17360-121205-DCR-602	Benzo(a)anthracene	2100	µg/kg	J
					Benzo(a)pyrene	2000	µg/kg	J
					Benzo(b)fluoranthene	3000	µg/kg	J
					Chrysene	2600	µg/kg	J
					Fluoranthene	3100	µg/kg	J
					Phenanthrene	2200	µg/kg	J
					Pyrene	2600	µg/kg	J
PNA	2,4,6-Tribromophenol	33	33-116	SO-17360-121205-DCR-612	2-Methylnaphthalene	11	µg/kg	J
					Acenaphthene	280 U	µg/kg	UJ
					Acenaphthylene	280 U	µg/kg	UJ
					Anthracene	23	µg/kg	J
					Benzo(a)anthracene	160	µg/kg	J
					Benzo(a)pyrene	180	µg/kg	J
					Benzo(b)fluoranthene	230	µg/kg	J
					Benzo(g,h,i)perylene	140	µg/kg	J
					Benzo(k)fluoranthene	70	µg/kg	J
					Chrysene	170	µg/kg	J
					Dibenz(a,h)anthracene	37	µg/kg	J
					Fluoranthene	250	µg/kg	J
					Fluorene	280 U	µg/kg	UJ
					Indeno(1,2,3-cd)pyrene	120	µg/kg	J
					Naphthalene	7.5	µg/kg	J
					Phenanthrene	98	µg/kg	J

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF SURROGATE RECOVERY ACCEPTANCE CRITERIA
2005 SECOND SOIL INVESTIGATION
GENERAL MOTORS GRAND RAPIDS MFD SITE
GRAND RAPIDS, MICHIGAN

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
					Pyrene	210	µg/kg	J
PNA	Nitrobenzene-d5	40	42-110	SO-17360-121205-DCR-615	2-Methylnaphthalene	280 U	µg/kg	UJ
					Acenaphthene	280 U	µg/kg	UJ
					Acenaphthylene	280 U	µg/kg	UJ
					Anthracene	280 U	µg/kg	UJ
					Benzo(a)anthracene	280 U	µg/kg	UJ
					Benzo(a)pyrene	280 U	µg/kg	UJ
					Benzo(b)fluoranthene	280 U	µg/kg	UJ
					Benzo(g,h,i)perylene	280 U	µg/kg	UJ
					Benzo(k)fluoranthene	280 U	µg/kg	UJ
					Chrysene	280 U	µg/kg	UJ
					Dibenz(a,h)anthracene	280 U	µg/kg	UJ
					Fluoranthene	9.0 J	µg/kg	J
					Fluorene	280 U	µg/kg	UJ
					Indeno(1,2,3-cd)pyrene	280 U	µg/kg	UJ
					Naphthalene	280 U	µg/kg	UJ
					Phenanthrene	280 U	µg/kg	UJ
					Pyrene	280 U	µg/kg	UJ

Notes:

J - Estimated Concentration
UJ - Estimated Report Limit
U - Not present at or above the associated value

TABLE 4

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
2005 SECOND SOIL INVESTIGATION
GENERAL MOTORS GRAND RAPIDS MFD SITE
GRAND RAPIDS, MICHIGAN

Parameter	*Analyte*	*Original Sample ID*	*Original Result*	*Duplicate Sample ID*	*Duplicate Result*	*RPD*	*Units*
		SO-17360-121205-DCR-588		SO-17360-121205-DCR-589			
PNA	Anthracene		280 U		7.6 J	NC	µg/kg
	Benzo(a)anthracene		21 J		32 J	42	µg/kg
	Benzo(a)pyrene		15 J		26 J	54	µg/kg
	Benzo(b)fluoranthene		26 J		38 J	38	µg/kg
	Benzo(g,h,i)perylene		11 J		17 J	43	µg/kg
	Benzo(k)fluoranthene		9.2 J		18 J	65	µg/kg
	Chrysene		24 J		33 J	32	µg/kg
	Fluoranthene		46 J		68 J	39	µg/kg
	Indeno(1,2,3-cd)pyrene		9.5 J		16 J	51	µg/kg
	Phenanthrene		33 J		44 J	29	µg/kg
	Pyrene		34 J		47 J	32	µg/kg
RCRA Metals	Arsenic		1.6		1.2	29	µg/kg
	Barium		6.4		4.3	39	µg/kg
	Cadmium		0.057 J		0.084 U	NC	µg/kg
	Chromium Total		12.0		11.1	7.8	µg/kg
	Lead		10.3		4.6	77	µg/kg
	Mercury		0.042 U		0.017 J	NC	µg/kg
		SO-17360-121205-DCR-612		SO-17360-121205-DCR-613			
PNA	2-Methylnaphthalene		11 J		13 J	17	µg/kg
	Anthracene		23 J		23 J	0	µg/kg
	Benzo(a)anthracene		160 J		130 J	21	µg/kg
	Benzo(a)pyrene		180 J		130 J	32	µg/kg
	Benzo(b)fluoranthene		230 J		200 J	14	µg/kg
	Benzo(g,h,i)perylene		140 J		95 J	38	µg/kg
	Benzo(k)fluoranthene		70 J		71 J	1.4	µg/kg
	Chrysene		170 J		130 J	27	µg/kg
	Dibenz(a,h)anthracene		37 J		261 J	35	µg/kg
	Fluoranthene		250 J		210 J	17	µg/kg
	Fluorene		280 U		7.3 J	NC	µg/kg
	Indeno(1,2,3-cd)pyrene		120 J		84 J	35	µg/kg
	Naphthalene		7.5 J		11 J	38	µg/kg
	Phenanthrene		98 J		90 J	8.5	µg/kg
	Pyrene		210 J		180 J	15	µg/kg

TABLE 4

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
2005 SECOND SOIL INVESTIGATION
GENERAL MOTORS GRAND RAPIDS MFD SITE
GRAND RAPIDS, MICHIGAN

Parameter	*Analyte*	*Original Sample ID*	*Original Result*	*Duplicate Sample ID*	*Duplicate Result*	*RPD*	*Units*
		SO-17360-121205-DCR-612		SO-17360-121205-DCR-613			
RCRA Metals	Arsenic		2.3		2.2	4.4	µg/kg
	Barium		17.8		13.7	26	µg/kg
	Cadmium		0.21		0.16	27	µg/kg
	Chromium Total		26.0		12.1	73	µg/kg
	Lead		8.6		6.8	23	µg/kg
	Mercury		0.016 J		0.022 J	32	µg/kg

Notes:

RPD Relative Percent Difference
NC - Not calculable
J - Estimated Concentration
U - Not present at or above the associated value

ATTACHMENT D

EARTH METAL ANALYTICAL RESULTS

TABLE D

SUMMARY OF ANALYTICAL RESULTS IN SOIL SAMPLES FOR EARTH METALS
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		SB26-07	SB26-07	SB26-07	SB26-07	SB26-07	SB27-07	SB27-07	SB27-07	SB27-07	SB27-07	SB28-07	SB28-07	SB28-07	SB28-07	SB28-07	SB29-07	SB29-07	SB29-07	SB29-07	SB29-07	SB30-07	SB30-07	SB30-07
Sample Identification (SO-17360-071007-)		BW-618	BW-619	BW-620	BW-621	BW-622	BW-623	BW-624	BW-625	BW-626	BW-627	BW-628	BW-629	BW-630	BW-631	BW-632	BW-633	BW-634	BW-635	BW-636	BW-637	BW-644	BW-645	BW-646
Sample Date		7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007	7/10/2007
Sample Depth		0-2 ft BGS	2-4 ft BGS	4-6 ft BGS	6-8 ft BGS	8-10 ft BGS	0-2 ft BGS	2-4 ft BGS	4-6 ft BGS	6-8 ft BGS	8-10 ft BGS	0-2 ft BGS	2-4 ft BGS	4-6 ft BGS	6-8 ft BGS	8-10 ft BGS	0-2 ft BGS	2-4 ft BGS	4-6 ft BGS	6-8 ft BGS	8-10 ft BGS	0-2 ft BGS	2-4 ft BGS	4-6 ft BGS
Sample Type		(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)	(Original)
	Units																							
Metals																								
Aluminum	mg/kg	2670	9260	3690	2570	2550	3150	4060	2920	2720	2780	4220	7860	3080	2570	2470	465	147	4660	2930	2100	3060	1850	1550
Calcium	mg/kg	6910 J	16000 J	3960 J	669 J	709 J	18500 J	36200 J	18100 J	3920 J	943 J	3690 J	9770 J	13500 J	492 J	583 J	647 J	410 UJ	430 UJ	425 UJ	419 UJ	7750	8620	7700
Iron	mg/kg	109000	276000	6580	14600	5460	186000	278000	4950	2480	3800	3280	6800	96000	7390	4370	11100	5580	4840	8000	4330	5270	3760	3160
Magnesium	mg/kg	2870 J	4330 J	657 J	767 J	928 J	5010 J	3090 J	3630 J	404 J	1210 J	234 J	407 J	2300 J	863 J	772 J	227 J	82.0 UJ	468 J	1160 J	633 J	3550 J	3050 J	2510 J
Potassium	mg/kg	458 U	1260	523 U	450 U	434 U	477 U	666	599 U	515 U	486 U	445 U	457 U	446 U	428 U	425 U	418 U	410 U	430 U	425 U	419 U	417 U	416 U	412 U
Sodium	mg/kg	524	2160	1260	383	414	2450	2220	1770	1620	448	755	1260	1460	242	211	704	245	809	359	383	83.4 U	83.3 U	82.4 U

Notes:
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.

TABLE D

SUMMARY OF ANALYTICAL RESULTS IN SOIL SAMPLES FOR EARTH METALS
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*SB30-07*	*SB30-07*	*SB30-07*	*SB31-07*	*SB31-07*	*SB31-07*	*SB31-07*	*SB31-07*	*SB31-07*	*SB32-07*	*SB32-07*	*SB32-07*	*SB32-07*	*SB32-07*	*SB32-07*	*SB33-07*	*SB33-07*	*SB33-07*	*SB33-07*	*SB33-07*	*SB33-07*
Sample Identification (SO-17360-071007-)		*BW-647*	*BW-648*	*BW-649*	*BW-656*	*BW-657*	*BW-658*	*BW-659*	*BW-660*	*BW-661*	*BW-638*	*BW-639*	*BW-640*	*BW-641*	*BW-642*	*BW-643*	*BW-650*	*BW-651*	*BW-652*	*BW-653*	*BW-654*	*BW-655*
Sample Date		*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*	*7/10/2007*
Sample Depth		*6-8 ft BGS*	*8-10 ft BGS*	*8-10 ft BGS*	*0-2 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*6-8 ft BGS*	*8-10 ft BGS*	*8-10 ft BGS*	*0-2 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*6-8 ft BGS*	*8-10 ft BGS*	*8-10 ft BGS*	*0-2 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*6-8 ft BGS*	*8-10 ft BGS*	*8-10 ft BGS*
Sample Type		*(Original)*	*(Original)*	*Duplicate*	*(Original)*	*(Original)*	*(Original)*	*(Original)*	*(Original)*	*Duplicate*	*(Original)*	*(Original)*	*(Original)*	*(Original)*	*(Original)*	*Duplicate*	*(Original)*	*(Original)*	*(Original)*	*(Original)*	*(Original)*	*Duplicate*
	Units																					
Metals																						
Aluminum	mg/kg	1450	1720	1630	1750	2020	1600	1390	2860	2870	3150	2460	3250	3520	2760	2200	1590	1930	1460	1770	2900	2620
Calcium	mg/kg	7150	6190	9560	23000	27100	32900	19600	35600	14100	2610	1780	3230	1710	1020	546	22400	24400	23100	32500	6500 J	523 J
Iron	mg/kg	2950	3610	3380	4240	4430	4100	3630	4040	7820	8190	3810	5090	5760	3900	3770	4220	4260	3620	4790	4460	3580
Magnesium	mg/kg	2030 J	1950 J	3010 J	5710 J	11500 J	15800 J	5090 J	2060 J	5330 J	1140 J	941 J	1340 J	1690 J	788 J	629 J	6230 J	8490 J	10700 J	10900 J	2570 J	417 J
Potassium	mg/kg	416 U	415 U	416 U	414 U	420 U	414 U	413 U	423 U	424 U	421 U	418 U	423 U	422 U	423 U	424 U	408 U	411 U	412 U	424 U	419 U	419 U
Sodium	mg/kg	83.3 U	82.9 U	83.3 U	82.8 U	84.0 U	82.8 U	82.6 U	84.7 U	84.9 U	280	195	221	84.5 U	116	115	81.6 U	82.1 U	82.3 U	99.1	83.8 U	83.9 U

Notes:
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.

CONESTOGA-ROVERS
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MEMORANDUM

PRIVILEGED AND CONFIDENTIAL
PREPARED AT ENCORE COUNSEL'S REQUEST

TO: Kurt Blizzard JQ

REF. NO.: 17360-01

FROM: Charles Munce/Jeni Quigley/cm/17/Det.

DATE: January 21, 2003

C.C.: Gary Klepper

RE: **Additional Historical Documentation Review Summary**
Phase III-B Hydrogeological Investigation
General Motors Corporation Metal Fabrication Division
Grand Rapids Metal Plant
Wyoming, Michigan

This memorandum presents a summary of the information obtained during the additional review of the Phase III-B Hydrogeological Investigation (Phase III-B HI) conducted at the General Motors Corporation (GM) Metal Fabrication Division (MFD) Grand Rapids Metal Plant (Plant) located at 300 36th Street in Wyoming, Michigan (Site). This document specifically addresses information in the Phase III-B HI relating to the collection and analysis of water samples from the Site and Cole Drain.

1.0 BACKGROUND

Conestoga-Rovers & Associates, Inc. (CRA) prepared a Historical Documentation Review Summary (Summary) for the Site, which was finalized on December 23, 2002 under separate cover. The purpose of the Summary was to obtain and review available documentation regarding historical investigations and remedial measures conducted at the Site. Documentation reviewed by CRA included numerous reports generated between 1981 and 1993, as well as correspondence and applicable permit information, relating to a chlorinated compound plume identified in groundwater beneath the Site and extending off-Site in a general northwest direction, towards the Cole Drain. A combination groundwater extraction and soil vapor extraction (SVE) system were installed at the Site in 1989 and 1993 to remediate groundwater and soil at the Site. Extracted groundwater is treated in an on-Site activated carbon system and discharged to the on-Site stormwater retention pond. The retention pond discharges to the Cole Drain under a National Pollution Discharge Elimination System (NPDES) permit. As a provision under the NPDES permit, the Site is required to monitoring the influent, intermediate, and effluent from the groundwater treatment system, as well as the outfall to Cole Drain, for trichloroethene and 1,1-dichloroethane (1,1-DCA), respectively. In addition, groundwater monitoring, including the collection and analysis of surface water samples from Cole Drain, is conducted on a quarterly basis.

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The Phase III-B HI was reviewed as a portion of the Summary. Based on the review of the Phase III-B HI, surface water samples were collected from Cole Drain upstream from the Site stormwater retention pond outfall, immediately downstream from the outfall, and at several downstream locations. A summary of the activities conducted during the Phase III-B HI with regards to the Cole Drain is presented below.

2.0 PHASE III-B HYDROGEOLOGICAL INVESTIGATION

A Phase III-B HI was conducted at the Site by EDI Engineering and Science (currently Earth Tech (ET)) and was summarized in a report dated July 1987.

One purpose of the Phase III-B HI was to determine the potential impact of the chlorinated compound plume identified during previous investigations on the water quality of the Cole Drain.

Four surface water samples were collected on January 7, 1987 at four locations along the Cole Drain. Sample C-1 was collected immediately below the retention pond outfall. Based on the extent of the plume, both at the time of the sample collection and currently, this location is located upstream of any contribution to Cole Drain by impacted groundwater from the chlorinated compound plume. Samples C-2, C-3, and C-4 were collected at various downstream locations between 36th and 28th Streets. Three additional surface water samples were collected on June 15, 1987 from the retention pond inlet, retention pond outfall, and the Cole Drain adjacent Clay Avenue outfalls. The surface water samples collected on January 7, 1987 were analyzed for trichloroethene (TCE). The surface water samples collected on June 15, 1987 were analyzed for Priority Pollutant volatile organic compounds. Figure 1 presents the approximate sample locations. It should be noted that the sample location figure provided by EDI in the Phase III-B HI was presented on a USGS quadrangle map with a large scale and did not provide exact sample locations. A summary of detected parameters identified in surface water samples is presented in Table 1.

TCE was identified in all of the surface water samples collected from C-1, C-2, C-3, C-4, retention pond inlet, retention pond outfall, and the upstream Clay Avenue outfalls at concentrations of 4.4 µg/L, 3.6 µg/L, 4.8 µg/L, 2.7 µg/L, 2.0 µg/L, 2.0 µg/L, and 4.0 µg/L, respectively, which are below the Michigan Act 451, Part 201 Residential and Commercial Drinking Water Criteria (RDWC) of 5 µg/L and the Groundwater Surface Water Interface Criteria (GSIC) of 200 µg/L. The sample collected from the Cole Drain adjacent to the Clay Avenue Outfalls was to assess the water quality coming into the Cole Drain, which had not passed through the stormwater retention pond. Tetrachloroethylene (PCE) was identified in the upstream surface water sample collected from the Cole Drain adjacent to the Clay Avenue outfalls at a concentration of 11 µg/L, which is above the Michigan Act 451, Part 201 RDWC of 5 µg/L and below the GSIC of 45 µg/L. Additional chlorinated compounds identified in surface water samples included bromodichloromethane, which was detected in the sample collected from the pond inlet at a concentration of 3 µg/L, which is below the Michigan Act 451, Part 201 RDWC and GSIC of 100 µg/L; chloroform, which was detected in the samples collected from the pond inlet and pond outfall at concentrations of 5 µg/L and 3 µg/L, respectively, which are below the Michigan Act 451, Part 201 RDWC and GSIC of 100 µg/L; and 1,1,1-trichloroethane (1,1,1-TCA), which was detected in the samples collected from the pond inlet and pond outfall at concentrations of 8 µg/L and 4 µg/L, which are below the Michigan Act 451, Part 201 RDWC and GSIC of 200 µg/L. No other parameters were reported to be detected in the surface water samples collected in January and June 1987.

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3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the review of the information presented in the Phase III-B HI, TCE was detected at consistently low concentrations for all samples collected. Based on the TCE concentrations measured in the upstream sample and uniformly low concentrations of TCE identified downstream, it appears that the Site is not contributing significantly to levels of TCE in the Cole Drain. It should be noted that concentrations of TCE in the pond influent and outfall were approximately half of the concentrations of TCE identified in the upstream and downstream Cole Drain samples.

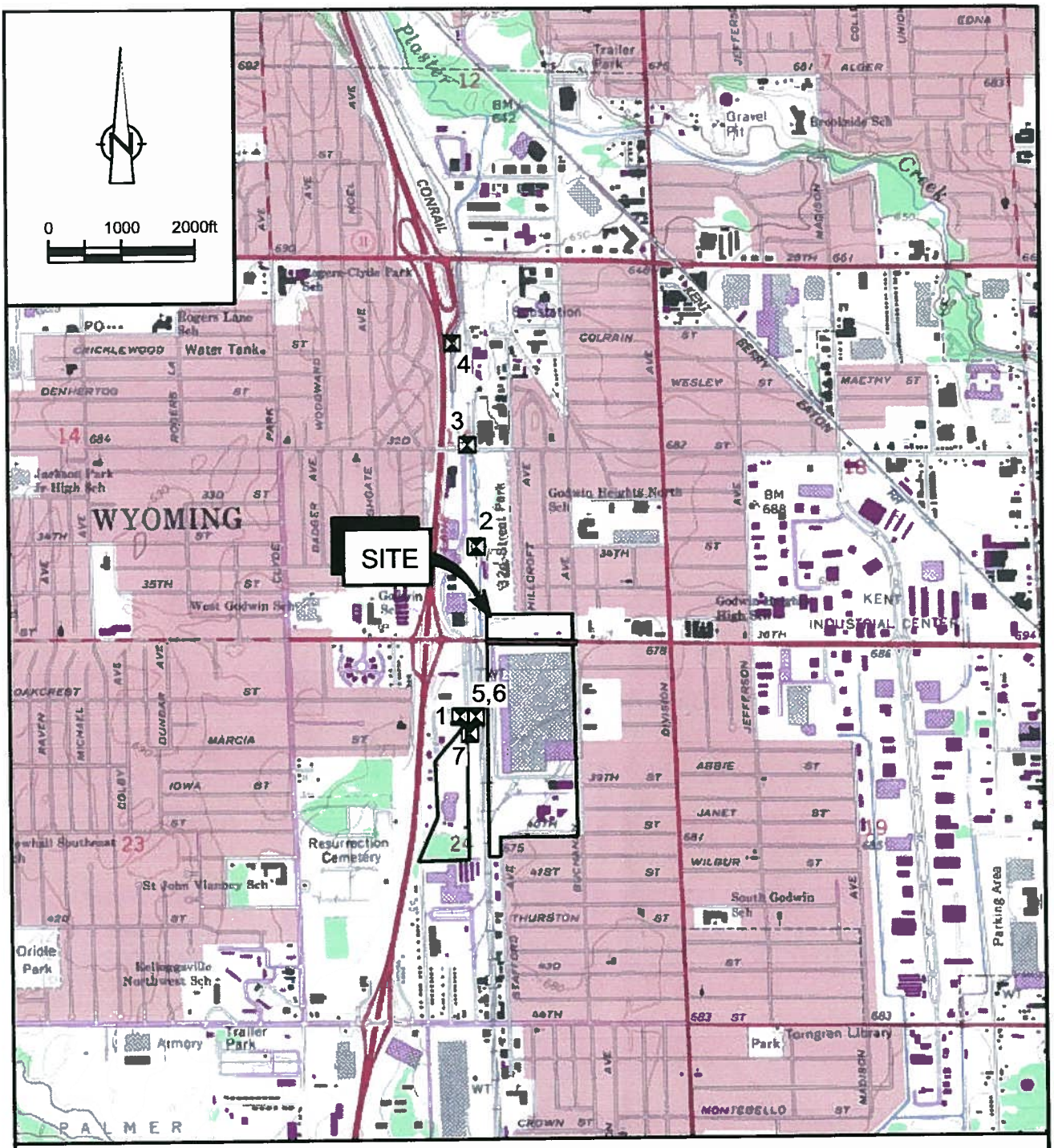
PCE was identified in the upstream sample location, the Clay Avenue outfalls at a concentration of 11 µg/L, which is above the Michigan Act 451, Part 201 RDWC of 5 µg/L, but below the GSIC of 45 µg/L. PCE was not detected in the pond inlet or outfall samples at concentrations above the laboratory detection limit of 1 µg/L. The downstream surface water samples were not analyzed for PCE. Additional chlorinated compounds identified in the samples collected from the pond inlet and outfall include bromodichloromethane, chloroform, and 1,1,1-TCA. These compounds were not detected in the upstream sample at a concentration above the laboratory detection limit of 1 µg/L. The downstream surface water samples were not analyzed for the additional chlorinated compounds. The variance in detected compounds indicates an upstream source for the PCE contamination.

Based on the information reviewed in the Phase III-B HI, no parameters were detected at concentrations above the applicable surface water criteria, the Michigan Act 451, Part 201 GSIC.

Future evaluation of Site impacts relative to Cole Drain that involve sampling and analysis of surface water samples from Cole Drain, should include sampling and analysis at points in the Cole Drain upstream from the retention pond outfall.

Additional investigation work for the Site is currently scheduled for Spring 2003. Based on the results of the additional investigation and recommendations therefrom, additional upstream and downstream Cole Drain surface water sample collection may be conducted for additional analytical parameters, and discontinuation of quarterly monitoring along Cole Drain may be recommended.

Should you have any questions regarding this memorandum, please contact Jeni Quigley or Gary Klepper at (517) 316-2397.



SOURCE: USGS QUADRANGLE MAP; GRAND RAPIDS WEST, MICHIGAN
SAMPLE LOCATIONS FROM EDI ENGINEERING AND SCIENCE, JULY 1987

LEGEND

1 ⊠ APPROXIMATE SAMPLE LOCATIONS

figure 1

APPROXIMATE COLE DRAIN SAMPLE LOCATIONS
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

GRAND RAPIDS

17360-03(MEMO017)GN-DE001 JAN 15/2003

TABLE 1

SUMMARY OF DETECTED PARAMETERS IN SURFACE WATER SAMPLES
PHASE III-B HYDROGEOLOGICAL INVESTIGATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451*	*Michigan Act 451*	*Michigan Act 451*	*C-1*	*C-2*	*C-3*	*C-4*	*Pond Inlet*	*Pond Outlet*	*Upstream*
Sample ID	*Part 201*	*Part 201*	*Part 201*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Depth (feet bgs)	*Residential &*	*Industrial &*	*Groundwater*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Date Sampled	*Commercial I*	*Commercial II, III & IV*	*Surface Water*	*1/7/87*	*1/7/87*	*1/7/87*	*1/7/87*	*6/15/87*	*6/15/87*	*6/15/87*
Date Analyzed	*Drinking Water*	*Drinking Water*	*Interface*	*1/13/87*	*1/13/87*	*1/13/87*	*1/13/87*	*6/16/87*	*6/16/87*	*6/16/87*
Units	*Criteria* [1]	*Criteria* [1]	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Parameter (ug/L)										
Volatile Organic Compounds										
Trichloroethylene	5.0	5.0	200	4.4	3.6	4.8	2.7	2.0	2.0	4.0
Tetrachloroethylene	5.0	5.0	45	NA	NA	NA	NA	ND (1.0)	ND (1.0)	11
Bromodichloromethane	100	100	ID	NA	NA	NA	NA	3.0	ND (1.0)	ND (1.0)
Chloroform	100	100	170	NA	NA	NA	NA	5.0	3.0	ND (1.0)
1,1,1-trichloroethane	200	200	200	NA	NA	NA	NA	8.0	4.0	ND (1.0)

Notes:
[1] Part 201 Generic Cleanup Criteria and Screening Levels, Groundwater: Residential and Industrial-Commercial, Michigan Department of Environmental Quality, June 7, 2000.
Boxed concentration indicates exceedance of one or more criteria.
NA - Parameter not analyzed.

Analytical Laboratory Report

Report ID: S10127.01(01)
Generated on 08/29/2002

Report to

Attention: Ms. Stephanie Cerling
GM MFD Grand Rapids
300 36th St. SW
Grand Rapids, MI 49548

Phone: 616-246-3093 FAX: 616-246-2896

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S10127.01-S10127.07
Project: Floor Blocks 4&5
Submitted Date/Time: 08/15/2002 16:00
Sampled by: T. Gooslin
P.O. #: WFB00013

Report Notes

Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
Results relate only to items tested.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10127.01
Sample Tag: Col-K10
Collected Date/Time: 08/14/2002
Matrix: Floor Blocks
COC Reference: 014667

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed				08/20/02	KMM		
Extraction, PCB	Completed			3550	08/19/02	JKB		
Mercury Digestion	Completed			7470A	08/20/02	BRP		
Metal Digestion	Completed			3015A	08/20/02	PER		
TCLP Zero Headspace Ext.	Completed			1311	08/18/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/18/02	ARH		
Sample Used g	100			1311	08/18/02	ARH		
Final Volume mL	2,000			1311	08/18/02	ARH		
Final Extract pH	5.05			1311	08/18/02	ARH		
Metals								
Arsenic	Not detected	mg/L	0.010	200.8	08/21/02	PER	5.0	
Barium	0.43	mg/L	0.01	200.8	08/21/02	PER	100.0	
Cadmium	Not detected	mg/L	0.005	200.8	08/21/02	PER	1.0	
Chromium	0.06	mg/L	0.01	200.8	08/21/02	PER	5.0	
Copper	0.44	mg/L	0.01	200.8	08/21/02	PER		
Lead	0.156	mg/L	0.003	200.8	08/21/02	PER	5.0	
Mercury	Not detected	mg/L	0.0002	245.1M	08/20/02	BRP	0.2	
Selenium	Not detected	mg/L	0.010	200.8	08/21/02	PER	1.0	
Silver	Not detected	mg/L	0.005	200.8	08/21/02	PER	5.0	
Zinc	4.73	mg/L	0.01	200.8	08/21/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	M
p,m-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	M
Pentachlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	100.0	M
2,4,5-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	400.0	M
2,4,6-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	2.0	M
2,4-Dinitrotoluene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.13	M
Hexachlorobenzene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.13	M
Hexachlorobutadiene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.5	M
Hexachloroethane	Not detected	mg/L	0.3	625	08/22/02	SMP	3.0	M
Nitrobenzene	Not detected	mg/L	0.3	625	08/22/02	SMP	2.0	M
Pyridine	Not detected	mg/L	0.3	625	08/22/02	SMP	5.0	M
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	100.0	

M-Higher detection limit due to matrix interference.

Lab Sample ID: S10127.01 (continued)
Sample Tag: Col-K10

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP/SPLP Volatiles (continued)								
Chloroform	Not detected	mg/L	0.1	624	08/21/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	624	08/21/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1242	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1221	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1232	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1248	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1254	7.5	mg/kg	1	8082	08/20/02	JANB		
PCB-1260	Not detected	mg/kg	1	8082	08/20/02	JANB		

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10127.02
Sample Tag: Col-K6
Collected Date/Time: 08/14/2002
Matrix: Floor Blocks
COC Reference: 014661

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed				08/20/02	KMM		
Extraction, PCB	Completed			3550	08/19/02	JKB		
Mercury Digestion	Completed			7470A	08/20/02	BRP		
Metal Digestion	Completed			3015A	08/20/02	PER		
TCLP Zero Headspace Ext.	Completed			1311	08/18/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/18/02	ARH		
Sample Used g	100			1311	08/18/02	ARH		
Final Volume mL	2,000			1311	08/18/02	ARH		
Final Extract pH	5.10			1311	08/18/02	ARH		
Metals								
Arsenic	Not detected	mg/L	0.010	200.8	08/21/02	PER	5.0	
Barium	0.24	mg/L	0.01	200.8	08/21/02	PER	100.0	
Cadmium	Not detected	mg/L	0.005	200.8	08/21/02	PER	1.0	
Chromium	0.02	mg/L	0.01	200.8	08/21/02	PER	5.0	
Copper	0.02	mg/L	0.01	200.8	08/21/02	PER		
Lead	0.095	mg/L	0.003	200.8	08/21/02	PER	5.0	
Mercury	Not detected	mg/L	0.0002	245.1M	08/20/02	BRP	0.2	
Selenium	Not detected	mg/L	0.010	200.8	08/21/02	PER	1.0	
Silver	Not detected	mg/L	0.005	200.8	08/21/02	PER	5.0	
Zinc	1.82	mg/L	0.01	200.8	08/21/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	100.0	
2,4,5-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	625	08/22/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	625	08/22/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	625	08/22/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	625	08/22/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	624	08/21/02	JGH	6.0	

Lab Sample ID: S10127.02 (continued)
Sample Tag: Col-K6

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP/SPLP Volatiles (continued)								
1,4-Dichlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	624	08/21/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1242	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1221	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1232	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1248	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1254	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1260	Not detected	mg/kg	1	8082	08/20/02	JANB		

Analytical Laboratory Report

Lab Sample ID: S10127.03
Sample Tag: Col-L 10
Collected Date/Time: 08/14/2002
Matrix: Floor Blocks
COC Reference: 014661

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed				08/20/02	KMM		
Extraction, PCB	Completed			3550	08/19/02	JKB		
Mercury Digestion	Completed			7470A	08/20/02	BRP		
Metal Digestion	Completed			3015A	08/20/02	PER		
TCLP Zero Headspace Ext.	Completed			1311	08/18/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/18/02	ARH		
Sample Used g	100			1311	08/18/02	ARH		
Final Volume mL	2,000			1311	08/18/02	ARH		
Final Extract pH	4.97			1311	08/18/02	ARH		
Metals								
Arsenic	Not detected	mg/L	0.010	200.8	08/21/02	PER	5.0	
Barium	0.20	mg/L	0.01	200.8	08/21/02	PER	100.0	
Cadmium	Not detected	mg/L	0.005	200.8	08/21/02	PER	1.0	
Chromium	0.02	mg/L	0.01	200.8	08/21/02	PER	5.0	
Copper	0.26	mg/L	0.01	200.8	08/21/02	PER		
Lead	0.199	mg/L	0.003	200.8	08/21/02	PER	5.0	
Mercury	Not detected	mg/L	0.0002	245.1M	08/20/02	BRP	0.2	
Selenium	Not detected	mg/L	0.010	200.8	08/21/02	PER	1.0	
Silver	Not detected	mg/L	0.005	200.8	08/21/02	PER	5.0	
Zinc	2.74	mg/L	0.01	200.8	08/21/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	2	mg/L	1	625	08/22/02	SMP	200.0	M
p,m-Cresol	3	mg/L	1	625	08/22/02	SMP	200.0	ME
Pentachlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	100.0	M
2,4,5-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	400.0	M
2,4,6-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	2.0	M
2,4-Dinitrotoluene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.13	M
Hexachlorobenzene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.13	M
Hexachlorobutadiene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.5	M
Hexachloroethane	Not detected	mg/L	0.3	625	08/22/02	SMP	3.0	M
Nitrobenzene	Not detected	mg/L	0.3	625	08/22/02	SMP	2.0	M
Pyridine	Not detected	mg/L	0.3	625	08/22/02	SMP	5.0	M
TCLP Semi-Volatiles (Replicate 01)								
o-Cresol	3	mg/L	2	8270C	08/28/02	SMP	200.0	C

M-Higher detection limit due to matrix interference.
E-Target value estimated due to exceeding calibration range.
C-Higher detection limit due to high target concentration.

Lab Sample ID: S10127.03 (continued)
Sample Tag: Col-L 10

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP Semi-Volatiles (Replicate 01) (continued)								
p,m-Cresol	8	mg/L	2	8270C	08/28/02	SMP	200.0	C
Pentachlorophenol	Not detected	mg/L	2	8270C	08/28/02	SMP	100.0	C
2,4,5-Trichlorophenol	Not detected	mg/L	2	8270C	08/28/02	SMP	400.0	C
2,4,6-Trichlorophenol	Not detected	mg/L	2	8270C	08/28/02	SMP	2.0	C
2,4-Dinitrotoluene	Not detected	mg/L	2	8270C	08/28/02	SMP	0.13	C
Hexachlorobenzene	Not detected	mg/L	2	8270C	08/28/02	SMP	0.13	C
Hexachlorobutadiene	Not detected	mg/L	2	8270C	08/28/02	SMP	0.5	C
Hexachloroethane	Not detected	mg/L	2	8270C	08/28/02	SMP	3.0	C
Nitrobenzene	Not detected	mg/L	2	8270C	08/28/02	SMP	2.0	C
Pyridine	Not detected	mg/L	2	8270C	08/28/02	SMP	5.0	C
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	624	08/21/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	624	08/21/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1242	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1221	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1232	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1248	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1254	9	mg/kg	1	8082	08/20/02	JANB		
PCB-1260	Not detected	mg/kg	1	8082	08/20/02	JANB		

C-Higher detection limit due to high target concentration.

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10127.04
Sample Tag: Col-N 13
Collected Date/Time: 08/14/2002
Matrix: Floor Blocks
COC Reference: 014661

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed				08/20/02	KMM		
Extraction, PCB	Completed			3550	08/19/02	JKB		
Mercury Digestion	Completed			7470A	08/20/02	BRP		
Metal Digestion	Completed			3015A	08/20/02	PER		
TCLP Zero Headspace Ext.	Completed			1311	08/18/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/18/02	ARH		
Sample Used g	100			1311	08/18/02	ARH		
Final Volume mL	2,000			1311	08/18/02	ARH		
Final Extract pH	4.93			1311	08/18/02	ARH		
Metals								
Arsenic	Not detected	mg/L	0.010	200.8	08/21/02	PER	5.0	
Barium	0.55	mg/L	0.01	200.8	08/21/02	PER	100.0	
Cadmium	Not detected	mg/L	0.005	200.8	08/21/02	PER	1.0	
Chromium	0.03	mg/L	0.01	200.8	08/21/02	PER	5.0	
Copper	0.03	mg/L	0.01	200.8	08/21/02	PER		
Lead	0.008	mg/L	0.003	200.8	08/21/02	PER	5.0	
Mercury	Not detected	mg/L	0.0002	245.1M	08/20/02	BRP	0.2	
Selenium	Not detected	mg/L	0.010	200.8	08/21/02	PER	1.0	
Silver	Not detected	mg/L	0.005	200.8	08/21/02	PER	5.0	
Zinc	0.81	mg/L	0.01	200.8	08/21/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	100.0	
2,4,5-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	625	08/22/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	625	08/22/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	625	08/22/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	625	08/22/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	624	08/21/02	JGH	6.0	

Lab Sample ID: S10127.04 (continued)
Sample Tag: Col-N 13

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP/SPLP Volatiles (continued)								
1,4-Dichlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	624	08/21/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1242	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1221	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1232	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1248	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1254	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1260	Not detected	mg/kg	1	8082	08/20/02	JANB		

Analytical Laboratory Report

Lab Sample ID: S10127.05
Sample Tag: Col-J 7
Collected Date/Time: 08/14/2002
Matrix: Floor Blocks
COC Reference: 014661

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed				08/20/02	KMM		
Extraction, PCB	Completed			3550	08/19/02	JKB		
Mercury Digestion	Completed			7470A	08/20/02	BRP		
Metal Digestion	Completed			3015A	08/20/02	PER		
TCLP Zero Headspace Ext.	Completed			1311	08/18/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/18/02	ARH		
Sample Used g	100			1311	08/18/02	ARH		
Final Volume mL	2,000			1311	08/18/02	ARH		
Final Extract pH	4.95			1311	08/18/02	ARH		
Metals								
Arsenic	Not detected	mg/L	0.010	200.8	08/21/02	PER	5.0	
Barium	0.42	mg/L	0.01	200.8	08/21/02	PER	100.0	
Cadmium	Not detected	mg/L	0.005	200.8	08/21/02	PER	1.0	
Chromium	0.06	mg/L	0.01	200.8	08/21/02	PER	5.0	
Copper	0.06	mg/L	0.01	200.8	08/21/02	PER		
Lead	0.013	mg/L	0.003	200.8	08/21/02	PER	5.0	
Mercury	Not detected	mg/L	0.0002	245.1M	08/20/02	BRP	0.2	
Selenium	Not detected	mg/L	0.010	200.8	08/21/02	PER	1.0	
Silver	Not detected	mg/L	0.005	200.8	08/21/02	PER	5.0	
Zinc	1.11	mg/L	0.01	200.8	08/21/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	M
p,m-Cresol	2	mg/L	1	625	08/22/02	SMP	200.0	M
Pentachlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	100.0	M
2,4,5-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	400.0	M
2,4,6-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	2.0	M
2,4-Dinitrotoluene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.13	M
Hexachlorobenzene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.13	M
Hexachlorobutadiene	Not detected	mg/L	0.3	625	08/22/02	SMP	0.5	M
Hexachloroethane	Not detected	mg/L	0.3	625	08/22/02	SMP	3.0	M
Nitrobenzene	Not detected	mg/L	0.3	625	08/22/02	SMP	2.0	M
Pyridine	Not detected	mg/L	0.3	625	08/22/02	SMP	5.0	M
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	100.0	

M-Higher detection limit due to matrix interference.

Lab Sample ID: S10127.05 (continued)
Sample Tag: Col-J 7

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP/SPLP Volatiles (continued)								
Chloroform	Not detected	mg/L	0.1	624	08/21/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	624	08/21/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1242	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1221	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1232	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1248	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1254	1.5	mg/kg	1	8082	08/20/02	JANB		
PCB-1260	Not detected	mg/kg	1	8082	08/20/02	JANB		

Analytical Laboratory Report

Lab Sample ID: S10127.06
Sample Tag: Col-O-6
Collected Date/Time: 08/14/2002
Matrix: Floor Blocks
COC Reference: 014661

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed				08/20/02	KMM		
Extraction, PCB	Completed			3550	08/19/02	JKB		
Mercury Digestion	Completed			7470A	08/20/02	BRP		
Metal Digestion	Completed			3015A	08/20/02	PER		
TCLP Zero Headspace Ext.	Completed			1311	08/18/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/18/02	ARH		
Sample Used g	100			1311	08/18/02	ARH		
Final Volume mL	2,000			1311	08/18/02	ARH		
Final Extract pH	4.91			1311	08/18/02	ARH		
Metals								
Arsenic	Not detected	mg/L	0.010	200.8	08/21/02	PER	5.0	
Barium	0.23	mg/L	0.01	200.8	08/21/02	PER	100.0	
Cadmium	Not detected	mg/L	0.005	200.8	08/21/02	PER	1.0	
Chromium	0.14	mg/L	0.01	200.8	08/21/02	PER	5.0	
Copper	Not detected	mg/L	0.01	200.8	08/21/02	PER		
Lead	0.043	mg/L	0.003	200.8	08/21/02	PER	5.0	
Mercury	Not detected	mg/L	0.0002	245.1M	08/20/02	BRP	0.2	
Selenium	Not detected	mg/L	0.010	200.8	08/21/02	PER	1.0	
Silver	Not detected	mg/L	0.005	200.8	08/21/02	PER	5.0	
Zinc	1.06	mg/L	0.01	200.8	08/21/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	100.0	
2,4,5-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	625	08/22/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	625	08/22/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	625	08/22/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	625	08/22/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	624	08/21/02	JGH	6.0	

Lab Sample ID: S10127.06 (continued)
Sample Tag: Col-O-6

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP/SPLP Volatiles (continued)								
1,4-Dichlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	624	08/21/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1242	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1221	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1232	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1248	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1254	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1260	Not detected	mg/kg	1	8082	08/20/02	JANB		

Analytical Laboratory Report

Lab Sample ID: S10127.07
Sample Tag: Misc 6
Collected Date/Time: 08/14/2002
Matrix: Floor Blocks
COC Reference: 014661

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed				08/20/02	KMM		
Extraction, PCB	Completed			3550	08/19/02	JKB		
Mercury Digestion	Completed			7470A	08/21/02	BRP		
Metal Digestion	Completed			3015A	08/20/02	PER		
TCLP Zero Headspace Ext.	Completed			1311	08/19/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/19/02	ARH		
Sample Used g	100			1311	08/19/02	ARH		
Final Volume mL	2,000			1311	08/19/02	ARH		
Final Extract pH	5.13			1311	08/19/02	ARH		
Metals								
Arsenic	Not detected	mg/L	0.010	200.8	08/21/02	PER	5.0	
Barium	0.26	mg/L	0.01	200.8	08/21/02	PER	100.0	
Cadmium	Not detected	mg/L	0.005	200.8	08/21/02	PER	1.0	
Chromium	0.04	mg/L	0.01	200.8	08/21/02	PER	5.0	
Copper	0.21	mg/L	0.01	200.8	08/21/02	PER		
Lead	0.069	mg/L	0.003	200.8	08/21/02	PER	5.0	
Mercury	Not detected	mg/L	0.0002	245.1M	08/21/02	BRP	0.2	
Selenium	Not detected	mg/L	0.010	200.8	08/21/02	PER	1.0	
Silver	Not detected	mg/L	0.005	200.8	08/21/02	PER	5.0	
Zinc	23.6	mg/L	0.01	200.8	08/21/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	625	08/22/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	100.0	
2,4,5-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	625	08/22/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	625	08/22/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	625	08/22/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	625	08/22/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	625	08/22/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	625	08/22/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	624	08/21/02	JGH	6.0	

Lab Sample ID: S10127.07 (continued)
Sample Tag: Misc 6

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP/SPLP Volatiles (continued)								
1,4-Dichlorobenzene	Not detected	mg/L	0.1	624	08/21/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	624	08/21/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	624	08/21/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	624	08/21/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1242	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1221	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1232	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1248	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1254	Not detected	mg/kg	1	8082	08/20/02	JANB		
PCB-1260	Not detected	mg/kg	1	8082	08/20/02	JANB		

Analytical Laboratory Report

Report ID: S10194.01(02)
Generated on 09/03/2002

Report to

Attention: Ms. Stephanie Cerling
GM MFD Grand Rapids
300 36th St. SW
Grand Rapids, MI 49548

Phone: 616-246-2992 FAX: 616-246-2896

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S10194.01-S10194.04
Project: Cores, Soil #4 & 5 Bay
Submitted Date/Time: 08/22/2002 10:20
Sampled by: T. Gooslin
P.O. #: WFB00013

Report Notes

Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
Results relate only to items tested.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10194.01
Sample Tag: J-10 - K-10
Collected Date/Time: 08/21/2002
Matrix: Soil
COC Reference: 014678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed			3510C	08/26/02	KMM		
Extraction, PCB	Completed			3550B	08/22/02	JKB		
Mercury Digestion	Completed			7471A	08/25/02	BRP		
Mercury Digestion	Completed			7470A	08/25/02	BRP		
TCLP Zero Headspace Ext.	Completed			1311	08/22/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/22/02	ARH		
Sample Used g	100			1311	08/22/02	ARH		
Final Volume mL	2,000			1311	08/22/02	ARH		
Final Extract pH	5.50			1311	08/22/02	ARH		
Inorganics								
Total Solids	87.5	%	1	160.3	08/26/02	MKH		
Metals								
Arsenic, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	5.0	
Barium, TCLP	0.76	mg/L	0.01	200.8	08/27/02	PER	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	1.0	
Chromium, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER	5.0	
Copper, TCLP	0.010	mg/L	0.01	200.8	08/27/02	PER		
Lead, TCLP	0.010	mg/L	0.003	200.8	08/27/02	PER	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	245.1M	08/25/02	BRP	0.2	
Selenium, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	1.0	
Silver, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	5.0	
Zinc, TCLP	0.10	mg/L	0.01	200.8	08/27/02	PER		
Arsenic	Not detected	mg/kg	0.50	6020	08/28/02	PER		
Cadmium	0.07	mg/kg	0.05	6020	08/28/02	PER		
Chromium	2.1	mg/kg	1.0	6020	08/28/02	PER		
Copper	3.3	mg/kg	1.0	6020	08/28/02	PER		
Lead	4.7	mg/kg	1.0	6020	08/28/02	PER		
Mercury	Not detected	mg/kg	0.10	7471M	08/28/02	BRP		
Selenium	Not detected	mg/kg	0.50	6020	08/28/02	PER		
Silver	Not detected	mg/kg	0.20	6020	08/28/02	PER		
Zinc	6.4	mg/kg	1.0	6020	08/28/02	PER		
Organics								
1,2-Dichloroethane	Not detected	mg/L	0.001	8260B	08/26/02	JGH	0.5	
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	100.0	

Lab Sample ID: S10194.01 (continued)
Sample Tag: J-10 - K-10

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP Semi-Volatiles (continued)								
2,4,5-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	8270C	08/29/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	8270C	08/29/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	8260B	08/27/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	8260B	08/27/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1242	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1221	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1232	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1248	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1254	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1260	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
Volatile Organics								
Chloroethane	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Methylene chloride	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Tetrachloroethene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Trichloroethene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Vinyl chloride	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Chloroform	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Benzene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10194.02
Sample Tag: L-10 - K-10 Walkway
Collected Date/Time: 08/21/2002
Matrix: Soil
COC Reference: 014678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed			3510C	08/26/02	KMM		
Extraction, PCB	Completed			3550B	08/22/02	JKB		
Mercury Digestion	Completed			7471A	08/25/02	BRP		
Mercury Digestion	Completed			7470A	08/25/02	BRP		
TCLP Zero Headspace Ext.	Completed			1311	08/22/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/22/02	ARH		
Sample Used g	100			1311	08/22/02	ARH		
Final Volume mL	2,000			1311	08/22/02	ARH		
Final Extract pH	5.83			1311	08/22/02	ARH		
Inorganics								
Total Solids	86.0	%	1	160.3	08/26/02	MKH		
Metals								
Arsenic, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	5.0	
Barium, TCLP	0.41	mg/L	0.01	200.8	08/27/02	PER	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	1.0	
Chromium, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER	5.0	
Copper, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER		
Lead, TCLP	0.006	mg/L	0.003	200.8	08/27/02	PER	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	245.1M	08/25/02	BRP	0.2	
Selenium, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	1.0	
Silver, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	5.0	
Zinc, TCLP	0.02	mg/L	0.01	200.8	08/27/02	PER		
Arsenic	0.84	mg/kg	0.50	6020	08/28/02	PER		
Cadmium	Not detected	mg/kg	0.05	6020	08/28/02	PER		
Chromium	1.5	mg/kg	1.0	6020	08/28/02	PER		
Copper	2.3	mg/kg	1.0	6020	08/28/02	PER		
Lead	2.7	mg/kg	1.0	6020	08/28/02	PER		
Mercury	Not detected	mg/kg	0.10	7471M	08/28/02	BRP		
Selenium	Not detected	mg/kg	0.50	6020	08/28/02	PER		
Silver	Not detected	mg/kg	0.20	6020	08/28/02	PER		
Zinc	3.8	mg/kg	1.0	6020	08/28/02	PER		
Organics								
1,2-Dichloroethane	Not detected	mg/L	0.001	8260B	08/26/02	JGH	0.5	
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	100.0	

Lab Sample ID: S10194.02 (continued)
Sample Tag: L-10 - K-10 Walkway

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP Semi-Volatiles (continued)								
2,4,5-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	8270C	08/29/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	8270C	08/29/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	8260B	08/27/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	8260B	08/27/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1242	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1221	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1232	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1248	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1254	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1260	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
Volatile Organics								
Chloroethane	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Methylene chloride	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Tetrachloroethene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Trichloroethene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Vinyl chloride	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Chloroform	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Benzene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		

Analytical Laboratory Report

Lab Sample ID: S10194.03
Sample Tag: L-10 - K-10 Pit
Collected Date/Time: 08/21/2002
Matrix: Soil
COC Reference: 014678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed			3510C	08/26/02	KMM		
Extraction, PCB	Completed			3550B	08/22/02	JKB		
Mercury Digestion	Completed			7471A	08/25/02	BRP		
Mercury Digestion	Completed			7470A	08/25/02	BRP		
TCLP Zero Headspace Ext.	Completed			1311	08/22/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/22/02	ARH		
Sample Used g	100			1311	08/22/02	ARH		
Final Volume mL	2,000			1311	08/22/02	ARH		
Final Extract pH	5.36			1311	08/22/02	ARH		
Inorganics								
Total Solids	93.5	%	1	160.3	08/26/02	MKH		
Metals								
Arsenic, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	5.0	
Barium, TCLP	0.38	mg/L	0.01	200.8	08/27/02	PER	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	1.0	
Chromium, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER	5.0	
Copper, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER		
Lead, TCLP	0.006	mg/L	0.003	200.8	08/27/02	PER	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	245.1M	08/25/02	BRP	0.2	
Selenium, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	1.0	
Silver, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	5.0	
Zinc, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER		
Arsenic	Not detected	mg/kg	0.50	6020	08/28/02	PER		
Cadmium	Not detected	mg/kg	0.05	6020	08/28/02	PER		
Chromium	1.3	mg/kg	1.0	6020	08/28/02	PER		
Copper	1.3	mg/kg	1.0	6020	08/28/02	PER		
Lead	2.1	mg/kg	1.0	6020	08/28/02	PER		
Mercury	Not detected	mg/kg	0.10	7471M	08/28/02	BRP		
Selenium	Not detected	mg/kg	0.50	6020	08/28/02	PER		
Silver	Not detected	mg/kg	0.20	6020	08/28/02	PER		
Zinc	3.1	mg/kg	1.0	6020	08/28/02	PER		
Organics								
1,2-Dichloroethane	Not detected	mg/L	0.001	8260B	08/26/02	JGH	0.5	
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	100.0	

Lab Sample ID: S10194.03 (continued)
Sample Tag: L-10 - K-10 Pit

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP Semi-Volatiles (continued)								
2,4,5-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	8270C	08/29/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	8270C	08/29/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	8260B	08/27/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	8260B	08/27/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1242	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1221	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1232	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1248	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1254	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1260	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
Volatile Organics								
Chloroethane	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Methylene chloride	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Tetrachloroethene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Trichloroethene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Vinyl chloride	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Chloroform	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		
Benzene	Not detected	mg/kg	0.01	8260B	08/26/02	JGH		

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10194.04
Sample Tag: Composite Concrete
Collected Date/Time: 08/21/2002
Matrix: Concrete
COC Reference: 014678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	Ziploc Bag	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed			3510C	08/26/02	KMM		
Extraction, PCB	Completed			3550B	08/22/02	JKB		
Mercury Digestion	Completed			7470A	08/25/02	BRP		
TCLP Zero Headspace Ext.	Completed			1311	08/25/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/22/02	ARH		
Sample Used g	100			1311	08/22/02	ARH		
Final Volume mL	2,000			1311	08/22/02	ARH		
Final Extract pH	7.18			1311	08/22/02	ARH		
Metals								
Arsenic, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	5.0	
Barium, TCLP	0.49	mg/L	0.01	200.8	08/27/02	PER	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	1.0	
Chromium, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER	5.0	
Copper, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER		
Lead, TCLP	Not detected	mg/L	0.003	200.8	08/27/02	PER	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	245.1M	08/25/02	BRP	0.2	
Selenium, TCLP	Not detected	mg/L	0.010	200.8	08/27/02	PER	1.0	
Silver, TCLP	Not detected	mg/L	0.005	200.8	08/27/02	PER	5.0	
Zinc, TCLP	Not detected	mg/L	0.01	200.8	08/27/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	8270C	08/28/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	8270C	08/28/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	8270C	08/28/02	SMP	100.0	
2,4,5-Trichlorophenol	Not detected	mg/L	1	8270C	08/28/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	8270C	08/28/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	8270C	08/28/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	8270C	08/28/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	8270C	08/28/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	8270C	08/28/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	8270C	08/28/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	8270C	08/28/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	8260B	08/27/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	7.5	

Lab Sample ID: S10194.04 (continued)
Sample Tag: Composite Concrete

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP/SPLP Volatiles (continued)								
1,2-Dichloroethane	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	8260B	08/27/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	8260B	08/27/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1242	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1221	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1232	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1248	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1254	Not detected	mg/kg	0.33	8082	08/22/02	JANB		
PCB-1260	Not detected	mg/kg	0.33	8082	08/22/02	JANB		

Analytical Laboratory Report

Report ID: S10221.01(01)
Generated on 09/05/2002

Report to

Attention: Ms. Stephanie Cerling
GM MFD Grand Rapids
300 36th St. SW
Grand Rapids, MI 49548

Phone: 616-246-2992 FAX: 616-246-2896

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S10221.01
Project: #4 & 5 Bay
Submitted Date/Time: 08/26/2002 12:00
Sampled by: T. Gooslin
P.O. #: WFB00013

Report Notes

Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
Results relate only to items tested.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10221.01
Sample Tag: Bay 4&5 Soil
Collected Date/Time: 08/26/2002
Matrix: Soil
COC Reference: 011179

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed			3510C	08/28/02	KMM		
Extraction, PCB	Completed			3550B	08/27/02	JKB		
Mercury Digestion	Completed			7471A	08/28/02	BRP		
Mercury Digestion	Completed			7470A	08/28/02	BRP		
TCLP Zero Headspace Ext.	Completed			1311	08/26/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/26/02	ARH		
Sample Used g	100			1311	08/26/02	ARH		
Final Volume mL	2,000			1311	08/26/02	ARH		
Final Extract pH	6.36			1311	08/26/02	ARH		
Inorganics								
Total Solids	95.9	%	1	160.3	08/26/02	MKH		
Metals								
Arsenic, TCLP	Not detected	mg/L	0.010	200.8	08/29/02	PER	5.0	
Barium, TCLP	0.41	mg/L	0.01	200.8	08/29/02	PER	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	200.8	08/29/02	PER	1.0	
Chromium, TCLP	Not detected	mg/L	0.01	200.8	08/29/02	PER	5.0	
Copper, TCLP	Not detected	mg/L	0.01	200.8	08/29/02	PER		
Lead, TCLP	Not detected	mg/L	0.003	200.8	08/29/02	PER	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	245.1M	08/28/02	BRP	0.2	
Selenium, TCLP	Not detected	mg/L	0.010	200.8	08/29/02	PER	1.0	
Silver, TCLP	Not detected	mg/L	0.005	200.8	08/29/02	PER	5.0	
Zinc, TCLP	0.10	mg/L	0.01	200.8	08/29/02	PER		
Arsenic	0.87	mg/kg	0.50	6020	09/04/02	PER		
Cadmium	Not detected	mg/kg	0.05	6020	09/04/02	PER		
Copper	2.81	mg/kg	0.50	6020	09/04/02	PER		
Lead	4.43	mg/kg	0.50	6020	09/04/02	PER		
Mercury	Not detected	mg/kg	0.10	7471M	08/28/02	BRP		
Selenium	Not detected	mg/kg	0.50	6020	09/04/02	PER		
Silver	Not detected	mg/kg	0.20	6020	09/04/02	PER		
Zinc	5.53	mg/kg	0.50	6020	09/04/02	PER		
Organics								
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	100.0	
2,4,5-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10221.01 (continued)
Sample Tag: Bay 4&5 Soil

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP Semi-Volatiles (continued)								
Hexachlorobenzene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	8270C	08/29/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	8270C	08/29/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	8260B	08/28/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	8260B	08/28/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1242	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1221	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1232	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1248	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1254	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1260	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
Volatile Organics								
Chloroethane	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Methylene chloride	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Tetrachloroethene	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Trichloroethene	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Vinyl chloride	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Chloroform	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Benzene	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		

Analytical Laboratory Report

Report ID: S10221.01(02)
Generated on 09/06/2002

Report to

Attention: Ms. Stephanie Cerling
GM MFD Grand Rapids
300 36th St. SW
Grand Rapids, MI 49548

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Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Report Summary

Lab Sample ID(s): S10221.01
Project: #4 & 5 Bay
Submitted Date/Time: 08/26/2002 12:00
Sampled by: T. Gooslin
P.O. #: WFB00013

Report Notes

Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
Results relate only to items tested.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Violetta F. Murshak

Violetta F. Murshak
Laboratory Director

Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10221.01
Sample Tag: Bay 4&5 Soil
Collected Date/Time: 08/26/2002
Matrix: Soil
COC Reference: 011179

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32 oz Glass	None	Yes	RT	No Ice

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Extraction / Prep.								
TCLP/SPLP BNA Extraction	Completed			3510C	08/28/02	KMM		
Extraction, PCB	Completed			3550B	08/27/02	JKB		
Mercury Digestion	Completed			7471A	08/28/02	BRP		
Mercury Digestion	Completed			7470A	08/28/02	BRP		
TCLP Zero Headspace Ext.	Completed			1311	08/26/02	ARH		
TCLP Extraction								
% Solids	100			1311	08/26/02	ARH		
Sample Used g	100			1311	08/26/02	ARH		
Final Volume mL	2,000			1311	08/26/02	ARH		
Final Extract pH	6.36			1311	08/26/02	ARH		
Inorganics								
Total Solids	95.9	%	1	160.3	08/26/02	MKH		
Metals								
Arsenic, TCLP	Not detected	mg/L	0.010	200.8	08/29/02	PER	5.0	
Barium, TCLP	0.41	mg/L	0.01	200.8	08/29/02	PER	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	200.8	08/29/02	PER	1.0	
Chromium, TCLP	Not detected	mg/L	0.01	200.8	08/29/02	PER	5.0	
Copper, TCLP	Not detected	mg/L	0.01	200.8	08/29/02	PER		
Lead, TCLP	Not detected	mg/L	0.003	200.8	08/29/02	PER	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	245.1M	08/28/02	BRP	0.2	
Selenium, TCLP	Not detected	mg/L	0.010	200.8	08/29/02	PER	1.0	
Silver, TCLP	Not detected	mg/L	0.005	200.8	08/29/02	PER	5.0	
Zinc, TCLP	0.10	mg/L	0.01	200.8	08/29/02	PER		
Arsenic	0.87	mg/kg	0.50	6020	09/04/02	PER		
Cadmium	Not detected	mg/kg	0.05	6020	09/04/02	PER		
Chromium	2.0	mg/kg	1.0	6020	09/05/02	PER		
Copper	2.81	mg/kg	0.50	6020	09/04/02	PER		
Lead	4.43	mg/kg	0.50	6020	09/04/02	PER		
Mercury	Not detected	mg/kg	0.10	7471M	08/28/02	BRP		
Selenium	Not detected	mg/kg	0.50	6020	09/04/02	PER		
Silver	Not detected	mg/kg	0.20	6020	09/04/02	PER		
Zinc	5.53	mg/kg	0.50	6020	09/04/02	PER		
Organics								
1,2-Dichloroethane	Not detected	mg/L	0.001	8260B	08/27/02	JGH	0.5	
TCLP Semi-Volatiles								
o-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
p,m-Cresol	Not detected	mg/L	1	8270C	08/29/02	SMP	200.0	
Pentachlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	100.0	

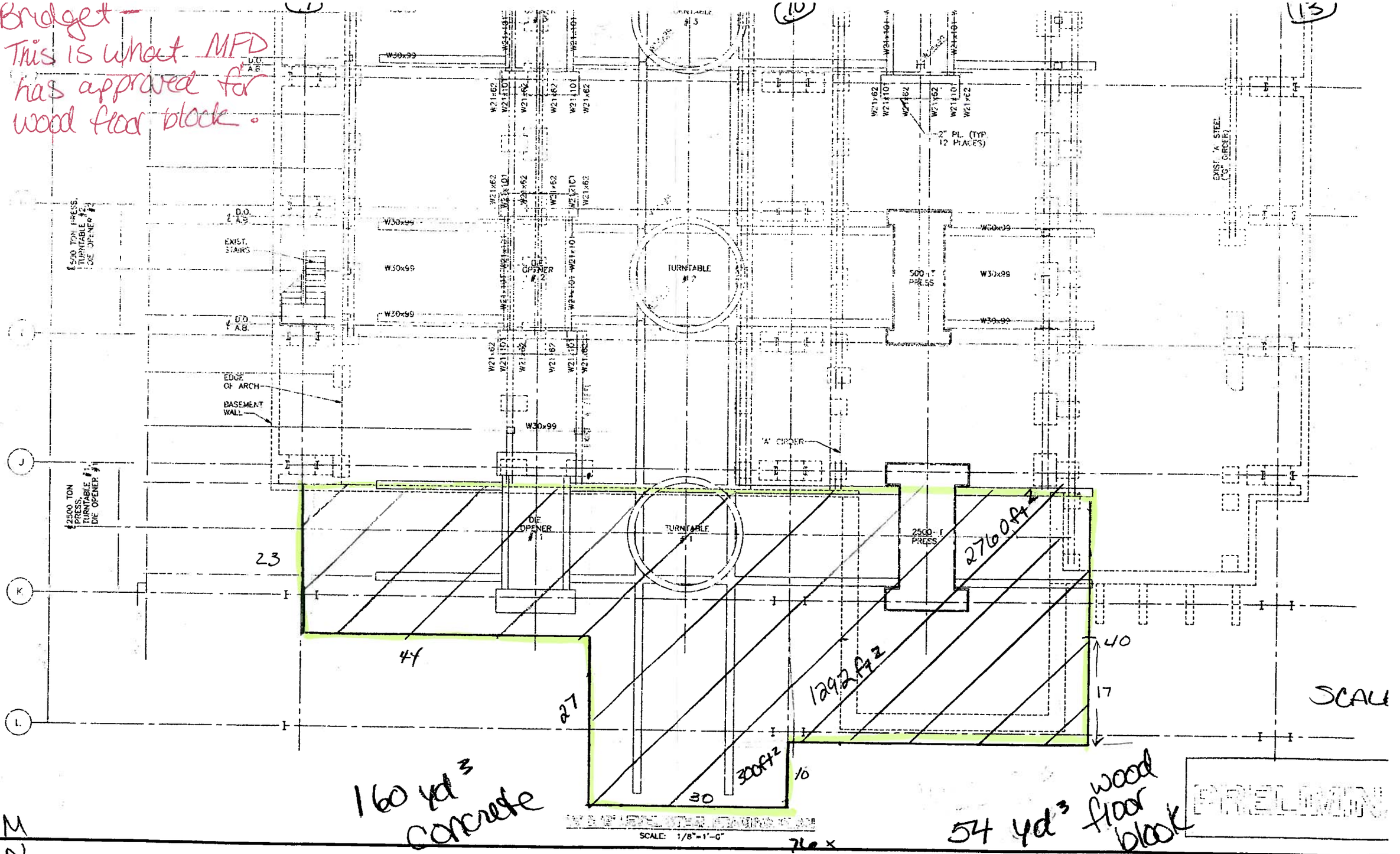
Merit Laboratories, Inc.

Analytical Laboratory Report

Lab Sample ID: S10221.01 (continued)
Sample Tag: Bay 4&5 Soil

Analysis	Results	Units	RDL	Method	Date Run	Analyst	Reg. Limits	Flags
Organics (continued)								
TCLP Semi-Volatiles (continued)								
2,4,5-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	400.0	
2,4,6-Trichlorophenol	Not detected	mg/L	1	8270C	08/29/02	SMP	2.0	
2,4-Dinitrotoluene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobenzene	Not detected	mg/L	0.09	8270C	08/29/02	SMP	0.13	
Hexachlorobutadiene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	0.5	
Hexachloroethane	Not detected	mg/L	0.1	8270C	08/29/02	SMP	3.0	
Nitrobenzene	Not detected	mg/L	0.1	8270C	08/29/02	SMP	2.0	
Pyridine	Not detected	mg/L	0.1	8270C	08/29/02	SMP	5.0	
TCLP/SPLP Volatiles								
Benzene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
Carbon tetrachloride	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
Chlorobenzene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	100.0	
Chloroform	Not detected	mg/L	0.1	8260B	08/28/02	JGH	6.0	
1,4-Dichlorobenzene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	7.5	
1,2-Dichloroethane	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
1,1-Dichloroethene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.7	
2-Butanone (MEK)	Not detected	mg/L	1	8260B	08/28/02	JGH	200.0	
Tetrachloroethene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.7	
Trichloroethene	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.5	
Vinyl chloride	Not detected	mg/L	0.1	8260B	08/28/02	JGH	0.2	
PCB List								
PCB-1016	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1242	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1221	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1232	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1248	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1254	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
PCB-1260	Not detected	mg/kg	0.33	8082	08/27/02	JANB		
Volatile Organics								
Chloroethane	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Methylene chloride	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Tetrachloroethene	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Trichloroethene	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Vinyl chloride	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Chloroform	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		
Benzene	Not detected	mg/kg	0.01	8260B	08/27/02	JGH		

Bridget –
This is what MFD has approved for wood floor block.



160 yd³ concrete

54 yd³ wood floor block

N

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Mike Everts **Phone Number:** 3231

Equipment Description: C-6 Press SN 55092702

Asset Tag Number: MAN1538

To be completed by Financial

AD Number: #0010

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: Padnose

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?		✓		
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?				✓
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: ~~North~~ South SLAP				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

(Certified Technician Signature)	(Date)	(Print Name)
N/A		

Decommission Acknowledgement:

(Maintenance General Supervisor Signature)	(Date)	(Print Name)
Michael J Everts	9/24/02	Michael J Everts

Environmental Engineering Release Approval:

Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)
Bridget Lennon	10/1/02	Bridget Lennon

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
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WWW.ANALYTICSCORP.COM

Group No. G260-026
Account No. 21402045
Report Date: 09/18/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02
Sample Type: 6 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-001	C6-1 Samp Date: 09/16/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	8082 Extraction	0 L		--	Complt	09/17/02
-002	C6-2 Samp Date: 09/16/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	8082 Extraction	0 L		--	Complt	09/17/02
-003	C6-3 Samp Date: 09/16/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02

INVOICE NO 372854
Rd 11-19-02
$367.50

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WWW.ANALYTICSCORP.COM

Group No. G260-026
Account No. 21402045
Report Date: 09/18/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02
Sample Type: 6 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	8082 Extraction	0 L		--	Complt	09/17/02
-004 C6-4 Samp Date: 09/16/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	8082 Extraction	0 L		--	Complt	09/17/02
-005 C6-5 Samp Date: 09/16/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	8082 Extraction	0 L		--	Complt	09/17/02
-006 C6-6 Samp Date: 09/16/02 Wipe Sample						

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Group No. G260-026
Account No. 21402045
Report Date: 09/18/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02
Sample Type: 6 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/17/02
-	8082 Extraction	0 L		--	Complt	09/17/02

Results are reported in ug/wipe. The wipe area was 100cm2.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter,
ug/g = micrograms per gram, mg/kg = milligrams per kilogram,
ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit.
uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Group No. G260-026
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BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

Quality Industrial Hygiene and Environmental Laboratory Testing

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

DATE SHIPPED: 9-16-02 | # OF SAMPLES: 6 | PROJECT NAME OR NUMBER: Press Wipe

PURCHASE ORDER NO. | CONTACT: Budget Lennon | TELEPHONE NUMBER: 246-2992 (2)

RUSH ANALYSIS
☐ 24 HOUR
☒ 48 HOUR
Extra Charge

SPECIAL INSTRUCTIONS: 48 hr Rush

ANALYTICS
8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES
A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	Pb	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	C6 - 1	9-16-02	S	1	G	X						
	C6 - 2											
	C6 - 3											
	C6 - 4											
	C6 - 5											
	C6 - 6											

SAMPLED BY (PRINT NAME): J Goodlin
SAMPLED BY (SIGNATURE TO INITIATE COC): [signature]
DATE: 9/16/02
TIME: 1530

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				[signature]	9/16/02	1730	OK
[signature]	9/17/02	#0 1145 9/17/02	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS, ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Mike Everts **Phone Number:** 616-246-3231

Equipment Description: C-4 SU4-1000 Dmty 132x84R SN 55084602

Asset Tag Number: GR-7308

To be completed by Financial

AD Number: 119

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: PADNOSE

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	X			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	X			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	X			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				X
5. Have all PCB containing items (e.g., ballast) been removed?				X
6. Have all fluid filled capacitors and transformers been removed?				X
7. Have all mercury-containing items been removed?				X
8. Have all asbestos containing items been abated?				X
9. Have all batteries been removed?				X
10. Have all cathode ray tubes been removed?				X
11. Have all Medical wastes been removed?				X
12. Have all radioactive devices been removed?				X
13. Have all used filters been removed?	X			
14. Has residual/vapor free equipment cleaning been completed?	X			
15. Have all hazardous debris/substances been removed?	X			
Interim storage required? Interim storage location: South SLAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everts	12/5/02	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	12/11/02	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

ANALYTICS CORPORATION
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804-264-8873 FAX
WWW.ANALYTICSCORP.COM

Group No. G289-027
Account No. 21402045
Report Date: 10/22/02
BRIDGET L.
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/16/02
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPE PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-001	C4-1 Samp Date: 10/14/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02
-002	C4-2 Samp Date: 10/14/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02
-003	C4-3 Samp Date: 10/14/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02

Invoice # 37547C
Pd. 11-19-02
~~Budget~~ Jeanne
@ $840

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
RICHMOND, VIRGINIA 23228
804-264-7100 PHONE
800-888-8061 PHONE
804-264-8873 FAX
WWW.ANALYTICSCORP.COM

Group No. G289-027
Account No. 21402045
Report Date: 10/22/02
BRIDGET L.
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/16/02
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPE PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02
-004 C4-4 Samp Date: 10/14/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02
-005 C4-5 Samp Date: 10/14/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02
-006 C4-6 Samp Date: 10/14/02 Wipe Sample						

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Group No. G289-027
Account No. 21402045
Report Date: 10/22/02
BRIDGET L.
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/16/02
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPE PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02
-007	C4-7 Samp Date: 10/14/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02
-008	C4-8 Samp Date: 10/14/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02



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Group No. G289-027
Account No. 21402045
Report Date: 10/22/02
BRIDGET L.
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/16/02
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPE PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	10/17/02
-	8082 Extraction	0 L		--	Complt	10/17/02

Results are reported in ug/wipe. The wipe area was 100cm2.

The recovery of the ending calibration standard was below QC limits due to matrix interference during the analytical run.

The recovery of the surrogate for PCB analysis was below QC limits due to matrix interference during the analytical run for samples G289027002, -004, -006, and -008.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter, ug/g = micrograms per gram, mg/kg = milligrams per kilogram, ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit. uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

Quality Industrial Hygiene and Environmental Laboratory Testing

ANALYTICS CORPORATION
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Group No. G289-027
Account No. 21402045
Report Date: 10/22/02
BRIDGET L.
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

Quality Industrial Hygiene and Environmental Laboratory Testing

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548
Phone: 616-246-2992
Fax: ~~264-8873~~ 616-246-2896
PROJ#: 21402045

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
10/15/02	24	Press Wipe

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	Bridget Lemm	616 246-2992

RUSH ANALYSIS
☐ 24 HOUR
☐ 48 HOUR
Extra Charge

SPECIAL INSTRUCTIONS:

1 of 3

ANALYTICS
8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES
A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PCB's	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	C4-1	10/14/02 1130	X	1	G	X						
	C4-2					X						
	C4-3					X						
	C4-4					X						
	C4-5					X						
	C4-6					X						
	C4-7					X						
	C4-8					X						
						X						
						X						

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
T Goodwin	Terry J Lee	10/14/02	16 CW

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
[illegible]	10/16/02	1200	good	Terry J Lee	10/15/02	1 CW	OK

RETAIN BACK COPY FOR PERSONAL RECORDS

ENVCOC-01 (REV. 2001-0)

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS, ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Mike Everts **Phone Number:** 3231

Equipment Description: B6 Press 63175203 GR 9321

Asset Tag Number: GR

To be completed by Financial

AD Number: #0010

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☑ Scrap/Disposal

Destination:

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?		✓		
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?				✓
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?	✓			
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South SLAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everts	9/13/02	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	9/16/02	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

B6 press

Analytics Corporation
8040 Villa Park Dr. Suite 250
Richmond VA 23228
Fax: 804-264-8873
Phone: 804-264-7100
Phone: 800-888-8061

Comprehensive laboratory testing since 1977

FACSIMILE TRANSMISSION COVER SHEET

Date:	**9/16/02 4:21:54 PM**
No. Of Pages:	**7**
To:	**BRIDGET**
At:	**GM-METAL FAB-GRAND RAPIDS**
Fax:	**1-616-246-2896**

This report is issued electronically from our information management system and should be considered preliminary. The final report is being printed and signed and should be received within 5-business days via US Mail.

The information contained in this facsimile message is legally privileged and confidential information intended only for the use of the individual named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or reproduction of this telecopy is strictly prohibited. If you have received this telecopy in error, please immediately notify us by telephone and return the original facsimile to us at the address listed above via the United States Postal Service. We will reimburse you for postage cost. Thank You

Group No. G255-019
Account No. 21402045
Report Date: 09/16/2002
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Preliminary Report

Date Received: 09/12/02
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-001	B-6 #1 Samp Date: 09/11/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	8082 Extraction	0 L		--	Complt	09/12/02
-002	B-6 #2 Samp Date: 09/11/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	8082 Extraction	0 L		--	Complt	09/12/02
-003	B-6 #3 Samp Date: 09/11/02		Wipe Sample			
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02

Group No. G255-019
Account No. 21402045
Report Date: 09/16/2002
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/12/02
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	8082 Extraction	0 L		--	Complt	09/12/02
-004 B-6 #4 Samp Date: 09/11/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	8082 Extraction	0 L		--	Complt	09/12/02
-005 B-6 #5 Samp Date: 09/11/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/14/02
-	8082 Extraction	0 L		--	Complt	09/12/02
-006 B-6 #6 Samp Date: 09/11/02 Wipe Sample						

Group No. G255-019
Account No. 21402045
Report Date: 09/16/2002
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/12/02
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	8082 Extraction	0 L		--	Complt	09/12/02
-007 B-6 #7 Samp Date: 09/11/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	8082 Extraction	0 L		--	Complt	09/12/02
-008 B-6 #8 Samp Date: 09/11/02 Wipe Sample						
-	AROCLOR 1016	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1221	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1232	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1242	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1248	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	AROCLOR 1254	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02

Group No. G255-019
Account No. 21402045
Report Date: 09/16/2002
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548 Final Report

Date Received: 09/12/02
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-	AROCLOR 1260	1	< 2.0 ug	2 ug	< 2 ug/wp	09/15/02
-	8082 Extraction	0 L		--	Complt	09/12/02

Results are reported in ug/wipe. The wipe area was 100cm2.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter,
ug/g = micrograms per gram, mg/kg = milligrams per kilogram,
ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit.
uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

Group No. G255-019
Account No. 21402045
Report Date: 09/16/2002
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

ANALYTICS CORPORATION
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804-264-8873 FAX
WWW.ANALYTICSCORP.COM

Group No.: G255-019
Date: 09/17/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

B to Press

The following types of samples were submitted for analysis on September 12, 2002

8 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

Quality Industrial Hygiene and Environmental Laboratory Testing

ANALYTICS CORPORATION
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Group No. G255-019
Account No. 21402045
Report Date: 09/17/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/12/02 10:56
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-001	B-6 #1 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/14/02 22:05
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/14/02 22:05
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/14/02 22:05
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/14/02 22:05
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/14/02 22:05
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/14/02 22:05
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/14/02 22:05
	8082 Extraction	Complt	--	MCL	09/12/02 20:38
-002	B-6 #2 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/14/02 22:30
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/14/02 22:30
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/14/02 22:30
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/14/02 22:30
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/14/02 22:30
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/14/02 22:30
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/14/02 22:30

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Group No. G255-019
Account No. 21402045
Report Date: 09/17/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/12/02 10:56
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-002	B-6 #2 Sample Date: 09/11/02				
	8082 Extraction	Complt	--	MCL	09/12/02 20:39
-003	B-6 #3 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/14/02 22:56
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/14/02 22:56
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/14/02 22:56
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/14/02 22:56
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/14/02 22:56
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/14/02 22:56
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/14/02 22:56
	8082 Extraction	Complt	--	MCL	09/12/02 20:39
-004	B-6 #4 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/14/02 23:21
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/14/02 23:21
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/14/02 23:21

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Group No. G255-019
Account No. 21402045
Report Date: 09/17/02
BRIDGET LENNON
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ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/12/02 10:56
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-004	B-6 #4 Sample Date: 09/11/02				
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/14/02 23:21
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/14/02 23:21
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/14/02 23:21
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/14/02 23:21
	8082 Extraction	Complt	--	MCL	09/12/02 20:42
-005	B-6 #5 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/14/02 23:47
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/14/02 23:47
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/14/02 23:47
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/14/02 23:47
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/14/02 23:47
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/14/02 23:47
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/14/02 23:47
	8082 Extraction	Complt	--	MCL	09/12/02 20:42
-006	B-6 #6 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				

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Group No. G255-019
Account No. 21402045
Report Date: 09/17/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/12/02 10:56
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-006	B-6 #6 Sample Date: 09/11/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/15/02 00:13
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/15/02 00:13
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/15/02 00:13
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/15/02 00:13
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/15/02 00:13
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/15/02 00:13
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/15/02 00:13
	8082 Extraction	Complt	--	MCL	09/12/02 20:42
-007	B-6 #7 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/15/02 00:38
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/15/02 00:38
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/15/02 00:38
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/15/02 00:38
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/15/02 00:38
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/15/02 00:38
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/15/02 00:38
	8082 Extraction	Complt	--	MCL	09/12/02 20:42

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Group No. G255-019
Account No. 21402045
Report Date: 09/17/02
BRIDGET LENNON
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ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/12/02 10:56
Sample Type: 8 - Wipe Sample(s)
Project: #6-B PRESS PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-008	B-6 #8 Sample Date: 09/11/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/15/02 01:04
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/15/02 01:04
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/15/02 01:04
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/15/02 01:04
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/15/02 01:04
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/15/02 01:04
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/15/02 01:04
	8082 Extraction	Complt	--	MCL	09/12/02 20:42

Results are reported in ug/wipe. The wipe area was 100cm2.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter,
ug/g = micrograms per gram, mg/kg = milligrams per kilogram,
ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit.
uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Group No. G255-019
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Report Date: 09/17/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

GM - Metal Fab - Grand Rapids
300 36th St SW
Grand Rapids 49548
ATTN = Bridget Lemon
INVOICE = same

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
9-11-02	8	# 6-B Press

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	Bridget Lemon	616 246-2992

RUSH ANALYSIS

☐ 24 HOUR
☐ 48 HOUR

Extra Charge

SPECIAL INSTRUCTIONS:
any? Call Terry

ANALYTICS
8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PCB-Wipe	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	B-6 # 1	9-11-02	S	1	G							
	B-6 # 2											
	B-6 # 3											
	B-6 # 4											
	B-6 # 5											
	B-6 # 6											
	B-6 # 7											
	B-6 # 8											

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
Terry Gooslin	Terry Gooslin	9/11/02	1630

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Terry Gooslin	9/11/02	1630	OK
Kathy Fuller	9/12/02	1030	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS, ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
RICHMOND, VIRGINIA 23228
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WWW.ANALYTICSCORP.COM

Invoice Number: 372611
Invoice Date: 17-SEP-02
Blanket P. O. No.:
Account Number: 21402045

INVOICE
Detail of Analyses

BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Analytic Number	Receive Date	#	Description	Project/PO	Unit Price	Total Price
G255019	12-SEP-02	1	MISCEL for Equipment Rental	#6-B PRESS-	$ 60.00	$ 60.00
G255019	12-SEP-02	1	MISCEL for Sampling Time	#6-B PRESS-	$ 90.00	$ 90.00
G255019	12-SEP-02	8	WIPES for 8082 Extraction	#6-B PRESS-	$ 0.00	$ 0.00
G255019	12-SEP-02	8	WIPES for Polychlorinated Biphenyls	#6-B PRESS-	$ 61.25	$ 490.00

8 Items - Total Amount Due: $640.00

PLEASE REMIT TO:

Make check payable and mail to:

ANALYTICS CORPORATION
P.O. BOX 25249
RICHMOND, VA 23260

TERMS: PAYABLE UPON RECEIPT

Federal ID#: 36-4359432
Please direct all inquiries to our Accounts Receivable Department within 30 days of invoice.

So that we may serve you more efficiently please include the Invoice Number on the check.

Mike Everts card 10-7-02 Approved to pay Bridget Lennon 10/1/02

Total Amount Due: $640.00

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: A-6 PRESS SN 55089551

Asset Tag Number: MS 1337

To be completed by Financial

AD Number: #0010

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: PADNOSE

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?		✓		
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?				✓
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?				✓
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South SLAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

(Certified Technician Signature)	(Date)	(Print Name)
N/A		

Decommission Acknowledgement:

(Maintenance General Supervisor Signature)	(Date)	(Print Name)
Michael J Everts	9/24/02	Michael J Everts

Environmental Engineering Release Approval:

Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)
Budget Lennon	10/1/02	Bridget Lennon

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Group No.: G260-025
Date: 09/18/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

The following types of samples were submitted for analysis on September 17, 2002

8 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

Invoice# 372853
Pd 11-19-02
$1440

Quality Industrial Hygiene and Environmental Laboratory Testing

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
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800-888-8061 PHONE
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WWW.ANALYTICSCORP.COM

Group No. G260-025
Account No. 21402045
Report Date: 09/18/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 11:53
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-001	A6-1 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00
	8082 Extraction	Complt	--	LFV	09/17/02 14:35
-002	A6-2 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00

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Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-002	A6-2 Sample Date: 09/16/02				
	8082 Extraction	Complt	--	LFV	09/17/02 14:35
-003	A6-3 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00
	8082 Extraction	Complt	--	LFV	09/17/02 14:35
-004	A6-4 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00

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Date Received: 09/17/02 11:53
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-004	A6-4 Sample Date: 09/16/02				
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00
	8082 Extraction	Complt	--	LFV	09/17/02 14:35
-005	A6-5 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00
	8082 Extraction	Complt	--	LFV	09/17/02 14:35
-006	A6-6 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				

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Final Report

Date Received: 09/17/02 11:53
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-006	A6-6 Sample Date: 09/16/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00
	8082 Extraction	Complt	--	LFV	09/17/02 14:35
-007	A6-7 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00
	8082 Extraction	Complt	--	LFV	09/17/02 14:35

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Final Report

Date Received: 09/17/02 11:53
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-008	A6-8 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 17:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 17:00
	8082 Extraction	Complt	--	LFV	09/17/02 14:35

Results are reported in ug/wipe. The wipe area was 100cm2.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter,
ug/g = micrograms per gram, mg/kg = milligrams per kilogram,
ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit.
uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

Quality Industrial Hygiene and Environmental Laboratory Testing

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

GM Grand Rapids metal
300/36th st SW
Grand Rapids Mi
49548

Bridget Lennon

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
9-16-02	7	Press Wiper

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	Bridget Lennon	616 246-2992

RUSH ANALYSIS

☒ 24 HOUR
☐ 48 HOUR

Extra Charge

SPECIAL INSTRUCTIONS: A-6 Press = 8 samples (24 hr Rush)

1 of 1

ANALYTICS

8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	Pb Wipe	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	A6-1	9-16-02	S	1	G	X						
	A6-2					X						
	A6-3					X						
	A6-4					X						
	A6-5					X						
	A6-6					X						
	A6-7					X						
	A6-8					X						

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
T Goslin	Terry J Russell	9/16/02	1

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Terry J Russell	9/16/02	17:30	OK
[illegible]	9/17/02	1145	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

ENVCOC-01 (REV. 2001-0)

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS, ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Mike Everts **Phone Number:** 3231

Equipment Description: D6 PRESS SN 64202301

Asset Tag Number: KAL 1628

To be completed by Financial

AD Number: 0119

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: PADNOS

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?		✓		
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?				✓
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South SLAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

(Maintenance General Supervisor Signature)	10/1/02 (Date)	Michael J Everts (Print Name)

Environmental Engineering Release Approval:

Environmental Engineer, or Designee, Signature)	11-8-02 (Date)	Bridget Lennon (Print Name)

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Group No.: G260-029
Date: 09/20/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

DG

The following types of samples were submitted for analysis on September 17, 2002

8 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

INVOICE NO. 372877
$490
pd 11-19-02

Quality Industrial Hygiene and Environmental Laboratory Testing

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Final Report

Date Received: 09/17/02 12:25
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Project: PRESS WIPES PO Number:

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	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 09:00
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	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-002	D6-2 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/17/02 09:00
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	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 09:00
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	8082 Extraction	Complt	--	LFV	09/17/02 16:35
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	AROCLOR 1232	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 09:00
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	AROCLOR 1248	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/17/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/17/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-005	D6-5 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-006	D6-6 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				

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Group No. G260-029
Account No. 21402045
Report Date: 09/20/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:25
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-006	D6-6 Sample Date: 09/16/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-007	D6-7 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35

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GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:25
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-008	D6-8 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35

Results are reported in ug/wipe. The wipe area was 100cm2.

Results are reported in ug/wipe. The wipe area was 100cm2.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter,
ug/g = micrograms per gram, mg/kg = milligrams per kilogram,
ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit.
uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

R

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
	8	Press Wipes
PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	Budget Lemon	246-2992

RUSH ANALYSIS

☐ 24 HOUR
☑ 48 HOUR

Extra Charge

SPECIAL INSTRUCTIONS: 48 hr # 4

ANALYTICS

8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PCB's	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	D6-1	9-16-02	S	1	G	X						
	D6-2					X						
	D6-3					X						
	D6-4					X						
	D6-5					X						
	D6-6					X						
	D6-7					X						
	D6-8					X						

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
	Jerry J Rand	9-16-02	14 EW

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Jerry J Rand	9.16.02	17 30	
Mark Baker	9/17/02	1145	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

ENVCOC-01 (REV. 2001-0)

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS, ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Mike Everts **Phone Number:** 3231

Equipment Description: D5 Press SN 5509281-2

Asset Tag Number: MR 5718

To be completed by Financial

AD Number: #0119

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☒ Sale ☐ Scrap/Disposal

Destination: Windsor Mold Plate & Tool LTD.

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South SLAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael Everts	10/4/02	Michael T Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	10-7-02	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

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Group No.: G260-030
Date: 09/20/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

D5

The following types of samples were submitted for analysis on September 17, 2002

8 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

Invoice No. 372878
pd 11-19-02
$490

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Group No. G260-030
Account No. 21402045
Report Date: 09/20/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:29
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-001	D5-1 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-002	D5-2 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00

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300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:29
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-002	D5-2 Sample Date: 09/16/02				
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-003	D5-3 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-004	D5-4 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00

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Final Report

Date Received: 09/17/02 12:29
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-004	D5-4 Sample Date: 09/16/02				
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-005	D5-5 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-006	D5-6 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				

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Date Received: 09/17/02 12:29
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-006	D5-6 Sample Date: 09/16/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35
-007	D5-7 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35

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Date Received: 09/17/02 12:29
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-008	D5-8 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/18/02 09:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/18/02 09:00
	8082 Extraction	Complt	--	LFV	09/17/02 16:35

The recovery of surrogate for samples G260030005 and -006 for PCB analysis was below QC limits.

Results are reported in ug/wipe. The wipe area was 100cm2.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter, ug/g = micrograms per gram, mg/kg = milligrams per kilogram, ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit. uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

ANALYTICS CORPORATION
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Group No. G260-030
Account No. 21402045
Report Date: 09/20/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

Quality Industrial Hygiene and Environmental Laboratory Testing

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
	8	Press Wipe
PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	Budget Lemon	246-2992

RUSH ANALYSIS

☐ 24 HOUR
☑ 48 HOUR

Extra Charge

SPECIAL INSTRUCTIONS: 48 hr + 5

ANALYTICS
8040 Villa Park Drive, Suite 250
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Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PCB	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	DS-1	9-16-02	S	1	G	X						
	DS-2											
	DS-3											
	DS-4											
	DS-5											
	DS-6											
	DS-7											
	DS-8											

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
	Jerry Rael	9-16-02	14

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Jerry Rael	9-16-02	1730	OK
Thomas Tucker	9/17/02	1145	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

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6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Michael Everts **Phone Number:** 616-246-3231

Equipment Description: SU4-1000 Dandy D4 SN 7332260 2

Asset Tag Number: GR 13810

To be completed by Financial

AD Number: 0124

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☒ Sale ☐ Scrap/Disposal

Destination: Windsor Metal Plate

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	X			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	X			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	X			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				X
5. Have all PCB containing items (e.g., ballast) been removed?				X
6. Have all fluid filled capacitors and transformers been removed?				X
7. Have all mercury-containing items been removed?				X
8. Have all asbestos containing items been abated?				X
9. Have all batteries been removed?				X
10. Have all cathode ray tubes been removed?				X
11. Have all Medical wastes been removed?				X
12. Have all radioactive devices been removed?				X
13. Have all used filters been removed?	X			
14. Has residual/vapor free equipment cleaning been completed?	X			
15. Have all hazardous debris/substances been removed?	X			
Interim storage required? Interim storage location:				

Comments: South SLAB

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everts	10/31/02	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	11/8/02	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

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D4

Group No.: G260-032
Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

The following types of samples were submitted for analysis on September 17, 2002

8 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

Invoice No. 373186
$500
pd 11/19/02

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Group No. G260-032
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:33
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-001	D4-1 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 03:05
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 03:05
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 03:05
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 03:05
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 03:05
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 03:05
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 03:05
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-002	D4-2 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 03:31
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 03:31
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 03:31
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 03:31
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 03:31
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 03:31
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 03:31

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Group No. G260-032
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:33
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-002	D4-2 Sample Date: 09/16/02				
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-003	D4-3 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 03:57
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 03:57
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 03:57
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 03:57
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 03:57
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 03:57
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 03:57
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-004	D4-4 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 04:23
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 04:23
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 04:23

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Group No. G260-032
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:33
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-004	D4-4 Sample Date: 09/16/02				
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 04:23
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 04:23
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 04:23
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 04:23
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-005	D4-5 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 04:50
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 04:50
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 04:50
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 04:50
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 04:50
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 04:50
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 04:50
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-006	D4-6 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				

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Group No. G260-032
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:33
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-006	D4-6 Sample Date: 09/16/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 05:16
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 05:16
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 05:16
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 05:16
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 05:16
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 05:16
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 05:16
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-007	D4-7 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 05:42
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 05:42
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 05:42
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 05:42
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 05:42
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 05:42
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 05:42
	8082 Extraction	Complt	--	LFV	09/18/02 16:15

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Group No. G260-032
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:33
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-008	D4-8 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 06:08
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 06:08
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 06:08
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 06:08
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 06:08
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 06:08
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 06:08
	8082 Extraction	Complt	--	LFV	09/18/02 16:15

Results are reported in ug/wipe. The wipe area was 100cm2.

The recoveries of surrogate for PCB analysis of samples G260032001 and -005 were below QC limits due to matrix interference.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter, ug/g = micrograms per gram, mg/kg = milligrams per kilogram, ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit. uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Group No. G260-032
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS: GHA - Grand Rapids

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
9-16-02	8	Press Wipe

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	B. Lemm	246 2992

RUSH ANALYSIS

☐ 24 HOUR
☐ 48 HOUR

Extra Charge

SPECIAL INSTRUCTIONS: STD TAT

ANALYTICS

8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PCB	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	D4-1	9-16-02	S	1	G	X						
	D4-2		S			X						
	D4-3					X						
	D4-4					X						
	D4-5					X						
	D4-6					X						
	D4-7					X						
	D4-8					X						

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
	Jerry Randall	9-16-02	15:30

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Jerry Randall	9-16-02	17:30	OK
Martha Cobb	9/17/02	1145	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

TERMS AND CONDITIONS

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6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or for any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Michael Everts **Phone Number:** 616-246-3231

Equipment Description: 544-1000 Daily D-3 Press SN 73322601

Asset Tag Number: GRI-12808

To be completed by Financial

AD Number: 0124

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☒ Sale ☐ Scrap/Disposal

Destination: Windsor Match Plate

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	X		[redacted]	
2. Have all hydraulic fluid reservoirs been tested for PCBs?	X		[redacted]	
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	X		[redacted]	
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				X
5. Have all PCB containing items (e.g., ballast) been removed?			[redacted]	X
6. Have all fluid filled capacitors and transformers been removed?				X
7. Have all mercury-containing items been removed?				X
8. Have all asbestos containing items been abated?				X
9. Have all batteries been removed?				X
10. Have all cathode ray tubes been removed?				X
11. Have all Medical wastes been removed?			[redacted]	X
12. Have all radioactive devices been removed?				X
13. Have all used filters been removed?	X		[redacted]	
14. Has residual/vapor free equipment cleaning been completed?	X		[redacted]	
15. Have all hazardous debris/substances been removed?	X		[redacted]	
Interim storage required? Interim storage location:			[redacted]	

Comments: South SLAB

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everts	10/31/02	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	11/8/02	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

ANALYTICS CORPORATION
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Group No.: G260-034
Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

D3

The following types of samples were submitted for analysis on September 17, 2002

8 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

INVOICE NO. 373188 $500 pd 11/19/02

Quality Industrial Hygiene and Environmental Laboratory Testing

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
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Group No. G260-034
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:42
Sample Type: 8 - Wipe Sample(s)
Project: PRESS PIT WIPE PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-001	D3-1 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/20/02 21:51
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/20/02 21:51
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/20/02 21:51
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/20/02 21:51
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/20/02 21:51
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/20/02 21:51
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/20/02 21:51
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-002	D3-2 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/20/02 22:17
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/20/02 22:17
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/20/02 22:17
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/20/02 22:17
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/20/02 22:17
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/20/02 22:17
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/20/02 22:17

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Group No. G260-034
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:42
Sample Type: 8 - Wipe Sample(s)
Project: PRESS PIT WIPE PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-002	D3-2 Sample Date: 09/16/02				
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-003	D3-3 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/20/02 22:43
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/20/02 22:43
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/20/02 22:43
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/20/02 22:43
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/20/02 22:43
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/20/02 22:43
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/20/02 22:43
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-004	D3-4 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/20/02 23:09
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/20/02 23:09
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/20/02 23:09

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Group No. G260-034
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:42
Sample Type: 8 - Wipe Sample(s)
Project: PRESS PIT WIPE PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-004	D3-4 Sample Date: 09/16/02				
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/20/02 23:09
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/20/02 23:09
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/20/02 23:09
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/20/02 23:09
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-005	D3-5 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/20/02 23:35
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/20/02 23:35
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/20/02 23:35
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/20/02 23:35
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/20/02 23:35
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/20/02 23:35
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/20/02 23:35
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-006	D3-6 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				

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Group No. G260-034
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:42
Sample Type: 8 - Wipe Sample(s)
Project: PRESS PIT WIPE PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-006	D3-6 Sample Date: 09/16/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 00:01
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 00:01
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 00:01
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 00:01
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 00:01
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 00:01
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 00:01
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
-007	D3-7 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 00:28
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 00:28
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 00:28
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 00:28
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 00:28
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 00:28
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 00:28
	8082 Extraction	Complt	--	LFV	09/18/02 16:15

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Group No. G260-034
Account No. 21402045
Report Date: 09/24/02
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ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:42
Sample Type: 8 - Wipe Sample(s)
Project: PRESS PIT WIPE PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-008	D3-8 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 00:54
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 00:54
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 00:54
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 00:54
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 00:54
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 00:54
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 00:54
	8082 Extraction	Complt	--	LFV	09/18/02 16:15

Results are reported in ug/wipe. The wipe area was 100cm2.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter,
ug/g = micrograms per gram, mg/kg = milligrams per kilogram,
ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit.
uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

Quality Industrial Hygiene and Environmental Laboratory Testing

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
9-16-02	8	Press Pit Wipe

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	Bridget Lennon	246-2992

RUSH ANALYSIS

☐ 24 HOUR
☐ 48 HOUR

Extra Charge

SPECIAL INSTRUCTIONS: STD TAT

ANALYTICS

8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PCB	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	03-1	9-16-02	S	1	G	X						
	03-2					X						
	03-3					X						
	03-4					X						
	03-5					X						
	03-6					X						
	03-7					X						
	03-8					X						

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
	Jerry Russell	9-16-02	15

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Jerry Russell	9/16/02	1730	OK
Mark Tuttle	9/17/02	1145	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS, ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

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7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: Michael Everts **Phone Number:** 616-246-3231

Equipment Description: SU4-1000 Danly D-2 SN 55084801

Asset Tag Number: GR-7305

To be completed by Financial

AD Number: 0119

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☒ Sale ☐ Scrap/Disposal

Destination: Windsor Match Plate

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	X			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	X			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	X			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				X
5. Have all PCB containing items (e.g., ballast) been removed?				X
6. Have all fluid filled capacitors and transformers been removed?				X
7. Have all mercury-containing items been removed?				X
8. Have all asbestos containing items been abated?				X
9. Have all batteries been removed?				X
10. Have all cathode ray tubes been removed?				X
11. Have all Medical wastes been removed?				X
12. Have all radioactive devices been removed?				X
13. Have all used filters been removed?	X			
14. Has residual/vapor free equipment cleaning been completed?	X			
15. Have all hazardous debris/substances been removed?	X			
Interim storage required? Interim storage location:				

Comments: South SLAB

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everts	10/31/02	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	11/8/02	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

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D2

Group No.: G260-033
Date: 09/25/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

The following types of samples were submitted for analysis on September 17, 2002

8 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

INVOICE NO: 373187 Pd 11-4-02 $520

Quality Industrial Hygiene and Environmental Laboratory Testing

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
RICHMOND, VIRGINIA 23228
804-264-7100 PHONE
800-888-8061 PHONE
804-264-8873 FAX
WWW.ANALYTICSCORP.COM

Group No. G260-033
Account No. 21402045
Report Date: 09/24/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:37
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-001	D2-1 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 07:00
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 07:00
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 07:00
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 07:00
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 07:00
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 07:00
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 07:00
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
	PCB Clean Up	Complt	0	MTS	09/21/02 07:00
-002	D2-2 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 07:27
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 07:27
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 07:27
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 07:27
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 07:27
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 07:27

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Report Date: 09/24/02
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300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:37
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-002	D2-2 Sample Date: 09/16/02				
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 07:27
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
	PCB Clean Up	Complt	0	MTS	09/21/02 07:00
-003	D2-3 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 07:53
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 07:53
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 07:53
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 07:53
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 07:53
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 07:53
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 07:53
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
	PCB Clean Up	Complt	0	MTS	09/21/02 07:00
-004	D2-4 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				

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Report Date: 09/24/02
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300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:37
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-004	D2-4 Sample Date: 09/16/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 08:19
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 08:19
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 08:19
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 08:19
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 08:19
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 08:19
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 08:19
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
	PCB Clean Up	Complt	0	MTS	09/21/02 07:00
-005	D2-5 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 08:45
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 08:45
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 08:45
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 08:45
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 08:45
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 08:45
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 08:45
	8082 Extraction	Complt	--	LFV	09/18/02 16:15

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Final Report

Date Received: 09/17/02 12:37
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-005	D2-5 Sample Date: 09/16/02				
	PCB Clean Up	Complt	0	MTS	09/21/02 07:00
-006	D2-6 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 09:11
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 09:11
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 09:11
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 09:11
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 09:11
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 09:11
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 09:11
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
	PCB Clean Up	Complt	0	MTS	09/21/02 07:00
-007	D2-7 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 09:37
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 09:37
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 09:37

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Report Date: 09/24/02
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ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:37
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-007	D2-7 Sample Date: 09/16/02				
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 09:37
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 09:37
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 09:37
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 09:37
	8082 Extraction	Complt	--	LFV	09/18/02 16:15
	PCB Clean Up	Complt	0	MTS	09/21/02 07:00
-008	D2-8 Sample Date: 09/16/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	09/21/02 10:03
	AROCLOR 1221	< 2 ug/wp	2	MTS	09/21/02 10:03
	AROCLOR 1232	< 2 ug/wp	2	MTS	09/21/02 10:03
	AROCLOR 1242	< 2 ug/wp	2	MTS	09/21/02 10:03
	AROCLOR 1248	< 2 ug/wp	2	MTS	09/21/02 10:03
	AROCLOR 1254	< 2 ug/wp	2	MTS	09/21/02 10:03
	AROCLOR 1260	< 2 ug/wp	2	MTS	09/21/02 10:03
	8082 Extraction	Complt	--	LFV	09/18/02 16:15

Results are reported in ug/wipe. The wipe area was 100cm2.

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ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/17/02 12:37
Sample Type: 8 - Wipe Sample(s)
Project: PRESS WIPES

PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Analysis Date/Time
-008	D2-8 Sample Date: 09/16/02				

The recoveries of surrogate for PCB analysis of samples G260033003 and -005 were below QC limits due to matrix interference.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter,
ug/g = micrograms per gram, mg/kg = milligrams per kilogram,
ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit.
uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

Quality Industrial Hygiene and Environmental Laboratory Testing

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS: ~~Grace~~ Grand Rapids

DATE SHIPPED: 9-16-02 | # OF SAMPLES: | PROJECT NAME OR NUMBER: Prem Wipe

PURCHASE ORDER NO.: | CONTACT: Bridget Lennon | TELEPHONE NUMBER: 246-2992

RUSH ANALYSIS ☐ 24 HOUR ☐ 48 HOUR Extra Charge

SPECIAL INSTRUCTIONS: Standard TAT !! dd

ANALYTICS
8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES: A = AQUEOUS, O = OIL, S = SOLID, X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PCB's	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	D2 - 1	9-16-02	S	1	G	X						
	D2 - 2					X						
	D2 - 3					X						
	D2 - 4					X						
	D2 - 5					X						
	D2 - 6					X						
	D2 - 7					X						
	D2 - 8					X						

SAMPLED BY (PRINT NAME):

SAMPLED BY (SIGNATURE TO INITIATE COC): Jerry Record

DATE: 9-16-02 TIME: 1430

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Jerry Record	9-16-02	14[illegible]	OK
Michelle Tuck	9/17/02	1145	Intact				

RETAIN BACK COPY FOR PERSONAL RECORDS

ENVCOC-01 (REV. 2001-0)

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS, ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

ANALYTICS CORPORATION
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Group No.: G273-018
Date: 10/07/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

The following types of samples were submitted for analysis on September 30, 2002

6 - Oil Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

Samples of presses for sale

Invoice # 374046
Dd 11-19-02
$180

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Group No. G273-018
Account No. 21402045
Report Date: 10/07/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/30/02 10:31
Sample Type: 6 - Oil Samples(s)
Project: HYDRO-OIL PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-001	D-2 Sample Date: 09/26/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 1 mg/kg	1	MTS	10/03/02 23:06
	AROCLOR 1221	< 1 mg/kg	1	MTS	10/03/02 23:06
	AROCLOR 1232	< 1 mg/kg	1	MTS	10/03/02 23:06
	AROCLOR 1242	< 1 mg/kg	1	MTS	10/03/02 23:06
	AROCLOR 1248	< 1 mg/kg	1	MTS	10/03/02 23:06
	AROCLOR 1254	< 1 mg/kg	1	MTS	10/03/02 23:06
	AROCLOR 1260	< 1 mg/kg	1	MTS	10/03/02 23:06
	8082 Extraction	Complt	--	LFV	10/03/02 11:16
-002	B-3 Sample Date: 09/26/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 1 mg/kg	1	MTS	10/03/02 23:29
	AROCLOR 1221	< 1 mg/kg	1	MTS	10/03/02 23:29
	AROCLOR 1232	< 1 mg/kg	1	MTS	10/03/02 23:29
	AROCLOR 1242	< 1 mg/kg	1	MTS	10/03/02 23:29
	AROCLOR 1248	< 1 mg/kg	1	MTS	10/03/02 23:29
	AROCLOR 1254	< 1 mg/kg	1	MTS	10/03/02 23:29
	AROCLOR 1260	< 1 mg/kg	1	MTS	10/03/02 23:29

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300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/30/02 10:31
Sample Type: 6 - Oil Samples(s)
Project: HYDRO-OIL PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-002	B-3 Sample Date: 09/26/02				
	8082 Extraction	Complt	--	LFV	10/03/02 11:16
-003	B-4 Sample Date: 09/26/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 1 mg/kg	1	MTS	10/03/02 23:52
	AROCLOR 1221	< 1 mg/kg	1	MTS	10/03/02 23:52
	AROCLOR 1232	< 1 mg/kg	1	MTS	10/03/02 23:52
	AROCLOR 1242	< 1 mg/kg	1	MTS	10/03/02 23:52
	AROCLOR 1248	< 1 mg/kg	1	MTS	10/03/02 23:52
	AROCLOR 1254	< 1 mg/kg	1	MTS	10/03/02 23:52
	AROCLOR 1260	< 1 mg/kg	1	MTS	10/03/02 23:52
	8082 Extraction	Complt	--	LFV	10/03/02 11:16
-004	D-3 Sample Date: 09/26/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 1 mg/kg	1	MTS	10/04/02 00:15
	AROCLOR 1221	< 1 mg/kg	1	MTS	10/04/02 00:15
	AROCLOR 1232	< 1 mg/kg	1	MTS	10/04/02 00:15

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Final Report

Date Received: 09/30/02 10:31
Sample Type: 6 - Oil Samples(s)
Project: HYDRO-OIL PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-004	D-3 Sample Date: 09/26/02				
	AROCLOR 1242	< 1 mg/kg	1	MTS	10/04/02 00:15
	AROCLOR 1248	< 1 mg/kg	1	MTS	10/04/02 00:15
	AROCLOR 1254	< 1 mg/kg	1	MTS	10/04/02 00:15
	AROCLOR 1260	< 1 mg/kg	1	MTS	10/04/02 00:15
	8082 Extraction	Complt	--	LFV	10/03/02 11:16
-005	D-4 Sample Date: 09/26/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 1 mg/kg	1	MTS	10/04/02 00:39
	AROCLOR 1221	< 1 mg/kg	1	MTS	10/04/02 00:39
	AROCLOR 1232	< 1 mg/kg	1	MTS	10/04/02 00:39
	AROCLOR 1242	< 1 mg/kg	1	MTS	10/04/02 00:39
	AROCLOR 1248	< 1 mg/kg	1	MTS	10/04/02 00:39
	AROCLOR 1254	< 1 mg/kg	1	MTS	10/04/02 00:39
	AROCLOR 1260	< 1 mg/kg	1	MTS	10/04/02 00:39
	8082 Extraction	Complt	--	LFV	10/03/02 11:16
-006	D-5 Sample Date: 09/26/02				
	Polychlorinated Biphenyls				

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
RICHMOND, VIRGINIA 23228
804-264-7100 PHONE
800-888-8061 PHONE
804-264-8873 FAX
WWW.ANALYTICSCORP.COM

Group No. G273-018
Account No. 21402045
Report Date: 10/07/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 09/30/02 10:31
Sample Type: 6 - Oil Samples(s)
Project: HYDRO-OIL PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-006	D-5 Sample Date: 09/26/02				
	AROCLOR 1016	< 1 mg/kg	1	MTS	10/04/02 01:02
	AROCLOR 1221	< 1 mg/kg	1	MTS	10/04/02 01:02
	AROCLOR 1232	< 1 mg/kg	1	MTS	10/04/02 01:02
	AROCLOR 1242	< 1 mg/kg	1	MTS	10/04/02 01:02
	AROCLOR 1248	< 1 mg/kg	1	MTS	10/04/02 01:02
	AROCLOR 1254	< 1 mg/kg	1	MTS	10/04/02 01:02
	AROCLOR 1260	< 1 mg/kg	1	MTS	10/04/02 01:02
	8082 Extraction	Complt	--	LFV	10/03/02 11:16

The ending calibration verification standard for PCB analysis was below QC limits due to interference from matrix.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter, ug/g = micrograms per gram, mg/kg = milligrams per kilogram, ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit. uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

ANALYTICS CORPORATION
8040 VILLA PARK DRIVE, SUITE 250
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Group No. G273-018
Account No. 21402045
Report Date: 10/07/02
BRIDGET LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 Method 8082	----
AROCLOR 1221	SW846 Method 8082	----
AROCLOR 1232	SW846 Method 8082	----
AROCLOR 1242	SW846 Method 8082	----
AROCLOR 1248	SW846 Method 8082	----
AROCLOR 1254	SW846 Method 8082	----
AROCLOR 1260	SW846 Method 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

SK - Grand Rapids
300 36th St SW
Grand Rapids MI 49548
(Budget Lennon?)

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
9-27-02	7	Hydro-cut

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	Budget Lennon	616 246-2992

RUSH ANALYSIS
☐ 24 HOUR
☐ 48 HOUR
Extra Charge

SPECIAL INSTRUCTIONS:
(oil Store Tank is a Rush ASAP) any? call Terry 810-206-4220

ANALYTICS
8040 Villa Park Drive, Suite 250
Richmond, Virginia 23228
Phone (804) 264-7100
Toll Free (800) 888-8061
Fax (804) 264-8873

CHAIN OF CUSTODY RECORD

MATRIX CODES
A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PAS	Preservative H_2SO_4	HCL	HNO_3	NaOH	Other	COMMENTS
	D-2	9-26-02	L	1	G	X						
	B-3	"	"	"	"	X						No F/C on Site
	B-4	"	"	"	"	X						
	D-3	"	"	"	"	X						
	D-4	"	"	"	"	X						
	D-5	"	"	"	"	X						
	oil Store Tank	"	"	"	"	X						Rush results (9-30-02)

STD TAT

SAMPLED BY (PRINT NAME)	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
T Goodlin	Terry Lamb	9/27/02	15

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
Thomas Parker	9/30/02	1020	Intact	Terry Lamb	9-27-02	15	OK

RETAIN BACK COPY FOR PERSONAL RECORDS

TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

1. Acceptance and Modification: This document contains all terms of the parties' agreement concerning the services described on this document or other related documents (to include, but not limited to, environmental analysis policies listed in the Analytics Environmental Laboratory services brochure), can be accepted only upon the provisions expressed herein, and may not be modified, added to, amended, superseded or waived except in writing by Analytics Corporation, duly authorized representative. Client may accept this document by acknowledging or confirming it or by accepting any performance, partial or complete, by Analytics Corporation. Reference by Analytics Corporation to any purchase or work order number supplied by Client shall be for accounting identification purposes only. This document shall be binding upon the successors and assigns of the parties.

2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor, and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

4. Limited Warranty and Limitation of Liability: ANALYTICS CORPORATION MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR CONDITION AS TO ITS SERVICES, FINDINGS, RECOMMENDATIONS OR PROFESSIONAL ADVICE EXCEPT THAT THEY ARE PREPARED, PERFORMED AND RENDERED IN ACCORDANCE WITH PROCEDURES, PROTOCOLS AND PRACTICES GENERALLY ACCEPTED IN ANALYTICS CORPORATIONS' PROFESSION FOR USE IN SIMILAR ASSIGNMENTS. ANALYTICS CORPORATION SHALL NOT BE LIABLE TO CLIENT IF SUCH NON-COMPLIANCE IS CAUSED BY NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, THE LIABILITY OF ANALYTICS CORPORATION TO CLIENT, OR TO ANY OTHER PERSON OR ENTITY, ARISING OUT OF, RESULTING FROM OR IN CONNECTION WITH THIS AGREEMENT OR THIS SERVICES PROVIDED BY ANALYTICS CORPORATION, INCLUDING BUT NOT LIMITED TO ANALYTICS CORPORATIONS' NEGLIGENT PROFESSIONAL ACTS. ERRORS OR OMISSIONS, WHETHER ACTIVE OR PASSIVE AND WHETHER OR NOT RELATED TO HAZARDOUS WASTES OR SUBSTANCES, SHALL NOT CONSTITUTE A FUNDAMENTAL BREACH, INCLUDING LIABILITY FOR CONSEQUENTIAL, INDIRECT, SPECIAL INCIDENTAL OR EXEMPLARY DAMAGES, OR EXCEED THE COMPENSATION PAID TO ANALYTICS CORPORATION. NO ACTION, SUIT OR PROCEEDING SHALL BE INSTITUTED IN CONNECTION WITH THIS AGREEMENT MORE THAN TWO YEARS AFTER ANALYTICS CORPORATION CEASES ITS PERFORMANCE HEREUNDER.

5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:** 5

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: A1 Press Dandy 504-1000 SN 55-089515

Asset Tag Number: GB 3011

To be completed by Financial

AD Number: #0019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: Padnose

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South 5 LAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everts	1/27/03	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	1-31-03	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: A2 Press Daily 544-1000 SN FL 23215

Asset Tag Number: 65202502

To be completed by Financial

AD Number: 0019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: Padnose

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South 5 LAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Evers	1/27/03	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	1-30-03	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: A3 Press 544-1000 Dwlg SN 631 90502

Asset Tag Number: KAL129

To be completed by Financial

AD Number: 0019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: Padnose

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South 5 LAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Evers	1/27/03	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Budget Lennon	1-31-03	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: A4 Press Dayton 544-1000 SN 63190501

Asset Tag Number: KAL 138

To be completed by Financial

AD Number: 0019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: Padnose

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South 5 LAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everts	1/27/03	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Budget Lennon	1-31-03	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: A5 Daisy 5424-1000 SN 550895555

Asset Tag Number: 5988

To be completed by Financial

AD Number: 0019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: Padnose

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South 5 LAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Evers	1/27/03	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	1-31-03	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERIS **Phone Number:** 3231

Equipment Description: SU4-1000 DANLY B-3 Press SN 6725 7201

Asset Tag Number: HA 10696

To be completed by Financial

AD Number: # 0019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☒ Sale ☐ Scrap/Disposal

Destination: WINSDOR Match Plate

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: SOUTH SLAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Everis	1/22/03	Michael J Everis
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lemon	2-7-03	Bridget Lemon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: 544-1000 DAVIS B-4 Press SN 6725 7202

Asset Tag Number: HA 10764

To be completed by Financial

AD Number: #6019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☒ Sale ☐ Scrap/Disposal

Destination: WINSDOR Match Plate

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: SOUTH SLAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Evers	1/22/03	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	2-7-03	Bridget Lennon
(Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

EQUIPMENT DECOMMISSIONING CHECK SHEET

To be completed by Requestor

Plant Name: GM MFD – Grand Rapids Metal Plant **Project Checklist Number:**

Requestor: MIKE EVERTS **Phone Number:** 3231

Equipment Description: BU 4 - 1000 Clearing; B-5 Prim SN 5518359-P

Asset Tag Number: MAN 1569

To be completed by Financial

AD Number: #0019

Equipment Disposition (Check One Below):

☐ Allied Transfer ☐ Recondition ☐ Donation ☐ Sale ☒ Scrap/Disposal

Destination: Padnose

To be completed by Maintenance General Supervisor

DECOMMISSIONING RECORD

Environmental Issue	Yes	No	Remain w/equip.	N/A
1. Are all fluids drained?	✓			
2. Have all hydraulic fluid reservoirs been tested for PCBs?	✓			
3. Are all PCB analytical results ≤ 2 mg/l or ≤ 10 ug/100 cm^2 ?	✓			
4. Have all refrigerants (CFCs, HCFCs) been evacuated?** (See Below)				✓
5. Have all PCB containing items (e.g., ballast) been removed?				✓
6. Have all fluid filled capacitors and transformers been removed?				✓
7. Have all mercury-containing items been removed?				✓
8. Have all asbestos containing items been abated?				✓
9. Have all batteries been removed?				✓
10. Have all cathode ray tubes been removed?				✓
11. Have all Medical wastes been removed?				✓
12. Have all radioactive devices been removed?				✓
13. Have all used filters been removed?	✓			
14. Has residual/vapor free equipment cleaning been completed?	✓			
15. Have all hazardous debris/substances been removed?	✓			
Interim storage required? Interim storage location: South 5 LAB				

Comments:

To be completed by the HVAC Technician

**CFC Certification Section:

Refrigerant Type:	Amount Recovered (lbs.):	Date Recovered:

Certification Statement: I certify on behalf of General Motors, to the best of my knowledge and belief, that all refrigerant previously in the appliance referenced above has been recovered to the applicable requirement in 40 CFR, Section 82.156, and that the information is true and correct.

N/A		
(Certified Technician Signature)	(Date)	(Print Name)

Decommission Acknowledgement:

Michael J Evers	1/22/03	Michael J Everts
(Maintenance General Supervisor Signature)	(Date)	(Print Name)

Environmental Engineering Release Approval:

Bridget Lennon	2-7-03	Bridget Lennon
Environmental Engineer, or Designee, Signature)	(Date)	(Print Name)

ANALYTICS CORPORATION
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Group No.: G303-039
Date: 11/08/02
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GM-METAL FAB-GRAND RAPIDS
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300 36TH ST SW
GRAND RAPIDS, MI 49548

The following types of samples were submitted for analysis on October 30, 2002

64 - Wipe Sample

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are enclosed. Also enclosed is a copy of the Sample Container Receipt Form. The Sample Container Receipt Form documents the condition of the sample upon arrival at the laboratory. The last page of this report is identified by the signature of a designated laboratory manager(s). Any reproduction of this report, except in full, is not permitted without written approval of the laboratory manager and the QA manager.

The analyses performed are based on the referenced method. For details on the analytical process refer to the Standard Operating Procedure for the referenced method. The signatures at the end of this report certify that the results are based on the referenced methods and unless otherwise noted meet the requirements of NELAC.

Unless otherwise specified all analyses of solid materials are based on dry weight.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).

Thank you for your business.

Invoice # 376992
pd. 11-19-02

Quality Industrial Hygiene and Environmental Laboratory Testing

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Group No. G303-039
Account No. 21402045
Report Date: 11/07/02
B.LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-001	A1-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 20:46
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 20:46
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 20:46
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 20:46
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 20:46
	AROCLOR 1254	3.5 ug/wp	2	MTS	10/31/02 20:46
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 20:46
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-002	A1-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 21:11
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 21:11
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 21:11
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 21:11
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 21:11
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 21:11
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 21:11

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-002	A1-2 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-003	A1-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 21:37
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 21:37
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 21:37
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 21:37
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 21:37
	AROCLOR 1254	2.7 ug/wp	2	MTS	10/31/02 21:37
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 21:37
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-004	A1-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 22:03
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 22:03
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 22:03

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-004	A1-4 Sample Date: 10/29/02				
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 22:03
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 22:03
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 22:03
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 22:03
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-005	A1-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 22:28
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 22:28
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 22:28
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 22:28
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 22:28
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 22:28
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 22:28
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-006	A1-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-006	A1-6 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 22:54
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 22:54
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 22:54
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 22:54
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 22:54
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 22:54
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 22:54
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-007	A1-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 23:20
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 23:20
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 23:20
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 23:20
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 23:20
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 23:20
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 23:20
	8082 Extraction	Complt	--	LFV	10/31/02 11:09

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300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-008	A1-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 23:45
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 23:45
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 23:45
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 23:45
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 23:45
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 23:45
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 23:45
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-009	A2-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 00:37
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 00:37
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 00:37
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 00:37
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 00:37
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 00:37
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 00:37

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-009	A2-1 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-010	A2-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 01:02
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 01:02
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 01:02
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 01:02
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 01:02
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 01:02
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 01:02
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-011	A2-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 01:28
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 01:28
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 01:28
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 01:28

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300 36TH ST SW
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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-011	A2-3 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 01:28
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 01:28
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 01:28
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-012	A2-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 01:54
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 01:54
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 01:54
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 01:54
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 01:54
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 01:54
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 01:54
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-013	A2-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Final Report

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-013	A2-5 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 02:19
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 02:19
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 02:19
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 02:19
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 02:19
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 02:19
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 02:19
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-014	A2-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 02:45
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 02:45
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 02:45
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 02:45
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 02:45
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 02:45
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 02:45
	8082 Extraction	Complt	--	LFV	10/31/02 11:09

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-015	A2-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 03:11
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 03:11
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 03:11
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 03:11
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 03:11
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 03:11
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 03:11
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-016	A2-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 03:36
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 03:36
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 03:36
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 03:36
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 03:36
	AROCLOR 1254	2.5 ug/wp	2	MTS	10/31/02 03:36
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 03:36

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300 36TH ST SW
GRAND RAPIDS, MI 49548 Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-016	A2-8 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-017	A3-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 04:02
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 04:02
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 04:02
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 04:02
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 04:02
	AROCLOR 1254	2.4 ug/wp	2	MTS	10/31/02 04:02
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 04:02
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-018	A3-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 04:27
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 04:27
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 04:27
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 04:27

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Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-018	A3-2 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 04:27
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 04:27
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 04:27
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-019	A3-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 04:53
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 04:53
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 04:53
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 04:53
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 04:53
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 04:53
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 04:53
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-020	A3-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Group No. G303-039
Account No. 21402045
Report Date: 11/07/02
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GM-METAL FAB-GRAND RAPIDS
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GRAND RAPIDS, MI 49548 Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-020	A3-4 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 05:19
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 05:19
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 05:19
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 05:19
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 05:19
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 05:19
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 05:19
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-021	A3-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 20:09
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 20:09
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 20:09
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 20:09
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 20:09
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 20:09
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 20:09
	8082 Extraction	Complt	--	LFV	10/31/02 11:09

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-022	A3-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 20:35
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 20:35
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 20:35
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 20:35
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 20:35
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 20:35
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 20:35
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-023	A3-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 21:01
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 21:01
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 21:01
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 21:01
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 21:01
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 21:01
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 21:01

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-023	A3-7 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-024	A3-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 21:28
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 21:28
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 21:28
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 21:28
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 21:28
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 21:28
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 21:28
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-025	A4-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 21:54
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 21:54
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 21:54
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 21:54

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-025	A4-1 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 21:54
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 21:54
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 21:54
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-026	A4-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 22:20
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 22:20
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 22:20
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 22:20
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 22:20
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 22:20
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 22:20
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-027	A4-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-027	A4-3 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 22:46
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 22:46
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 22:46
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 22:46
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 22:46
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 22:46
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 22:46
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-028	A4-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	10/31/02 23:12
	AROCLOR 1221	< 2 ug/wp	2	MTS	10/31/02 23:12
	AROCLOR 1232	< 2 ug/wp	2	MTS	10/31/02 23:12
	AROCLOR 1242	< 2 ug/wp	2	MTS	10/31/02 23:12
	AROCLOR 1248	< 2 ug/wp	2	MTS	10/31/02 23:12
	AROCLOR 1254	< 2 ug/wp	2	MTS	10/31/02 23:12
	AROCLOR 1260	< 2 ug/wp	2	MTS	10/31/02 23:12
	8082 Extraction	Complt	--	LFV	10/31/02 11:09

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Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-029	A4-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 00:05
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 00:05
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 00:05
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 00:05
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 00:05
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 00:05
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 00:05
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-030	A4-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 00:31
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 00:31
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 00:31
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 00:31
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 00:31
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 00:31
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 00:31

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Final Report

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-030	A4-6 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-031	A4-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 00:57
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 00:57
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 00:57
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 00:57
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 00:57
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 00:57
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 00:57
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-032	A4-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 01:24
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 01:24
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 01:24
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 01:24

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-032	A4-8 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 01:24
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 01:24
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 01:24
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-033	A5-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 01:50
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 01:50
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 01:50
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 01:50
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 01:50
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 01:50
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 01:50
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-034	A5-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-034	A5-2 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 02:16
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 02:16
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 02:16
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 02:16
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 02:16
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 02:16
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 02:16
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-035	A5-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 02:42
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 02:42
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 02:42
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 02:42
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 02:42
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 02:42
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 02:42
	8082 Extraction	Complt	--	LFV	10/31/02 11:09

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-036	A5-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 03:09
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 03:09
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 03:09
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 03:09
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 03:09
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 03:09
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 03:09
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-037	A5-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 03:35
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 03:35
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 03:35
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 03:35
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 03:35
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 03:35
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 03:35

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-037	A5-5 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-038	A5-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 04:01
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 04:01
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 04:01
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 04:01
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 04:01
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 04:01
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 04:01
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-039	A5-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 04:27
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 04:27
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 04:27
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 04:27

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Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-039	A5-7 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 04:27
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 04:27
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 04:27
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-040	A5-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	MTS	11/01/02 04:54
	AROCLOR 1221	< 2 ug/wp	2	MTS	11/01/02 04:54
	AROCLOR 1232	< 2 ug/wp	2	MTS	11/01/02 04:54
	AROCLOR 1242	< 2 ug/wp	2	MTS	11/01/02 04:54
	AROCLOR 1248	< 2 ug/wp	2	MTS	11/01/02 04:54
	AROCLOR 1254	< 2 ug/wp	2	MTS	11/01/02 04:54
	AROCLOR 1260	< 2 ug/wp	2	MTS	11/01/02 04:54
	8082 Extraction	Complt	--	LFV	10/31/02 11:09
-041	B3-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-041	B3-1 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 18:54
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 18:54
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 18:54
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 18:54
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 18:54
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 18:54
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 18:54
	8082 Extraction	Complt	--	LFV	10/31/02 14:17
-042	B3-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 19:21
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 19:21
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 19:21
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 19:21
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 19:21
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 19:21
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 19:21
	8082 Extraction	Complt	--	LFV	10/31/02 14:18

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-043	B3-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 19:47
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 19:47
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 19:47
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 19:47
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 19:47
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 19:47
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 19:47
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-044	B3-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 20:13
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 20:13
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 20:13
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 20:13
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 20:13
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 20:13
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 20:13

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Final Report

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-044	B3-4 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-045	B3-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 20:39
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 20:39
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 20:39
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 20:39
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 20:39
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 20:39
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 20:39
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-046	B3-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 21:06
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 21:06
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 21:06
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 21:06

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-046	B3-6 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 21:06
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 21:06
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 21:06
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-047	B3-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 21:32
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 21:32
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 21:32
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 21:32
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 21:32
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 21:32
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 21:32
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-048	B3-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-048	B3-8 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 21:58
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 21:58
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 21:58
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 21:58
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 21:58
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 21:58
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 21:58
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-049	B4-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 22:24
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 22:24
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 22:24
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 22:24
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 22:24
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 22:24
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 22:24
	8082 Extraction	Complt	--	LFV	10/31/02 14:18

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-050	B4-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 22:54
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 22:54
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 22:54
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 22:54
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 22:54
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 22:54
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 22:54
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-051	B4-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 23:16
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 23:16
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 23:16
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 23:16
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 23:16
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 23:16
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 23:16

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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-051	B4-3 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-052	B4-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 23:43
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 23:43
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 23:43
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 23:43
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 23:43
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 23:43
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 23:43
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-053	B4-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 01:54
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 01:54
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 01:54
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 01:54

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Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-053	B4-5 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 01:54
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 01:54
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 01:54
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-054	B4-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 02:20
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 02:20
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 02:20
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 02:20
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 02:20
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 02:20
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 02:20
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-055	B4-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-055	B4-7 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 02:46
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 02:46
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 02:46
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 02:46
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 02:46
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 02:46
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 02:46
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-056	B4-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 03:12
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 03:12
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 03:12
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 03:12
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 03:12
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 03:12
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 03:12
	8082 Extraction	Complt	--	LFV	10/31/02 14:18

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Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-057	B5-1 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 03:38
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 03:38
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 03:38
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 03:38
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 03:38
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 03:38
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 03:38
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-058	B5-2 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 04:04
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 04:04
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 04:04
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 04:04
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 04:04
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 04:04
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 04:04

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Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-058	B5-2 Sample Date: 10/29/02				
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-059	B5-3 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 04:30
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 04:30
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 04:30
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 04:30
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 04:30
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 04:30
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 04:30
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-060	B5-4 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 04:56
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 04:56
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 04:56
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 04:56

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Lab ID	Parameter	Concentration	DL	Analyst	Analysis Date/Time
-060	B5-4 Sample Date: 10/29/02				
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 04:56
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 04:56
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 04:56
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-061	B5-5 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 05:22
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 05:22
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 05:22
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 05:22
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 05:22
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 05:22
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 05:22
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-062	B5-6 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				

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Group No. G303-039
Account No. 21402045
Report Date: 11/07/02
B.LENNON
GM-METAL FAB-GRAND RAPIDS
ENVIRONMENTAL ENGINEERING
300 36TH ST SW
GRAND RAPIDS, MI 49548

Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-062	B5-6 Sample Date: 10/29/02				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 05:49
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 05:49
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 05:49
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 05:49
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 05:49
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 05:49
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 05:49
	8082 Extraction	Complt	--	LFV	10/31/02 14:18
-063	B5-7 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 06:15
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 06:15
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 06:15
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 06:15
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 06:15
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 06:15
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 06:15
	8082 Extraction	Complt	--	LFV	10/31/02 14:18

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Group No. G303-039
Account No. 21402045
Report Date: 11/07/02
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Final Report

Date Received: 10/30/02 11:47
Sample Type: 64 - Wipe Sample(s)
Project: PRESS WIPES&ASBESTOS PO Number:

Lab ID	Parameter	Concentration	DL	Analysis Analyst	Date/Time
-064	B5-8 Sample Date: 10/29/02				
	Polychlorinated Biphenyls				
	AROCLOR 1016	< 2 ug/wp	2	CMC	11/01/02 06:41
	AROCLOR 1221	< 2 ug/wp	2	CMC	11/01/02 06:41
	AROCLOR 1232	< 2 ug/wp	2	CMC	11/01/02 06:41
	AROCLOR 1242	< 2 ug/wp	2	CMC	11/01/02 06:41
	AROCLOR 1248	< 2 ug/wp	2	CMC	11/01/02 06:41
	AROCLOR 1254	< 2 ug/wp	2	CMC	11/01/02 06:41
	AROCLOR 1260	< 2 ug/wp	2	CMC	11/01/02 06:41
	8082 Extraction	Complt	--	LFV	10/31/02 14:18

For Method 8082, the surrogate DCB was below QC limits for sample G303-039-005.

Results are reported in ug/wipe. The wipe area was 100cm2.

For Method 8082, the surrogate DCB was below QC limits for samples G303-039-027, -034, -038.

For Method 8082, the surrogate DCB was below QC limits for samples G303-039-053, -056, -059, -062, -064.

Report Limit=PQL=Practical Quantitation Limit; DL=Lowest reportable value

Abbreviations: ug/L = micrograms per liter, mg/L = milligrams per liter, ug/g = micrograms per gram, mg/kg = milligrams per kilogram, ug/ml = micrograms per milliliter, PQL = Practical Quantitation Limit. uS = microsiemens/centimeter at 25 degrees Celsius, ppb = parts per billion.

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Group No. G303-039
Account No. 21402045
Report Date: 11/07/02
B.LENNON
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GRAND RAPIDS, MI 49548

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
8082 Extraction	SW846 Method 3550	----
AROCLOR 1016	SW846 8082	----
AROCLOR 1221	SW846 8082	----
AROCLOR 1232	SW846 8082	----
AROCLOR 1242	SW846 8082	----
AROCLOR 1248	SW846 8082	----
AROCLOR 1254	SW846 8082	----
AROCLOR 1260	SW846 8082	----

Christopher M. Lapallo
Environmental Services

James A. Calpin, CIH
Laboratory Director

Quality Industrial Hygiene and Environmental Laboratory Testing

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

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ENVIRONMENTAL ENGINEERING
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Phone: 616-246-2992
Fax: ~~264-8873~~ 2896

PROJ#: 21402045

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
10-29-02	6 ~~5~~	Press Wipe + Asbestos

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER
	B. Lemon	2992

RUSH ANALYSIS
☐ 24 HOUR
☐ 48 HOUR
Extra Charge

SPECIAL INSTRUCTIONS:

1-7

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CHAIN OF CUSTODY RECORD

MATRIX CODES
A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	PAS	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	A1-1	10-29-02	S	1	6	X						
	A1-2					X						
	A1-3					X						
	A1-4					X						
	A1-5					X						
	A1-6					X						
	A1-7					X						
	A1-8					X						
	A2-1					X						
	A2-2					X						

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
T Goslin	Jerry J Rau	10/29/02	16 30

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Jerry J Rau	10/29/02	16 30	OK
Martha Hutchison	10/30/02	1030	Intact				

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ENVCOC-01 (REV. 2001-0)

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

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Phone: 616-246-2992
Fax: 264-8873

PROJ#: 21402045

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER

RUSH ANALYSIS

☐ 24 HOUR
☐ 48 HOUR

Extra Charge

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CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	A2-3										
	A2-4										
	A2-5										
	A2-6										
	A2-7										
	A2-8										
	A3-1										
	A3-2										
	A3-3										
	A3-4										

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
[signature]	10/30/02	1030	[signature]	[signature]	10/29/02	16 30	OK

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ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

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Phone: 616-246-2992
Fax: 264-8873

PROJ#: 21402045

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER

RUSH ANALYSIS

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MATRIX CODES

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S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	A3-5										
	A3-6										
	A3-7										
	A3-8										
	A4-1										
	A4-2										
	A4-3										
	A4-4										
	A4-5										
	A4-6										

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
[signature]	10/30/02	1050	Intact	[signature]	10/30/02	1630	OK

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ENVCOC-01 (REV. 2001-0)

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

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DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER

PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER

RUSH ANALYSIS

☐ 24 HOUR
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CHAIN OF CUSTODY RECORD

MATRIX CODES

A = AQUEOUS O = OIL
S = SOLID X = OTHER

ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	A4-7										
	A4-8										
	A5-1										
	A5-2										
	A5-3										
	A5-4										
	A5-5										
	A5-6										
	A5-7										
	A5-8										

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
[signature]	10/30/02	1030	Intact	[signature]	10/29/02	1630	OK

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ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

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MATRIX CODES

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ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	B3-1										
	B3-2										
	B3-3										
	B3-4										
	B3-5										
	B3-6										
	B3-7										
	B3-8										
	B4-1										
	B4-2										

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
				Jerry Rascal	10/29/02	1630	OK
Abdul Kader	10/30/02	1030	Intact				

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ENVCOC-01 (REV. 2001-0)

ENVIRONMENTAL CHAIN OF CUSTODY

ACCOUNT NAME AND ADDRESS

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300 36TH ST SW
GRAND RAPIDS, MI 49548
Phone: 616-246-2992
Fax: 264-8873

PROJ#: 21402045

DATE SHIPPED	# OF SAMPLES	PROJECT NAME OR NUMBER
PURCHASE ORDER NO.	CONTACT	TELEPHONE NUMBER

RUSH ANALYSIS

☐ 24 HOUR
☐ 48 HOUR

Extra Charge

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CHAIN OF CUSTODY RECORD

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A = AQUEOUS O = OIL
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ANALYSIS REQUESTED (Place an "X" in the box below to indicate request)

Lab ID	Sample Identification	Date & Time	MATRIX	# of Bottles	Grab / Comp.	Preservative H_2SO_4	Preservative HCL	Preservative HNO_3	Preservative NaOH	Preservative Other	COMMENTS
	B4-3										
	B4-4										
	B-4-5										
	B4-6										
	B4-7										
	B4-8										
	B5-1										
	B-5-2										
	B5-3										
	B5-4										

SAMPLED BY (PRINT NAME):	SAMPLED BY (SIGNATURE TO INITIATE COC):	DATE	TIME
	Jerry J. Rood	10/29/02	1630

SAMPLES RECEIVED BY: (SIGNATURE)	DATE	TIME	CONDITION	SAMPLES RELINQUISHED BY (SIGNATURE)	DATE	TIME	CONDITION
Heather Walker	10/30/02	1030	Intact				

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TERMS AND CONDITIONS

Except as otherwise provided on this document or other related documents, the parties agree to the following provisions:

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2. Independent Contractor: In performing its services, Analytics Corporation shall be deemed to be acting solely as an independent contractor and only to the extent and for the specific purpose expressly set forth on this document or other related documents.

3. Force Majeure: Delay in performance or failure to perform by Analytics Corporation shall be excused to the extent caused by any act of God, labor trouble, fire, inclement weather, act of governmental authority, failure of transportation, accident or any other limitation. Client's failure to furnish information or to approve or disapprove Analytics Corporations' work. In the event of any of these circumstances, Analytics Corporations' time for completion of its services shall be extended accordingly.

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5. Information from Client: Client shall provide Analytics Corporation with all information and samples required to enable Analytics Corporation to perform its services. Analytics Corporation shall not be liable for any incorrect advice, judgment, recommendation, finding, decision or conduct based upon any inaccurate or incomplete information or samples supplied by Client, or the failure of any such samples to be representative.

6. Indemnification: Client shall indemnify and hold harmless Analytics Corporation and its affiliated corporations from and against any and all claims, causes of action, demands, losses, costs, expenses, liabilities, damages, settlements or judgments of any nature, including without limitation those related to the defense or investigation thereof and all attorney's fees incurred, which are attributable to the negligence or wrongful conduct of Client or its employees or agents, which arise from or are related to any matter or circumstances as to which Analytics Corporation does not expressly assume responsibility or disclaims responsibility, which exceed the maximum amount for which Analytics Corporation is liable as set forth herein, or which are attributable to the acts, errors, or omissions of others and arise from or are related to this agreement or the work to be performed hereunder.

7. Waiver: One or more waivers of any term, condition or covenant by Analytics Corporation shall not be construed by Client as a waiver of a subsequent breach of the same or of any other term, condition or covenant.

8. Severability: In the event any provision of this agreement shall be held to be invalid and unenforceable, the other provisions shall be valid and binding on the parties hereto.

9. Retention of Samples: All samples received by Analytics Corporation may be disposed of 30 days after submission of Analytics Corporation report to Client unless otherwise mutually agreed.

BULK UNLOAD AREA INVESTIGATION WORK PLAN

GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

FEBRUARY 2007
REF. NO. 17360 (14)

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LIST OF FIGURES
(Following Text)

FIGURE 1.1 SITE LOCATION

FIGURE 1.2 APPROXIMATE BULK UNLOAD AREA

FIGURE 3.1 PROPOSED SOIL BORING LOCATIONS

LIST OF TABLES
(Following Text)

TABLE 4.1 SAMPLING AND ANALYSIS PLAN

LIST OF ACRONYMS

bgs	Below Ground Surface
COC	Chain of Custody
CRA	Conestoga-Rovers & Associates
DCC	Direct Contact Criteria
DWPC	Drinking Water Protection Criteria
DOT	Department of Transportation
GM	General Motors Corporation
GSIC	Groundwater-Surface Water Interface Protection Criteria
HSA	Hollow-stem Auger
MDEQ	Michigan Department of Environmental Quality
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector
PNAs	Polynuclear Aromatic Hydrocarbons
PSIC	Particulate Soil Inhalation Criteria
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RCI	Reactivity, Corrosivity, and Ignitabilty
RCRA	Resource Conservation and Recovery Act
RRD	Remediation and Redevelopment Division
SDBL	State Default Background Levels
SOW	Scope of Work
STL	Severn Trent Laboratories
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TAT	Turnaround Time
TCLP	Toxicity Characteristic Leaching Procedure
TCL	Target Compound List
USCS	United Soil Classification System
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
Work Plan	Bulk Unload Area Investigation Work Plan
WWTP	Wastewater Treatment Plant

1.0 INTRODUCTION

The purpose of this Bulk Unload Area Investigation Work Plan (Work Plan) is to present the protocol to be used for the implementation of the installation of soil borings and the collection and analysis of soil samples near the bulk unload area at the General Motors Corporation (GM) Grand Rapids Metal Plant located at 300 36th Street in Wyoming, Michigan (Site). Figure 1.1 presents the Site location. A Site plan is presented on Figure 1.2.

1.1 BACKGROUND

The Grand Rapids Metal Plant is a metal fabrication and assembly plant for GM consisting of approximately 45 acres of production activities on approximately 88 acres of land.

Current operations conducted at the Site include the manufacture of quarter panels, floor pans, roof panels, deck lids, doors, and center pillars for assembly plant use. In addition, the Site constructs the dies, fixtures, mechanical devices, and manufacturing aids used internally to produce the aforementioned parts. The Site consists of a main manufacturing building, with several outbuildings including a baler house, wastewater treatment plant (WWTP), powerhouse, and other ancillary structures. The remainder of Site areas consist of asphalt/concrete paved areas and landscaped areas. The Site is relatively flat, with little or no significant topographic relief.

In November 2004, Site personnel installed a trench drain in the bulk unload area. The location of the bulk unload area is presented on Figure 1.2. The trench drain is approximately 70 feet long by one-foot wide and drains to a sump located adjacent to the bulk unload area. From there, liquids are discharged to a sump within the plant inside an adjacent truck dock, which discharges to the on-Site wastewater treatment plant via aboveground piping lines.

Prior to disposal, Site personnel sampled excavated soils from the area for waste characterization. Analysis conducted for the waste characterization of the excavated soils included Toxicity characteristic leaching procedure (TCLP) metals, oil and grease, and total petroleum hydrocarbons (TPH) as gasoline, diesel, and "other". TCLP analysis of the waste soil sample had detections of barium, cadmium, copper, lead, and zinc. Total analysis was also preformed on lead, TPH diesel, and TPH "other" for which there

were detections. The soils were disposed of as a hazardous waste due to the concentration of lead identified.

Based on these finding at the Site, an investigation in the bulk unload area was initiated. Seven soil borings, SB19-05 through SB25-05 (SB19 through SB25), were advanced at the Site on December 12, 2005 and a total of 33 soil samples were collected to define current soil conditions in the vicinity of the trench drain. Soil borings SB19 through SB24 were advanced around the perimeter of the trench drain and SB25 was advanced in the northwest corner inside the trench drain area.

Soil borings were advanced utilizing a 4 ¼-inch hollow stem auger (HSA) drill rig with continuous split-spoon sampling. Soil samples were collected starting at the top of the ground surface and continuing at two-foot intervals until a terminal depth of ten feet bgs, excluding SB23 and SB24, where samples were collected at 0 to 2 feet bgs, 4 to 6 feet bgs, and 8 to 10 feet bgs intervals, respectively. A total of 33 soil samples were collected for analysis for polynuclear aromatic hydrocarbons (PNAs) and Target Analyte List (TAL) metals.

Laboratory analytical results were compared to Michigan Public Act 451, Part 201 Generic Residential and Commercial I Cleanup Criteria (Part 201 Residential), as well as the Michigan Public Act 451, Part 201 Generic Industrial and Commercial II, III, and IV Criteria (Part 201 Industrial). Arsenic, barium, cadmium, total chromium, lead, mercury, selenium and silver were detected at concentrations above the Part 201 Residential and Industrial Drinking Water Protection Criteria (DWPC), Direct Contact Criteria (DCC), Particulate Soil Inhalation Criteria (PSIC), Groundwater Surface Water Interface Protection Criteria (GSIC), and/or State Default Background Level (SDBL) in the soil samples collected during the investigation. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, fluoranthene, naphthalene, and phenanthrene were detected above the Part 201 Residential and Industrial DCC and/or GSIC in the soil samples collected during the investigation. The previous investigation was summarized under separate cover in a memorandum dated September 8, 2006, which was submitted to the Michigan Department of Environmental Quality (MDEQ).

1.2 PURPOSE OF BULK UNLOAD AREA INVESTIGATION WORK PLAN

The purpose of this Work Plan is to outline the activities proposed to further evaluate and delineate metal impacts to soil above the Michigan Act 451, Part 201 Residential Cleanup Criteria in the vicinity of the bulk unload area.

2.0 CURRENT CONDITIONS

2.1 NATURE AND EXTENT OF CONTAMINATION

The nature and extent of contamination is presented in the memorandum to GM dated September 8, 2006, which was submitted to the MDEQ.

Arsenic, barium, cadmium, total chromium, lead, mercury, selenium and silver were detected at concentrations above the Part 201 Residential and Industrial DWPC, DCC, PSIC, GSIC, and/or SDBL in the soil samples collected during the investigation.

Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, fluoranthene, naphthalene, and phenanthrene were detected above the Part 201 Residential and Industrial DCC and/or GSIC in the soil samples collected during the investigation.

2.2 SITE GEOLOGY AND HYDROGEOLOGY

Information regarding the geologic conditions at the Site was collected during previous environmental investigations. Numerous soil borings have been installed at the Site between 1981 and 2005.

Regional overburden in the vicinity of the Site consists of glacial outwash sand and gravel, and postglacial alluvium from the Paleozoic Upper Mississippian Meramecian Series. Based on the review of stratigraphic boring logs generated during previous investigations at the Site, the glacial outwash, consisting of sands and gravels, has been observed at varying depths between 40 and 90 feet below ground surface (bgs). The outwash is underlain by a clay layer that has been observed to generally slope to the west-northwest at a gradient of approximately 1-foot in 15 feet. Bedrock was not encountered during previous investigations conducted at the Site. Based on a regional knowledge of geology, bedrock in the area of the Site is present at approximately 100 feet bgs. The upper bedrock is part of the Michigan formation, which is underlain by Marshall sandstone. The Michigan formation is approximately 100 feet thick, and consists of interbedded layers of shale, gypsum, and limestone.

Groundwater was encountered during the historical environmental investigations at approximately 20 feet bgs. Groundwater level measurements were recorded during the environmental investigations and during subsequent quarterly monitoring events.

Historical groundwater elevation data indicates the approximate groundwater flow direction is to the north-northwest, towards Cole Drain.

Geologic information in the vicinity of the bulk unload area was obtained during the previous investigation on December 12, 2005. Based on observations during the investigation, soils in the bulk unload area consist of sands with trace silt.

3.0 SCOPE OF WORK

The scope of work (SOW) for this Work Plan includes the advancement of eight soil borings and the collection and analysis of approximately 50 soil samples, including QA/QC samples. The investigation fieldwork will adhere to the methods and procedures specified in this Work Plan and applicable Quality Assurance Project Plan. The QAPP is presented in Appendix A of the Work Plan dated November 2002, which was submitted to the MDEQ. . Additionally, the soil samples will be collected consistent with the requirements set forth in the MDEQ Remediation and Redevelopment Division (RRD) Operational Memorandum No. 2 (October 22, 2004).

3.1 SOIL BORING INSTALLATION

Eight soil borings, SB26-07 through SB33-07, will be advanced at the Site in the bulk unload area to further define the PNA and metal impacts to soil. The soil borings will be installed to the north, east and west of soil borings SB19-05 through SB21-05, respectively, to vertically and horizontally delineate the concentrations of PNAs and metals compounds in soil. The soil borings to the east of the bulk unload area will be advanced inside the Site building in the oil-storage room. Proposed soil boring location area presented on Figure 3.1.

Soil borings will be advanced utilizing a 4 ¼-inch hollow stem auger (HSA) drill rig with continuous split-spoon sampling. Soil samples will be collected starting at the top of the ground surface and continuing at two-foot intervals until a terminal depth of 10 feet bgs. A two-foot long, two-inch outside diameter stainless steel split-spoon sampler will be driven into the undisturbed material through the HSA auger. Soil samples will be described and classified according to the Unified Soil Classification System (USCS) by a CRA Geologist. Soil samples will be field screened for visual/olfactory evidence of impact and with an 11.7 eV photoionization detector (PID).

Concrete coring of approximately 10 to 12-inch thick concrete will be performed, as necessary. PID readings will be collected upon removal of concrete. Concrete will be patched after completion of drilling activities.

Soil cuttings will be screened with an 11.7 eV bulb PID and examined for visual/olfactory indication of contamination. All soil cuttings will be containerized in DOT approved 55-gallon drums and labeled as to where they were generated and the initial accumulation date.

Upon completion of soil sample collection, each borehole will be abandoned. All soil borings will be abandoned using the tremie-method to backfill the borehole annulus with a high solids bentonite grout to ground surface.

3.2 SURVEYING

A survey of the Site will be completed for all new soil borings and for the initial soil borings in the bulk unload area. Soil boring locations and elevations will be surveyed, with elevations to the nearest 0.01-foot. These elevations will be referenced to a designated above mean sea level benchmark.

3.3 DECONTAMINATION

Upon mobilization to the Site and prior to drilling commencement, the drill rig and all associated equipment will be thoroughly cleaned using a high-pressure, low-volume steam wash and inspected. Before initiating drilling at each subsequent location, the augers, drill rod, and other associated equipment will be decontaminated to prevent cross-contamination. Decontamination of sampling equipment is presented in Section 4.2.

All generated decontamination water will be visually examined and screened with a PID. All decontamination water will be containerized in DOT-approved 55-gallon drums and labeled as to where it was generated and the initial accumulation date.

4.0 SAMPLING PROCEDURES

Proposed sample locations are presented on Figure 3.1. All sampling will be performed in accordance with the procedures outlined below.

4.1 SOIL SAMPLE COLLECTION

Soil samples shall be collected at two-foot intervals using 4 ¼-inch HSA drill rig equipped with a two-foot long stainless steel split-spoon sampler as described in Section 3.1. Samples shall be collected consistent with the protocols set forth in MDEQ RRD Operation Memorandum No. 2 (October 22, 2004).

One soil sample will be collected for chemical analysis from each two-foot interval, in addition to quality assurance/quality control (QA/QC) samples. A total of approximately 50 soil samples will be collected for analysis for PNAs and TAL metals. A Sampling and Analysis Plan is presented in Table 4.1. Collected samples shall be placed in pre-cleaned laboratory-provided containers, properly labeled, placed on ice, and shipped under chain-of-custody (COC) protocol via overnight courier to Severn Trent Laboratories (STL) in North Canton, Ohio to be analyzed on a two-week turnaround time (TAT).

4.2 DECONTAMINATION

All non-disposable sampling equipment will be decontaminated prior to each use by using an Alconox wash, potable water rinse, followed by a deionized water rinse and allowed to air dry. This includes split-spoon samplers, hand sampling tools, etc.

All generated decontamination water will be visually examined and screened with a PID. All decontamination water will be containerized in DOT-approved 55-gallon drums and labeled as to where it was generated and the initial accumulation date.

4.3 WASTE CHARACTERIZATION

All generated soil cuttings and decontamination water will be visually examined and screened with a PID. All generated soil cuttings and decontamination/development

water will be containerized in DOT-approved 55-gallon drums and labeled as to where it was generated and the initial accumulation date.

Drum contents will be segregated as necessary, based on evidence of impact observed during field screening activities. Two soil waste characterization samples and one water waste characterization sample will be collected from the drums and analyzed for TCLP metals, TCLP volatile organic compounds (VOCs), TCLP semi-volatile organic compounds (SVOCs), reactivity, corrosivity, and ignitability (RCI) on a 2-week TAT for off-Site disposal. Table 4.1 presents the Sampling and Analysis Plan.

Based on the analytical results, the decontamination water will be discharged to the on-Site WWTP or properly disposed of off-Site. Soil cuttings will be disposed off-Site.

5.0 ANALYTICAL PROTOCOLS

Soil samples will be analyzed for PNAs and TAL metals, as presented in the SOW and on Table 4.1. All samples will be analyzed using the United States Environmental Protection Agency approved methods set forth in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition and Promulgated Update, November 1986, "Standards Methods for the Examination of Water and Wastewater", APHA, 19th Edition, 1995, and "Methods for Chemical Analysis of Water and Waste", EPA-600/4-79-020, revised March 1983. Quality Control/Quality Assurance samples will be collected for data and sample quality assessment in accordance with the QAPP. The QAPP is presented in Appendix A of the Work Plan dated November 2002, which was submitted to the MDEQ. An amendment to the QAPP will be submitted under separate cover at a later date.

Following receipt of final analytical data, a data quality assessment and validation will be prepared by a CRA chemist, in accordance with the QAPP presented in Appendix A of the Work Plan dated November 2002, which was submitted to the MDEQ. An amendment to the QAPP will be submitted under separate cover at a later date.

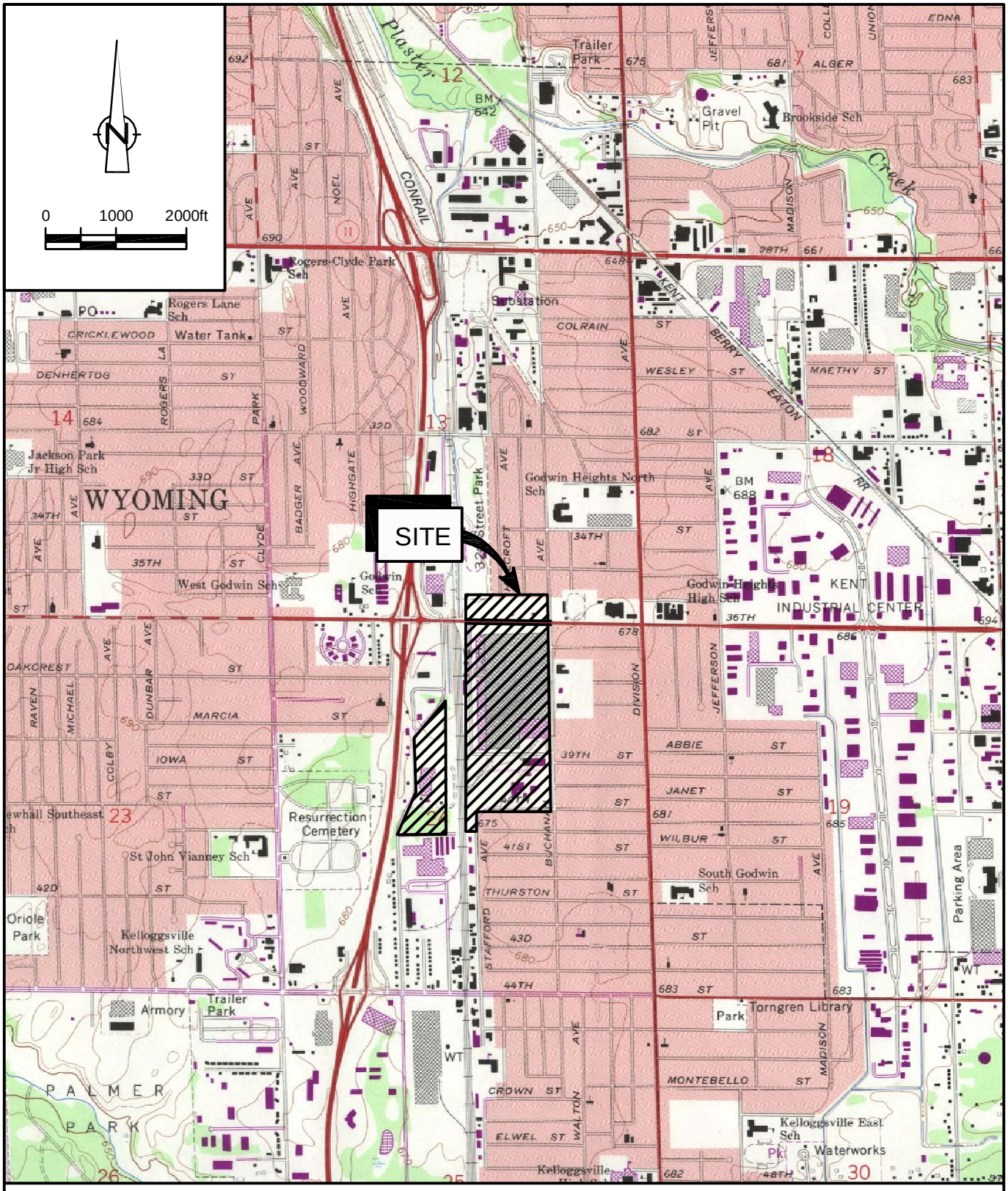
6.0 REPORTING

Upon completion of the field activities, receipt of final analytical results, and data quality assessment and validation, a report summarizing the results will be generated.

7.0 SCHEDULE

A generalized proposed schedule for the implementation of the field activities and reporting is presented below. A more detailed schedule will be provided upon verification of start date.

- Completion of Field Activities – Approximately 1 to 2 days from mobilization to completion.
- Submittal of Data Report – Approximately 6 to 10 weeks from completion of field activities.



SOURCE: USGS QUADRANGLE MAP;
GRAND RAPIDS WEST, MICHIGAN

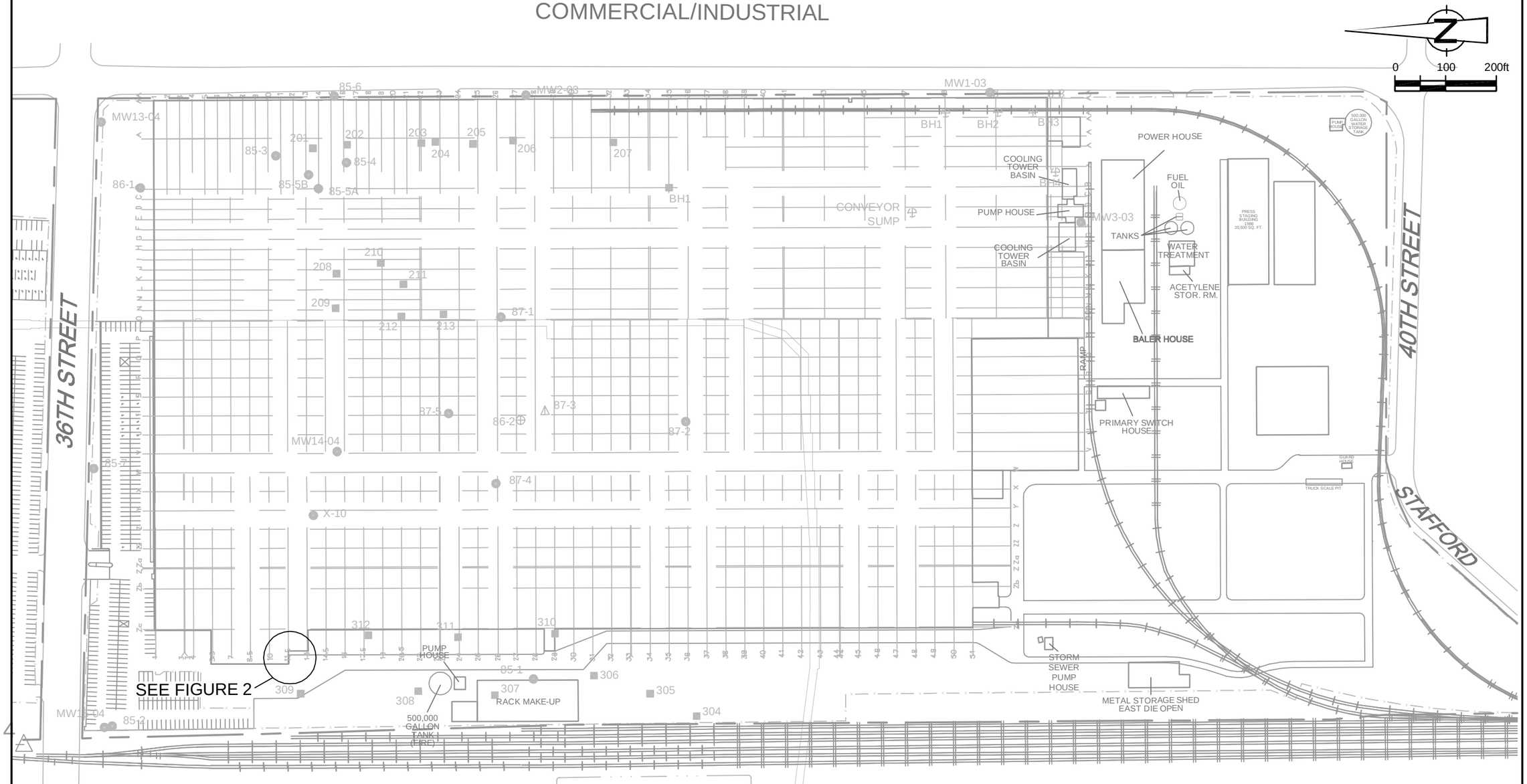
GRAND RAPIDS

figure 1.1

SITE LOCATION
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-10(014)GN-DE001 NOV 14/2006

COMMERCIAL/INDUSTRIAL



LEGEND

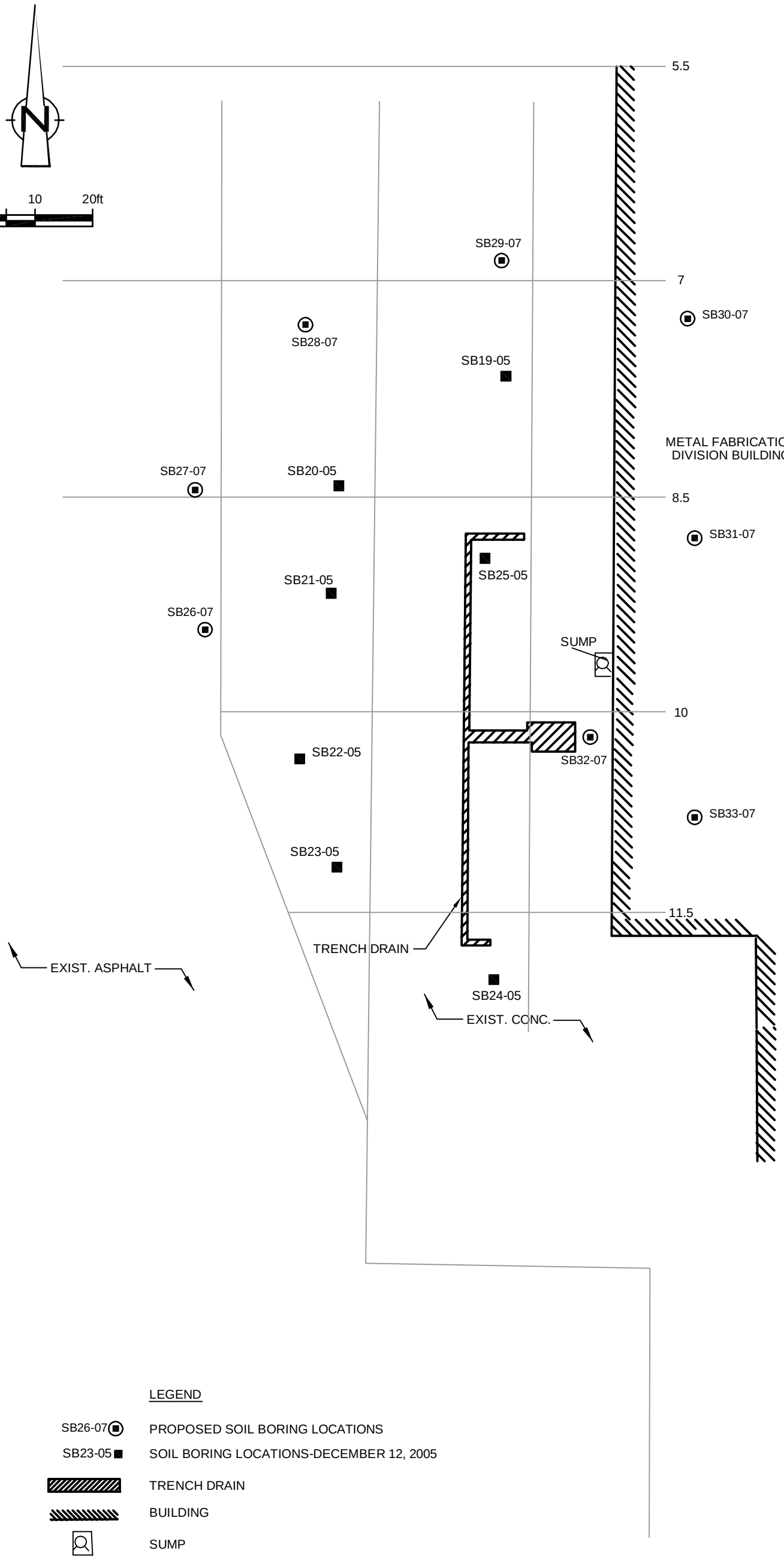
87-2	MONITORING WELL LOCATION
PWDISCH	PURGE WELL LOCATION
307	SOIL BORING LOCATION
X-10	DESTROYED/REMOVED MONITORING WELL LOCATION
C-2	CULVERT LOCATION
87-3	ABANDONED AIR PURGE WELL
BH1	APPROXIMATE LOCATION OF DEWATERING WELLS
	APPROXIMATE SITE BOUNDARY
	FENCE
	RAILROAD
	COLE DRAIN

SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

figure 1.2

APPROXIMATE BULK UNLOAD AREA
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-10(014)GN-DE002 NOV 14/2006



LEGEND

SB26-07	PROPOSED SOIL BORING LOCATIONS
SB23-05	SOIL BORING LOCATIONS-DECEMBER 12, 2005
	TRENCH DRAIN
	BUILDING
	SUMP
5.5	PLANT COLUMN NUMBER

figure 3.1

PROPOSED SOIL BORING LOCATIONS
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-10(014)GN-DE003 JAN 10/2007

TABLE 4.1

SAMPLING AND ANALYSIS PLAN
BULK UNLOAD AREA INVESTIGATION WORK PLAN
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Proposed Investigation Activity	*Reason for Activity*	*Quantity of Sample Locations*	*Quantity of Samples*	*Sample Matrix*	*Sample Interval*	*Analysis*
Collection of Soil Samples	Vertical/horizontal delineation	8	50[1]	soil	vertical intervals of 2 feet	PNAs and TAL Metals
Collection of waste characterization samples	Disposal	2 [2]	2 [2]	soil	--	TCLP metals, TCLP VOCs, TCLP SVOCs, RCI
		1 [2]	1 [2]	water	--	TCLP metals, TCLP VOCs, TCLP SVOCs, RCI

Notes:

[1] Number of samples includes Quality Assurance/Quality Control samples.
[2] Number of samples to be determined in the field.
TAL - Target Analyte List
PNAs - Polynuclear Aromatic Hydrocarbons
TCLP - Toxicity Characteristic Leaching Procedure
SVOCs - Semi-volatile Organic Compounds
RCI - Reactivity, Corrosivity, and Ignitability
VOCs -Volatile Organic Compounds



GM Metal Fabricating Division

November 7, 2002

Mr. Brent Cowins
Environmental Engineer
Louis Padnos Iron & Metal
PO Box 1979
Holland, MI 49422

Mr. Cowins,

I am writing this letter as follow up to our conversation via telephone on November 4, 2002 regarding an incident at the Grand Rapids Padnos Facility involving materials received from General Motors, MFD Grand Rapids that occurred on Wednesday, October 30, 2002.

On October 30, 2002 a section of press sent to Padnos for scrap from General Motors, MFD Grand Rapids, was discovered to contain oil. The oil was found in a cavity of the press that is normally sealed, but had been punctured, allowing oil to accumulate. The puncture was undetected by General Motors personnel prior to shipping the part to Padnos. The discovery of oil was made at Padnos when the metal was cut for processing and oil began leaking from the cavity.

Immediately upon discovery of the oil, General Motors Maintenance Supervisor, Mr. Mike Everts, was notified of the incident by Padnos. Mr. Everts was informed by Padnos that Plummers, an Environmental Response / Cleanup Company, would be contacted by Padnos to cleanup any oil that had leaked from the cavity. Mr. Everts agreed to incur any cost associated with the cleanup effort. Cleanup took place on Wednesday, October 30, 2002.

Thursday, October 31, 2002, I received notification of the previous days' incident. Upon notification, I contacted Mr. Gary Rusticus at Padnos. Mr. Rusticus escorted me to the site of the incident to assess cleanup activities. The area I was shown had been recently covered with new gravel. Mr. Rusticus informed me that the gravel had been added after Plummers cleaned the area. Mr. Rusticus also informed me that Plummers had removed all oil, including any impacted soil, generated from the incident.

Based on the October 31st meeting with Mr. Rusticus and my telephone conversation with you on November 4th in which you confirmed that Padnos is satisfied that all soil impacted by the oil spill has been appropriately cleaned up, I am considering the situation closed, with the exception of payment by General Motors for clean up and disposal fees associated with the incident. If you have any questions, or would like to further discuss the incident, please contact me at 616-246-2992. Thank you for your attention to and cooperation in this effort.

Sincerely,

Bridget Lennon

Bridget Lennon
Senior Environmental Engineer
GM MFD Grand Rapids Metal Plant

cc: S. Tomaszewski, WFG Environmental Manager
P. Jamieson, WFG Environmental Operational Support
M. Everts, TDO Maintenance Supervisor
K. Mazzocco, Facility Area Manager
S. Bhatti, Director of Manufacturing Engineering



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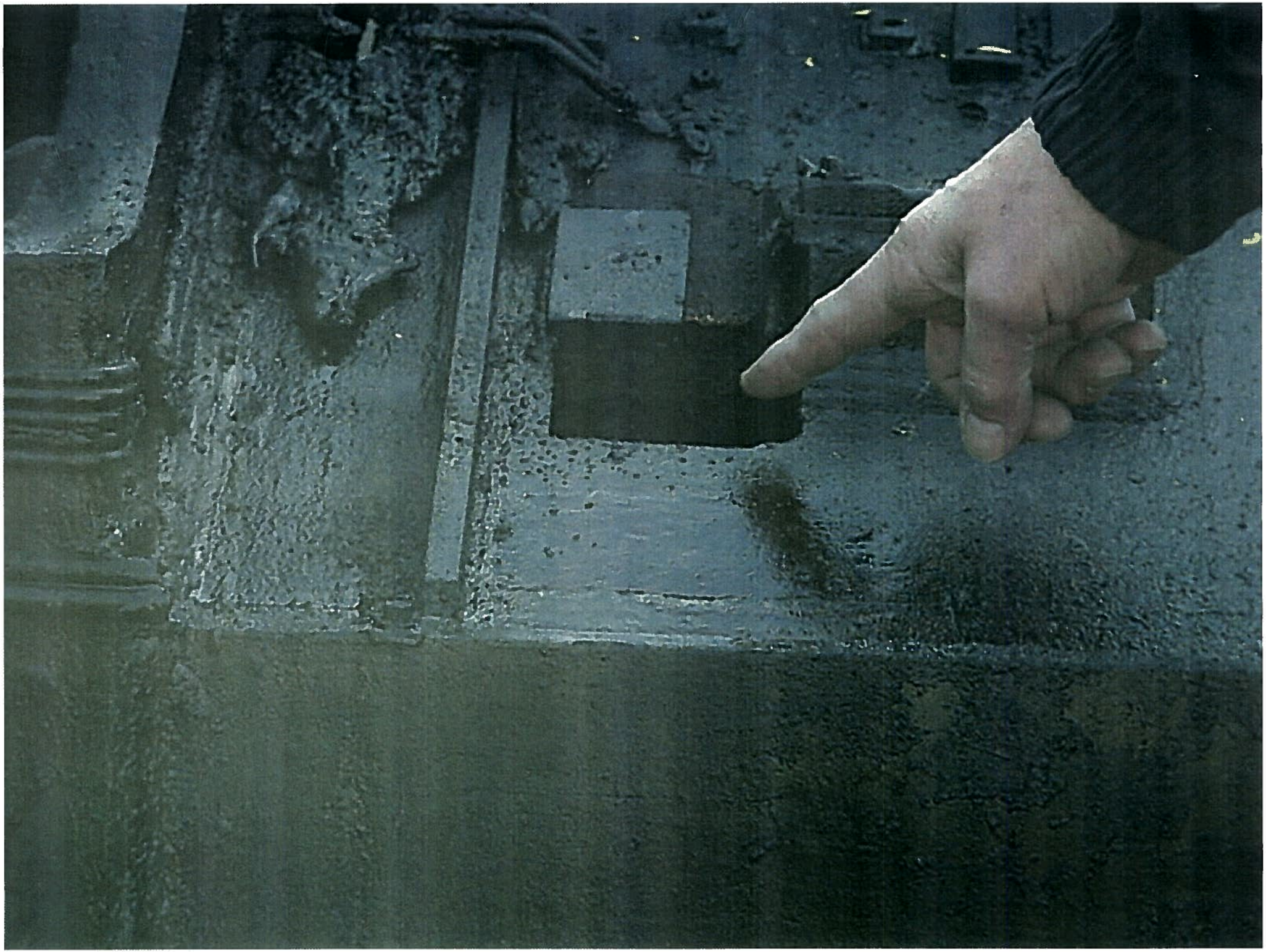
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Senior Environmental Engineer
GM MFD Grand Rapids Metal Plant

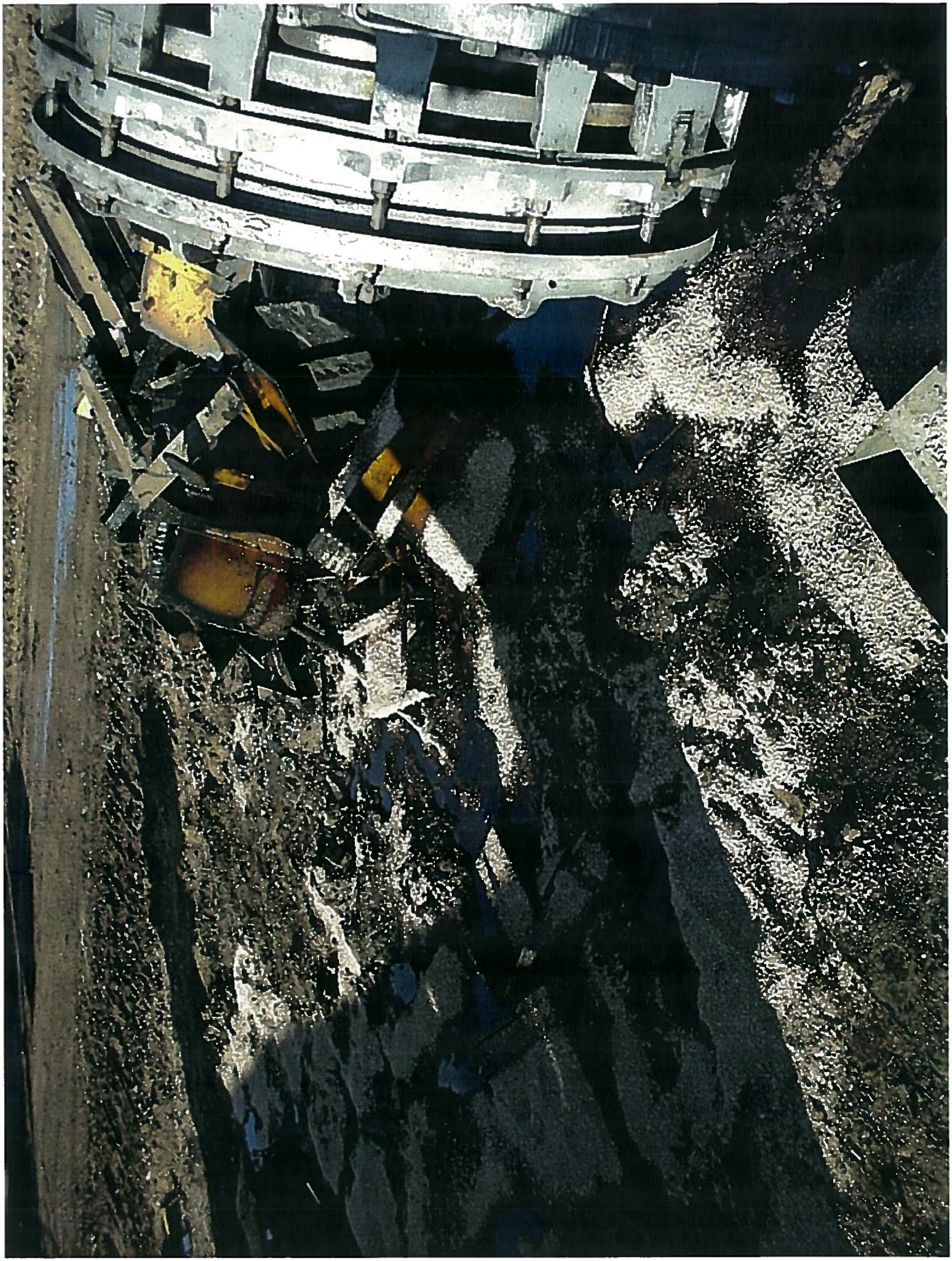
cc: S. Tomaszewski, WFG Environmental Manager
P. Jamieson, WFG Environmental Operational Support
M. Everts, TDO Maintenance Supervisor
K. Mazzocco, Facility Area Manager

bcc: M. Fisher, GM Legal Staff






SHO







DATA REPORT
ACTIVITIES FROM MARCH TO DECEMBER 2003

GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

FEBRUARY 2004
REF. NO. 17360-01 (7)

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1.0 INTRODUCTION

1.1 PURPOSE

Conestoga-Rovers & Associates (CRA) was retained by General Motors Corporation (GM) to conduct an environmental investigation at the GM Grand Rapids Metal Plant located at 300 36th Street in Wyoming, Michigan (Site).

The purpose of the environmental investigation was to outline the activities necessary to further evaluate and delineate chlorinated compound impacts to groundwater above the Michigan Public Act 451, Part 201 Residential Cleanup Criteria; to further define hydrogeologic conditions at the Site; to evaluate the extent and nature of the light non-aqueous phase liquid (LNAPL) identified at the Site; to evaluate potential groundwater and indoor air issues associated with the identified LNAPL and potentially impacted groundwater therefrom; and evaluate the current effectiveness of the groundwater extraction system.

1.2 BACKGROUND AND HISTORY

The Site is a metal fabrication and assembly plant for GM North American Operations (NAO) Group consisting of approximately 45 acres of production activities on approximately 88 acres of land. Figure 1.1 presents the Site location.

The Site currently manufactures quarter panels, floor pans, roof panels, deck lids, doors, and center pillars for assembly plant use. In addition, the Site constructs the dies, fixtures, mechanical devices, and manufacturing aids used internally to produce the aforementioned parts. The Site consists of a main manufacturing building, with several outbuildings including a baler house, wastewater treatment plant (WWTP), powerhouse, and other ancillary structures. The remainder of the Site areas consist of asphalt/concrete paved areas and landscaped areas. The Site is relatively flat, with little or no significant topographic relief. Figure 1.2 presents the Site plan.

The Site is currently zoned General Industrial. Adjoining properties are currently zoned as a mixture of residential, commercial, and industrial properties.

1.2.1 INVESTIGATION HISTORY

Numerous environmental investigations have been conducted at the Site to date. Based on the review of available documentation, three areas of concern were identified: an oil release from a press pit sump pan, chlorinated compounds in soil and groundwater

beneath the Site, and LNAPL observed in groundwater in monitoring wells located in the northeast portion of the main manufacturing building.

Contamination from a release of water-soluble oil from a press pit sump pan was identified in soil and groundwater at the Site in 1981. Based on analytical results from soil and groundwater samples collected in the vicinity of the release and a review of the material safety data sheet (MSDS) for the oil, no chemicals of concern were detected in the soil and groundwater samples collected above the applicable regulatory limits at the time that the samples were collected.

From 1953 to 1979, the Site conducted degreasing operations inside the facility utilizing chlorinated compounds near Column A-15. This area is the suspected source of chlorinated compound contamination to soil and groundwater beneath the facility. Numerous subsurface investigations were conducted at the Site between 1985 and 1989 to identify and delineate the chlorinated compound contamination and geological/hydrogeological conditions at the Site and on the area located hydraulically downgradient of the Site. Chlorinated volatile organic compounds (VOCs) have been identified in groundwater on-Site and off-Site at concentrations above Michigan Act 451, Part 201 Residential Drinking Water Criteria (RDWC). Semi-volatile organic compounds (SVOCs) have been identified in the groundwater on-Site at concentrations above the Michigan Act 451, Part 201 Industrial Groundwater Volatilization to Indoor Air Criteria (IGVIAC). Based on the results of the investigations, a remediation system, consisting of a combination soil vapor extraction (SVE) system and a groundwater extraction system was constructed in 1989 and is currently in place at the facility to remediate the soil and groundwater at the Site. Quarterly monitoring activities are conducted at the Site and reported to the Michigan Department of Environmental Quality (MDEQ). The SVE system has accomplished significant contaminant removal and with the approval of the MDEQ is currently not being operated.

LNAPL was identified in monitoring wells located in the northeast portion of the plant in 1985 during plant expansion activities. Subsequent investigations continued to monitor on a regular basis for the presence of LNAPL in select monitoring wells; however, the nature and extent of the LNAPL had not been determined.

1.3 REPORT ORGANIZATION

The remainder of this report is presented in the following sections:

Section 2.0	Environmental Setting
Section 3.0	Scope of Work
Section 4.0	Results of Investigation
Section 5.0	Summary

2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

Kent County is situated in an area near the southwestern margin of the Michigan Basin. Marshall Sandstone bedrock crops out or is found at shallow depth and underlies all of Kent County with overlapping by the Michigan Formation. The Michigan Formation consists of primarily limestone, gypsum, and dolomite interbedded with shale and sandstone. To the northeast, the Marshall Sandstone and Michigan Formation are progressively overlain by Bayport Limestone, Parma Sandstone, and then the Saginaw Formation. Overlying these rocks is a mass of glacial drift from the Wisconsinan Glacial stage consisting of moraines and former sand lake beds with thicknesses of less than ten feet to several hundred feet. The glacial drift is characterized by ranges of materials from coarse gravel to fine lacustrine clays. The outwash is underlain by a clay layer that has been observed to generally slope to the west-northwest at a gradient of approximately 1 foot in 15 feet. Bedrock in the area of the Site is encountered at approximately 100 feet bgs.

Shallow groundwater in this area of Kent County is generally less than 20 feet bgs. Groundwater flow is influenced by local topography and surface water drains, such as creeks and streams.

Bedrock aquifers near the Site include, in descending order, the Bayport Limestone, the Michigan Formation, and the Marshall Sandstone. Elevated concentrations of naturally occurring sulfate, cadmium, and bicarbonate limit the use of the Bayport Limestone aquifer as a drinking water supply. The Michigan Formation aquifer generally yields only small quantities of poor quality groundwater. The deepest regional aquifer, the Marshall Sandstone aquifer, provides large quantities of better quality groundwater. Groundwater flow in the Bayport Limestone bedrock aquifer in the area is generally uniform and to the southeast.

2.2 SITE GEOLOGY AND HYDROGEOLOGY

Information regarding the geologic conditions at the Site was collected during previous environmental investigations, as well as during this investigation. Numerous soil borings were installed at the Site between 1981 and 2003. Seven soil borings were advanced at the Site and logged by a CRA geologist to further define the geologic conditions at the Site. The stratigraphic logs generated during the environmental investigation are presented in Appendix A.

The overburden at the Site consists of a sand and/or clay surficial layer containing various amounts of sand, gravel, underlain by interbedded layers of silt and clay material. Bedrock was not encountered during any of the environmental investigations conducted to date.

To better understand the surficial geology at the Site, three cross-sections were prepared, based on previous investigation results. Locations of the cross-sections are presented on Figure 2.1. Cross-sections A-A', B-B', and C-C' are presented on Figures 2.2, 2.3, and 2.4, respectively.

2.2.1 GROUNDWATER FLOW DIRECTION

Groundwater level measurements and the corresponding depths were recorded for all monitoring wells. The new wells were developed by removing a minimum of five well volumes until the groundwater was developed to a silt-free condition, if possible, and the turbidity, pH, temperature, dissolved oxygen (DO), oxidation/reduction potential (ORP), and conductivity of the groundwater had stabilized.

Groundwater elevation data for the groundwater monitoring events on December 9, 2002, March 20, 2003, July 14, 2003, October 7, 2003, and December 17, 2003 are presented in Table 2.1. Groundwater was encountered during the environmental investigations at approximately 20 feet bgs. Based on the December 17, 2003 groundwater levels, the approximate groundwater flow direction is to the north-northwest, toward the Cole Drain, which is consistent with historical groundwater flow direction. Figure 2.5 presents the approximate December 17, 2003 groundwater flow direction.

Based on the groundwater flow direction, it appears that groundwater in the vicinity of the Site is discharging to Cole Drain, which acts as a hydrologic barrier. Based on the review of analytical data for monitoring wells located adjacent to the Cole Drain (see Section 4.2), no parameters were currently detected at concentrations exceeding the Michigan Act 451, Part 201 Groundwater-Surface Water Interface (GSI) Cleanup Criteria.

2.3 TOPOGRAPHY

According to the Grand Rapids West, Michigan United States Geological Surrey (USGS) 7.5 minute quadrangle, the Site is located approximately 675 feet above mean sea level (AMSL), with regional elevations ranging from 650 to 690 feet AMSL. The Site and surrounding area display gently rolling to relatively flat topographical features, with local topography sloping towards Cole Drain and Plaster Creek.

2.4 HYDROLOGY

There are no natural surface water bodies on the Site. A stormwater retention pond is located on-Site, which discharges to Cole Drain, under a National Pollution Discharge Elimination System (NPDES) permit. The nearest surface water body to the Site is the Cole Drain, which runs along the entire west side of the Site and flows north. Cole Drain discharges to Plaster Creek, which is part of the Grand River Drainage Basin, and ultimately discharges to Lake Michigan.

3.0 SCOPE OF WORK

The Scope of Work (SOW) for this investigation included the installation of soil borings and monitoring wells, the collection and analysis of discrete groundwater samples utilizing a hydropunch method, the collection of groundwater samples from monitoring wells and the collection and analysis of a LNAPL sample. In addition, the SOW included conducting a LNAPL recovery test. The investigation fieldwork adhered to the methods and procedures specified in the Work Plan, including the Quality Assurance Project Plan (QAPP), which was submitted to the Michigan Department of Environmental Quality (MDEQ) under separate cover on November 24, 2002 and a letter addendum submitted to the MDEQ on May 16, 2003.

Additionally, this report presents a portion of the results of the September and December 2003 Quarterly Groundwater Monitoring Reports for the Site, as presented below.

A Freedom of Information Act (FOIA) review was conducted in April 2003, to identify any potential upgradient sources of contamination, which may be migrating onto the Site.

3.1 SUMMARY OF INVESTIGATION

The SOW for this investigation is documented in the November 2002 Work Plan that was submitted to the MDEQ. The SOW identified in the Work Plan included the installation of soil borings and monitoring wells, the collection of groundwater samples from monitoring wells and hydropunch locations, and the collection of LNAPL samples. In addition, the SOW included conducting a LNAPL recovery test.

The SOW for the Quarterly Groundwater Monitoring Program activities is documented in the September and December 2003 Quarterly Groundwater Monitoring Program Reports, submitted to the MDEQ under separate cover on December 8, 2003 and February 6, 2004, respectively. The SOW identified herein is a portion of the SOW presented in the Quarterly Groundwater Monitoring Program Reports and included the collection and analysis of groundwater samples from monitoring wells, the measurement of static groundwater levels in all monitoring wells, and the measurement of free product levels in select Site monitoring wells.

3.2 SUBSURFACE INVESTIGATION

3.2.1 SOIL BORING INSTALLATION

A total of seven soil borings, HP1-03 through HP7-03, were advanced and logged by a CRA geologist. Stratigraphic soil boring and monitoring well construction logs are presented in Appendix A.

Soil borings were advanced utilizing 4¼-inch inside diameter hollow-stem augers (HSA) with continuous split spoon sample collection. Soil samples were described and classified according to the Unified Soil Classification System (USCS) by a CRA Geologist. Soil samples were field screened for visual/olfactory evidence of impact and with an 11.7 eV photoionization detector (PID). PID readings are recorded on the stratigraphic logs presented in Appendix A.

3.2.2 LNAPL INVESTIGATION

3.2.2.1 LNAPL RECOVERY TESTING

To evaluate the potential extent of LNAPL, a recovery test was conducted. Measurements of LNAPL and groundwater levels were collected from monitoring wells 85-3, 85-5b, and 86-1, which are currently monitored on a monthly, quarterly, or annual basis in the area of the identified LNAPL, utilizing an oil-water interface probe.

LNAPL, in the form of globules of oil in the groundwater, was identified in 85-3 and was not observed in wells 85-5B, 85-6 or 86-1 during this investigation. Measurement of the LNAPL was conducted in 85-3 utilizing an oil-water interface probe and approximately 0.02 feet of LNAPL was observed. A disposable polyethylene bailer was lowered into 85-3 for visual observation of the LNAPL. The groundwater was observed to exhibit a heavy sheen that contained suspended globules. A polyethylene bailer was used to remove the 0.02 feet of LNAPL, with a recovery rate too slow to measure.

3.2.2.2 LNAPL SAMPLE COLLECTION

Only 0.02 feet of LNAPL, consisting of water with a heavy sheen and suspended globules of LNAPL, was observed in monitoring well 85-3. Due to the insufficient LNAPL volume identified in monitoring well 85-3, a sample could not be collected.

3.2.3 GROUNDWATER INVESTIGATION

The vertical and horizontal extent of contamination in groundwater was investigated during the environmental investigation through the collection and analysis of 68 groundwater samples, including 14 quality assurance/quality control (QA/QC) samples (six duplicates, four matrix spike (MS)/matrix spike duplicate (MSD), and four field rinsates) from seven soil borings, HP1-03 through HP7-03; twenty monitoring wells; MW1-03 through MW7-03, 85-3, 87-8, 87-9, 87-10, 87-11, 93-1, 87-13, 87-4, 87-5, 87-2, 87-1, 86-3, and 85-7; and two groundwater extraction wells; 86-2 and PWDISCH. Figure 3.1 presents the hydropunch and monitoring well locations. A sample summary is presented in Table 3.1.

Soil borings were advanced utilizing a 4 ¼-inch inside diameter HSA with continuous split spoon sampling. Discrete groundwater samples were collected from soil borings HP1-03 through HP7-03 utilizing a hydropunch for vertical aquifer sampling (VAS). VAS was conducted starting at the top of the water table and continuing at ten-foot intervals until the confining clay layer was encountered. Discrete groundwater grab sample depths varied slightly dependent on stratigraphic conditions encountered. A 5-foot long stainless steel hydropunch sampler with a 0.01-inch slotted screen and a well point were driven into the undisturbed material through the 4¼-inch HSA annulus. The well point detached from the hydropunch sampler at the specified sample depth and groundwater was allowed to flow into and fill the hydropunch sampler. The amount of time required to fill the hydropunch was dependent upon geological factors such as surrounding media (i.e., sand vs. clay) and depth below ground surface (i.e., increasing water pressure with increasing depth). After sufficient time to fill the hydropunch sampler passed (approximately 15 minutes to 1 hour), the sampler was removed from the soil boring and the groundwater sample was collected.

After completion of the VAS and receipt of analytical data, a second soil boring was advanced adjacent to the VAS soil boring, and a monitoring well was constructed, based on the analytical results from the VAS. Monitoring wells were constructed in the borehole annulus through the auger using 2-inch diameter Schedule 40 polyvinyl chloride (PVC) riser with 5-foot long, 0.01-inch slot Schedule 40 PVC screens. During completion of the installation, the risers were temporarily capped to prevent entrance of foreign materials during the overburden well installation. The risers and screens were joined with flush threaded joints.

An inert silica sand pack was placed around the screen to a height of three vertical feet above the top of the screen using a flush-threaded 1-inch diameter tremie pipe as the

augers were withdrawn from the borehole. If bridging of the silica sand occurred, the bridged material was mechanically broken prior to the addition of more silica sand.

A high solids bentonite grout was installed above the silica sand using a flush-threaded 1-inch diameter tremie pipe. Once the grout was set, the remainder of the annulus was filled with concrete and a flushmounted casing was installed. The protective flushmount casing was centered over the riser and extends into the concrete collar 1-foot bgs. The concrete seal was sloped away from the flushmount casing to deter infiltration of precipitation. Risers were capped with a locking cap.

Monitoring wells were developed as presented in Section 2.2. The generated development water was containerized in DOT approved 55-gallon drums prior to treatment at the on-Site wastewater treat plant (WWTP) prior to discharge to the Publicly Owned Treatment Works (POTW).

Groundwater samples were collected from MW1-03 through MW7-03, 85-3, 87-8, 87-9, 87-10, 87-11, 93-1, 87-13, 87-4, 87-5, 87-2, 87-1, 86-2, 86-3, 85-7, and PWDISCH. Prior to sampling the monitoring wells, the caps were removed and the groundwater was allowed to equilibrate. Stabilization for each well was confirmed by three consecutive readings within 10 percent of each other for the following parameters: pH, turbidity, ORP, DO, temperature, specific conductivity, and draw down of less then 0.3 of a foot.

All groundwater samples were analyzed for Target Compound List (TCL) VOCs. In addition, all wells were sampled for select natural attenuation parameters (alkalinity, chloride, hardness, nitrate, nitrite, sulfate, sulfide, total organic carbon (TOC), calcium, magnesium, manganese, ethane, ethene, and methane) and well 85-3 was sampled for TCL Semi-volatile Organic Compounds (SVOCs). Collected samples were placed in pre-cleaned laboratory-provided containers, properly labeled, and shipped under chain-of-custody (COC) protocol via overnight courier to Severn Trent Laboratories (STL) in North Canton, Ohio to be analyzed on a two week turn around time (TAT) for groundwater samples collected from the monitoring wells and a 72-hr TAT for VAS samples.

3.3 QUARTERLY GROUNDWATER MONITORING PROGRAM

3.3.1 SEPTEMBER 2003 GROUNDWATER MONITORING ACTIVITIES

A total of 30 groundwater samples, including QA/QC samples, were collected from monitoring wells MW1-03 through MW7-03, 82-6, 85-7, 86-3, 87-1, 87-2, 87-4, 87-5, 87-8, 87-9, 87-10, 87-11, 87-13, 93-1 and PWDISCH, and from culvert locations C-1, C-2, and

C-3 on September 30, 2003 through October 7, 2003 for analysis of TCL VOCs, and monitoring wells 85-3, 85-5B, 85-6, and 86-1 were sampled on October 7, 2003 for TCL VOCs and TCL SVOCs. Table 3.2 presents a summary of the samples collected during the September 2003 quarterly sampling event.

Prior to groundwater sample collection, static water levels, and if applicable, the free product thickness, were measured and recorded for the monitoring wells. Well caps were unlocked and removed allowing the water levels in the wells to stabilize. Static water levels and free product levels were measured to the top of each riser. No measurable free product was detected in monitoring wells 85-3, 85-6, or 86-1 during the September 2003 quarterly sampling event. A sheen was observed in well 85-5B during the September monitoring event.

New ¼-inch diameter polyethylene tubing was installed into each of the wells to be sampled. The bottom intake of the tubing was set in the middle of the screened interval for each of the wells. All wells were purged with a peristaltic pump using low-flow purge (LFP) techniques. Wells were purged between 100 and 200 mL per minute with continuous monitoring to confirm less then 0.3 feet of drawdown of the water level. Groundwater quality measurements were recorded in consecutive timed intervals using a Horiba and a HF Scientific turbidity meter. Groundwater quality parameters included pH, specific conductivity, temperature, DO, ORP, and turbidity. Upon groundwater stabilization, based on three consecutive similar readings, groundwater samples were collected.

Water samples collected from PWDISCH and 86-2 were collected from the sample ports attached to the purge wells. Water samples collected from the culvert locations C-1, C-2, and C-3 were collected using a new disposable bottom-filling polyethylene bailer in each location.

Groundwater samples and water samples were analyzed for TCL VOCs with the exception of the groundwater samples collected from 85-3, 85-5B, 85-6, and 86-1, which were analyzed for TCL VOCs and TCL SVOCs. Collected groundwater samples and water samples were containerized in laboratory-approved containers, labeled, packed on ice, and shipped under a COC protocol to STL located in North Canton, Ohio for analysis on a standard two-week TAT.

3.3.2 DECEMBER 2003 GROUNDWATER MONITORING ACTIVITIES

A total of 30 groundwater samples, including QA/QC samples, were collected from monitoring wells MW1-03 through MW7-03, 85-7, 86-2, 86-3, 87-1, 87-2, 87-4, 87-5, 87-8,

87-9, 87-10, 87-11, 87-13, 93-1 and PWDISCH, and from culvert locations C-1, C-2, and C-3 on December 17, 2003 through December 18, 2003 for analysis of TCL VOCs, and monitoring wells 85-3, 85-5B, 85-6, and 86-1 were sampled on December 17, 2003 TCL SVOCs. Table 3.3 presents a summary of the samples collected during the December 2003 quarterly sampling event.

Prior to groundwater sample collection, static water levels, and if applicable, the free product thickness, were measured and recorded for the monitoring wells. Well caps were unlocked and removed allowing the water levels in the wells to stabilize. Static water levels and free product levels were measured to the top of each riser. No measurable free product was detected in monitoring wells 85-3, 85-6, or 86-1 during the December 2003 quarterly sampling event.

New ¼-inch diameter polyethylene tubing was installed into each of the wells to be sampled. The bottom intake of the tubing was set in the middle of the screened interval for each of the wells. All wells were purged with a peristaltic pump using LFP techniques. Wells were purged between 100 and 200 mL per minute with continuous monitoring to confirm less then 0.3 feet of drawdown of the water level. Groundwater quality measurements were recorded in consecutive timed intervals using a Horiba and a HF Scientific turbidity meter. Groundwater quality parameters included: pH, specific conductivity, temperature, DO, ORP, and turbidity. Upon groundwater stabilization, based on three consecutive similar readings, groundwater samples were collected.

Water samples collected from PWDISCH and 86-2 were collected from the sample ports attached to the purge wells. Water samples collected from the culvert locations C-1, C-2, and C-3 were collected using a new disposable bottom-filling polyethylene bailer in each location.

Groundwater samples and water samples were analyzed for TCL VOCs with the exception of the groundwater samples collected from 85-3, 85-5B, 85-6, and 86-1, which were analyzed for TCL SVOCs. Collected groundwater samples and water samples were containerized in laboratory-approved containers, labeled, packed on ice, and shipped under a COC protocol to STL located in North Canton, Ohio for analysis on a standard two-week TAT.

3.4 FREEDOM OF INFORMATION ACT REVIEW

CRA completed an adjacent property review in the immediate upgradient vicinity of the Site on April 24, 2003. The adjacent property review included observing and recording the addresses and facility names of adjacent properties along Buchanan Avenue, 36th

Street, and 39th Street, which are located hydraulically upgradient of the Site. Based on the observations, a number of commercial and light industrial type facilities are located upgradient of the Site.

Based on the results of the adjacent property identification, a written Freedom of Information Act (FOIA) request was submitted to the Michigan Department of Environmental Quality (MDEQ), Remediation and Redevelopment Section on April 29, 2003. The FOIA request included the properties and addresses noted during the visual inspection to be adjacent to the Site.

One file was identified for all requested properties: Conical Tool Company (Conical Tool), located at 3890 Buchanan Avenue. On May 13, 2003, CRA performed a file review at the MDEQ Remediation and Redevelopment office located in Wyoming, Michigan. Documentation that was available for CRA's review on May 13, 2003 included:

- Phase II Environmental Site Assessment (ESA) prepared by Dixon Environmental Consulting, Inc. (Dixon), dated January 28, 2002; and
- Preliminary Soil and Groundwater Data for Conical Tool Company prepared by Dixon, dated September 3, 2002.

In addition, the following reports were obtained from the MDEQ for the properties located at 3700 and 3740 Buchanan Street, and 150 36th Avenue:

- Aboveground Storage Tank (AST) Inspection Reports for 3700 Buchanan Street;
- Underground Storage Tank (UST) Closure Report and associated letters for 3740 Buchanan Street; and
- UST Inspection Reports for 150 36th Street.

A copy of the memorandum summarizing the FOIA review and the documents obtained during the FOIA review is presented in Appendix B.

3.5 BOREHOLE ABANDONMENT

Upon completion of soil and discrete groundwater sample collection, each borehole was completed as a monitoring well or abandoned. All soil borings not completed as monitoring wells during the environmental investigation were abandoned using a tremie method to backfill the annulus with bentonite grout to the ground surface.

Abandonment details are presented on the stratigraphic logs, which are presented in Appendix A.

Soil cuttings from all soil boring and monitoring well installations were containerized, and characterized for off Site disposed as described in Section 3.7.

3.6 SURVEYING

A survey of the Site was conducted by CRA surveyors. Soil boring locations, reference features, and monitoring well locations were surveyed. Elevations were established to the nearest 0.01-foot. The survey was benchmarked by National Geographic Survey (NGS) Station Number NF0822.

3.7 DECONTAMINATION AND CONTAINMENT PROCEDURES

Upon mobilization to the Site and prior to commencing drilling, the drill rig and all associated equipment were thoroughly cleaned using a high pressure, low volume steam wash and inspected by CRA field personnel. Before initiating drilling at each subsequent location, the augers, drill rod, hydropunch sampler, and all other non-disposable sampling and drilling equipment were decontaminated to prevent cross-contamination.

All non-disposable sampling equipment was decontaminated prior to each use by using an Alconox wash, a potable water rinse, a deionized water rinse and was allowed to air dry.

All decontamination water was containerized in DOT approved 55-gallon drums and discharged to the on-Site WWTP.

3.8 DISPOSITION OF INVESTIGATION-DERIVED WASTE

Soil cuttings generated during drilling were containerized in DOT approved 55-gallon drums. All soil cuttings were properly labeled, characterized, sealed, and staged on Site in a GM designated area near the maintenance building. Soil cuttings generated during drilling were characterized as non-hazardous waste. Fifty-two 55-gallon drums of soil cutting waste were shipped off-Site for disposal at Waste Management's CWM Model City Landfill, located in Model City, New York.

Waste characterization samples were divided into upgradient and downgradient samples. One composite waste characterization soil sample was collected from the 55-gallon drums containing the soil cuttings of HP1-03 and HP2-03 for analysis of Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs, TCLP metals, reactivity, corrosivity, and ignitibility (RCI), and TCL VOCs. An additional composite waste characterization soil sample was collected from the 55-gallon drums containing the soil cuttings of HP3-03 through HP7-03 for analysis of TCLP VOCs, TCLP SVOCs, TCLP metals, reactivity, corrosivity, and ignitability (RCI), and TCL VOCs. Soil samples collected for laboratory analysis were placed in pre-cleaned laboratory-provided containers, labeled, and shipped under COC protocol via overnight courier to STL in North Canton, Ohio to be analyzed on a one week TAT. A sample summary is presented in Table 3.1. Analytical results are presented in Appendix C.

Decontamination/purge water was containerized in DOT approved 55-gallon drums. All decontamination/purge water was properly labeled, sealed and staged in fifteen DOT approved 55-gallon drums. Decontamination/purge water was discharged to the on-Site WWTP.

All personal protective equipment (PPE) and decontamination liner material was properly labeled, characterized, sealed, and staged in two DOT approved 55-gallon drums and shipped, as non-hazardous waste for disposal at Waste Management's CWM Model City Landfill, located in Model City, New York.

Waste disposal documentation is presented in Appendix D.

4.0 RESULTS OF INVESTIGATION

4.1 COMPARISON OF ANALYTICAL RESULTS

Analytical results for groundwater samples were compared to the cleanup criteria and screening levels found in the Michigan Act 451, Part 201 Residential and Industrial Cleanup Criteria. Waste characterization sample results were compared to Resource Conservation and Recovery Act (RCRA) waste characteristics. Laboratory analytical results for samples collected during this environmental investigation, the September 2003 quarterly groundwater sampling event, and the December 2003 quarterly groundwater sampling event are presented in Appendix C. Data validation memorandums for this environmental investigation, September 2003 quarterly groundwater sampling event, and December 2003 quarterly groundwater sampling event are presented in Appendix E.

4.2 RESULTS OF INVESTIGATION

A total of 68 groundwater samples were collected and analyzed for TCL VOCs, one groundwater sample was collected and analyzed for TCL SVOCs, and 26 groundwater samples were collect and analyzed for select natural attenuation parameters during the environmental investigation to further delineate the horizontal and vertical extent of TCE contamination identified during the previous investigations at the Site and downgradient of the Site. The sample from well 85-3 was also analyzed for TCL SVOCs. A sample summary is presented in Table 3.1. Plan 1 presents a summary of select TCL VOCs in groundwater. Plan 2 presents the isocontours for select TCL VOCs, cis-1,2-DCE, TCE, PCE, and VC on the southern portion of the Site. Plan 3 presents the isocontours for select TCL VOCs, cis-1,2-DCE, TCE, PCE, and VC on the northern portion of the Site.

4.2.1 SOIL INVESTIGATION RESULTS

Soil samples collected during the environmental investigation were examined by a CRA geologist for odor and visual impact and screened with a PID. No soil samples above the water table were observed to exhibit contamination; therefore, no soil samples were collected and submitted for laboratory analysis. Descriptions and PID readings for soil intervals are included in the stratigraphic borehole logs presented in Appendix A.

4.2.2 LNAPL TEST RESULTS

Prior to groundwater sampling, LNAPL was evaluated in 85-3. Measurement of the LNAPL was conducted in 85-3 utilizing an oil-water interface probe and approximately 0.02 feet of LNAPL was observed. A disposable polyethylene bailer was lowered into 85-3 for visual observation of the LNAPL. The LNAPL was observed to exhibit a heavy sheen that contained suspended globules. Due to insufficient sample volume, a LNAPL sample was not collected. LNAPL was not observed in other wells during this investigation; however, a sheen was observed in wells 85-5B, 85-6 and 86-1.

One groundwater sample was collected from monitoring well 85-3 for analysis for TCL SVOCs. Bis(2-Ethylhexyl) phthalate was detected in the groundwater sample collected from 85-3 (screened 20.3 to 30.3 feet bgs) at 20 µg/L, which is above the Michigan Act 451, Part 201 RDWC of 6 µg/L.

4.2.3 GROUNDWATER INVESTIGATION RESULTS

A total of 68 groundwater samples, including 14 QA/QC samples, were collected during the environmental investigation. Groundwater samples were analyzed for TCL VOCs, TCL SVOCs, and select natural attenuation parameters, and VAS samples were analyzed for TCL VOCs. Table 3.1 presents a summary of the collected samples. Table 4.1 presents TCL VOC analytical results, Table 4.2 presents TCL SVOC analytical results, and Table 4.3 presents select natural attenuation parameter analytical results.

Several parameters were detected in groundwater samples collected at the Site, including: bis(2-ethylhexyl) phthalate, tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride (VC) above criteria. Groundwater sample results for the VAS and monitoring well samples collected July 14, 15, and August 6, 2003, are discussed below.

Bis(2-Ethylhexyl) phthalate was detected in the groundwater sample collected from 85-3 (screened 20.3 to 30.3 feet bgs) at 20 µg/L, which is above the Michigan Act 451, Part 201 RDWC of 6 µg/L.

PCE was detected in groundwater samples collected from MW2-03 (screened 22 to 27 feet bgs) and MW1-03 (screened 30 to 35 feet bgs), at concentrations of 14 µg/L and 72 µg/L, which are above the Michigan Act 451, Part 201 RDWC of 5.0 µg/L. PCE was also detected in groundwater samples collected from HP2-03 at concentrations of 31 µg/L (at 24 feet bgs), 7.2 µg/L (at 34 feet bgs), and HP1-03 at concentrations of 7.0 µg/L (at 24 feet bgs), 7.1 µg/L (duplicate, at 24 feet bgs), and 66 µg/L (at 34 feet bgs).

TCE was detected in groundwater samples collected from MW5-03 (screened 30 to 35 feet bgs), 87-10 (screened 29 to 32 feet bgs), 87-11 (screened 30 to 33 feet bgs), 87-1 (screened 8.5 to 19.5 feet bgs), and 87-2 (screened 7.5 to 18.5 feet bgs), at concentrations of 7.4 µg/L, 27 µg/L, 28 µg/L, 55 µg/L, and 26 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 5.0 µg/L. TCE was also detected in groundwater samples collected from HP5-03 (at 34 feet bgs), at a concentration of 5.9 µg/L.

VC was detected in the groundwater sample collected from 87-11 (screened 30 to feet 33 bgs), 87-5 (screened 39.5 to 50.5 feet bgs), and 87-1 (screened 8.5 to 19.5 feet bgs), at concentrations of 3.7 µg/L, 130 µg/L, and 7.2 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 2.0 µg/L.

No other TCL VOCs were detected in the groundwater samples collected during the investigation above the Michigan Act 451, Part 201 RDWC. Plan 1 presents a summary of TCL VOCs identified in groundwater.

Based upon the distribution of contaminant concentrations identified across the Site, and the results of the natural attenuation parameters, there is an indication that natural attenuation of contaminants is occurring at the Site. There appear to be two distinct areas where natural attenuation is occurring; one is located just north of the extraction well 86-2, and the other is located downgradient of the second recovery well PWDISCH. Both areas identified contain detectable concentrations of 1,1-dichloroethene, 1,1-dichloroethane, cis-1,2-dichloroethene, and vinyl chloride (daughter products of PCE and TCE). Figure 4.1 presents the degradation product contours. Field parameters also provide indirect evidence of natural attenuation with low levels of dissolved oxygen and negative oxidation-reduction potential in both areas noted above. Groundwater from all sampled monitoring wells was also submitted for laboratory analysis of natural attenuation indicator parameters (ethene, ethane, methane, nitrogen, and sulfate). The analytical results for these parameters also provide an indication that natural attenuation is occurring in the two areas noted above (i.e., methane detections and reduced concentrations of nitrogen and sulfate). Table 4.3 presents the results of the natural attenuation parameter sampling.

4.3 SEPTEMBER AND DECEMBER QUARTERLY MONITORING RESULTS

4.3.1 SEPTEMBER QUARTERLY MONITORING RESULTS

A total of 30 groundwater samples, including QA/QC samples, were collected from monitoring wells MW1-03 through MW7-03, 82-6, 85-7, 86-3, 87-1, 87-2, 87-4, 87-5, 87-8,

87-9, 87-10, 87-11, 87-13, 93-1 and PWDISCH, and from culvert locations C-1, C-2, and C-3 for analysis of TCL VOCs, and monitoring wells 85-3, 85-5B, 85-6, and 86-1 were sampled for TCL VOCs and TCL SVOCs during the September 2003 groundwater quarterly monitoring event. Table 3.2 presents a summary of the samples collected during the September 2003 quarterly sampling event. Table 4.4 presents the TCL VOC results and Table 4.5 presents the TCL SVOC results.

Several parameters were detected in groundwater samples collected at the Site during September 2003 quarterly monitoring sampling, including: bis(2-ethylhexyl) phthalate, chrysene, cis-1,2-dichloroethene (cis-1,2-DCE), PCE, TCE, and VC above the Michigan Act 451, Part 201 Residential Drinking Water Criteria. Groundwater sample results for the September 2003 quarterly groundwater monitoring activities are discussed below.

Bis(2-Ethylhexyl) phthalate was detected in the groundwater sample collected from 85-3 (screened 20.3 to 30.3 feet bgs) at 97 µg/L, which is above the Michigan Act 451, Part 201 RDWC of 6 µg/L.

Chrysene was detected in the groundwater sample collected from 85-3 (screened 20.3 to 30.0 feet bgs) at 36 µg/L, which is above the Michigan Act 451, Part 201 RDWC of 5.0 µg/L.

Cis-1,2-DCE was detected in groundwater samples collected from 87-11 (screened 30 to 33 feet bgs) and 87-1 (screened 24 to 29 feet bgs), at concentrations of 130 µg/L and 100 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 70 µg/L.

PCE was detected in groundwater samples collected from MW2-03 (screened 22 to 27 feet bgs), MW1-03 (screened 30 to 35 feet bgs), and 85-6 (screened 19.5 to 24.5 feet bgs) at concentrations of 13 µg/L, 83 µg/L, and 5.3 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 5.0 µg/L.

TCE was detected in groundwater samples collected from MW5-03 (screened 30 to 35 feet bgs), 87-10 (screened 29 to 32 feet bgs), 87-11 (screened 30 to 33 feet bgs), and 87-2 (screened 7.5 to 18.5 feet bgs), at concentrations of 6.2 µg/L, 44 µg/L, 34 µg/L, and 8.5 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 5.0 µg/L.

VC was detected in the groundwater sample collected from 87-11 (screened 30 to feet 33 bgs), 87-5 (screened 39.5 to 50.5 feet bgs), and 87-1 (screened 8.5 to 19.5 feet bgs), at concentrations of 5.0 µg/L, 92 µg/L, and 5.1 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 2.0 µg/L.

No other TCL VOCs or SVOCs were detected in the groundwater samples collected during the investigation above the Michigan Act 451, Part 201 RDWC.

4.3.2 DECEMBER QUARTERLY MONITORING RESULTS

A total of 30 groundwater samples, including QA/QC samples, were collected from monitoring wells MW1-03 through MW7-03, 85-7, 86-2, 86-3, 87-1, 87-2, 87-4, 87-5, 87-8, 87-9, 87-10, 87-11, 87-13, 93-1 and PWDISCH, and from culvert locations C-1, C-2, and C-3 for analysis of TCL VOCs, and monitoring wells 85-3, 85-5B, 85-6, and 86-1 were sampled for TCL SVOCs during the December quarterly groundwater monitoring event. Table 3.3 presents a summary of the samples collected during the December 2003 quarterly sampling event. Table 4.6 presents the TCL VOC results and Table 4.7 presented the TCL SVOC results.

Several parameters were detected in groundwater samples collected at the Site during December 2003 quarterly monitoring sampling, including: 1,2-DCE, PCE, TCE, and VC above criteria, however bis(2-ethylhexyl) phthalate and chrysene were not detected above criteria for December. Groundwater sample results for the December 2003 quarterly groundwater monitoring activities are discussed below.

Cis-1,2-DCE was detected in groundwater sample collected from 87-11 (screened 30 to 33 feet bgs) at a concentration of 130 µg/L, which is above the Michigan Act 451, Part 201 RDWC of 70 µg/L.

PCE was detected in groundwater samples collected from MW2-03 (screened 22 to 27 feet bgs) and MW1-03 (screened 30 to 35 feet bgs) at concentrations of 7.2 µg/L and 86 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 5.0 µg/L.

TCE was detected in groundwater samples collected from MW5-03 (screened 30 to 35 feet bgs), 87-10 (screened 29 to 32 feet bgs), 87-11 (screened 30 to 33 feet bgs), 87-2 (screened 7.5 to 18.5 feet bgs), and 87-1 (screened 8.5 to 19.5 feet bgs and 24 to 29 feet bgs), at concentrations of 9.8 µg/L, 44.0 µg/L, 11 µg/L, 35 µg/L (33 µg/L in a duplicate sample), and 76 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 5.0 µg/L.

VC was detected in the groundwater sample collected from 87-1 (screened 8.5 to 19.5 feet bgs and 24 to 29 feet bgs), and 87-5 (screened 39.5 to 50.5 feet bgs), at concentrations of 5.2 µg/L and 120 µg/L, respectively, which are above the Michigan Act 451, Part 201 RDWC of 2.0 µg/L.

No other TCL VOCs or TCL SVOCs were detected in the groundwater samples collected during the investigation above the Michigan Act 451, Part 201 RDWC.

4.4 ANALYTICAL DATA VALIDATION RESULTS SUMMARY

Soil and groundwater samples were submitted under COC protocol to STL in North Canton, Ohio. All samples were analyzed using EPA approved methods set forth in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition and Promulgated Update, November 1986.

The laboratory analytical data was reviewed by a CRA chemist to determine the quality and validity of the analytical data resulting from the collection and analysis of groundwater samples. The laboratory analytical data are presented in Appendix C. The data validation memorandum is presented in Appendix E.

The data validation was performed in accordance with the requirements of the State of Michigan, as identified in the Site-specific QAPP and as approved by MDEQ. The data is usable with a few qualifiers as noted in the validation memorandum in Appendix E.

4.5 FREEDOM OF INFORMATION ACT REVIEW

4.5.1 CONICAL TOOL COMPANY

Phase II ESA

A Phase II ESA was conducted by Dixon on January 28, 2002, for Conical Tool. The scope of work for the Phase II ESA was determined based on the results of a Phase I ESA previously conducted by Dixon on January 29, 2002. A copy of the Phase I ESA was not available for review by CRA.

Based on information provided in the Phase II ESA, the Phase I ESA identified one Recognized Environmental Condition (REC) at the Conical Tool site, that being two areas of discolored surface soil. One area was identified during the Site inspection portion of the January 2002 Phase I ESA, and one area was observed by Dixon during the review of 1970 and 1975 aerial photographs. The area observed in the aerial photographs was formerly used as a storage area for scrap steel and empty drums. This area is currently located beneath the northeastern portion of the building. The area of discolored surface soil observed during the Phase I ESA is located outside, near the northeast corner of the existing building.

Based on the results of the Phase I ESA, Dixon completed a Phase II ESA on January 28, 2002, and February 6, 2002. One soil boring, SB-1, was installed in January 2002 to an approximate depth of 5 feet below ground surface (bgs) and one soil boring, SB-2, was installed in February 2002 to an approximate depth of 3.5 feet bgs. Four soil samples, two from each soil boring, were collected for laboratory analysis for VOCs, polynuclear aromatic hydrocarbons (PNAs), and metals (aluminum, arsenic, cadmium chromium, iron, lead, nickel, molybdenum, silver and zinc).

TCE was detected in the soil sample collected from SB-2 at a concentration of 790 µg/kg, which is above the current Michigan Act 451, Part 201 Residential & Commercial I (Residential) Drinking Water Protection Criterion (DWPC) of 100 µg/kg. The soil sample collected from SB-1 identified 1,3,5-trimethylbenzene at a concentration of 2,400 µg/kg, which is above the Michigan Act, Part 201 Residential DWPC of 1,800 µg/kg. Chromium was detected in the soil samples collected from SB-1 and SB-2 at concentrations of 49,000 µg/kg and 1,500,000 µg/kg, respectively, which are above the Michigan Act 451, Part 201 Residential DWPC of 30,000 µg/kg. Molybdenum was detected in the soil samples collected from SB-1 and SB-2 at concentrations of 43,000 µg/kg and 1,500,000 µg/kg, respectively, which are above the current Michigan Act 451, Part 201 Residential DWPC of 1,500 µg/kg. Nickel was detected in the soil sample collected from SB-2 at a concentration of 120,000 ug/kg, which is the Michigan Act 451, Part 201 Residential DWPC of 100,000 µg/kg. Iron was detected in soil samples collected from SB-2 at concentrations of 46,000,000 µg/kg, and 17,000,000 µg/kg, respectively, which are above the Residential DWPC of 6,000 µg/kg and above the Michigan Statewide Default Background Level Criterion of 12,000,000 µg/kg.

Preliminary Soil and Groundwater Data for Conical Tool Company

Based on the results of the Phase II ESA, additional subsurface investigation activities were conducted by Dixon, including additional soil sampling, the installation of five monitoring wells, and soil excavation and verification sampling in the areas of historic and current soil discoloration. Results were present in preliminary data form in the FOIA file reviewed.

A soil sample collected from GP-9 detected 1,2,4-trimethylbenzene at a concentration of 24,000 µg/kg, which is above the Michigan Act 451, Part 201 Residential DWPC of 2,100 µg/kg. A soil sample collected from GP-9 detected 1,3,5-trimethylbenzene at a concentration of 7,900 µg/kg, which is above the Michigan Act 451, Part 201 Residential DWPC of 1,800 µg/kg. Dibenzo(a,h)anthracene was detected in a soil sample collected from GP-9 at a concentration of 4,400 µg/kg, which is above the Michigan Act 451, Part

201 Residential DWPC of 2,000 µg/kg. Chromium was detected in soil samples collected from VSR-2, VSR-7, VSR-8, GP-2, GP-3, GP-4, GP-5, GP-8 and GP-9 at concentrations of 69,000 µg/kg, 450,00 µg/kg, 110,000 µg/kg, 51,000 µg/kg, 540,000 µg/kg, 82,000 µg/kg, 110,000 µg/kg, 62,000 µg/kg, and 380,000 µg/kg, respectively, which are above the Michigan Act 451, Part 201 DWPC of 30,000 µg/kg. Molybdenum was detected in soil samples collected from VSR-1, VSR-2, VSR-3, VSR-4, VSR-5, VSR-6, VSR-7, VSR-8, VSR-9, VSSR-10, VSR-11, VSR-12, GP-2, GP-3, GP-4, GP-5, GP-6, GP-7, GP-8, GP-9, and GP-10 at concentrations of 3,400 µg/kg, 57,000 µg/kg, 2,800 µg/kg, 18,000 µg/kg, 6,500 µg/kg, 3,400 µg/kg, 330,000 µg/kg, 120,000 µg/kg, 27,000 µg/kg, 24,000 µg/kg, 4,500 µg/kg, 8,900 µg/kg, 38,000 µg/kg, 580,000 µg/kg, 83,000 µg/kg, 230,000 µg/kg, 5,400 µg/kg, 4,500 µg/kg, 53,000 µg/kg, 250,000 µg/kg and 950 µg/kg, respectively, which are above the current Michigan Act 451, Part 201 DWPC of 1,500 µg/kg. Nickel was detected in a soil sample collected from GP-9 at a concentration of 140,000 µg/kg, which is above the Michigan Act 451, Part 201 DWPC of 100,000 µg/kg. Silver was detected in a soil sample collected from GP-9 at a concentration of 15,000 µg/kg, which is above the Michigan Act 451, Part 201 DWPC of 4,500 µg/kg. Iron was detected in soil samples VSR-7, GP-2, and GP-3 at concentrations of 25,000,000 µg/kg, 26,000,000 µg/kg, and 21,000,000 µg/kg, respectively, which are above the Michigan Statewide Default Background Level Criterion of 12,000,000 µg/kg.

TCE was detected in the groundwater samples collected from MW-1, MW-2, MW-3, MW-4, GP-1, and GP-5 at concentrations of 7.8 µg/L, 28 µg/L, 85 µg/L, 17 µg/L, 14 µg/L, and 100 µg/L, respectively, which are above the current Michigan Act 451, Part 201 Drinking Water Criterion (DWC) of 5.0 µg/L, which is above the Michigan Act 451, Part 201 DWC of 5 µg/L. Tetrachloroethene (PCE) was detected in the groundwater sample collected from MW-4 at a concentration of 12 µg/L, which is above the Michigan Act 451, Part 201 DWC of 5 µg/L.

Based on discussions with Mr. Terry O'Brien, the MDEQ Project Manager for the Conical Tool site, no further investigations have been conducted or scheduled at this time.

4.5.2 MISCELLANEOUS ADJACENT PROPERTIES

AST Inspection Reports (Sunshine Systems Factory Showroom, 3700 Buchanan Street)

AST inspection reports were available for July 1980, April 1991, January 1993, July 1994, January 995, May 1995, August 1995, May 1996, January 1997, June 1997, July 1997, August 1997, December 1997, March 1998, May 1998, February 1999, July 1999, August

1999, December 1998, and January 2001. The Michigan State Police approved the installation of two 1,850-gallon liquefied petroleum (LP) gasoline ASTs at the property on November 3, 1980. According to inspection reports, a third 1,850-gallon LP gasoline AST was installed in 1985. Two 1,000-gallon LP gasoline ASTs were installed at the property in April 1991. The two original 1,850-gallon LP gasoline ASTs were removed in April 1991. The three remaining ASTs were removed in 1996 and replaced by a 12,000-gallon LP gasoline AST. AST inspection reports cite non-environmental violations or deficiencies including, but not limited to:

- Electrical inspection needs;
- Verified flow rates;
- Incorrect labeling/painting; and
- Fire extinguisher availability.

UST Closure Report and Associated Letters (currently Fed-Ex Freight, 3740 Buchanan Street)

A UST closure report, prepared by Superior Environmental Corporation, dated October 15, 1990, was available for review. According to the report, three USTs (one 12,000-gallon gasoline UST, one 15,000-gallon diesel UST, and one 1,000-gallon used oil UST) were excavated by Pitsch's Wrecking. No visible staining or petroleum odors were observed during the excavation activities. Two soil samples were collected per tank and analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX). According to the report, the analytical results indicated that no concentrations of TPH-GRO, TPH-DRO, or BTEX were reported above the laboratory detection limits. A letter from the Michigan State Police, dated April 17, 1991, referencing the UST Closure Report, indicates that no further information/action is required.

UST Inspection and Associated Reports (Amoco Station, 150 36th Street)

According to Notifications for Underground Storage Tanks forms received by the Michigan State Police in June 1989, five USTs (one 9,500-gallon gasoline UST, one 6,000-gallon gasoline UST, two 4,000-gallon gasoline USTs, one 500-gallon waste oil UST) were removed and replaced by four USTs (two 10,000-gallon gasoline USTs, one 6,000-gallon gasoline UST, one 4,000 gallon-diesel UST) from the property in March 1989. UST inspection reports were available for June 1990, January 1997, March 1997, June 1999, July 1999, August 1999, June 2002, and July 2002. These UST inspection reports cite non-environmental violations or deficiencies including, but not limited to:

- Inventory control needs;
- Shut-off valve needs;
- Annual testing requirements;
- Tank gauging needs; and
- Fire extinguisher needs.

A copy of the memorandum summarizing the FOIA review and the documents obtained during the FOIA review is presented in Appendix B.

5.0 SUMMARY

5.1 SUMMARY OF ANALYTICAL RESULTS

5.1.1 SOIL

No soil samples above the water table were observed to exhibit contamination; therefore, no soil samples were collected for laboratory analysis.

5.1.2 GROUNDWATER

Bis(2-Ethylhexyl) phthalate, PCE, VC, and TCE were detected in groundwater samples above the Michigan Act 451, Part 201 RDWC.

5.1.3 LNAPL

LNAPL, evaluated in 85-3, measured approximately 0.02 feet and consisted of water with globules of LNAPL exhibiting a heavy sheen. Due to insufficient pure LNAPL sample volume, a LNAPL sample was not collected. LNAPL was not observed in other wells during this investigation; however, a sheen was observed in wells 85-5B, 85-6 and 86-1.

5.1.4 SEPTEMBER 2003 QUARTERLY MONITORING

Several parameters were detected in groundwater samples collected at the Site during September 2003 quarterly monitoring sampling, including: bis(2-ethylhexyl) phthalate, chrysene, cis-1,2-DCE, PCE, TCE, and VC above Michigan Act 451, Part 201 RDWC.

5.1.5 DECEMBER 2003 QUARTERLY MONITORING

Several parameters were detected in groundwater samples collected at the Site during December 2003 quarterly monitoring sampling, including: cis-1,2-DCE, PCE, TCE, and VC above Michigan Act 451, Part 201 RDWC.

5.1.6 FREEDOM OF INFORMATION ACT REVIEW

Based on the observed groundwater flow direction at the Grand Rapids Metal Plant, the Conical Tool property is assumed to be located hydraulically upgradient. However, no groundwater flow direction information for the Conical Tool site was presented in the documentation reviewed by CRA.

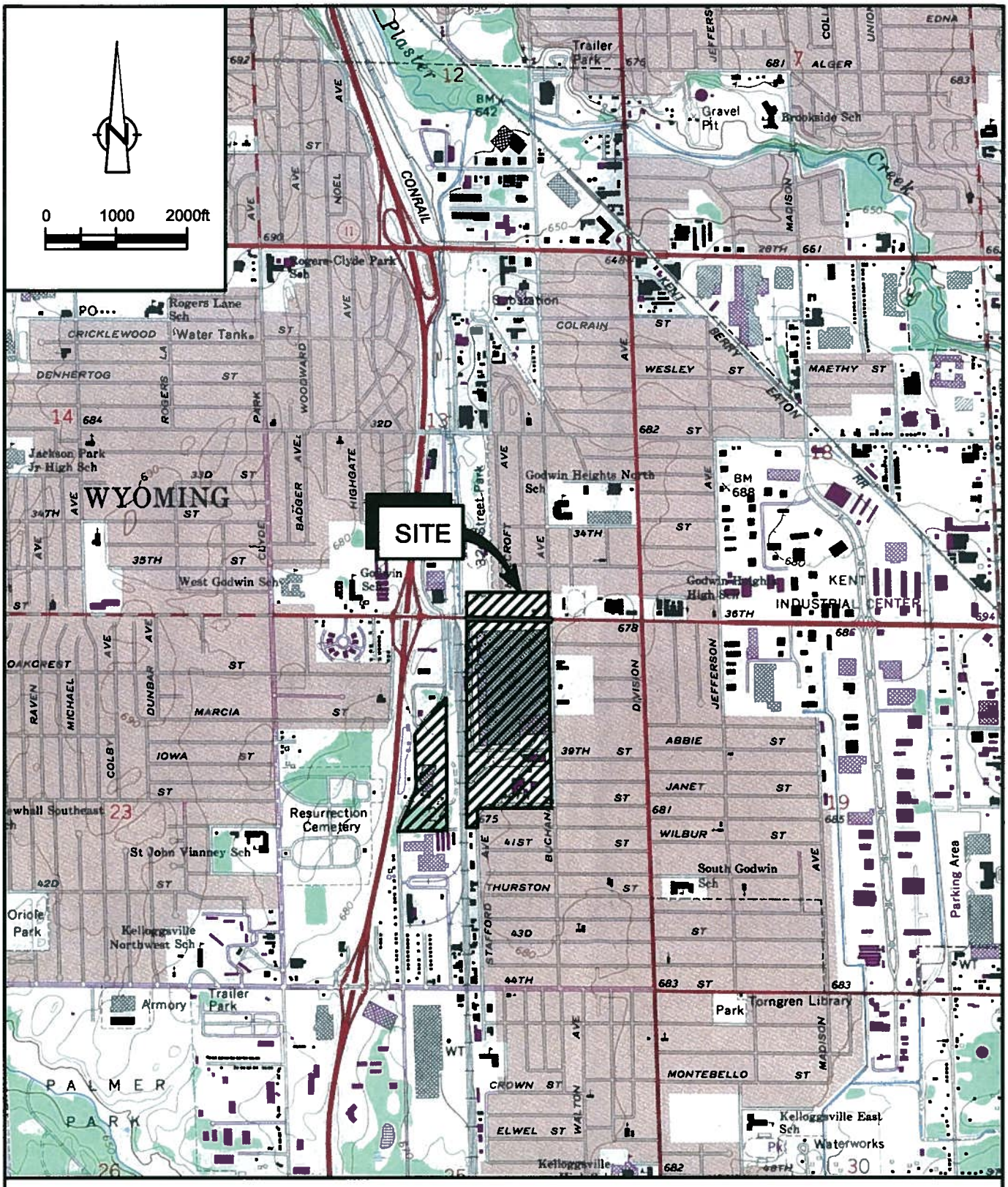
Based on the review of available information obtained from the FOIA request, it appears possible that there was a former or current source of TCE at the Conical Tool site. TCE was identified in soil and groundwater at concentrations above the Michigan Act 451, Part 201 Residential DWPC and DWC, respectively. PCE was also detected in groundwater above the Michigan Act 451, Part 201 Residential DWC from the Conical Tool site. However, it is not clear from the information reviewed whether all soil samples were analyzed for PCE. Insufficient information from the MDEQ files was present to determine a possible source location for PCE at the Conical Tool site. Additionally, the vertical extents of TCE and PCE in groundwater were not determined, based on the information reviewed.

Selected excavation was conducted in two areas at the Conical Tool site. Neither of these excavations were conducted where the TCE was detected in soil above the Residential Criterion.

During the investigations conducted by Dixon, five monitoring wells, MW-1 through MW-5, were installed at the Conical Tool site. Groundwater samples collected from these wells ranged from 12 feet bgs to 17.5 feet bgs. Additional delineation grab groundwater samples were collected from depths of approximately 17 to 19 feet bgs. These depths correspond to the upper few feet of the aquifer.

5.2 ADDITIONAL INVESTIGATION

Based on the results of the environmental investigation, further investigation of the Site is warranted. A Work Plan for additional investigation of LNAPL, as well as TCE and associated chlorinated compounds in groundwater will be presented under a separate cover.



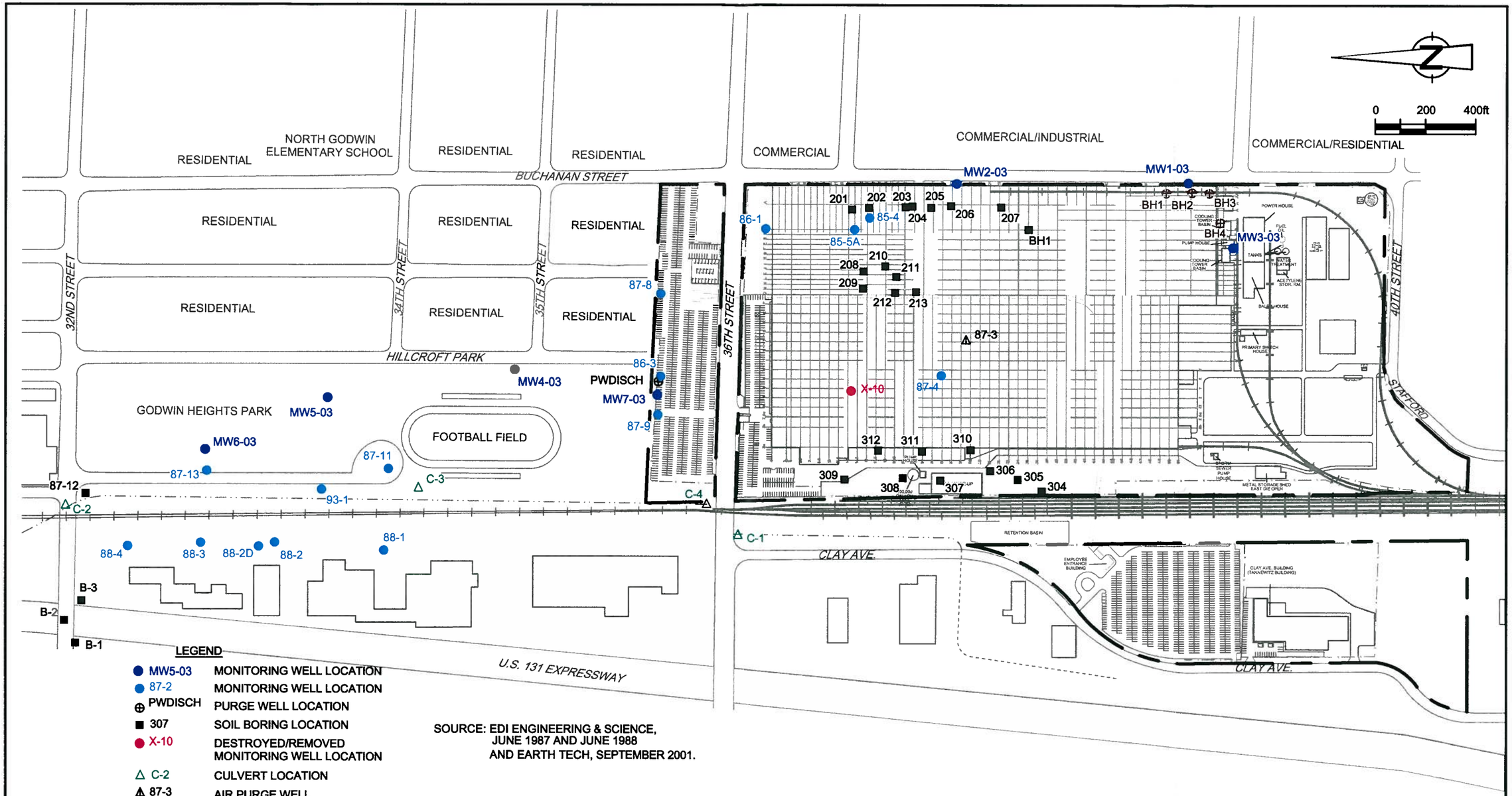
SOURCE: USGS QUADRANGLE MAP;
GRAND RAPIDS WEST, MICHIGAN



figure 1.1

SITE LOCATION
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE001 FEB 16/2004

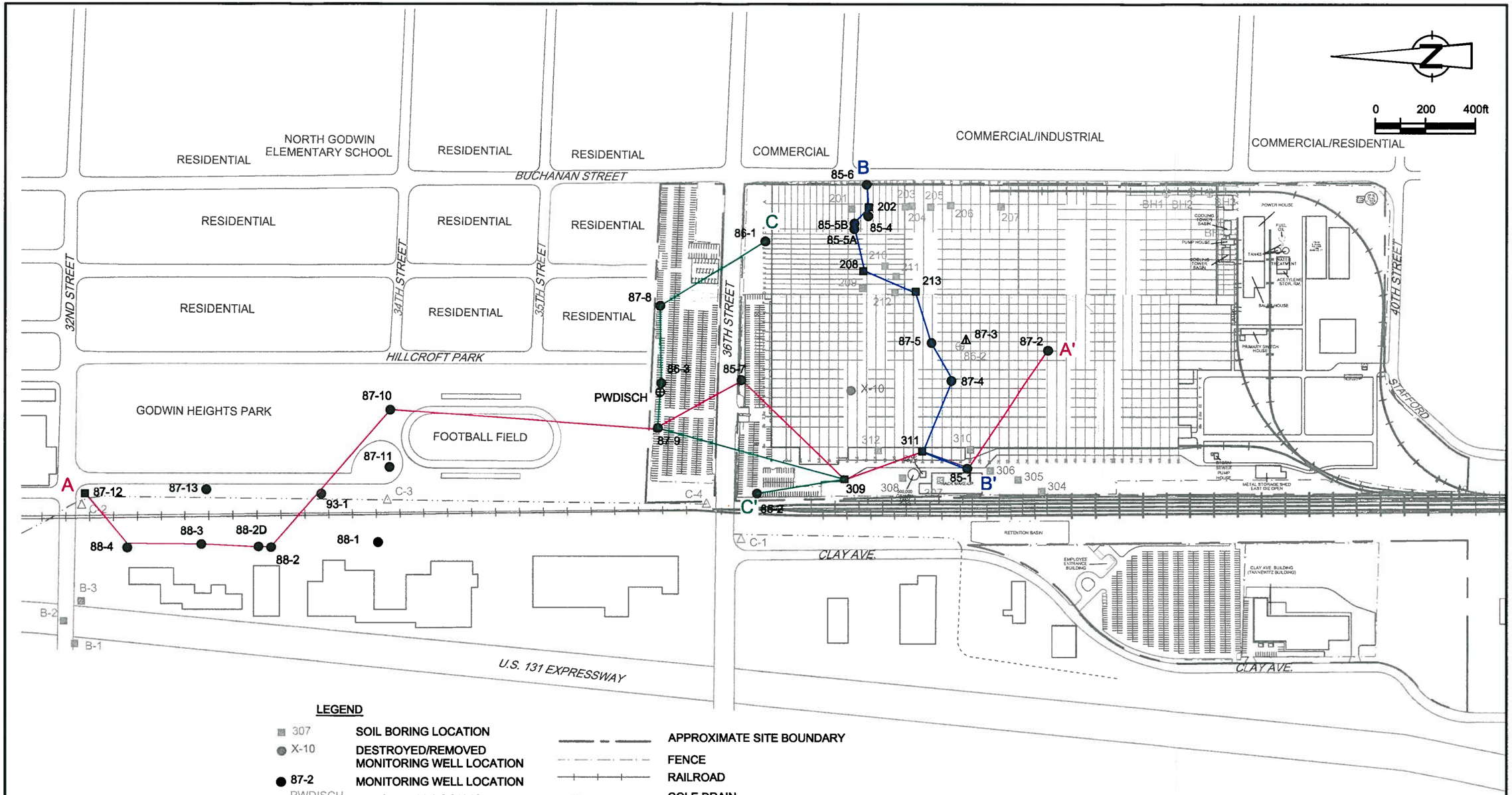


SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

figure 1.2

SITE PLAN
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE002 FEB 27/2004



LEGEND

307	SOIL BORING LOCATION
X-10	DESTROYED/REMOVED MONITORING WELL LOCATION
87-2	MONITORING WELL LOCATION
PWDISCH	PURGE WELL LOCATION
C-2	CULVERT LOCATION
87-3	AIR PURGE WELL
BH1	APPROXIMATE LOCATION OF DEWATERING WELLS
	APPROXIMATE SITE BOUNDARY
	FENCE
	RAILROAD
	COLE DRAIN
A — A'	CROSS SECTION LOCATION

SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

figure 2.1

CROSS SECTION LOCATIONS
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE006 FEB 27/2004

A

A'

VERTICAL SCALE:
1"=20' (FT. AMSL)

690
680
670
660
650
640
630
620
610
600
590
580

87-12
88-4
88-3
88-2D/88-2
87-10
87-9
85-7
309
311
85-1
87-2

TOPSOIL
ASPHALT
WOOD CHIPS
CONCRETE
DEBRIS
SILTY SAND
PEAT

SAND
GRAVEL
SAND
SAND
SAND
SILTY SAND
SAND
SAND
CLAY
CLAY
GRAVEL
CLAY
SILTY CLAY
CLAYEY SAND

0
400
800
1200
1600
2000
2400
2800
3200
3600
4000
4400

HORIZONTAL SCALE:
1"=400'

LEGEND

- DECEMBER 17, 2003 STATIC WATER LEVEL
- UNSATURATED ZONE SCREEN
- SATURATED ZONE SCREEN
- INTERPRETIVE WATER TABLE
- INTERPRETIVE CONTACT
- KNOWN CONTACT
- ASPHALT/TOPSOIL/WOOD CHIPS/ WOOD FLOOR BLOCK/CONCRETE
- DEBRIS
- GRAVEL
- SAND
- CLAY
- SILTY SAND
- CLAYEY SAND
- PEAT

figure 2.2

CROSS SECTION A-A'
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE003 FEB 16/2004

B

B'

VERTICAL SCALE:
1"=20' (FT. AMSL)

700
690
680
670
660
650
640
630
620
610
600
590
580
570

85-6
202
85-5B
208
213
87-5
87-4
311
85-1

WOOD FLOOR BLOCK/ CONCRETE
WOOD FLOOR BLOCK/ CONCRETE
WOOD FLOOR BLOCK/ CONCRETE

SAND
GRAVEL
SAND
SAND
DEBRIS
SILTY SAND
PEAT
SAND
SAND
SAND
SILTY CLAY
SANDY SILT
SILTY SAND
CLAYEY SILT
SAND
SILTY CLAY
SILTY CLAY
SILTY CLAY
CLAY
SILTY CLAY
CLAYEY SAND
SAND
SAND & GRAVEL
?
?
SANDY SILT
SILTY CLAY

0
120
240
360
480
600
720
840
960
1080
1200
1320
1440
1560

HORIZONTAL SCALE:
1"=120'

LEGEND

- DECEMBER 17, 2003 STATIC WATER LEVEL
- UNSATURATED ZONE SCREEN
- SATURATED ZONE SCREEN
- INTERPRETIVE WATER TABLE
- INTERPRETIVE CONTACT
- KNOWN CONTACT
- WOOD FLOOR BLOCK/CONCRETE
- DEBRIS
- GRAVEL
- SAND
- CLAY
- PEAT
- CLAYEY SILT
- SANDY SILT
- SILTY SAND
- CLAYEY SAND

figure 2.3

CROSS SECTION B-B'
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE004 FEB 16/2004

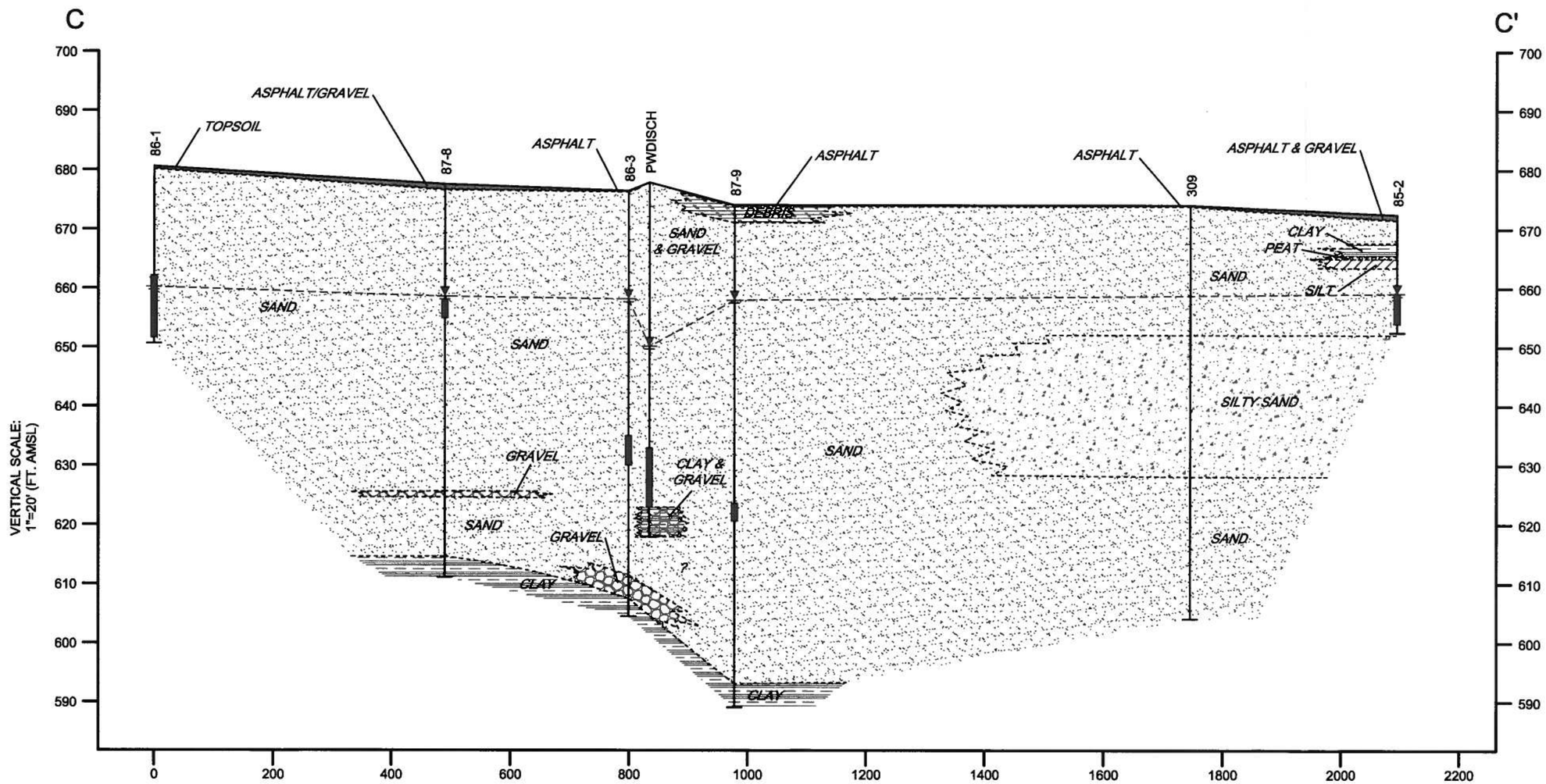
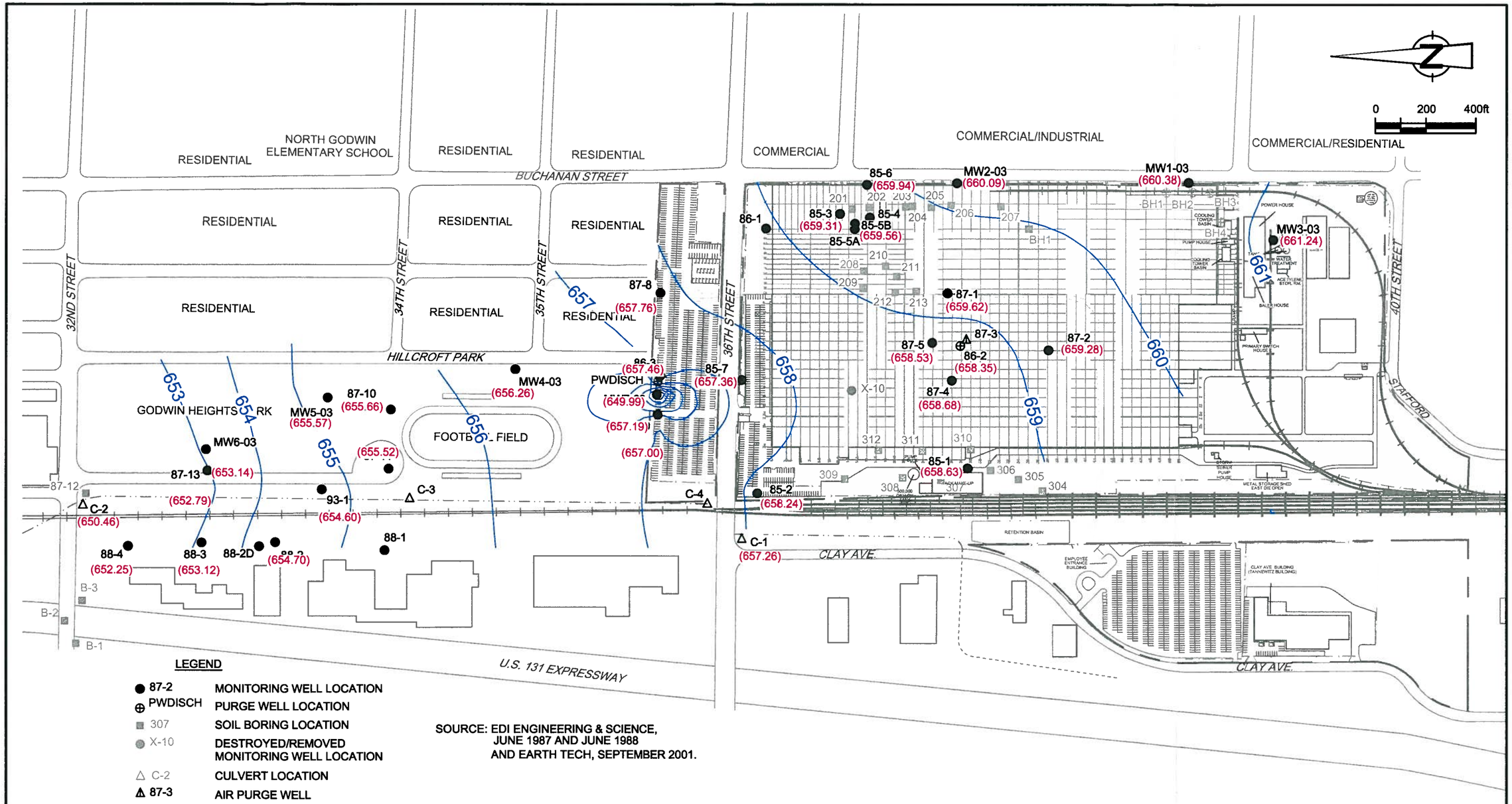


figure 2.4

CROSS SECTION C-C'
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE005 FEB 16/2004



LEGEND

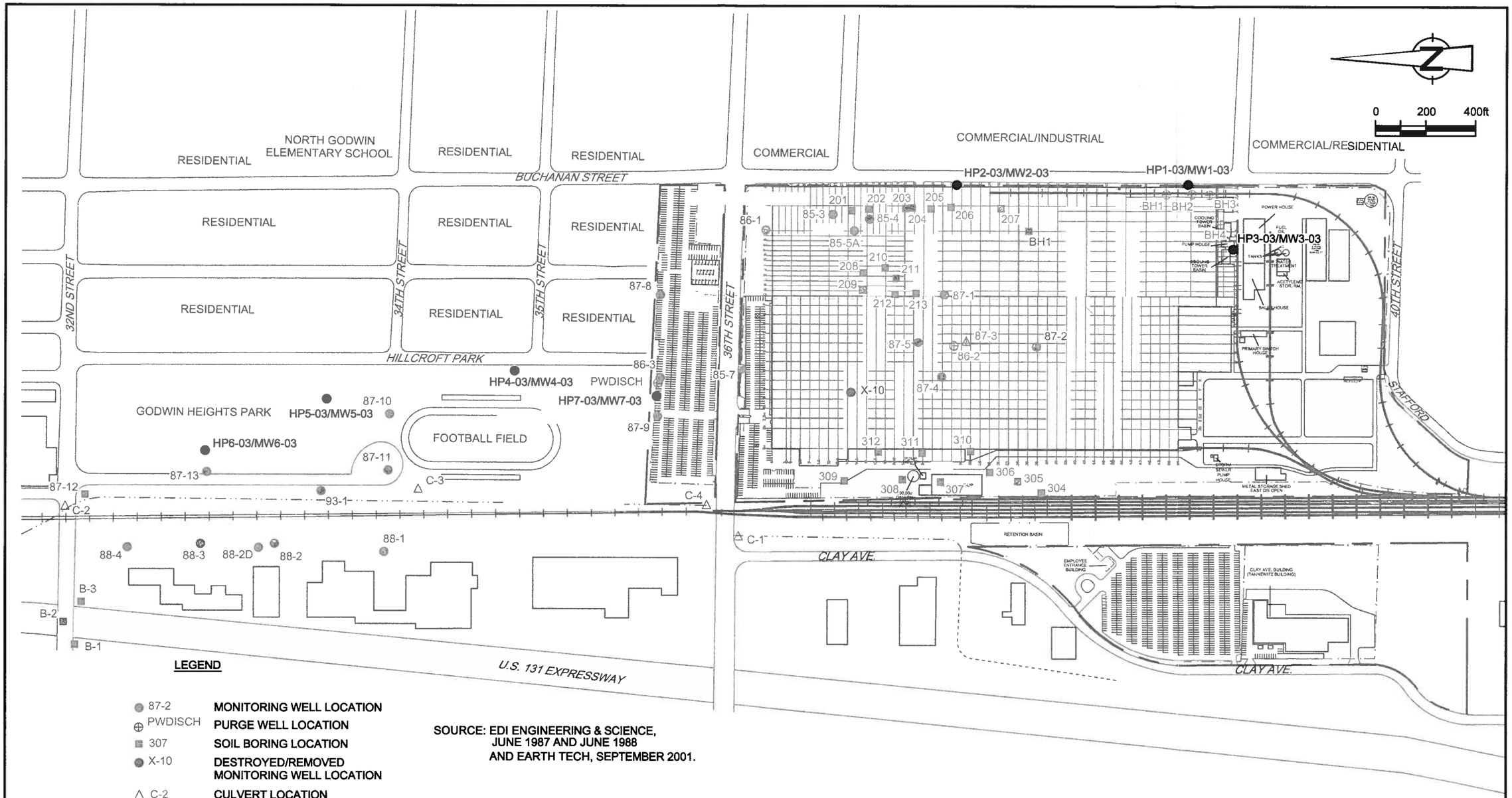
● 87-2	MONITORING WELL LOCATION
⊕ PWDISCH	PURGE WELL LOCATION
■ 307	SOIL BORING LOCATION
● X-10	DESTROYED/REMOVED MONITORING WELL LOCATION
△ C-2	CULVERT LOCATION
⚠ 87-3	AIR PURGE WELL
⊕ BH1	APPROXIMATE LOCATION OF DEWATERING WELLS
———	APPROXIMATE SITE BOUNDARY
—·—·—	FENCE
—+—+—	RAILROAD
—·—·—	COLE DRAIN
———	GROUNDWATER ELEVATION CONTOUR
- - - - -	INFERRED GROUNDWATER ELEVATION CONTOUR
(658.63)	DECEMBER 17, 2003 GROUNDWATER ELEVATION

SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

figure 2.5

APPROXIMATE DECEMBER 17, 2003 GROUNDWATER FLOW DIRECTION
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE010 FEB 27/2004



SOURCE: EDI ENGINEERING & SCIENCE, JUNE 1987 AND JUNE 1988 AND EARTH TECH, SEPTEMBER 2001.

figure 3.1

HYDROPUNCH AND MONITORING WELL LOCATIONS
GRAND RAPIDS METAL PLANT
Wyoming, Michigan

17360-09(007)GN-DE007 FEB 27/2004

TABLE 2.1

GROUNDWATER ELEVATIONS
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Monitoring Well Identification	Elevation of Top of Riser	December 9, 2002		March 20, 2003		July 14, 2003		September 29, 2003		December 17, 2003	
		Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation	Depth to Groundwater ft. (BTOR)	Groundwater Elevation
93-1	656.62	2.00	654.62	1.77	654.85	2.42	654.20	2.28	654.34	2.02	654.6
88-4	661.20	8.59	652.61	8.64	652.56	NA	NA	8.95	652.25	8.95	652.25
88-3	664.36	10.41	653.95	10.41	653.95	NA	NA	11.32	653.04	11.24	653.12
88-2	665.80	11.06	654.74	11.12	654.68	NA	NA	12.04	653.76	11.10	654.7
87-9	673.13	16.20	656.93	16.37	656.76	16.44	656.69	16.43	656.70	16.13	657.00
87-8	676.78	19.87	656.91	20.00	656.78	20.29	656.49	19.90	656.88	19.02	657.76
87-5	680.39	21.95	658.44	22.24	658.15	21.99	658.40	22.24	658.15	21.86	658.53
87-4	680.91	22.14	658.77	22.62	658.29	27.23	653.68	22.49	658.42	22.23	658.68
87-2	680.73	21.20	659.53	22.70	658.03	21.33	659.40	21.78	658.95	21.45	659.28
87-13	663.57	10.55	653.02	10.76	652.81	10.76	652.81	10.82	652.75	10.78	652.79
87-11	666.25	10.78	655.47	10.84	655.41	10.73	655.52	10.82	655.43	10.73	655.52
87-10	667.76	11.76	656.00	12.29	655.47	12.19	655.57	12.28	655.48	12.10	655.66
87-1	680.74	22.10	658.64	22.47	658.27	22.18	658.56	22.36	658.38	21.12	659.62
86-3	675.80	18.80	657.00	19.10	656.70	18.95	656.85	19.11	656.69	18.34	657.46
86-2	680.93	22.35	658.58	22.77	658.16	22.48	658.45	22.75	658.18	22.58	658.35
86-1	679.92	19.95	659.97	21.25	658.67	NA	NA	21.82	658.1	NA	NA
85-7	677.84	20.25	657.59	20.43	657.41	20.27	657.57	20.48	657.36	20.12	657.72
85-6	679.59	19.01	660.58	20.46	659.13	19.79	659.80	20.19	659.40	19.65	659.94
85-5B	680.83	21.30	659.53	22.04	658.79	21.27	659.56	21.20	659.63	NA	NA
85-3	680.91	21.49	659.42	22.32	658.59	21.60	659.31	21.54	659.37	NA	NA
85-2	671.63	13.99	657.64	15.01	656.62	13.88	657.75	14.06	657.57	13.39	658.24
85-1	675.03	15.91	659.12	16.44	658.59	16.16	658.87	16.40	658.63	16.40	658.63
C-3	661.97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C-2	658.81	7.90	650.91	7.82	650.99	8.35	650.46	8.26	650.55	8.14	650.67
C-1	662.61	5.30	657.31	5.45	657.16	5.35	657.26	5.19	657.42	5.06	657.55
MW1-03	678.68	NA	NA	NA	NA	18.32	660.36	18.57	660.11	18.30	660.38
MW2-03	680.60	NA	NA	NA	NA	20.56	660.04	20.88	659.72	20.51	660.09
MW3-03	676.74	NA	NA	NA	NA	15.59	661.15	15.82	660.92	15.50	661.24
MW4-03	679.12	NA	NA	NA	NA	22.95	656.17	23.01	656.11	22.86	656.26
MW5-03	675.82	NA	NA	NA	NA	20.54	655.28	20.66	655.16	20.25	655.57
MW6-03	665.39	NA	NA	NA	NA	12.35	653.04	12.38	653.01	12.25	653.14
MW7-03	674.79	NA	NA	NA	NA	17.69	657.10	17.86	656.93	17.60	657.19
PWDISCH	677.79	NA	NA	NA	NA	28.12	649.67	28.61	649.18	27.80	649.99

Notes:

ft. BTOR - Feet below top of riser
NA-Not Available
All elevations are measured as Above Mean Sea Level (AMSL)

TABLE 3.1

SAMPLE SUMARY
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Sample Interval (ft. BTOR)*	*QA/QC*	*Analysis* [1]
GW-17360-060903-BW-001	HP6-03	16		TCL VOCs
GW-17360-060903-BW-002	HP6-03	26		TCL VOCs
GW-17360-060903-BW-003	HP6-03	36		TCL VOCs
GW-17360-060903-BW-004	HP6-03	45		TCL VOCs
GW-17360-060903-BW-005	HP6-03	45	Duplicate	TCL VOCs
GW-17360-061003-BW-006	HP5-03	24		TCL VOCs
GW-17360-061003-BW-007	HP5-03	34		TCL VOCs
GW-17360-061003-BW-008	HP5-03	44		TCL VOCs
GW-17360-061003-BW-009	HP5-03	54		TCL VOCs
GW-17360-061003-BW-010	HP5-03	--	Field Rinsate	TCL VOCs
GW-17360-061003-BW-011	HP5-03	62		TCL VOCs
GW-17360-061103-BW-012	HP4-03	26		TCL VOCs
GW-17360-061103-BW-013	HP4-03	36		TCL VOCs
GW-17360-061103-BW-014	HP4-03	46		TCL VOCs
GW-17360-061103-BW-015	HP4-03	56		TCL VOCs
GW-17360-061103-BW-016	HP4-03	66		TCL VOCs
GW-17360-061203-BW-017	HP2-03	24		TCL VOCs
GW-17360-061203-BW-018	HP2-03	34		TCL VOCs
GW-17360-061203-BW-019	HP2-03	41		TCL VOCs
GW-17360-061303-BW-020	HP1-03	24		TCL VOCs
GW-17360-061303-BW-021	HP1-03	24	Duplicate	TCL VOCs
GW-17360-061303-BW-022	HP1-03	34	MS/MSD	TCL VOCs
GW-17360-061303-BW-023	HP1-03	--	Field Rinsate	TCL VOCs
GW-17360-061303-BW-024	HP1-03	41		TCL VOCs
GW-17360-061603-BW-025	HP3-03	18		TCL VOCs
GW-17360-061603-BW-026	HP3-03	28	MS/MSD	TCL VOCs
GW-17360-061603-BW-027	HP3-03	38		TCL VOCs
GW-17360-061603-BW-028	HP3-03	38	Duplicate	TCL VOCs
GW-17360-061603-BW-029	HP3-03	43		TCL VOCs
GW-17360-061703-BW-030	HP7-03	20		TCL VOCs
GW-17360-061703-BW-031	HP7-03	30		TCL VOCs
GW-17360-061703-BW-032	HP7-03	--	Field Rinsate	TCL VOCs
GW-17360-061703-BW-033	HP7-03	40		TCL VOCs
GW-17360-061703-BW-034	HP7-03	50		TCL VOCs
GW-17360-061703-BW-035	HP7-03	50	Duplicate	TCL VOCs
GW-17360-061703-BW-036	HP7-03	60		TCL VOCs
GW-17360-061703-BW-037	HP7-03	69.5		TCL VOCs
GW-17360-061703-BW-038	HP7-03	--	Field Rinsate	TCL VOCs
S-17360-060903-BW-039	Drums 1 & 2	--		TCLP VOCs, TCLP SVOCs, TCLP Metals, Corrosivity, Flashpoint, Reactive Cyanide, and Reactive Sulfide
S-17360-060903-BW-040	Drums 3 - 7	--		TCLP VOCs, TCLP SVOCs, TCLP Metals, Corrosivity, Flashpoint, Reactive Cyanide, and Reactive Sulfide

[1] Samples were transported under chain-of-custody (COC) protocol to Severn Trent Laboratory (STL) located in North Canton, Ohio or Los Angeles, California to be analyzed within a standard two week timeframe.

ND - No Available Depth
-- Non Applicable
QA/QC - Quality Assurance/Quality Control
MS/MSD - Matrix Spike/Matrix Spike Duplicate
BTOR - Below top of riser

TABLE 3.1

SAMPLE SUMARY
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Sample Interval (ft. BTOR)*	*QA/QC*	*Analysis* [1]
GW-17360-071403-SP-041	MW6-03	13-18		TCL VOCs and NA Parameters
GW-17360-071403-SP-042	MW5-03	30-35		TCL VOCs and NA Parameters
GW-17360-071403-SP-043	MW4-03	52-57		TCL VOCs and NA Parameters
GW-17360-071403-SP-044	MW2-03	22-27		TCL VOCs and NA Parameters
GW-17360-071403-SP-045	MW1-03	30-35		TCL VOCs and NA Parameters
GW-17360-071403-SP-046	87-10	29-32		TCL VOCs and NA Parameters
GW-17360-071403-SP-047	87-11	30-33		TCL VOCs and NA Parameters
GW-17360-071403-SP-048	93-1	8.2		TCL VOCs and NA Parameters
GW-17360-071403-SP-049	87-13	40-43		TCL VOCs and NA Parameters
GW-17360-071403-SP-050	C-1	ND		TCL VOCs and NA Parameters
GW-17360-071403-SP-051	C-2	ND		TCL VOCs and NA Parameters
GW-17360-071403-SP-052	C-3	ND		TCL VOCs and NA Parameters
GW-17360-071403-SP-053	86-3	41.5-46.5		TCL VOCs and NA Parameters
TB-017360-071403-SP-054	Trip Blank	--		TCL VOCs
GW-17360-071503-SP-055	85-7	20.6-25.6		TCL VOCs and NA Parameters
GW-17360-071503-SP-056	85-7	20.6-25.6	Duplicate	TCL VOCs and NA Parameters
GW-17360-071503-SP-057	MW7-03	36-41	MS/MSD	TCL VOCs and NA Parameters
GW-17360-071503-SP-058	PWDISCH	45-55	MS/MSD	TCL VOCs and NA Parameters
GW-17360-071503-SP-059	87-4	24-27		TCL VOCs and NA Parameters
GW-17360-071503-SP-060	87-5	39.5-50.5		TCL VOCs and NA Parameters
GW-17360-071503-SP-061	87-1	24-29		TCL VOCs and NA Parameters
GW-17360-071503-SP-062	87-2	33.2-38.2		TCL VOCs and NA Parameters
GW-17360-071503-SP-063	86-2	ND		TCL VOCs and NA Parameters
GW-17360-071503-SP-064	85-3	ND		TCL VOCs, NA Parameters and TCL
GW-17360-071503-SP-065	MW3-03	25-30		TCL VOCs and NA Parameters
TB-17360-071503-SP-066	Trip Blank	--		TCL VOCs
GW-17360-080603-JB-067	87-9	50.5-53.5		TCL VOCs and NA Parameters
GW-17360-080603-JB-068	87-8	19.7-22.7		TCL VOCs and NA Parameters
GW-17360-080603-JB-069	87-8	19.7-22.7	Duplicate	TCL VOCs and NA Parameters
TB-17360-080603-JB-070	Trip Blank	--		TCL VOCs

[1] Samples were transported under chain-of-custody (COC) protocol to Severn Trent Laboratory (STL) located in North Canton, Ohio to be analyzed within a standard two week timeframe.

ND - No Available Depth
-- Non Applicable
QA/QC - Quality Assurance/Quality Control
MS/MSD - Matrix Spike/Matrix Spike Duplicate
BTOR - Below top of riser

TABLE 3.2

SEPTEMBER QUARTERLY SAMPLE SUMMARY
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Matrix*	*QA/QC*	*Analysis* [1]
GW-17360-093003-JB-070	87-9	Water		TCL VOCs
GW-17360-093003-JB-071	MW-7-03	Water		TCL VOCs
GW-17360-093003-JB-072	PWDISCH	Water		TCL VOCs
GW-17360-093003-JB-073	86-3	Water	MS/MSD	TCL VOCs
GW-17360-093003-JB-074	87-8	Water		TCL VOCs
GW-17360-100103-JB-075	87-11	Water		TCL VOCs
GW-17360-100103-JB-076	87-10	Water		TCL VOCs
GW-17360-100103-JB-077	87-13	Water		TCL VOCs
GW-17360-100103-JB-078	87-13	Water	Duplicate	TCL VOCs
GW-17360-100103-JB-079	93-1	Water		TCL VOCs
GW-17360-100103-JB-080	C-1	Water		TCL VOCs
GW-17360-100103-JB-081	C-2	Water		TCL VOCs
GW-17360-100103-JB-082	C-3	Water		TCL VOCs
GW-17360-100203-JB-083	87-1	Water		TCL VOCs
GW-17360-100203-JB-084	87-5	Water		TCL VOCs
GW-17360-100203-JB-085	87-2	Water		TCL VOCs
GW-17360-100203-JB-086	85-7	Water		TCL VOCs
GW-17360-100203-JB-087	85-7	Water	Duplicate	TCL VOCs
GW-17360-100203-JB-088	MW-6-03	Water		TCL VOCs
GW-17360-100903-JB-089	MW-4-03	Water	MS/MSD	TCL VOCs
GW-17360-100903-JB-090	MW-5-03	Water		TCL VOCs
GW-17360-100303-JB-091	MW1-03	Water		TCL VOCs
GW-17360-100303-JB-092	MW-2-03	Water		TCL VOCs
GW-17360-100303-JB-093	MW-3-03	Water		TCL VOCs
GW-17360-100703-JB-094	87-4	Water		TCL VOCs
GW-17360-100703-JB-095	86-2	Water		TCL VOCs
GW-17360-100703-JB-096	85-5B	Water		TCL VOCs, TCL SVOCs
GW-17360-100703-JB-097	85-3	Water		TCL VOCs, TCL SVOCs
GW-17360-100703-JB-098	86-1	Water		TCL VOCs, TCL SVOCs
GW-17360-100703-JB-099	85-6	Water		TCL VOCs, TCL SVOCs

Notes:

[1] Samples were transported under chain-of-custody (COC) protocol to Severn Trent Laboratory (STL) located in North Canton, Ohio to be analyzed within a standard two week timeframe.

QA/QC - Quality Assurance/Quality Control

MS/MSD - Matrix Spike/Matrix Spike Duplicate

TABLE 3.3

DECEMBER QUARTERLY SAMPLE SUMMARY
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Identification	*Sample Location*	*Matrix*	*QA/QC*	*Analysis* [1]
GW-17360-121703-JB-091	87-4	Water		TCL VOCs
GW-17360-121703-JB-092	87-5	Water		TCL VOCs
GW-17360-121703-JB-093	87-1	Water		TCL VOCs
GW-17360-121703-JB-094	86-2	Water		TCL VOCs
GW-17360-121703-JB-095	87-2	Water		TCL VOCs
GW-17360-121703-JB-096	85-3	Water		TCL SVOCs
GW-17360-121703-JB-097	87-2	Water	Duplicate	TCL VOCs
GW-17360-121703-JB-098	85-5B	Water		TCL SVOCs
GW-17360-121703-JB-099	86-1	Water		TCL SVOCs
GW-17360-121703-JB-100	85-7	Water		TCL VOCs
GW-17360-121703-JB-101	85-6	Water		TCL SVOCs
GW-17360-121703-JB-102	MW7-03	Water		TCL VOCs
GW-17360-121803-JB-103	87-9	Water		TCL VOCs
GW-17360-121803-JB-104	86-3	Water		TCL VOCs
GW-17360-121803-JB-105	87-8	Water		TCL VOCs
GW-17360-121803-JB-106	MW4-03	Water	MS/MSD	TCL VOCs
GW-17360-121803-JB-107	C-3	Water		TCL VOCs
GW-17360-121803-JB-108	C-1	Water		TCL VOCs
GW-17360-121803-JB-109	C-2	Water		TCL VOCs
GW-17360-121803-JB-110	PWDISCH	Water		TCL VOCs
GW-17360-121803-JB-111	MW6-03	Water		TCL VOCs
GW-17360-121803-JB-112	87-13	Water		TCL VOCs
GW-17360-121803-JB-113	87-11	Water		TCL VOCs
GW-17360-121803-JB-114	87-10	Water		TCL VOCs
GW-17360-121803-JB-115	MW5-03	Water		TCL VOCs
GW-17360-121803-JB-116	93-1	Water		TCL VOCs
GW-17360-121803-JB-117	MW2-03	Water		TCL VOCs
GW-17360-121803-JB-118	MW1-03	Water		TCL VOCs
GW-17360-121803-JB-119	MW3-03	Water		TCL VOCs
TB-17360-121803-JB-120	--	Water		TCL VOCs

Notes:

[1] Samples were transported under chain-of-custody (COC) protocol to Severn Trent Laboratory (STL) located in North Canton, Ohio to be analyzed within a standard two week timeframe.

-- Not applicable
QA/QC - Quality Assurance/Quality Control
MS/MSD - Matrix Spike/Matrix Spike Duplicate

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*85-7*	*85-7*	*86-2*	*86-3*	*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-8*	*87-9*	*87-10*	*87-11*	*87-13*	*93-1*
Sample Identification (GW-17360-)	*Residential &*	*071503-SP-055*	*071503-SP-056*	*071503-SP-063*	*071403-SP-053*	*071503-SP-061*	*071503-SP-062*	*071503-SP-059*	*071503-SP-060*	*080603-JB-068*	*080603-JB-069*	*080603-JB-067*	*071403-SP-046*	*071403-SP-047*	*071403-SP-049*	*071403-SP-048*
Sample Depth	*Commercial I*	*20.6-25.6*	*20.6-25.6*	*27.5-32.5*	*41.5-46.5*	*24-29*	*33.2-38.2*	*24-27*	*39.5-50.5*	*19.7-22.7*	*19.7-22.7*	*50.5-53.5*	*29-32*	*30-33*	*40-43*	*8.2*
Sample Date	*Drinking Water*	*7/15/2003*	*7/15/2003*	*7/15/2003*	*7/14/2003*	*7/15/2003*	*7/15/2003*	*7/15/2003*	*7/15/2003*	*8/6/2003*	*8/6/2003*	*8/6/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
			Duplicate								*Duplicate*					
TCL VOCs (ug/L)																
1,1,1-Trichloroethane	200	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	3.4 J	ND(1.0)	ND(1.0)	ND(1.0)	1.8	ND(2.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.7	ND(1.0)	ND(1.0)	6.9	ND(1.0)	ND(1.0)	0.57 J	1.5	ND(2.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.4 J	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.51 J	ND(2.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)	ND(25)	ND(25)	ND(25)UJ	ND(62)	ND(25)	ND(25)	ND(100)	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(50)UJ	ND(25)UJ	ND(25)UJ
2-Hexanone	1,000	ND(50)	ND(50)	ND(50)	ND(50)UJ	ND(120)	ND(50)	ND(50)	ND(200)	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(100)UJ	ND(50)UJ	ND(50)UJ
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	ND(50)	ND(50)	ND(120)	ND(50)	ND(50)	ND(200)	ND(50)	ND(50)	ND(50)	ND(50)	ND(100)	ND(50)	ND(50)
Acetone	730	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(62)UJ	ND(25)UJ	ND(25)UJ	ND(100)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(50)UJ	ND(25)UJ	ND(25)UJ
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	100	0.32 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Bromoform	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	100	2.0	2.1	1.5	1.5	ND(2.5)	ND(1.0)	1.3	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(2.0)UJ	ND(1.0)UJ	ND(1.0)UJ
cis-1,2-Dichloroethene	70	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	50	23	ND(1.0)	33	ND(1.0)	ND(1.0)	ND(1.0)	1.6	42	ND(1.0)	4.2
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(2.0)UJ	ND(1.0)UJ	ND(1.0)UJ
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(10)	ND(25)	ND(10)	ND(10)	ND(40)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(10)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	40	ND(5.0)	ND(5.0)	0.64 J	ND(5.0)	ND(12)	0.67 J	ND(5.0)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	2.9
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.3	2.4	ND(1.0)	13	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Trichloroethene	5.0	0.79 J	0.88 J	3.3	4.3	55	26	ND(1.0)	ND(4.0)	0.36 J	0.37 J	0.31 J	27	28	1.6	1.9
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(4.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	7.2	ND(1.0)	ND(1.0)	130	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.7	ND(1.0)	0.43 J
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(7.5)	ND(3.0)	ND(3.0)	ND(12)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(6.0)	ND(3.0)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.

ND ( ) – Not detected above the value in parenthesis.

J – The associated value is qualified as an estimated quantity.

UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.

U - The analyte was analyzed for, but was qualified not detected above the value identified.

NA - Not Available

Boxed value exceed Residential Drinking Water Criteria

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*C-1*	*C-2*	*C-3*	*Field Rinsate*	*Field Rinsate*	*Field Rinsate*	*Field Rinsate*	*HP1-03*	*HP1-03*	*HP1-03*	*HP1-03*	*HP2-03*	*HP2-03*	*HP2-03*
Sample Identification (GW-17360-)	*Residential &*	*071403-SP-050*	*071403-SP-051*	*071403-SP-052*	*061003-BW-010*	*061303-BW-023*	*061703-BW-032*	*061703-BW-038*	*061303-BW-020*	*061303-BW-021*	*061303-BW-022*	*061303-BW-024*	*061203-BW-017*	*061203-BW-018*	*061203-BW-019*
Sample Depth	*Commercial I*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*24*	*24*	*34*	*41*	*24*	*34*	*41*
Sample Date	*Drinking Water*	*7/14/2003*	*7/14/2003*	*7/14/2003*	*6/10/2003*	*6/13/2003*	*6/17/2003*	*6/17/2003*	*6/13/2003*	*6/13/2003*	*6/13/2003*	*6/13/2003*	*6/12/2003*	*6/12/2003*	*6/12/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L Duplicate*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL VOCs (ug/L)															
1,1,1-Trichloroethane	200	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(50)	ND(25)	ND(25)	ND(25)	ND(25)
2-Hexanone	1,000	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(100)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(100)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	730	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(50)	ND(25)	ND(25)	ND(25)	ND(25)
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	7.3	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.0	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	9.5	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	260	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	70	ND(1.0)	3.5	7.4	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.7	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.6	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	40	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	5.0	ND(1.0)	0.89 J	2.3	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	7.0	7.1	66	1.5	31	7.2	ND(1.0)
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	5.0	ND(1.0)	1.6	1.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.8	3.8	2.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	1.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(6.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
U - The analyte was analyzed for, but was qualified not detected above the value identified.
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*HP3-03*	*HP3-03*	*HP3-03*	*HP3-03*	*HP3-03*	*HP4-03*	*HP4-03*	*HP4-03*	*HP4-03*	*HP4-03*	*HP6-03*	*HP6-03*	*HP6-03*	*HP6-03*
Sample Identification (GW-17360-)	*Residential &*	*061603-BW-025*	*061603-BW-026*	*061603-BW-027*	*061603-BW-028*	*061603-BW-029*	*061103-BW-012*	*061103-BW-013*	*061103-BW-014*	*061103-BW-015*	*061103-BW-016*	*060903-BW-001*	*060903-BW-002*	*060903-BW-003*	*060903-BW-004*
Sample Depth	*Commercial I*	*18*	*28*	*38*	*38*	*43*	*26*	*36*	*46*	*56*	*66*	*16*	*26*	*36*	*45*
Sample Date	*Drinking Water*	*6/16/2003*	*6/16/2003*	*6/16/2003*	*6/16/2003*	*6/16/2003*	*6/11/2003*	*6/11/2003*	*6/11/2003*	*6/11/2003*	*6/11/2003*	*6/9/2003*	*6/9/2003*	*6/9/2003*	*6/9/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
					Duplicate										
TCL VOCs (ug/L)															
1,1,1-Trichloroethane	200	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
2-Hexanone	1,000	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	730	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	9.3	9.3	9.3	ND(1.0)	2.4	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	36	35	37	2.4	11	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	70	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	4.7	4.4	3.7	ND(1.0)	1.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	40	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	5.0	1.1	1.4	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.4	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.1	1.1	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.

ND ( ) – Not detected above the value in parenthesis.

J – The associated value is qualified as an estimated quantity.

UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.

U - The analyte was analyzed for, but was qualified not detected above the value identified.

NA - Not Available

Boxed value exceed Residential Drinking Water Criteria

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*HP6-03*	*HP7-03*	*HP7-03*	*HP7-03*	*HP7-03*	*HP7-03*	*HP7-03*	*HP7-03*	*HP5-03*	*HP5-03*	*HP5-03*	*HP5-03*	*HP5-03*	*MW1-03*
Sample Identification (GW-17360-)	*Residential &*	*060903-BW-005*	*061703-BW-030*	*061703-BW-031*	*061703-BW-033*	*061703-BW-034*	*061703-BW-035*	*061703-BW-036*	*061703-BW-037*	*061003-BW-006*	*061003-BW-007*	*061003-BW-008*	*061003-BW-009*	*061003-BW-011*	*071403-SP-045*
Sample Depth	*Commercial I*	*45*	*20*	*30*	*40*	*50*	*50*	*60*	*69.5*	*24*	*34*	*44*	*54*	*62*	*30-35*
Sample Date	*Drinking Water*	*6/9/2003*	*6/17/2003*	*6/17/2003*	*6/17/2003*	*6/17/2003*	*6/17/2003*	*6/17/2003*	*6/17/2003*	*6/10/2003*	*6/10/2003*	*6/10/2003*	*6/10/2003*	*6/10/2003*	*7/14/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
		Duplicate					*Duplicate*								
TCL VOCs (ug/L)															
1,1,1-Trichloroethane	200	ND(1.0)	ND(1.0)	1.5	2.2	1.9	1.8	1.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(50)UJ
2-Hexanone	1,000	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(100)UJ
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(100)
Acetone	730	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(50)UJ
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Bromodichloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Bromoform	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chloroform (Trichloromethane)	100	ND(1.0)	ND(1.0)	ND(1.0)	1.8	2.0	1.9	1.9	1.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)UJ
cis-1,2-Dichloroethene	70	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.7
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)UJ
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Methyl Tert Butyl Ether	40	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Tetrachloroethene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.2	ND(1.0)	1.2	ND(1.0)	72
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.0	ND(1.0)	ND(1.0)	ND(2.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Trichloroethene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	5.9	3.5	3.6	1.6	1.6 J
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(6.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.

ND ( ) – Not detected above the value in parenthesis.

J – The associated value is qualified as an estimated quantity.

UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.

U - The analyte was analyzed for, but was qualified not detected above the value identified.

NA - Not Available

Boxed value exceed Residential Drinking Water Criteria

TABLE 4.1

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*PWDISCH*			
Sample Identification (GW-17360-)	*Residential &*	*071403-SP-044*	*071503-SP-065*	*071403-SP-043*	*071403-SP-042*	*071403-SP-041*	*071503-SP-057*	*071503-SP-058*	*TB-17360-071403-SP-054*	*TB-17360-071503-SP-066*	*TRIP BLANK*
Sample Depth	*Commercial I*	*22-27*	*25-30*	*52-57*	*30-35*	*13-18*	*36-41*	*45-55*	*NA*	*NA*	*NA*
Sample Date	*Drinking Water*	*7/14/2003*	*7/15/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*	*7/15/2003*	*7/15/2003*	*7/14/2003*	*7/15/2003*	*8/6/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL VOCs (ug/L)											
1,1,1-Trichloroethane	200	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.4	0.57 J	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(1.0)	0.39 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)UJ	ND(25)	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)	ND(25)UJ	1.1 J	0.86 J	0.90 J
2-Hexanone	1,000	ND(50)UJ	ND(50)	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)	ND(50)UJ
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	730	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	2.3 J	2.0 J	ND(25)UJ
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	100	ND(1.0)	ND(1.0)	2.1	ND(1.0)	ND(1.0)	0.67 J	0.44 J	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	100	ND(1.0)	0.36 J	11	0.76 J	0.42 J	1.9	3.0	ND(1.0)	ND(1.0)	0.26 J
Chloromethane (Methyl Chloride)	260	ND(1.0)UJ	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	70	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	0.50 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)UJ	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	40	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	5.0	14	0.85 J	0.58 J	0.55 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	5.0	ND(1.0)	ND(1.0)	2.0	7.4	ND(1.0)	0.54 J	3.0	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
U - The analyte was analyzed for, but was qualified not detected above the value identified.
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.2

ANALYTICAL RESULTS FOR TCL SVOCs IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*85-3*
Sample Identification (GW-17360-)	*Residential &*	*071503-SP-064*
Sample Depth	*Commercial I*	*20.3-30.3*
Sample Date	*Drinking Water*	*7/15/2003*
Units	*Criteria* [1]	*ug/L*
TCL SVOCs (ug/L)		
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	NA	ND(250)
2,4,5-Trichlorophenol	730	ND(250)
2,4,6-Trichlorophenol	120	ND(200)
2,4-Dichlorophenol	73	ND(500)
2,4-Dimethylphenol	370	ND(250)
2,4-Dinitrophenol	NA	ND(1000)UJ
2,4-Dinitrotoluene	7.7	ND(250)
2,6-Dinitrotoluene	NA	ND(250)
2-Chloronaphthalene	1,800	ND(250)
2-Chlorophenol	45	ND(250)
2-Methylnaphthalene	260	ND(250)
2-Methylphenol	NA	ND(250)
2-Nitroaniline	NA	ND(1000)
2-Nitrophenol	20	ND(250)
3,3'-Dichlorobenzidine	1.1	ND(200)
3-Nitroaniline	NA	ND(1000)
4,6-Dinitro-2-methylphenol	NA	ND(1000)
4-Bromophenyl phenyl ether	NA	ND(250)
4-Chloro-3-methylphenol	150	ND(250)
4-Chloroaniline	NA	ND(1000)
4-Chlorophenyl phenyl ether	NA	ND(250)
4-Methylphenol	NA	ND(250)
4-Nitroaniline	NA	ND(1000)
4-Nitrophenol	NA	ND(1000)
Acenaphthene	1,300	ND(250)
Acenaphthylene	52	ND(250)
Acetophenone	1,500	ND(250)
Anthracene	43	ND(250)
Atrazine	3.0	ND(250)
Benzaldehyde	NA	ND(500)
Benzo(a)anthracene	2.1	ND(200)
Benzo(a)pyrene	5.0	ND(200)
Benzo(b)fluoranthene	2.0 (M)	ND(200)
Benzo(g,h,i)perylene	5.0 (M)	ND(250)
Benzo(k)fluoranthene	5.0 (M)	ND(250)
Biphenyl	NA	ND(500)
bis(2-Chloroethoxy)methane	NA	ND(250)
bis(2-Chloroethyl)ether	2.0	ND(200)
bis(2-Ethylhexyl)phthalate	6.0	20 J
Butyl benzylphthalate	1,200	ND(250)
Caprolactam	5,800	ND(500)
Carbazole	85	ND(500)
Chrysene	5.0 (M)	ND(250)
Dibenz(a,h)anthracene	2.0 (M)	ND(200)
Dibenzofuran	ID	ND(250)
Diethyl phthalate	5,500	ND(250)
Dimethyl phthalate	73,000	ND(250)
Di-n-butylphthalate	880	ND(250)
Di-n-octyl phthalate	130	ND(250)
Fluoranthene	210	ND(250)
Fluorene	880	ND(250)
Hexachlorobenzene	1.0	ND(250)
Hexachlorobutadiene	15	ND(250)
Hexachlorocyclopentadiene	50	ND(250)
Hexachloroethane	7.3	ND(250)
Indeno(1,2,3-cd)pyrene	2.0	ND(200)
Isophorone	770	ND(250)
Naphthalene	520	ND(250)
Nitrobenzene	3.4	ND(200)
N-Nitrosodi-n-propylamine	5.0 (M)	ND(250)
N-Nitrosodiphenylamine	270	ND(250)
Pentachlorophenol	1.0	ND(1000)
Phenanthrene	52	ND(250)
Phenol	4,400	ND(250)
Pyrene	140	ND(250)

Notes:

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Boxed value exceed Residential Drinking Water Criteria

TABLE 4.3

ANALYTICAL RESULTS FOR NATURAL ATTENUATION PARAMETERS IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*85-7*	*85-7*	*86-2*	*86-3*	*87-1*	*87-2*	*87-4*	*87-5*	*87-8*	*87-8*	*87-9*	*87-10*	*87-11*	*87-13*	*93-1*
Sample Identification (GW-17360-)		*071503-SP-055*	*071503-SP-056*	*071503-SP-063*	*071403-SP-053*	*071503-SP-061*	*071503-SP-062*	*071503-SP-059*	*071503-SP-060*	*080603-JB-068*	*080603-JB-069*	*080603-JB-067*	*071403-SP-046*	*071403-SP-047*	*071403-SP-049*	*071403-SP-048*
Sample Depth		*20.6-25.6*	*20.6-25.6*	*NA*	*41.5-46.5*	*24-29*	*33.2-38.2*	*24-27*	*39.5-50.5*	*19.7-22.7*	*19.7-22.7*	*50.5-53.5*	*29-32*	*30-33*	*40-43*	*8.2*
Sample Date		*7/15/2003*	*7/15/2003*	*7/15/2003*	*7/14/2003*	*7/15/2003*	*7/15/2003*	*7/15/2003*	*7/15/2003*	*8/6/2003*	*8/6/2003*	*8/6/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*
			Duplicate								*Duplicate*					
Natural Attenuation Parameters	*Units*															
Alkalinity, Total (As CaCO3)	mg/L	250	250	270	260	330	280	260	310	290	280	270	300	270	300	180
Chloride	mg/L	253	244	177	328	204	164	219	174	759	756	152	229	142	214	152
Hardness	mg/L	450	460	360	420	410	400	380	380	450	550	320	410	410	430	250
Nitrate (as N)	mg/L	9.7 J	9.5 J	3.3 J	3.5	0.010 J	0.33 J	3.3 J	0.010 J	9.2	9.4	2.6	1.7	0.15	3.0	ND(0.10)
Nitrite (as N)	mg/L	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.087 J	0.043 J	ND(0.10)	ND(0.10)	0.22	ND(0.10)
Sulfate	mg/L	45.2	45.3	39.6	40.7	21.4	50.5	33.0	23.8	49.8	50.1	37.9	43.1	95.0	78.9	35.6
Sulfide	mg/L	1.2 J	1.2 J	1.3 J	0.91 J	1.7 J	1.3 J	1.2 J	2.0 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.27 J	ND(1.0)	ND(1.0)
Total Organic Carbon (TOC)	mg/L	3	2	2	2	5	2	3	7	0.7 J	0.7 J	0.7 J	ND(3)U	2	2	5
Calcium	mg/L	100	109	92.6	102	89.7	88.8	88.7	84.9	146	158	97.0	95.3	104	118	63.6
Magnesium	mg/L	21.2	23.1	22.7	27.6	24.0	26.6	20.4	22.5	ND(29.8)U	ND(32.1)U	ND(21.0)U	21.0	23.5	27.4	12.8
Manganese	mg/L	ND(0.015)U	ND(0.015)U	ND(0.015)U	ND(0.015)	0.54	ND(0.073)U	ND(0.015)U	ND(0.040)U	ND(0.015)U	ND(0.015)U	ND(0.015)U	ND(0.015)U	ND(0.071)U	ND(0.019)U	ND(0.12)U
Ethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Ethene	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.68	ND(0.50)UJ	ND(0.50)UJ	ND(0.50)UJ	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	88	0.86	ND(0.50)	73	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.1

Notes:

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U – The analyte was analyzed for, but was qualified not detected above the value identified.

NA - Not Available

Boxed value exceed Residential Drinking Water Criteria

TABLE 4.3

ANALYTICAL RESULTS FOR NATURAL ATTENUATION PARAMETERS IN GROUNDWATER SAMPLES
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location		*C-1*	*C-2*	*C-3*	*MW1-03*	*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*PWDISCH*
Sample Identification (GW-17360-)		*071403-SP-050*	*071403-SP-051*	*071403-SP-052*	*071403-SP-045*	*071403-SP-044*	*071503-SP-065*	*071403-SP-043*	*071403-SP-042*	*071403-SP-041*	*071503-SP-057*	*071503-SP-058*
Sample Depth		*NA*	*NA*	*NA*	*30-35*	*22-27*	*25-30*	*52-57*	*30-35*	*13-18*	*36-41*	*45-55*
Sample Date		*7/14/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*	*7/15/2003*	*7/14/2003*	*7/14/2003*	*7/14/2003*	*7/15/2003*	*7/15/2003*
Natural Attenuation Parameters	*Units*											
Alkalinity, Total (As CaCO3)	mg/L	200	250	230	300	330	320	260	300	260	300	260
Chloride	mg/L	198	229	242	147	346	254	151	176	194	351	203
Hardness	mg/L	300	380	370	420	370	420	300	400	360	400	400
Nitrate (as N)	mg/L	2.1	1.9	2.0	2.5	5.4	4.4 J	2.2	1.8	6.0	7.3 J	3.8 J
Nitrite (as N)	mg/L	0.14	0.14	0.14	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.10)
Sulfate	mg/L	42.4	66.2	54.9	35.6	34.6	35.8	33.7	37.0	30.0	53.2	61.2
Sulfide	mg/L	0.75 J	0.91 J	0.27 J	ND(1.0)	ND(1.0)	2.1 J	ND(1.0)	ND(1.0)	ND(1.0)	0.70 J	0.70 J
Total Organic Carbon (TOC)	mg/L	5	4	4	ND(2)U	ND(3)U	2	ND(2)U	ND(3)U	ND(2)U	2	2
Calcium	mg/L	80.6	96.1	87.7	102	97.9	97.8	68.2	95.9	89.1	80.5	105
Magnesium	mg/L	17.0	19.4	17.5	25.2	17.2	23.4	15.2	21.7	18.8	17.0	22.9
Manganese	mg/L	ND(0.056)U	ND(0.064)U	ND(0.078)U	ND(0.033)U	ND(0.022)U	ND(0.020)U	ND(0.023)U	ND(0.015)U	ND(0.015)U	ND(0.020)U	ND(0.015)
Ethane	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Ethene	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methane	ug/L	2.5	1.7	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Notes:

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Boxed value exceed Residential Drinking Water Criteria

TABLE 4.4

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
SEPTEMBER 2003 QUARTERLY MONITORING EVENT
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*85-3*	*85-5B*	*85-6*	*85-7*	*85-7*	*86-1*	*86-2*	*86-3*	*87-1*	*87-2*
Sample Identifiation (GW-17360-)	*Residential &*	*100703-JB-097*	*100703-JB-096*	*100703-JB-099*	*100203-JB-086*	*100203-JB-087*	*100703-JB-098*	*100703-JB-095*	*093003-JB-073*	*100203-JB-083*	*100203-JB-085*
Sample Depth	*Commercial I*	*20.3-30.3*	*21.9-31.9*	*19.5-24.5*	*20.6-25.6*	*20.6-25.6*	*18.5-29*	*27.5-32.5*	*41.5-46.5*	*24-29*	*33.2-38.2*
Sample Date	*Drinking Water*	*10/7/2003*	*10/7/2003*	*10/7/2003*	*10/2/2003*	*10/2/2003*	*10/7/2003*	*10/7/2003*	*9/30/2003*	*10/2/2003*	*10/2/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L Duplicate*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL VOC											
1,1,1-Trichloroethane	200	ND(1.0)	ND(1.0)	0.51 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.61 J	ND(3.3)	ND(1.4)
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,1-Dichloroethane	880	0.29 J	0.41 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	4.8	ND(1.4)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.4	ND(1.4)
1,2,4-Trichlorobenzene	70	ND(5.0)UJ	ND(5.0)UJ	ND(5.0)UJ	ND(5.0)	ND(5.0)	ND(5.0)UJ	ND(5.0)UJ	ND(5.0)	ND(17)U	ND(7.2)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(83)UJ	ND(36)UJ
2-Hexanone	1,000	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(170)UJ	ND(72)UJ
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)UJ	4.5 J	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)	ND(170)UJ	ND(72)UJ
Acetone	730	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(83)UJ	ND(36)UJ
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Bromodichloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	0.39 J	0.40 J	ND(1.0)	ND(1.0)	0.44 J	ND(3.3)	ND(1.4)
Bromoform	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(7.2)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Chloroform (Trichloromethane)	100	ND(1.0)	ND(1.0)	ND(1.0)	2.7	2.6	ND(1.0)	1.7	2.7	ND(3.3)	ND(1.4)
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
cis-1,2-Dichloroethene	70	ND(1.0)	0.29 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	100	41
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)UJ	ND(1.4)UJ
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(7.2)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(10)UJ	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(33)UJ	ND(14)UJ
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Methyl Tert Butyl Ether	40	ND(5.0)	ND(5.0)	ND(5.0)	0.21 J	0.23 J	ND(5.0)	0.54 J	ND(5.0)	ND(17)	0.85 J
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(7.2)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Tetrachloroethene	5.0	0.54 J	0.64 J	5.3	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	8.3	2.6
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Trichloroethene	5.0	0.69 J	1.1	1.3	0.93 J	0.90 J	ND(1.0)	3.8	2.2	1.9 J	8.5
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(3.3)	ND(1.4)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.4)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	5.1	ND(1.4)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(10)	ND(4.3)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was qualified not detected above the value identified
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.4

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
SEPTEMBER 2003 QUARTERLY MONITORING EVENT
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-11*	*87-13*	*87-13*	*93-1*	*C-1*
Sample Identifiation (GW-17360-)	*Residential &*	*100703-JB-094*	*100203-JB-084*	*093003-JB-074*	*093003-JB-070*	*100103-JB-076*	*100103-JB-075*	*100103-JB-077*	*100103-JB-078*	*100103-JB-079*	*100103-JB-080*
Sample Depth	*Commercial I*	*24-27*	*39.5-50.5*	*19.7-22.7*	*50.5-53.5*	*29-32*	*30-33*	*40-43*	*40-43*	*8.2*	*NA*
Sample Date	*Drinking Water*	*10/7/2003*	*10/2/2003*	*9/30/2003*	*9/30/2003*	*10/1/2003*	*10/1/2003*	*10/1/2003*	*10/1/2003*	*10/1/2003*	*10/1/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L Duplicate*	*ug/L*	*ug/L*
TCL VOC											
1,1,1-Trichloroethane	200	ND(1.0)	ND(2.5)	ND(1.0)	0.40 J	2.2	ND(5.0)	0.20 J	0.21 J	0.37 J	0.37 J
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	7.3	ND(1.0)	0.52 J	1.4 J	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)UJ	ND(12)U	ND(5.0)	ND(5.0)	ND(10)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)UJ	ND(62)UJ	ND(25)UJ	ND(25)UJ	ND(50)	ND(120)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ
2-Hexanone	1,000	ND(50)UJ	ND(120)UJ	ND(50)UJ	ND(50)	ND(100)	ND(250)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ	ND(50)UJ
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)UJ	ND(120)UJ	ND(50)	ND(50)	ND(100)	ND(250)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	730	ND(25)UJ	ND(62)UJ	ND(25)UJ	ND(25)UJ	ND(50)	ND(120)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ
Benzene	5.0	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	100	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.22 J
Bromoform	100	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(10)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)UJ	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	100	1.6	ND(2.5)	ND(1.0)	0.30 J	ND(2.0)	ND(5.0)	ND(1.0)	0.23 J	0.23 J	0.22 J
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)UJ	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	70	0.28 J	3.0	ND(1.0)	ND(1.0)	1.4 J	130	ND(1.0)	ND(1.0)	5.2	5.4
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(2.5)UJ	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	74	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(10)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(25)UJ	ND(10)	ND(10)	ND(20)	ND(50)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	40	0.50 J	ND(12)	ND(5.0)	ND(5.0)	ND(10)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(10)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	100	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	5.0	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	1.9	2.0
Toluene	790	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	2.1 J	ND(1.0)	ND(1.0)	ND(2.0)	1.5 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	5.0	3.7	ND(2.5)	0.33 J	0.30 J	44	34	2.0	1.8	1.4	1.4
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)UJ	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	2.0	ND(1.0)	92	ND(1.0)	ND(1.0)	ND(2.0)	5.0	ND(1.0)	ND(1.0)	0.60 J	0.70 J
Xylene (total)	280	ND(3.0)	ND(7.5)	ND(3.0)	ND(3.0)	ND(6.0)	ND(15)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample rep
limit is qualified as an estimated value and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was qualified not detected above the value i
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.4

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
SEPTEMBER 2003 QUARTERLY MONITORING EVENT
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*C-2*	*C-3*	*MW1-03*	*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*PWDISCH*
Sample Identification (GW-17360-)	*Residential &*	*100103-JB-081*	*100103-JB-082*	*100303-JB-091*	*100303-JB-092*	*100303-JB-093*	*100903-JB-089*	*100903-JB-090*	*100203-JB-088*	*093003-JB-071*	*093003-JB-072*
Sample Depth	*Commercial I*	*NA*	*NA*	*30-35*	*22-27*	*25-30*	*52-57*	*30-35*	*13-18*	*36-41*	*45-55*
Sample Date	*Drinking Water*	*10/1/2003*	*10/1/2003*	*10/3/2003*	*10/3/2003*	*10/3/2003*	*10/9/2003*	*10/9/2003*	*10/2/2003*	*9/30/2003*	*9/30/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL VOC											
1,1,1-Trichloroethane	200	0.39 J	0.43 J	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	0.24 J	ND(1.0)	0.41 J	0.59 J
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	0.58 J	ND(1.0)	0.53 J	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)U	ND(5.0)	ND(5.0)U	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)UJ	ND(25)UJ	ND(83)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)UJ	ND(25)UJ	ND(25)UJ
2-Hexanone	1,000	ND(50)UJ	ND(50)UJ	ND(170)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)UJ	ND(50)UJ	ND(50)UJ
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	ND(170)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)UJ	ND(50)	ND(50)
Acetone	730	ND(25)UJ	ND(25)UJ	ND(83)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)UJ	ND(25)UJ	ND(25)UJ
Benzene	5.0	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	100	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	3.7	0.21 J	0.95 J	ND(1.0)	0.45 J
Bromoform	100	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(3.3)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	0.62 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	100	0.22 J	ND(1.0)	ND(3.3)	ND(1.0)	0.69 J	8.6	1.0	1.6	0.37 J	2.6
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	70	5.2	5.3	2.6 J	ND(1.0)	ND(1.0)	ND(1.0)	0.38 J	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	1.6	ND(1.0)	0.68 J	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(1.0)	ND(3.3)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(10)	ND(33)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)UJ	ND(10)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	40	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	100	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	5.0	1.9	1.9	83	13	0.90 J	ND(1.0)	0.38 J	0.41 J	ND(1.0)	ND(1.0)
Toluene	790	ND(1.0)	ND(1.0)	ND(3.3)U	ND(1.0)U	ND(1.0)U	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	5.0	1.4	1.5	1.7 J	ND(1.0)	ND(1.0)	0.28 J	6.2	ND(1.0)	0.37 J	2.1
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(3.3)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	2.0	0.70 J	0.79 J	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(10)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample rep limit is qualified as an estimated value and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was qualified not detected above the value i
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.5

ANALYTICAL RESULTS FOR TCL SVOCs IN GROUNDWATER SAMPLES
SEPTEMBER 2003 QUARTERLY MONITORING EVENT
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*85-3*	*85-5B*	*85-6*	*86-1*
Sample Identifiation (GW-17360-)	*Residential &*	*100703-JB-097*	*100703-JB-096*	*100703-JB-099*	*100703-JB-098*
Sample Depth	*Commercial I*	*20.3-30.3*	*21.9-31.9*	*19.5-24.5*	*18.5-29*
Sample Date	*Drinking Water*	*10/7/2003*	*10/7/2003*	*10/7/2003*	*10/7/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL SVOC					
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	NA	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2,4,5-Trichlorophenol	730	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2,4,6-Trichlorophenol	120	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
2,4-Dichlorophenol	73	ND(750)	ND(10)	ND(10)	ND(10)
2,4-Dimethylphenol	370	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2,4-Dinitrophenol	NA	ND(1500)UJ	ND(20)UJ	ND(20)UJ	ND(20)UJ
2,4-Dinitrotoluene	7.7	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2,6-Dinitrotoluene	NA	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2-Chloronaphthalene	1,800	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2-Chlorophenol	45	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2-Methylnaphthalene	260	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2-Methylphenol	NA	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
2-Nitroaniline	NA	ND(1500)	ND(20)	ND(20)	ND(20)
2-Nitrophenol	20	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
3,3'-Dichlorobenzidine	1.1	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
3-Nitroaniline	NA	ND(1500)	ND(20)	ND(20)	ND(20)
4,6-Dinitro-2-methylphenol	NA	ND(1500)UJ	ND(20)UJ	ND(20)UJ	ND(20)UJ
4-Bromophenyl phenyl ether	NA	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
4-Chloro-3-methylphenol	150	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
4-Chloroaniline	NA	ND(1500)	ND(20)	ND(20)	ND(20)
4-Chlorophenyl phenyl ether	NA	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
4-Methylphenol	NA	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
4-Nitroaniline	NA	ND(1500)	ND(20)	ND(20)	ND(20)
4-Nitrophenol	NA	ND(1500)	ND(20)	ND(20)	ND(20)
Acenaphthene	1,300	ND(380)	1.4 J	ND(5.0)	ND(5.0)
Acenaphthylene	52	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Acetophenone	1,500	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Anthracene	43	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Atrazine	3.0	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Benzaldehyde	NA	ND(750)	ND(10)	ND(10)	ND(10)
Benzo(a)anthracene	2.1	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
Benzo(a)pyrene	5.0	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
Benzo(b)fluoranthene	2.0 (M)	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
Benzo(g,h,i)perylene	5.0 (M)	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Benzo(k)fluoranthene	5.0 (M)	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Biphenyl	NA	ND(750)	ND(10)	ND(10)	ND(10)
bis(2-Chloroethoxy)methane	NA	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
bis(2-Chloroethyl)ether	2.0	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
bis(2-Ethylhexyl)phthalate	6.0	97 J	0.86 J	0.50 J	5.0
Butyl benzylphthalate	1,200	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Caprolactam	5,800	ND(750)	ND(10)	34	12
Carbazole	85	ND(750)	ND(10)	ND(10)	ND(10)
Chrysene	5.0 (M)	36 J	0.86 J	ND(5.0)	ND(5.0)
Dibenz(a,h)anthracene	2.0 (M)	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
Dibenzofuran	ID	ND(380)	0.81 J	ND(5.0)	ND(5.0)
Diethyl phthalate	5,500	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Dimethyl phthalate	73,000	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Di-n-butylphthalate	880	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Di-n-octyl phthalate	130	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Fluoranthene	210	ND(380)	7.6	ND(5.0)	ND(5.0)
Fluorene	880	ND(380)	1.2 J	ND(5.0)	ND(5.0)
Hexachlorobenzene	1.0	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Hexachlorobutadiene	15	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Hexachlorocyclopentadiene	50	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Hexachloroethane	7.3	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Indeno(1,2,3-cd)pyrene	2.0	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
Isophorone	770	ND(380)	ND(5.0)	ND(5.0)	ND(5.0).
Naphthalene	520	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Nitrobenzene	3.4	ND(300)	ND(4.0)	ND(4.0)	ND(4.0)
N-Nitrosodi-n-propylamine	5.0 (M)	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
N-Nitrosodiphenylamine	270	ND(380)	ND(5.0)	ND(5.0)	ND(5.0)
Pentachlorophenol	1.0	ND(1500)	ND(20)	ND(20)	ND(20)
Phenanthrene	52	ND(380)	3.7 J	ND(5.0)	ND(5.0)
Phenol	4,400	ND(380)	10	ND(5.0)	1.6 J
Pyrene	140	110 J	6.8	ND(5.0)	ND(5.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was qualified not detected above the value identified.
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.6

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
DECEMBER 2003 QUARTERLY MONITORING EVENT
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*85-7*	*86-2*	*86-3*	*87-1*	*87-2*	*87-2*	*87-4*	*87-5*	*87-8*	*87-9*	*87-10*	*87-11*	*87-13*
Sample Identifiation (GW-17360-)	*Residential &*	*121703-JB-100*	*121703-JB-094*	*121803-JB-104*	*121703-JB-093*	*121703-JB-095*	*121703-JB-097*	*121703-JB-091*	*121703-JB-092*	*121803-JB-105*	*121803-JB-103*	*121803-JB-114*	*121803-JB-113*	*121803-JB-112*
Sample Depth	*Commercial I*	*20.6-25.6*	*27.5-32.5*	*41.5-46.5*	*24-29*	*33.2-38.2*	*33.2-38.2*	*24-27*	*39.5-50.5*	*19.7-22.7*	*50.5-53.5*	*29-32*	*30-33*	*40-43*
Sample Date	*Drinking Water*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L* *Duplicate*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL VOC														
1,1,1-Trichloroethane	200	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	3.2 J	ND(1.0)	0.51 J	1.8	ND(4.0)	0.21 J
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(1.0)	4.2	ND(1.0)	ND(1.0)	ND(1.0)	7.8	ND(1.0)	0.78 J	0.90 J	ND(4.0)	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	3.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)UJ	ND(8.4)	ND(20)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)	ND(25)	ND(25)	ND(62)	ND(25)	ND(25)	ND(25)	ND(83)	ND(25)U	ND(25)UJ	ND(42)	ND(100)	ND(25)
2-Hexanone	1,000	ND(50)	ND(50)	ND(50)	ND(120)	ND(50)	ND(50)	ND(50)	ND(170)	ND(50)	ND(50)UJ	ND(84)	ND(200)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	0.38 J	ND(120)	ND(50)	ND(50)	ND(50)	ND(170)	ND(50)	ND(50)UJ	ND(84)	ND(200)	ND(50)
Acetone	730	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(62)UJ	ND(25)UJ	ND(25)UJ	ND(25)UJ	ND(83)UJ	3.3 J	ND(25)UJ	1.9 J	5.7 J	0.86 J
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Bromodichloromethane	100	0.33 J	ND(1.0)	0.38 J	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Bromoform	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)UJ	ND(1.0)UJ	ND(1.7)UJ	ND(4.0)UJ	ND(1.0)UJ
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)UJ	ND(8.4)	ND(20)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Chloroform (Trichloromethane)	100	2.2 J	2.0	2.5	ND(2.5)	ND(1.0)	ND(1.0)	1.9	ND(3.3)	ND(1.0)	0.23 J	ND(1.7)	ND(4.0)	ND(1.0)
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
cis-1,2-Dichloroethene	70	ND(1.0)	0.36 J	ND(1.0)	40	23	23	ND(1.0)	23	ND(1.0)	ND(1.0)UJ	1.1 J	130	ND(1.0)
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)UJ	ND(8.4)	ND(20)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(25)	ND(10)	ND(10)	ND(10)	ND(33)	ND(10)	ND(10)UJ	ND(17)	ND(40)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Methyl Tert Butyl Ether	40	ND(5.0)UJ	0.35 J	ND(5.0)UJ	ND(12)UJ	0.62 J	0.53 J	ND(5.0)UJ	ND(17)UJ	ND(5.0)	ND(5.0)UJ	ND(8.4)	ND(20)	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(12)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	0.49 J	ND(8.4)	ND(20)	ND(5.0)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Tetrachloroethene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	0.25 J	ND(1.0)UJ	0.34 J	ND(4.0)	ND(1.0)
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	6.7	3.1	2.9	ND(1.0)	12	ND(1.0)	ND(1.0)UJ	ND(1.7)	1.5 J	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Trichloroethene	5.0	0.86 J	4.7	2.1	76	35	33	0.41 J	ND(3.3)	0.53 J	0.50 J	44	11	1.5
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)UJ	ND(1.7)	ND(4.0)	ND(1.0)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	ND(1.0)	5.2	ND(1.0)	ND(1.0)	ND(1.0)	120	ND(1.0)	ND(1.0)UJ	ND(1.7)	1.3 J	ND(1.0)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(7.5)	ND(3.0)	ND(3.0)	ND(3.0)	ND(10)	ND(3.0)	ND(3.0)UJ	ND(5.0)	ND(12)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was qualified not detected above the value identified
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.6

ANALYTICAL RESULTS FOR TCL VOCs IN GROUNDWATER SAMPLES
DECEMBER 2003 QUARTERLY MONITORING EVENT
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*93-1*	*C-1*	*C-2*	*C-3*	*MW1-03*	*MW2-03*	*MW3-03*	*MW4-03*	*MW5-03*	*MW6-03*	*MW7-03*	*PWDISCH*
Sample Identifiation (GW-17360-)	*Residential &*	*121803-JB-116*	*121803-JB-108*	*121803-JB-109*	*121803-JB-107*	*121803-JB-118*	*121803-JB-117*	*121803-JB-119*	*121803-JB-106*	*121803-JB-115*	*121803-JB-111*	*121703-JB-102*	*121803-JB-110*
Sample Depth	*Commercial I*	*8.2*	*NA*	*NA*	*NA*	*30-35*	*22-27*	*25-30*	*52-57*	*30-35*	*13-18*	*36-41*	*45-55*
Sample Date	*Drinking Water*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*
Units	*Criteria* [1]	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL VOC													
1,1,1-Trichloroethane	200	0.38 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	0.32 J	ND(1.0)	4.3	0.55 J
1,1,2,2-Tetrachloroethane	8.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	880	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	0.51 J	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	7.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	70	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene Dibromide)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	6.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	75	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl Ethyl Ketone)	13,000	ND(25)	ND(25)U	ND(25)	ND(25)U	ND(83)	ND(25)	ND(25)UJ	ND(25)	ND(25)	ND(25)	1.6 J	ND(25)U
2-Hexanone	1,000	ND(50)	ND(50)	ND(50)	ND(50)	ND(170)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1,800	ND(50)	ND(50)	ND(50)	ND(50)	ND(170)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
Acetone	730	ND(25)UJ	1.7 J	1.4 J	1.3 J	5.1 J	0.74 J	ND(25)UJ	0.72 J	ND(25)UJ	ND(25)	ND(25)UJ	0.78 J
Benzene	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	100	ND(1.0)	0.44 J	0.39 J	0.44 J	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.40 J
Bromoform	100	ND(1.0)	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(3.3)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)UJ	ND(1.0)	ND(1.0)UJ	ND(1.0)	ND(1.0)UJ
Bromomethane (Methyl Bromide)	10	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	5.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	430	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	100	ND(1.0)	0.62 J	0.67 J	0.60 J	ND(3.3)	ND(1.0)	0.68 J	0.58 J	1.1	0.34 J	1.3	2.6
Chloromethane (Methyl Chloride)	260	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	70	3.4 J	ND(1.0)	ND(1.0)	ND(1.0)	0.91 J	ND(1.0)	ND(1.0)	ND(1.0)	0.41 J	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	100	ND(1.0)	0.32 J	0.34 J	0.34 J	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	1,700	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropylbenzene	800	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Methyl acetate	NA	ND(10)	ND(10)	ND(10)	ND(10)	ND(33)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl Tert Butyl Ether	40	ND(5.0)UJ	0.28 J	0.30 J	0.27 J	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)UJ	ND(5.0)	ND(5.0)UJ	ND(5.0)
Methylene chloride	5.0	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(17)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	100	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	5.0	1.0 J	0.63 J	0.61 J	0.60 J	86	7.2	0.78 J	0.78 J	0.70 J	0.16 J	ND(1.0)	0.14 J
Toluene	790	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	5.0	1.1 J	ND(1.0)	ND(1.0)	ND(1.0)	1.4 J	ND(1.0)	ND(1.0)	1.2	9.8	1.2	0.90 J	1.7
Trichlorofluoromethane (CFC-11)	2,600	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(3.3)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylene (total)	280	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(10)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)	ND(3.0)

Notes:

(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was qualified not detected above the value identifi
NA - Not Available
Boxed value exceed Residential Drinking Water Criteria

TABLE 4.7

ANALYTICAL RESULTS FOR TCL SVOCs IN GROUNDWATER SAMPLES
DECEMBER 2003 QUARTERLY MONITORING EVENT
GENERAL MOTORS CORPORATION
GRAND RAPIDS METAL PLANT
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451, Part 201*	*85-3*	*85-5B*	*85-6*	*86-1*
Sample Identifiation (GW-17360-)	*Residential &*	*121703-JB-096*	*121703-JB-098*	*121703-JB-101*	*121703-JB-099*
Sample Depth	*Commercial I*	*20.3-30.3*	*21.9-31.9*	*19.5-24.5*	*18.5-29*
Sample Date	*Drinking Water*	*12/18/2003*	*12/18/2003*	*12/18/2003*	*12/18/2003*
Units	*Criteria* (1)	*ug/L*	*ug/L*	*ug/L*	*ug/L*
TCL SVOC					
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	NA	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2,4,5-Trichlorophenol	730	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2,4,6-Trichlorophenol	120	ND(40)	ND(16)	ND(4.0)	ND(4.0)
2,4-Dichlorophenol	73	ND(100)	ND(40)	ND(10)	ND(10)
2,4-Dimethylphenol	370	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2,4-Dinitrophenol	NA	ND(200)	ND(80)	ND(20)	ND(20)
2,4-Dinitrotoluene	7.7	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2,6-Dinitrotoluene	NA	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2-Chloronaphthalene	1,800	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2-Chlorophenol	45	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2-Methylnaphthalene	260	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2-Methylphenol	NA	ND(50)	ND(20)	ND(5.0)	ND(5.0)
2-Nitroaniline	NA	ND(200)	ND(80)	ND(20)	ND(20)
2-Nitrophenol	20	ND(50)	ND(20)	ND(5.0)	ND(5.0)
3,3'-Dichlorobenzidine	1.1	ND(40)	ND(16)	ND(4.0)	ND(4.0)
3-Nitroaniline	NA	ND(200)	ND(80)	ND(20)	ND(20)
4,6-Dinitro-2-methylphenol	NA	ND(200)	ND(80)	ND(20)	ND(20)
4-Bromophenyl phenyl ether	NA	ND(50)	ND(20)	ND(5.0)	ND(5.0)
4-Chloro-3-methylphenol	150	ND(50)	ND(20)	ND(5.0)	ND(5.0)
4-Chloroaniline	NA	ND(200)	ND(80)	ND(20)	ND(20)
4-Chlorophenyl phenyl ether	NA	ND(50)	ND(20)	ND(5.0)	ND(5.0)
4-Methylphenol	NA	ND(50)	ND(20)	ND(5.0)	ND(5.0)
4-Nitroaniline	NA	ND(200)	ND(80)	ND(20)	ND(20)
4-Nitrophenol	NA	ND(200)	ND(80)	ND(20)UJ	ND(20)
Acenaphthene	1,300	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Acenaphthylene	52	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Acetophenone	1,500	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Anthracene	43	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Atrazine	3.0	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Benzaldehyde	NA	ND(100)	ND(40)	ND(10)	ND(10)
Benzo(a)anthracene	2.1	ND(40)	ND(16)	ND(4.0)	ND(4.0)
Benzo(a)pyrene	5.0	ND(40)	ND(16)	ND(4.0)	ND(4.0)
Benzo(b)fluoranthene	2.0 (M)	ND(40)	ND(16)	ND(4.0)	ND(4.0)
Benzo(g,h,i)perylene	5.0 (M)	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Benzo(k)fluoranthene	5.0 (M)	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Biphenyl	NA	ND(100)	ND(40)	ND(10)	ND(10)
bis(2-Chloroethoxy)methane	NA	ND(50)	ND(20)	ND(5.0)	ND(5.0)
bis(2-Chloroethyl)ether	2.0	ND(40)	ND(16)	ND(4.0)	ND(4.0)
bis(2-Ethylhexyl)phthalate	6.0	4.7 J	ND(20)	0.79 J	0.97 J
Butyl benzylphthalate	1,200	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Caprolactam	5,800	ND(100)	ND(40)U	ND(10)	ND(10)U
Carbazole	85	ND(100)	ND(40)	ND(10)	ND(10)
Chrysene	5.0 (M)	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Dibenz(a,h)anthracene	2.0 (M)	ND(40)	ND(16)	ND(4.0)	ND(4.0)
Dibenzofuran	ID	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Diethyl phthalate	5,500	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Dimethyl phthalate	73,000	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Di-n-butylphthalate	880	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Di-n-octyl phthalate	130	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Fluoranthene	210	ND(50)	10 J	ND(5.0)	ND(5.0)
Fluorene	880	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Hexachlorobenzene	1.0	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Hexachlorobutadiene	15	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Hexachlorocyclopentadiene	50	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Hexachloroethane	7.3	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Indeno(1,2,3-cd)pyrene	2.0	ND(40)	ND(16)	ND(4.0)	ND(4.0)
Isophorone	770	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Naphthalene	520	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Nitrobenzene	3.4	ND(40)	ND(16)	ND(4.0)	ND(4.0)
N-Nitrosodi-n-propylamine	5.0 (M)	ND(50)	ND(20)	ND(5.0)	ND(5.0)
N-Nitrosodiphenylamine	270	ND(50)	ND(20)	ND(5.0)	ND(5.0)
Pentachlorophenol	1.0	ND(200)	ND(80)	ND(20)	ND(20)
Phenanthrene	52	ND(50)	4.9 J	ND(5.0)	ND(5.0)
Phenol	4,400	ND(50)	ND(20)	9.0	1.3 J
Pyrene	140	ND(50)	12 J	ND(5.0)	ND(5.0)

Notes:
(1) If Criteria is exceeded then the corresponding analytical value is boxed.
ND ( ) – Not detected above the value in parenthesis.
J – The associated value is qualified as an estimated quantity.
UJ – The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.
U – The analyte was analyzed for, but was qualified not detected above the value identified.
NA - Not Available

APPENDIX A

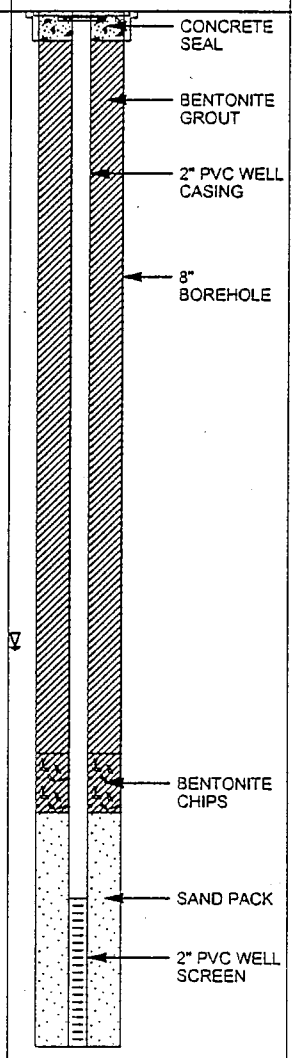
STRATIGRAPHIC AND MONITORING WELL CONSTRUCTION LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW1-03
DATE COMPLETED: June 23, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	678.99
0	CONCRETE (SIDEWALK)	678.39
2	SW-SAND, fine to coarse, well graded, trace concrete debris, trace medium gravel, dark brown, moist	676.69
4	SP-SAND, medium grained, poorly graded, trace fine subangular gravel, compact, brown, moist	
6	- slight increase in gravel content at 5.5ft BGS	
8	SW-SAND, with gravel, fine to coarse, fine to medium, well graded, heterogeneous, compact, brown, moist	670.99
10		
12	- becoming denser at 11.7ft BGS	667.69
	SP-SAND, fine grained, poorly graded, brown, moist	667.09
14	SW/GW-SAND AND GRAVEL, fine to coarse, well graded, subangular to subrounded, heterogeneous, dense, multicolored, brown, moist	
16		
18	SW-SAND, with gravel, fine to coarse, fine to medium, well graded, heterogeneous, compact, brown, moist	661.79
20	- moist to wet at 20.0ft BGS	
22	- wet at 21.5ft BGS - medium grained sands, poorly graded at 22.5ft BGS	
24		
26	- increasing medium sands, decreasing gravel content at 24.8ft BGS	653.99
	SP-SAND, medium grained, poorly graded, homogeneous, compact, light brown, wet	
28	- trace fine gravel at 26.4ft BGS - trace medium gravel at 27.0ft BGS	
30		
32		
34		
36		
38		
40		
42	CL-SILTY CLAY, trace fine subangular gravel, competant, low plasticity, gray, dry	637.99
	END OF BOREHOLE @ 42.0ft BGS	636.99
44		



WELL DETAILS
Screened interval:
648.99 to 643.99ft AMSL
30.00 to 35.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
651.89 to 643.99ft AMSL
27.10 to 35.00ft BGS
Material: #6 SAND

SAMPLE NUMBER	INTERVAL	REC (%)	"N" VALUE	PID (ppm)
1SS			8	0.0
2SS			9	0.0
3SS			10	0.0
4SS			6	0.0
5SS			13	0.0
6SS			34	0.0
7SS			40	0.0
8SS			36	0.0
9SS			25	0.0
10SS			14	0.0
11SS			27	0.0
12SS			32	0.0
13SS			14	0.0
14SS			12	0.0
15SS			10	0.0
16SS			12	0.0
17SS			14	0.0
18SS			8	0.0
19SS			2	0.0
20SS			2	0.0
21SS			14	0.0

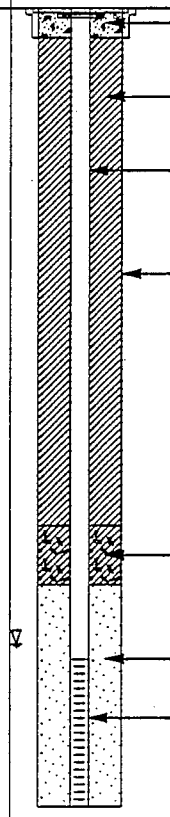
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW2-03
DATE COMPLETED: June 12, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	680.89
0	CONCRETE (SIDEWALK)	680.29
2	SW-SAND, fine to medium, trace coarse sands, trace coal material, trace vegetation, dark brown, dry to moist	
4		
	- loose at 5.0ft BGS	
6	- increase in coarse sands at 6.6ft BGS	673.99
8	SP-SAND, coarse grained, trace fines and medium sands, light brown, moist	673.69
10	SW-SAND, with gravel, fine to coarse, fine to medium gravels, well graded, subangular to subrounded, light brown, multicolored, moist	
12	- trace rounded medium gravel at 11.3ft BGS - becoming more dense at 11.5ft BGS	
14		
	- decreasing gravel content at 15.0ft BGS	
16		
	- coarse gravel, dense at 17.0ft BGS	
18		
20	SP-SAND, medium grained, poorly graded, homogeneous, dense, light brown, moist to wet	660.89
22	- wet at 21.5ft BGS	
	SW-SAND, with gravel, fine to coarse, fine to medium gravel, well graded, subangular to subrounded, compact, multicolored brown, wet	658.29
24		
26		
28		
30		
32		
34		
36	SM-SILTY SAND, fine grained, homogeneous, non-compact, gray, wet	645.69
38	- trace silty clay at 37.5ft BGS	
40		640.59
42	CL-SILTY CLAY (TILL), with trace fine subangular gravel, compact, competent, low plasticity, dark gray, dry to moist	638.89
	END OF BOREHOLE @ 42.0ft BGS	
44		



WELL DETAILS
Screened interval:
658.89 to 653.89ft AMSL
22.00 to 27.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
661.39 to 653.89ft AMSL
19.50 to 27.00ft BGS
Material: #6 SAND

SAMPLE NUMBER	INTERVAL	REC (%)	"N" VALUE	PID (ppm)
1SS			18	0.0
2SS			10	0.0
3SS			6	0.0
4SS			6	0.0
5SS			12	0.0
6SS			24	0.0
7SS			16	0.0
8SS			23	0.0
9SS			50	0.0
10SS			34	0.0
11SS			19	0.0
12SS			24	0.0
13SS			26	0.0
14SS			17	0.0
15SS			14	0.0
16SS			26	0.0
17SS			18	0.0
18SS			35	0.0
19SS			16	0.0
20SS			11	0.0
21SS			15	0.0

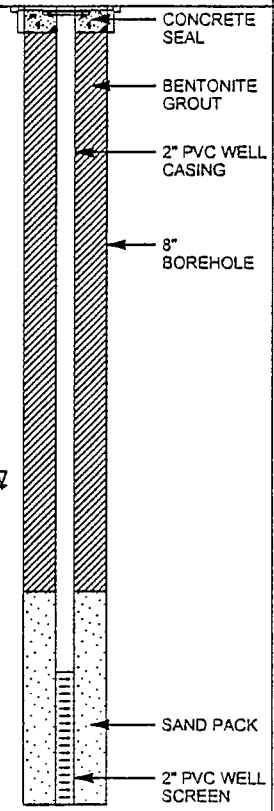
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW3-03
DATE COMPLETED: June 16, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	676.93
0	ASPHALT	676.43
2	SW/GW-SAND AND GRAVEL (FILL), fine to coarse, well graded, trace asphalt debris, trace concrete, dark brown, dry to moist	
4	- decreasing gravel content at 4.3ft BGS	672.33
6	SW-SAND, fine to coarse, well graded, loose, brown, dry to moist	
8	- trace subrounded medium gravel at 9.0ft BGS	
10	- grading to coarse sands at 10.0ft BGS	666.33
12	SW/GW-SAND AND GRAVEL, fine to coarse, subangular to subrounded, well graded, dense, dark brown, moist	
14		661.73
16	SP-SAND, medium grained, poorly graded, light brown, moist	
18	- wet at 18.0ft BGS	
20	SM-SILTY SAND, fine grained, trace sandy clay, semi-competent, trace plasticity, brown, compact, wet	656.93
22	SP-SAND, medium grained, poorly graded, loose, light brown, wet	654.93
24	- trace coarse sands at 23.3ft BGS - silty sand seam at 24.1ft BGS	
26	- trace fine gravel at 25.0ft BGS	
28	- trace fine sands, loose at 29.2ft BGS	
30		
32		
34		
36		
38		
40	- becoming gray at 40.0ft BGS	
42		
44	CL-SILTY CLAY (TILL), trace fine subanguiar gravel, competent, stiff, low plasticity, dark gray, dry to moist	633.43 632.93
46	END OF BOREHOLE @ 44.0ft BGS	
48		



WELL DETAILS
Screened interval:
651.93 to 646.93ft AMSL
25.00 to 30.00ft BGS
Length: 5ft
Diameter: 30in
Slot Size: 0.010
Material: PVC
Sand Pack:
654.93 to 651.93ft AMSL
22.00 to 25.00ft BGS
Material: #6 SAND

SAMPLE NUMBER	INTERVAL	REC (%)	"N" VALUE	PID (ppm)
1SS			26	0.0
2SS			15	0.0
3SS			7	0.0
4SS			5	0.0
5SS			26	0.0
6SS			23	0.0
7SS			46	0.0
8SS			41	0.0
9SS			10	0.0
10SS			25	0.0
11SS			24	0.0
12SS			9	0.0
13SS			9	0.0
14SS			12	0.0
15SS			7	0.0
16SS			8	0.0
17SS			11	0.0
18SS			8	1.3
19SS			5	NA
20SS			8	NA
21SS			16	0.0
22SS			18	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW4-03
DATE COMPLETED: June 11, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE "N" VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	679.26						
0	SW-SAND, fine to coarse, well graded, trace vegetation and medium subrounded gravels, loose, dark brown, dry		CONCRETE SEAL	1SS			9	0.0
2		676.56	BENTONITE GROUT	2SS			10	0.0
4	SP-SAND, medium grained, poorly graded, trace fine gravels, compact, yellowish brown, moist			3SS			9	0.0
6	- slight increase in gravel content at 6.2ft BGS		2" PVC WELL CASING	4SS			6	0.0
8	- becoming darker brown at 8.2ft BGS			5SS			7	0.0
10			8" BOREHOLE	6SS			4	0.0
12	- increase in moisture content at 12.0ft BGS			7SS			9	0.0
14	- some medium gravel at 13.6ft BGS - moist to wet at 13.8ft BGS	665.26		8SS			8	0.0
16	SW-SAND, with gravel, fine to coarse, well graded, fine subangular gravel, brown, moist	662.96		9SS			16	0.0
18	SP-SAND, medium grained, poorly graded, homogeneous, light brown, moist - grading to finer sands at 18.0ft BGS			10SS			18	0.0
20	- becoming more dense at 21.0ft BGS			11SS			28	0.0
22		657.26		12SS			34	0.0
24	SP-SAND, fine grained, poorly graded, homogeneous, light brown, moist - trace oxidation banding at 22.5ft BGS - wetness at 23.5ft BGS		▽	13SS			5	0.0
26				14SS			10	0.0
28		650.56		15SS			23	0.0
30	SW-SAND, fine to coarse, trace fine gravel, well graded, compact, dark brown, wet	649.76		16SS			6	0.0
32	SP-SAND, medium grained, trace coarse sands, poorly graded, compact, brown, wet	647.86		17SS			8	0.0
34	SW-SAND, with gravel, well graded, fine to coarse, subrounded to subangular, heterogeneous, multicolored brown, wet			18SS			12	0.0
36				19SS			10	0.0
38				20SS			12	0.0
40		639.96		21SS			10	0.0
42	GW/SW-GRAVEL AND SAND, well graded, fine to coarse, subangular to subrounded, compact, heterogeneous, multicolored, wet - some rounded fine gravels at 41.4ft BGS - grading to coarser sands at 43.0ft BGS			22SS			19	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW4-03
DATE COMPLETED: June 11, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE "N" VALUE	SAMPLE PID (ppm)
46	SP-SANDS, coarse grained, poorly graded, trace fine and medium sands, compact, multicolored, wet	635.26	BENTONITE SEAL	23SS			15	0.0
48			BENTONITE CHIPS	24SS			10	0.0
50			2" PVC WELL CASING	25SS			19	0.0
52			8" BOREHOLE	26SS			12	0.0
54				27SS			12	0.0
56	- loose at 55.0ft BGS		SAND PACK	28SS			5	0.0
58	- grading to medium sands at 58.0ft BGS		2" PVC WELL SCREEN	29SS			9	0.0
60	SP-SAND, medium grained, poorly graded, trace fines and coarse sands, compact, light brown, wet	619.96	WELL DETAILS Screened interval: 627.26 to 622.26ft AMSL 52.00 to 57.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 630.26 to 622.26ft AMSL 49.00 to 57.00ft BGS Material: #6 SAND	30SS			21	0.0
62	- loose at 61.0ft BGS			31SS			4	0.0
64				32SS			13	0.0
66	- grading to coarser sands at 66.0ft BGS			33SS			8	0.0
68		611.26		34SS			17	0.0
70	SP-SAND, coarse grained, poorly graded, trace fines CL-SILTY CLAY (TILL), trace fine subangular gravel, competent, hard, low plasticity, dark gray, dry to moist	610.76		35SS			52	0.0
72	END OF BOREHOLE @ 72.0ft BGS	607.26		36SS			32	0.0
74								
76								
78								
80								
82								
84								
86								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

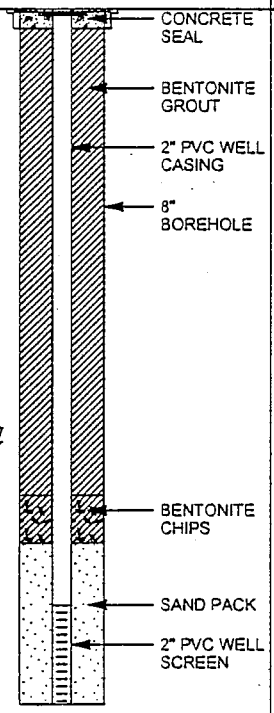
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW5-03
DATE COMPLETED: June 10, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	675.77
0	SW-SAND, fine to coarse sands, trace vegetation, trace fine gravels, compact, dark brown, moist	
	- dark brown banding at 4.0ft BGS	
5	- slight increase in gravel content at 5.5ft BGS	
	- trace medium, well graded, gravels at 6.7ft BGS	
10	- slight increase in moisture at 10.0ft BGS	
15	SP-SAND, coarse grained, poorly graded, homogeneous, compact, brown, moist	660.77
20	- grading to medium sands at 20.0ft BGS	655.47
	SP-SAND, medium grained, poorly graded, homogeneous, loose, light brown, moist to wet	653.77
	- wet at 21.8ft BGS	653.07
25	SM-SILTY SAND, some fines, stiff, trace plasticity, gray, moist to wet	650.77
	- trace oxidation banding at 23.3ft BGS	
	SP-SAND, medium grained, poorly graded, trace fine sands, homogenous, compact, brown, wet	
30	SW-SAND, trace fine gravels, fine to coarse, heterogeneous, compact, multicolored gray and brown, wet	
	- trace medium well graded gravel at 29.4ft BGS	641.77
35	- coarse sands at 33.0ft BGS	
	- medium sands at 33.7ft BGS	
40	SP-SAND, coarse grained, poorly graded, trace fines, compact, brown, wet	
	- trace medium gravels, subangular at 41.4ft BGS	
45	- grading to at 49.0ft BGS	
50	SW-SAND, with trace well graded gravels, fine to coarse, subangular to subrounded, fine to medium gravels, compact, heterogeneous, multicolored, brown, wet	625.77
		622.77
55	- slight increase in gravel content at 51.5ft BGS	
	SW-SAND, with gravel, fine to coarse, subangular to subrounded, well graded, compact, multicolored, wet	618.77
		617.77
60	CL-SILTY CLAY, with trace very fine subangular gravel, competent, very dense, low plasticity, gray, dry to moist	615.77
	SP-SAND, fine grained, trace silts, poorly graded, dense, light brown, wet	
65	END OF BOREHOLE @ 60.0ft BGS	

MONITORING WELL



WELL DETAILS
Screened interval:
645.77 to 640.77ft AMSL
30.00 to 35.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
648.87 to 640.77ft AMSL
26.90 to 35.00ft BGS
Material: #6 SAND

SAMPLE NUMBER	INTERVAL	REC (%)	"N" VALUE	PID (ppm)
1SS			18	0.0
2SS			10	0.0
3SS			7	0.0
4SS			7	0.0
5SS			6	0.0
6SS			6	0.0
7SS			7	0.0
8SS			11	0.0
9SS			12	0.0
10SS			9	0.0
11SS			7	0.0
12SS			6	0.0
13SS			18	0.0
14SS			11	0.0
15SS			18	0.0
16SS			9	0.0
17SS			8	0.0
18SS			7	0.0
19SS			8	0.0
20SS			6	0.0
21SS			16	0.0
22SS			16	0.0
23SS			16	0.0
24SS			12	0.0
25SS			11	0.0
26SS			14	0.0
27SS			12	0.0
28SS			15	0.0
29SS			94	0.0
30SS			34	0.0

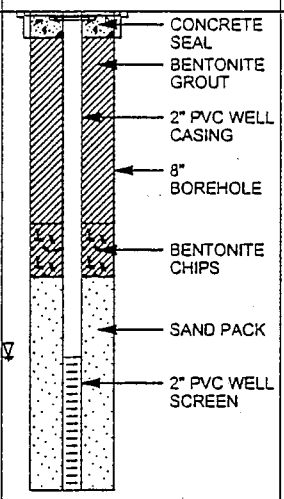
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW6-03
DATE COMPLETED: June 18, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	665.60
2	SW-SAND, trace fine gravels, well graded, fine to coarse, fine subrounded gravels, loose, brown, dry to moist	
4	- decrease in fine and coarse sands, fine gravels at 2.0ft BGS	663.30
6	SP-SAND, medium grained, poorly graded, trace coarse sands, loose, light brown, moist - very loose at 5.0ft BGS	
8		657.10
10	SW-SAND, with fine well graded gravels, fine to coarse, trace medium subrounded gravel, compact, brownish-gray, moist - slight increase in gravel content at 10.0ft BGS	
12	- becoming light brown at 11.8ft BGS - increase in moisture content at 12.0ft BGS	
14	- wet at 13.0ft BGS	
16	- some medium gravel at 15.0ft BGS	650.20
18	SW/GW-SANDS AND GRAVELS, well graded, fine to coarse, subangular to subrounded, compact, heterogenous, multicolored, wet	
20		
22	- slight decrease in gravel content at 21.0ft BGS - grading to medium sands at 22.5ft BGS	642.60
24	SW-SAND, well graded, fine to coarse, trace fine gravels, compact, light brown, wet	
26		
28	- dense at 29.0ft BGS	
30		634.60
32	SP-SAND, medium grained, poorly graded, homogenous, compact, light brown, wet - trace coarse sand at 32.6ft BGS	
34	- trace very fine gravels at 34.2ft BGS	
36	- trace medium subrounded gravels at 36.0ft BGS	
38		
40		
42	- some fine sands at 43.0ft BGS	
44		620.60
46	CL-SILTY CLAY, trace find subangular gravel, very dense, low plasticity, gray, dry to moist, competent	619.60
48	END OF BOREHOLE @ 46.0ft BGS	



WELL DETAILS
Screened interval:
652.60 to 647.60ft AMSL
13.00 to 18.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
655.60 to 647.60ft AMSL
10.00 to 18.00ft BGS
Material: #6 SAND

SAMPLE NUMBER	INTERVAL	REC (%)	"N" VALUE	PID (ppm)
1SS			7	0.0
2SS			10	0.0
3SS			5	0.0
4SS			10	0.0
5SS			10	0.0
6SS			12	0.0
7SS			17	0.00
8SS			12	0.0
9SS			13	0.0
10SS			10	0.0
11SS			10	0.0
12SS			14	0.0
13SS			21	0.0
14SS			26	0.0
15SS			33	0.0
16SS			20	0.0
17SS			21	0.0
18SS			16	0.0
19SS			27	0.0
20SS			34	0.0
21SS			23	0.0
22SS			36	0.0
23SS			69	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 17360.GPJ CRA_CORP.GDT 8/26/03

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW7-03
DATE COMPLETED: June 17, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE "N" VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	675.03						
0	ASPHALT (PARKING LOT)	674.53	CONCRETE SEAL	1SS			20	0.0
2	SP-SAND, medium grained, poorly graded, homogeneous, compact, yellowish-brown, moist		BENTONITE GROUT	2SS			15	0.0
4	- loose at 5.0ft BGS		2" PVC WELL CASING	3SS			6	0.0
6				4SS			11	0.0
8	- becoming lighter brown at 9.4ft BGS		8" BOREHOLE	5SS			8	0.0
10	- trace coarse sands at 10.0ft BGS			6SS			10	0.0
12	SW-SAND, medium and coarse sands, trace fines, well graded, loose, light brown, dry to moist	663.03		7SS			9	0.00
14	- trace fine gravel at 15.2ft BGS			8SS			11	0.0
16	SP-SAND, medium grained, poorly graded, homogeneous, compact, grayish-brown, moist	659.53		9SS			22	0.0
18	- wet at 18.5ft BGS		▽	10SS			12	0.0
20	- loose at 20.0ft BGS			11SS			14	0.0
22				12SS			13	0.0
24				13SS			12	0.0
26				14SS			7	0.0
28				15SS			10	0.0
30	- trace subrounded medium gravel at 31.0ft BGS			16SS			22	0.0
32				17SS			12	0.0
34	SW-SAND, fine to coarse, well graded, trace fine gravel, compact, multicolored brown, wet	640.53		18SS			11	0.0
36	- grading to coarse sands at 37.0ft BGS		SAND PACK	19SS			15	0.0
38			2" PVC WELL SCREEN	20SS			12	0.0
40	- some medium subrounded gravels at 40.0ft BGS			21SS			16	0.0
42			WELL DETAILS Screened interval: 639.03 to 634.03ft AMSL 36.00 to 41.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 642.03 to 634.03ft AMSL	22SS			15	0.0
44				23SS			6	0.0
46				24SS			11	0.0
48	- trace fine gravel at 49.5ft BGS			25SS			23	0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM GRAND RAPIDS
PROJECT NUMBER: 17360
CLIENT: GENERAL MOTORS
LOCATION: WYOMING, MI

HOLE DESIGNATION: MW7-03
DATE COMPLETED: June 17, 2003
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE "N" VALUE	SAMPLE PID (ppm)
52	GW/SW-GRAVEL AND SAND, fine to coarse, subangular to subrounded, well graded, heterogeneous, multicolored, wet	624.03	33.00 to 41.00ft BGS Material: #6 SAND	26SS			16	0.0
54				27SS			4	0.0
56	SP-SAND, coarse grained, poorly graded, trace fine and medium sands, loose, multicolored, wet	619.83		28SS			8	0.0
58	- trace fine subrounded gravel at 57.3ft BGS			29SS			8	0.0
60	- some subrounded medium gravel at 59.4ft BGS			30SS			14	0.0
62				31SS			13	0.0
64				32SS			20	0.0
66				33SS			12	0.0
68				34SS			20	0.0
70				35SS			79	0.0
72	CL-SILTY CLAY (TILL), trace fine subangular gravel, competent, stiff, low plasticity, dark gray, dry to moist	605.03		36SS			NA	0.0
74	END OF BOREHOLE @ 72.0ft BGS	603.03						
76								
78								
80								
82								
84								
86								
88								
90								
92								
94								
96								
98								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 17360.GPJ CRA_CORP.GDT 8/26/03

APPENDIX B

FREEDOM OF INFORMATION ACT INFORMATION

CONESTOGA-ROVERS & ASSOCIATES

620 S. Capitol Ave., Suite 100
Lansing, Michigan 48933
Telephone: (517) 316-2397 Fax: (517) 316-2398
www.CRAworld.com

MEMORANDUM

TO:	Kurt Blizzard	REF. NO.:	17360-01
FROM:	Jeni Quigley/Bill Steinmann/jq/19/Lan.	DATE:	November 13, 2003
C.C.:	Gary Klepper		
RE:	**Summary of Adjacent Property Review** **General Motors Corporation** **Grand Rapids Metal Plant** **Wyoming, Michigan**		

1.0 INTRODUCTION

The purpose of this memorandum is to summarize the adjacent property review completed by Conestoga-Rovers & Associates (CRA). These activities were completed in conjunction with the ongoing groundwater investigation and remediation at the General Motors Corporation (GM) Grand Rapids Metal Plant, located at 300 36th Avenue in Wyoming, Michigan (Site). The adjacent industrial/commercial properties identified are located hydraulically upgradient and immediately adjacent to the Site.

2.0 SCOPE OF WORK

2.1 ADJACENT PROPERTY VISUAL INSPECTION

Consistent with our discussion on April 22, 2003, CRA completed an adjacent property review in the immediate upgradient vicinity of the Site on April 24, 2003. The adjacent property review included observing and recording the addresses and facility names of adjacent properties along Buchanan Avenue, 36th Street, and 39th Street, which are located hydraulically upgradient of the Site. The following facilities and corresponding addresses were identified by observing the adjacent properties during a Site walk:

Facility	*Address*
Amoco Station	150 36th Street
Residence	3638 Buchanan Avenue
Unidentified	3650 Buchanan Avenue
Sunshine Systems Factory Showroom	3700 Buchanan Avenue
Toering Electric Company	3714 Buchanan Avenue
MSC Industrial Supply	3718 Buchanan Avenue
Facility	*Address*
Fed-Ex Freight	3740 Buchanan Avenue
Tracer Tool & Die	3800 Buchanan Avenue

Unidentified	3818 Buchanan Avenue
UAW Local 730 (Vandewater Hall)	3852 Buchanan Avenue
Conical Tool Company (Tapered End Mills)	3890 Buchanan Avenue
Mark Meter Co.	3920 Buchanan Avenue
Travis Collision	149 39th Street
Wyoming Body Shop	100 39th Street
G.J. Fabrication LLC	120 39th Street
Accurate Metal Finishing	136 39th Street
George's Foreign Car Service	130 39th Street

2.2 FREEDOM OF INFORMATION ACT FILE REVIEW

Based on the results of the adjacent property identification, a written Freedom of Information Act (FOIA) request was submitted to the Michigan Department of Environmental Quality (MDEQ), Remediation and Redevelopment Section on April 29, 2003. The FOIA request included the aforementioned properties adjacent to the Site.

One file was identified for all requested properties: Conical Tool Company (Conical Tool), located at 3890 Buchanan Avenue. On May 13, 2003, CRA performed a file review at the MDEQ Remediation and Redevelopment office located in Wyoming, Michigan. Documentation that was available for CRA's review on May 13, 2003 included:

- Phase II Environmental Site Assessment (ESA) prepared by Dixon Environmental Consulting, Inc. (Dixon), dated January 28, 2002; and
- Preliminary Soil and Groundwater Data for Conical Tool Company prepared by Dixon, dated September 3, 2002.

In addition, the following reports were obtained from the MDEQ for the properties located at 3700 and 3740 Buchanan Street, and 150 36th Avenue:

- Aboveground Storage Tank (AST) Inspection Reports for 3700 Buchanan Street;
- Underground Storage Tank (UST) Closure Report and associated letters for 3740 Buchanan Street; and
- UST Inspection Reports for 150 36th Street.

A copy of the documents obtained during the FOIA are presented in Attachment A. The following summarizes the information obtained during the review of these documents.

2.2.1 CONICAL TOOL COMPANY

Phase II ESA

A Phase II ESA was conducted by Dixon on January 28, 2002, for Conical Tool. The scope of work for the Phase II ESA was determined based on the results of a Phase I ESA previously conducted by Dixon on January 29, 2002. A copy of the Phase I ESA was not available for review by CRA.

Based on information provided in the Phase II ESA, the Phase I ESA identified one Recognized Environmental Condition (REC) at the Conical Tool site, that being two areas of discolored surface soil. One area was identified during the Site inspection portion of the January 2002 Phase I ESA, and one area was observed by Dixon during the review of 1970 and 1975 aerial photographs. The area observed in the aerial photographs was formerly used as a storage area for scrap steel and empty drums. This area is currently located beneath the northeastern portion of the building. The area of discolored surface soil observed during the Phase I ESA is located outside, near the northeast corner of the existing building.

Based on the results of the Phase I ESA, Dixon completed a Phase II ESA on January 28, 2002, and February 6, 2002. One soil boring, SB-1, was installed in January 2002 to an approximate depth of 5 feet below ground surface (bgs) and one soil boring, SB-2, was installed in February 2002 to an approximate depth of 3.5 feet bgs. Four soil samples, two from each soil boring, were collected for laboratory analysis for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), and metals (aluminum, arsenic, cadmium chromium, iron, lead, nickel, molybdenum, silver and zinc).

Trichloroethene (TCE) was detected in the soil sample collected from SB-2 at a concentration of 790 µg/kg, which is above the current Michigan Act 451, Part 201 Residential & Commercial I (Residential) Drinking Water Protection Criterion (DWPC) of 100 µg/kg. The soil sample collected from SB-1 identified 1,3,5-trimethylbenzene at a concentration of 2,400 µg/kg, which is above the Michigan Act, Part 201 Residential DWPC of 1,800 µg/kg. Chromium was detected in the soil samples collected from SB-1 and SB-2 at concentrations of 49,000 µg/kg and 1,500,000 µg/kg, respectively, which are above the Michigan Act 451, Part 201 Residential DWPC of 30,000 µg/kg. Molybdenum was detected in the soil samples collected from SB-1 and SB-2 at concentrations of 43,000 µg/kg and 1,500,000 µg/kg, respectively, which are above the current Michigan Act 451, Part 201 Residential DWPC of 1,500 µg/kg. Nickel was detected in the soil sample collected from SB-2 at a concentration of 120,000 ug/kg, which is the Michigan Act 451, Part 201 Residential DWPC of 100,000 µg/kg. Iron was detected in soil samples collected from SB-2 at concentrations of 46,000,000 µg/kg, and 17,000,000 µg/kg, respectively, which are above the Residential DWPC of 6,000 µg/kg and above the Michigan Statewide Default Background Level Criterion of 12,000,000 µg/kg.

Preliminary Soil and Groundwater Data for Conical Tool Company

Based on the results of the Phase II ESA, additional subsurface investigation activities were conducted by Dixon, including additional soil sampling, the installation of five monitoring wells, and soil excavation and verification sampling in the areas of historic and current soil discoloration. Results were present in preliminary data form in the FOIA file reviewed.

A soil sample collected from GP-9 detected 1,2,4-trimethylbenzene at a concentration of 24,000 µg/kg, which is above the Michigan Act 451, Part 201 Residential DWPC of 2,100 µg/kg. A soil sample collected from GP-9 detected 1,3,5-trimethylbenzene at a concentration of 7,900 µg/kg, which is above the Michigan Act 451, Part 201 Residential DWPC of 1,800 µg/kg. Dibenzo(a,h)anthracene was detected in a soil sample collected from GP-9 at a concentration of 4,400 µg/kg, which is above the Michigan Act 451, Part 201 Residential DWPC of 2,000 µg/kg. Chromium was detected in soil samples collected from VSR-2, VSR-7, VSR-8, GP-2, GP-3, GP-4, GP-5, GP-8 and GP-9 at concentrations of 69,000 µg/kg, 450,00 µg/kg, 110,000 µg/kg, 51,000 µg/kg, 540,000 µg/kg, 82,000 µg/kg, 110,000 µg/kg, 62,000 µg/kg, and 380,000 µg/kg, respectively, which are above the Michigan Act 451, Part 201 DWPC of 30,000 µg/kg. Molybdenum was detected in soil samples collected from VSR-1, VSR-2, VSR-3, VSR-4, VSR-5, VSR-6, VSR-7, VSR-8, VSR-9, VSSR-10, VSR-11, VSR-12, GP-2, GP-3, GP-4, GP-5, GP-6, GP-7, GP-8, GP-9, and GP-10 at concentrations of 3,400 µg/kg, 57,000 µg/kg, 2,800 µg/kg, 18,000 µg/kg, 6,500 µg/kg, 3,400 µg/kg, 330,000 µg/kg, 120,000 µg/kg, 27,000 µg/kg, 24,000 µg/kg, 4,500 µg/kg, 8,900 µg/kg, 38,000 µg/kg, 580,000 µg/kg, 83,000 µg/kg, 230,000 µg/kg, 5,400 µg/kg, 4,500 µg/kg, 53,000 µg/kg, 250,000 µg/kg and 950 µg/kg, respectively, which are above the current Michigan Act 451, Part 201 DWPC of 1,500 µg/kg. Nickel was detected in a soil sample collected from GP-9 at a concentration of 140,000 µg/kg, which is above the Michigan Act 451, Part 201 DWPC of 100,000 µg/kg. Silver was detected in a soil sample collected from GP-9 at a concentration of 15,000 µg/kg, which is above the Michigan Act 451, Part 201 DWPC of 4,500 µg/kg. Iron was detected in soil samples VSR-7, GP-2, and GP-3 at concentrations of 25,000,000 µg/kg, 26,000,000 µg/kg, and 21,000,000 µg/kg, respectively, which are above the Michigan Statewide Default Background Level Criterion of 12,000,000 µg/kg.

TCE was detected in the groundwater samples collected from MW-1, MW-2, MW-3, MW-4, GP-1, and GP-5 at concentrations of 7.8 µg/L, 28 µg/L, 85 µg/L, 17 µg/L, 14 µg/L, and 100 µg/L, respectively, which are above the current Michigan Act 451, Part 201 Drinking Water Criterion (DWC) of 5.0 µg/L, which is above the Michigan Act 451, Part 201 DWC of 5 µg/L. Tetrachloroethene (PCE) was detected in the groundwater sample collected from MW-4 at a concentration of 12 µg/L, which is above the Michigan Act 451, Part 201 DWC of 5 µg/L.

Based on discussions with Mr. Terry O'Brien, the MDEQ Project Manager for the Conical Tool site, no further investigations have been conducted or scheduled at this time.

2.2.2 MISCELLANEOUS ADJACENT PROPERTIES

AST Inspection Reports (Sunshine Systems Factory Showroom, 3700 Buchanan Street)

AST inspection reports were available for July 1980, April 1991, January 1993, July 1994, January 995, May 1995, August 1995, May 1996, January 1997, June 1997, July 1997, August 1997, December 1997, March 1998, May 1998, February 1999, July 1999, August 1999, December 1998, and January 2001. The Michigan State Police approved the installation of two 1,850-gallon liquefied petroleum (LP) gasoline ASTs at the property on November 3, 1980. According to inspection reports, a third 1,850-gallon LP gasoline AST was installed in 1985. Two 1,000-gallon LP gasoline ASTs were installed at the property in April 1991. The two original 1,850-gallon LP gasoline ASTs were removed in April 1991. The three remaining ASTs were removed in 1996 and replaced by a 12,000-gallon LP gasoline AST. AST inspection reports cite non-environmental violations or deficiencies including, but not limited to:

- Electrical inspection needs;
- Verified flow rates;
- Incorrect labeling/painting; and
- Fire extinguisher availability.

UST Closure Report and Associated Letters (currently Fed-Ex Freight, 3740 Buchanan Street)

A UST closure report, prepared by Superior Environmental Corporation, dated October 15, 1990, was available for review. According to the report, three USTs (one 12,000-gallon gasoline UST, one 15,000-gallon diesel UST, and one 1,000-gallon used oil UST) were excavated by Pitsch's Wrecking. No visible staining or petroleum odors were observed during the excavation activities. Two soil samples were collected per tank and analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX). According to the report, the analytical results indicated that no concentrations of TPH-GRO, TPH-DRO, or BTEX were reported above the laboratory detection limits. A letter from the Michigan State Police, dated April 17, 1991, referencing the UST Closure Report, indicates that no further information/action is required.

UST Inspection and Associated Reports (Amoco Station, 150 36th Street)

According to Notifications for Underground Storage Tanks forms received by the Michigan State Police in June 1989, five USTs (one 9,500-gallon gasoline UST, one 6,000-gallon gasoline UST, two 4,000-gallon gasoline USTs, one 500-gallon waste oil UST) were removed and replaced by four USTs (two 10,000-gallon gasoline USTs, one 6,000-gallon gasoline UST, one 4,000 gallon-diesel UST) from the property in March 1989. UST inspection reports were available for June 1990, January 1997, March 1997, June 1999, July 1999, August 1999, June 2002, and July 2002. These UST inspection reports cite non-environmental violations or deficiencies including, but not limited to:

- Inventory control needs;
- Shut-off valve needs;
- Annual testing requirements;
- Tank gauging needs; and
- Fire extinguisher needs.

3.0 DISCUSSION

Based on the observed groundwater flow direction at the Grand Rapids Metal Plant, the Conical Tool property is assumed to be located hydraulically upgradient. However, no groundwater flow direction information for the Conical Tool site was presented in the documentation reviewed by CRA.

Based on the review of available information obtained from the FOIA request, it appears possible that there was a former or current source of TCE at the Conical Tool site. TCE was identified in soil and groundwater at concentrations above the Michigan Act 451, Part 201 Residential DWPC and DWC, respectively. PCE was also detected in groundwater above the Michigan Act 451, Part 201 Residential DWC from the Conical Tool site. However, it is not clear from the information reviewed whether all soil samples were analyzed for PCE. Insufficient information from the MDEQ files was present to determine a possible source location for PCE at the Conical Tool site. Additionally, the vertical extents of TCE and PCE in groundwater were not determined, based on the information reviewed.

Selected excavation was conducted in two areas at the Conical Tool site. Neither of these excavations were conducted where the TCE was detected in soil above the Residential Criterion.

During the investigations conducted by Dixon, five monitoring wells, MW-1 through MW-5, were installed at the Conical Tool site. Groundwater samples collected from these wells ranged from 12 feet bgs to 17.5 feet bgs. Additional delineation grab groundwater samples were collected from depths of approximately 17 to 19 feet bgs. These depths correspond to the upper few feet of the aquifer. Figure 1 presents the approximate sample locations for the Conical Tool site and the Grand Rapids Metal Plant site. Table 1 presents a summary of detected parameters at the Conical Tool site, as presented in the available documentation, and the results from HP1-03, HP2-03, MW1-03, and MW2-03, installed by CRA in June 2003 at the Grand Rapids Metal Plant site.

Concentrations of PCE and TCE in groundwater samples collected during the recent vertical aquifer sampling (VAS) from HP1-03 and HP2-03, and from monitoring wells MW1-03 and MW2-03, indicated that samples collected from near the water table, similar to those collected at the Conical Tool site, are at lower concentrations than in samples collected at greater depths. This is consistent with the hypothesis of an upgradient source located some distance from the Grand Rapids Metal Plant.

4.0 CONCLUSIONS

Based on the review of available documentation, CRA provides the following conclusions:

- TCE was detected in soil, and TCE and PCE have been identified in groundwater on the Conical Tool property, located hydraulically upgradient of the Site. Insufficient information was available to determine whether PCE is present in soil at this property;
- The vertical extent of TCE and PCE in groundwater at the Conical Tool site was not determined;
- Insufficient information was available to determine the actual source of PCE upgradient of the Grand Rapids Metal Plant. However, the file review does confirm that PCE is present in groundwater located hydraulically upgradient of the Site at concentrations above the Residential Criterion, pursuant to Part 201 of Michigan Act 451 of 1994, as amended; and

- Additional potential upgradient properties including Accurate Metal Finishing and Travis Collision were observed; however, no documentation was available during the FOIA review for these properties.

Should you have any questions regarding this memorandum, please contact Jeni Quigley at (517) 316-2397.

TABLE 1

SUMMARY OF DETECTED PARAMETERS IN GROUNDWATER
GRAND RAPIDS METAL PLANT AND CONICAL TOOL PROPERTY
WYOMING, MICHIGAN

Sample Location	*Michigan Act 451,*	*MW2-03*	*MW1-03*	*HP2-03*	*HP2-03*	*HP2-03*	***HP1-03***
Sample ID	***Part 201***	*GW-17360-071403-SP-044*	*GW-17360-071403-SP-045*	***W-17360-061203-BW-01***	***W-17360-061203-BW-01***	***W-17360-061203-BW-01***	***W-17360-061303-BW-02***
Sample Depth/Interval (ft bgs)	*Residential & Commercial*	*22 - 27*	*30 - 35*	***24***	***34***	***41***	***24***
Date Sampled	*Drinking Water*	*7/14/03*	*7/14/03*	***06/12/03***	***06/12/03***	***06/12/03***	***06/13/03***
Date Analyzed	*Criteria* [1]	*7/21/03*	*7/21/03*	***06/17/03***	***06/17/03***	***06/17/03***	***06/18/03***
Units		*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Parameter (ug/L)							
cis-1,2-Dichloroethene	70	ND (1.0)	2.7	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Tetrachloroethene	5.0	14	72	31	7.2	ND (1.0)	7.0
1,1,1-Trichloroethane	200	ND (1.0)	ND (2.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Trichloroethene	5.0	ND (1.0)	1.6	ND (1.0)	ND (1.0)	ND (1.0)	3.8
Vinyl chloride	2.0	ND (1.0)	ND (2.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)

Notes:

[1] Criteria from Rule 7 of the Administrative Rules for Part 201 Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994, PA 451, as amended, December 21, 2002.

ND (1.0) - Parameter not detected at concentration identified

Boxed values exceed Residential Drinking Water Criteria

TABLE 1

SUMMARY OF DETECTED PARAMETERS IN GROUNDWATER
GRAND RAPIDS METAL PLANT AND CONICAL TOOL PROPERTY
WYOMING, MICHIGAN

HP1-03	*HP1-03*	*HP1-03*	*GP-1*
iW-17360-061303-BW-02	*iW-17360-061303-BW-02*	*iW-17360-061303-BW-024*	
24	*34*	*41*	*17.5 - 19*
06/13/03	*06/13/03*	*06/13/03*	
06/18/03	*06/18/03*	*06/18/03*	
ug/L	*ug/L*	*ug/L*	
Duplicate	***MS/MSD***		
ND (1.0)	ND (1.0)	1.7	
7.1	66	1.5	
ND (1.0)	ND (1.0)	ND (1.0)	
3.8	2.2	ND (1.0)	
ND (1.0)	ND (1.0)	ND (1.0)	

APPENDIX C

LABORATORY ANALYTICAL RESULTS

SEVERN TRENT STL

REC'D CRA
JUL - 1 2003
SDG: 36

ANALYTICAL REPORT

PROJECT NO. 17360-01

GM GRAND RAPIDS METAL PLANT

Lot #: A3F100251

Paul Wiseman

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

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-01 Lab#: A3F100251
Name: GM GR
Description
Event:
Samples: 6 water
Analysis:
VOC
TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: Init.:
Date of Validation Memo: 10/21/03
Invoice Approval Date:
Comments:

Amy L. McCormick
Project Manager

June 27, 2003

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

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: 17360-01

PROJECT NAME: GM Grand Rapids Metal Plant

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Brad Williams

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	REMARKS
1	6/9/03	1215	GW-17360-060903-BW-001	H2O	3	X	48 hr TAT
2		1302	002		3	X	
3		1350	003		3	X	
4		1515	004		3	X	
5		1518	005		3	X	
		1640	Trip Blank		1	X	
							CRA Contact Paul Wiseman

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: 1. [signature]	DATE: 6/9/03 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.

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

22893

SAMPLE TEAM: BMW

RECEIVED FOR LABORATORY BY: Anne Sanders
DATE: 6-10-03 TIME: 900

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A3F100251

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 Metal Plant Site, project number 17360-01. The samples were received June 10, 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 13, 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 repreparation 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)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		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 repreparation 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 reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped 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)

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A3F100251

PARAMETER	ANALYTICAL METHOD
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.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A3F100251

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FP9QG	001	GW-17360-060903-BW-001	06/09/03	12:15
FP9QM	002	GW-17360-060903-BW-002	06/09/03	13:02
FP9QN	003	GW-17360-060903-BW-003	06/09/03	13:50
FP9QP	004	GW-17360-060903-BW-004	06/09/03	15:15
FP9QQ	005	GW-17360-060903-BW-005	06/09/03	15:18
FP9QR	006	TRIP BLANK	06/09/03	16:40

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.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

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

REFERENCE NUMBER: 17360-01

PROJECT NAME: GM Grand Rapids Metal Plant

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Brian Williams

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	REMARKS
1	6/9/03	1215	GW-17360-060903-BW-001	H2O	3	X	48 hr TAT
2		1302	002		3	X	
3		1350	003		3	X	
4		1515	004		3	X	
5		1518	005		3	X	
		1640	Trip Blank		1	X	
							CRA Contact Paul Widmer

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. [signature]	6/9/03	1900	1.		
2.			2.		
3.			1.		

METHOD OF SHIPMENT: FED-EX AIR BILL No.

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

22893

SAMPLE TEAM: BMW

RECEIVED FOR LABORATORY BY: Anna Sanders
DATE: 6-10-03 TIME: 920

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

RSR280

Client: 57787

Lot #: A3F100251

Case Number/SDG: 17360-01

Storage Location: MS

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FP9QG	STILLERJ	6/10/03	Yes		Storage	
FP9QM	STILLERJ	6/10/03	Yes		Storage	
FP9QN	STILLERJ	6/10/03	Yes		Storage	
FP9QP	STILLERJ	6/10/03	Yes		Storage	
FP9QQ	STILLERJ	6/10/03	Yes		Storage	
FP9QR	STILLERJ	6/10/03	Yes		Storage	

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A3F100257

Client: Cra Project: GM Grand Rapids Quote#:
Cooler Received on: 6-10-03 Opened on: 6-10-03 by: Anne SAnders (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 ☑ 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 0.9 °C (see back of form for multiple coolers/temp)
   METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O 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)		

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-060903-BW-001

GC/MS Volatiles

Lot-Sample #...:	A3F100251-001	**Work Order #...:**	FP9QG1AA	**Matrix.....:**	WG
Date Sampled...:	06/09/03 12:15	**Date Received..:**	06/10/03		
Prep Date.....:	06/12/03	**Analysis Date..:**	06/12/03		
Prep Batch #...:	3164304				
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-17360-060903-BW-001

GC/MS Volatiles

Lot-Sample #...: A3F100251-001 **Work Order #...:** FP9QG1AA **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	91	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-060903-BW-002

GC/MS Volatiles

Lot-Sample #...: A3F100251-002 **Work Order #...:** FP9QM1AA **Matrix.....:** WG
Date Sampled...: 06/09/03 13:02 **Date Received..:** 06/10/03
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
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-17360-060903-BW-002

GC/MS Volatiles

Lot-Sample #...: A3F100251-002 **Work Order #...:** FP9QM1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**1.1**	**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	92	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-060903-BW-003

GC/MS Volatiles

Lot-Sample #...:	A3F100251-003	**Work Order #...:**	FP9QN1AA	**Matrix.....:**	WG
Date Sampled...:	06/09/03 13:50	**Date Received..:**	06/10/03		
Prep Date.....:	06/12/03	**Analysis Date..:**	06/12/03		
Prep Batch #...:	3164304				
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-17360-060903-BW-003

GC/MS Volatiles

Lot-Sample #...: A3F100251-003 **Work Order #...:** FP9QN1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**1.1**	**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	101	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-060903-BW-004

GC/MS Volatiles

Lot-Sample #...: A3F100251-004 **Work Order #...:** FP9QP1AA **Matrix.....:** WG
Date Sampled...: 06/09/03 15:15 **Date Received..:** 06/10/03
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
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-17360-060903-BW-004

GC/MS Volatiles

Lot-Sample #...: A3F100251-004 **Work Order #...:** FP9QP1AA **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	103	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-060903-BW-005

GC/MS Volatiles

Lot-Sample #...: A3F100251-005 **Work Order #...:** FP9QQ1AA **Matrix.....:** WG
Date Sampled...: 06/09/03 15:18 **Date Received..:** 06/10/03
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
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-17360-060903-BW-005

GC/MS Volatiles

Lot-Sample #...: A3F100251-005 **Work Order #...:** FP9QQ1AA **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	103	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A3F100251-006 **Work Order #...:** FP9QR1AA **Matrix.....:** WQ
Date Sampled...: 06/09/03 16:40 **Date Received..:** 06/10/03
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
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 #...: A3F100251-006 **Work Order #...:** FP9QR1AA **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	95	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3F100251 **Work Order #...:** FQHCL1AA **Matrix.....:** WATER
MB Lot-Sample #: A3F130000-304

Prep Date.....: 06/12/03 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 06/12/03 **Prep Batch #...:** 3164304
Dilution Factor: 1 **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-chloropropane	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 #...: A3F100251 **Work Order #...:** FQHCL1AA **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	94	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	75	(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 #...: A3F100251 **Work Order #...:** FQHCL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A3F130000-304 FQHCL1AD-LCSD
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
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**	**100**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**2.2**	**SW846 8260B**
Chlorobenzene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**10**	**ug/L**	**103**	**1.5**	**SW846 8260B**
1,1-Dichloroethene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**9.6**	**ug/L**	**96**	**3.2**	**SW846 8260B**
Toluene	**10**	**10**	**ug/L**	**100**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**1.4**	**SW846 8260B**
Trichloroethene	**10**	**10**	**ug/L**	**101**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**2.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	101	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	94	(61 - 128)
Toluene-d8	100	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	86	(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 #...: A3F100251 **Work Order #...:** FQHCL1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A3F130000-304 FQHCL1AD-LCSD
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**100**	**(80 - 116)**			**SW846 8260B**
	98	**(80 - 116)**	**2.2**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**101**	**(76 - 117)**			**SW846 8260B**
	103	**(76 - 117)**	**1.5**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**99**	**(63 - 130)**			**SW846 8260B**
	96	**(63 - 130)**	**3.2**	**(0-20)**	**SW846 8260B**
Toluene	**100**	**(74 - 119)**			**SW846 8260B**
	98	**(74 - 119)**	**1.4**	**(0-20)**	**SW846 8260B**
Trichloroethene	**101**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**2.4**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	101	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	94	(61 - 128)
Toluene-d8	100	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	86	(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 #...: A3F100251 **Work Order #...:** FP5CQ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A3F060317-005 FP5CQ1AD-MSD
Date Sampled...: 06/05/03 **Date Received..:** 06/06/03
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
Dilution Factor: 1000 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	**ND**	**10000**	**9800**	**ug/L**	**98**		**SW846 8260B**
	ND	**10000**	**11000**	**ug/L**	**110**	**12**	**SW846 8260B**
Chlorobenzene	**ND**	**10000**	**9700**	**ug/L**	**97**		**SW846 8260B**
	ND	**10000**	**11000**	**ug/L**	**114**	**16**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10000**	**9800**	**ug/L**	**98**		**SW846 8260B**
	ND	**10000**	**10000**	**ug/L**	**105**	**6.6**	**SW846 8260B**
Toluene	**ND**	**10000**	**9900**	**ug/L**	**96**		**SW846 8260B**
	ND	**10000**	**11000**	**ug/L**	**107**	**10**	**SW846 8260B**
Trichloroethene	**20000**	**10000**	**30000**	**ug/L**	**100**		**SW846 8260B**
	20000	**10000**	**34000**	**ug/L**	**131 a**	**9.7**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	98	(61 - 128)
Toluene-d8	94	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	85	(74 - 116)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A3F100251 **Work Order #...:** FP5CQ1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: A3F060317-005 FP5CQ1AD-MSD
Date Sampled...: 06/05/03 **Date Received..:** 06/06/03
Prep Date.....: 06/12/03 **Analysis Date..:** 06/12/03
Prep Batch #...: 3164304
Dilution Factor: 1000 **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**
	110	**(78 - 118)**	**12**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**97**	**(76 - 117)**			**SW846 8260B**
	114	**(76 - 117)**	**16**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	105	**(62 - 130)**	**6.6**	**(0-20)**	**SW846 8260B**
Toluene	**96**	**(70 - 119)**			**SW846 8260B**
	107	**(70 - 119)**	**10**	**(0-20)**	**SW846 8260B**
Trichloroethene	**100**	**(62 - 130)**			**SW846 8260B**
	131 a	**(62 - 130)**	**9.7**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
	98	(61 - 128)
Toluene-d8	94	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)
	85	(74 - 116)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

SEVERN TRENT STL

END OF REPORT

SEVERN TRENT STL

REC'D CRA
JUL - 1 2003
SDG: 37

ANALYTICAL REPORT

PROJECT NO. 17360

GM GRAND RAPIDS

Lot #: A3F110232

Paul Wiseman

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

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360 Lab#: A3F110232
Name: GM GR
Description
Event:
Samples: 7 water
Analysis: VOC
TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: Init.:
Date of Validation Memo: 10/2/03
Invoice Approval Date:
Comments:

Amy L. McCormick
Amy L. McCormick
Project Manager

June 27, 2003

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: GM Grand Rapids

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Bart Williams

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	REMARKS
	6/10/03	1016	GW-17360-061003-BW-006	H_2O	3	X	48 h-TAT
		1100	007		3	X	
		1300	008		3	X	
		1420	009		3	X	
		1330	010		3	X	
		1643	011		3	X	
			Trip Blank		1	X	

BMW

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. [signature]	6/10/03	1835	1.		
2.			2.		
3.			1.		

METHOD OF SHIPMENT: FED-EX

AIR BILL No.

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

22421

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: [signature]

DATE: 6/11/03 TIME: 10:00

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A3F110232

The following report contains the analytical results for six 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 11, 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 repreparation 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)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		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 repreparation 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 reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped 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)

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A3F110232

PARAMETER	ANALYTICAL METHOD
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.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A3F110232

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQCH4	001	GW-17360-061003-BW-006	06/10/03	10:16
FQCH8	002	GW-17360-061003-BW-007	06/10/03	11:00
FQCJC	003	GW-17360-061003-BW-008	06/10/03	13:00
FQCJD	004	GW-17360-061003-BW-009	06/10/03	14:20
FQCJF	005	GW-17360-061003-BW-010	06/10/03	13:30
FQCJG	006	GW-17360-061003-BW-011	06/10/03	16:43
FQCJJ	007	TRIP BLANK	06/10/03	

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.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

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

REFERENCE NUMBER: 17360

PROJECT NAME: GM Grand Rapids

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Bart Williams

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	REMARKS
	6/10/03	1016	GW-17360-061003-BW-006	H20	3	X	48 hr TAT
		1100	007		3	X	
		1300	008		3	X	
		1420	009		3	X	
		1330	010		3	X	
		1643	011		3	X	
			Trip Blank		1	X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
1. [signature]	6/10/03	1835	1.		
2.			2.		
3.			1.		

METHOD OF SHIPMENT: FEDEX AIR BILL No.

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

22421

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: [signature]
DATE: 6/11/03 TIME: 10:00

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A3F110232

Case Number/SDG: 17360

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FQCH4	EZZOL	6/11/03	Yes		Storage	
FQCH8	EZZOL	6/11/03	Yes		Storage	
FQCJC	EZZOL	6/11/03	Yes		Storage	
FQCJD	EZZOL	6/11/03	Yes		Storage	
FQCJF	EZZOL	6/11/03	Yes		Storage	
FQCJG	EZZOL	6/11/03	Yes		Storage	
FQCJJ	EZZOL	6/11/03	Yes		Storage	

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A3F110232

Client: CRA Project: _____ Quote#: 45813

Cooler Received on: 6/11/03 Opened on: 6/11/03 by: DL Williams (Signature)

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

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

STL Shipper No#: M-248

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 1.6 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_20 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)		

a. due 6-17-03 per ALM

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061003-BW-006

GC/MS Volatiles

Lot-Sample #...: A3F110232-001 **Work Order #...:** FQCH41AA **Matrix.....:** WG
Date Sampled...: 06/10/03 10:16 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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-17360-061003-BW-006

GC/MS Volatiles

Lot-Sample #...: A3F110232-001 **Work Order #...:** FQCH41AA **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	108	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061003-BW-007

GC/MS Volatiles

Lot-Sample #...: A3F110232-002 **Work Order #...:** FQCH81AA **Matrix.....:** WG
Date Sampled...: 06/10/03 11:00 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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-17360-061003-BW-007

GC/MS Volatiles

Lot-Sample #...: A3F110232-002 **Work Order #...:** FQCH81AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	**1.2**	**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	**5.9**	**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	95	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061003-BW-008

GC/MS Volatiles

Lot-Sample #...: A3F110232-003 **Work Order #...:** FQCJC1AA **Matrix.....:** WG
Date Sampled...: 06/10/03 13:00 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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-17360-061003-BW-008

GC/MS Volatiles

Lot-Sample #...: A3F110232-003 **Work Order #...:** FQCJC1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	**1.0**	**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	**3.5**	**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	101	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	74	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061003-BW-009

GC/MS Volatiles

Lot-Sample #...: A3F110232-004 **Work Order #...:** FQCJD1AA **Matrix.....:** WG
Date Sampled...: 06/10/03 14:20 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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-17360-061003-BW-009

GC/MS Volatiles

Lot-Sample #...: A3F110232-004 **Work Order #...:** FQCJD1AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	**1.2**	**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	**3.6**	**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	93	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061003-BW-010

GC/MS Volatiles

Lot-Sample #...: A3F110232-005 **Work Order #...:** FQCJF1AA **Matrix.....:** WG
Date Sampled...: 06/10/03 13:30 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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-17360-061003-BW-010

GC/MS Volatiles

Lot-Sample #...: A3F110232-005 **Work Order #...:** FQCJF1AA **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	96	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061003-BW-011

GC/MS Volatiles

Lot-Sample #...: A3F110232-006 **Work Order #...:** FQCJG1AA **Matrix.....:** WG
Date Sampled...: 06/10/03 16:43 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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-17360-061003-BW-011

GC/MS Volatiles

Lot-Sample #...: A3F110232-006 **Work Order #...:** FQCJG1AA **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	**1.6**	**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	96	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A3F110232-007 **Work Order #...:** FQCJJ1AA **Matrix.....:** WQ
Date Sampled...: 06/10/03 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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 #...: A3F110232-007 **Work Order #...:** FQCJJ1AA **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	95	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A3F110232 **Work Order #...:** FQLEF1AA **Matrix.....:** WATER
MB Lot-Sample #: A3F160000-257

Prep Date.....: 06/15/03 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 06/15/03 **Prep Batch #...:** 3167257
Dilution Factor: 1 **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 #...: A3F110232 **Work Order #...:** FQLEF1AA **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	110	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	79	(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 #...: A3F110232 **Work Order #...:** FQLEF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A3F160000-257 FQLEF1AD-LCSD
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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**	**9.7**	**ug/L**	**97**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**0.19**	**SW846 8260B**
Chlorobenzene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**10**	**ug/L**	**102**	**3.3**	**SW846 8260B**
1,1-Dichloroethene	**10**	**10**	**ug/L**	**102**		**SW846 8260B**
	10	**9.7**	**ug/L**	**97**	**4.2**	**SW846 8260B**
Toluene	**10**	**9.6**	**ug/L**	**96**		**SW846 8260B**
	10	**9.9**	**ug/L**	**99**	**2.3**	**SW846 8260B**
Trichloroethene	**10**	**9.9**	**ug/L**	**99**		**SW846 8260B**
	10	**9.8**	**ug/L**	**98**	**1.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
	95	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	86	(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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A3F110232 **Work Order #...:** FQLEF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A3F160000-257 FQLEF1AD-LCSD
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**97**	**(80 - 116)**			**SW846 8260B**
	97	**(80 - 116)**	**0.19**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**99**	**(76 - 117)**			**SW846 8260B**
	102	**(76 - 117)**	**3.3**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**102**	**(63 - 130)**			**SW846 8260B**
	97	**(63 - 130)**	**4.2**	**(0-20)**	**SW846 8260B**
Toluene	**96**	**(74 - 119)**			**SW846 8260B**
	99	**(74 - 119)**	**2.3**	**(0-20)**	**SW846 8260B**
Trichloroethene	**99**	**(75 - 122)**			**SW846 8260B**
	98	**(75 - 122)**	**1.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
	95	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	86	(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 #...: A3F110232 **Work Order #...:** FQA3R1CT-MS **Matrix.....:** WATER
MS Lot-Sample #: A3F110188-001 FQA3R1CU-MSD
Date Sampled...: 06/10/03 09:00 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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**	**9.5**	**ug/L**	**95**	**0.77**	**SW846 8260B**
Chlorobenzene	**ND**	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	ND	**10**	**10**	**ug/L**	**100**	**2.1**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10**	**9.8**	**ug/L**	**98**		**SW846 8260B**
	ND	**10**	**9.6**	**ug/L**	**96**	**2.5**	**SW846 8260B**
Toluene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.6**	**ug/L**	**96**	**0.16**	**SW846 8260B**
Trichloroethene	**ND**	**10**	**9.5**	**ug/L**	**95**		**SW846 8260B**
	ND	**10**	**9.1**	**ug/L**	**91**	**5.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	95	(61 - 128)
Toluene-d8	99	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)
	91	(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 #...: A3F110232 **Work Order #...:** FQA3R1CT-MS **Matrix.....:** WATER
MS Lot-Sample #: A3F110188-001 FQA3R1CU-MSD
Date Sampled...: 06/10/03 09:00 **Date Received..:** 06/11/03
Prep Date.....: 06/15/03 **Analysis Date..:** 06/15/03
Prep Batch #...: 3167257
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**
	95	**(78 - 118)**	**0.77**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**98**	**(76 - 117)**			**SW846 8260B**
	100	**(76 - 117)**	**2.1**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**98**	**(62 - 130)**			**SW846 8260B**
	96	**(62 - 130)**	**2.5**	**(0-20)**	**SW846 8260B**
Toluene	**95**	**(70 - 119)**			**SW846 8260B**
	96	**(70 - 119)**	**0.16**	**(0-20)**	**SW846 8260B**
Trichloroethene	**95**	**(62 - 130)**			**SW846 8260B**
	91	**(62 - 130)**	**5.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
	103	(73 - 122)
1,2-Dichloroethane-d4	98	(61 - 128)
	95	(61 - 128)
Toluene-d8	99	(76 - 110)
	101	(76 - 110)
4-Bromofluorobenzene	88	(74 - 116)
	91	(74 - 116)

NOTE(S):

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

Bold print denotes control parameters

SEVERN TRENT STL

END OF REPORT

SEVERN TRENT STL

REC'D CRA
JUN 30 2003
SDG: 38

ANALYTICAL REPORT

PROJECT NO. 17360-01

GM GRAND RAPIDS METAL

Lot #: A3F120247

Paul Wiseman

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

SEVERN TRENT LABORATORIES, INC.

ORIGINAL ANALYTICAL REPORT
Project#: 17360-01 Lab#: A3F120247
Name: GM GR
Description
Event:
Samples: 6 water
Analysis: VOC

TAT: 2 day
Lab: STL
Checked Against Preliminary Data:
Date: _____ Init.: _____
Date of Validation Memo: 10/21/03
Invoice Approval Date:
Comments:

Amy L. McCormick
Project Manager

June 27, 2003

1/1

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

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: 17360-01

PROJECT NAME: GM Grand Rapids Metal

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Bart Williams

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	REMARKS
1	6/11/03	1043	GW-17360-061103-BW-012	H2O	2	X	48 hr TAT
2		1110	013		2	X	
3		1300	014		2	X	
4		1348	015		2	X	
5		1458	016		2	X	
			TR.P		1	X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: 1. [signature]	DATE: 6/11/03 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: FED EX

AIR BILL No.

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

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: [signature]

DATE: 6/12/03 TIME: 9:30

22420

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

A3F120247

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 Metal Site, project number 17360-01. The samples were received June 12, 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 16, 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 repreparation 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)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		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 repreparation 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 reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped 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)

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

A3F120247

PARAMETER	ANALYTICAL METHOD
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.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

A3F120247

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FQFCL	001	GW-17360-061103-BW-012	06/11/03	10:43
FQFCN	002	GW-17360-061103-BW-013	06/11/03	11:10
FQFCQ	003	GW-17360-061103-BW-014	06/11/03	13:00
FQFCR	004	GW-17360-061103-BW-015	06/11/03	13:48
FQFCT	005	GW-17360-061103-BW-016	06/11/03	14:58
FQFCV	006	TRIP	06/11/03	

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.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

1/1

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: 17360-01

PROJECT NAME: GM Grand Rapids Metal

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Bart Williams

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOC	REMARKS
1	6/11/03	1043	GW-17360-061103-BW-012	H2O	2	X	48 hr TAT
2		1110	013		2	X	
3		1300	014		2	X	
4		1348	015		2	X	
5		1458	016		2	X	
			TR.P		1	X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: 1. [signature]	DATE: 6/11/03 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: FED EX AIR BILL No.

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

22420

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: [signature]
DATE: 6/12/03 TIME: 9:30

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 57787

Lot #: A3F120247

Case Number/SDG: 17360-01

Storage Location: MS

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
FQFCL	STILLERJ	6/12/03	Yes		Storage	
FQFCN	STILLERJ	6/12/03	Yes		Storage	
FQFCQ	STILLERJ	6/12/03	Yes		Storage	
FQFCR	STILLERJ	6/12/03	Yes		Storage	
FQFCT	STILLERJ	6/12/03	Yes		Storage	
FQFCV	STILLERJ	6/12/03	Yes		Storage	

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A3F120247

Client: CRA Project: GM Grand Rapids Quote#: 45813

Cooler Received on: 6/12/03 Opened on: 6/12/03 by: JZ Miller (Signature)

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

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

STL Shipper No#: M-259

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 2.9 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O 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)		

SEVERN TRENT STL

GCMS VOLATILE DATA

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061103-BW-012

GC/MS Volatiles

Lot-Sample #...: A3F120247-001 Work Order #...: FQFCL1AA Matrix.....: WG
Date Sampled...: 06/11/03 10:43 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	**9.3**	**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	**36**	**1.0**	**ug/L**
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	**4.7**	**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-17360-061103-BW-012

GC/MS Volatiles

Lot-Sample #...: A3F120247-001 **Work Order #...:** FQFCL1AA **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	95	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061103-BW-013

GC/MS Volatiles

Lot-Sample #...: A3F120247-002 Work Order #...: FQFCN1AA Matrix.....: WG
Date Sampled...: 06/11/03 11:10 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	**9.3**	**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	**35**	**1.0**	**ug/L**
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	**4.4**	**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-013

GC/MS Volatiles

Lot-Sample #...: A3F120247-002 Work Order #...: FQFCN1AA 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	108	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061103-BW-014

GC/MS Volatiles

Lot-Sample #...: A3F120247-003 Work Order #...: FQFCQ1AA Matrix.....: WG
Date Sampled...: 06/11/03 13:00 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	**9.3**	**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	**37**	**1.0**	**ug/L**
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	**3.7**	**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-17360-061103-BW-014

GC/MS Volatiles

Lot-Sample #...: A3F120247-003 Work Order #...: FQFCQ1AA 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	95	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

CONESTOGA ROVERS & ASSOC.,INC.

Client Sample ID: GW-17360-061103-BW-015

GC/MS Volatiles

Lot-Sample #...: A3F120247-004 Work Order #...: FQFCR1AA Matrix.....: WG
Date Sampled...: 06/11/03 13:48 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	**2.4**	**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-17360-061103-BW-015

GC/MS Volatiles

Lot-Sample #...: A3F120247-004 **Work Order #...:** FQFCR1AA **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	109	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	78	(74 - 116)