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Counsel's Request

DRAFT

**PARCEL A-1
PHASE II ENVIRONMENTAL SITE ASSESSMENT**

ADDENDUM NO. 1

**General Motors Corporation
Clark Avenue Facility
Detroit, Michigan**

MARCH 1998
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CONESTOGA-ROVERS & ASSOCIATES

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 ANALYTICAL RESULTS	2
2.1 VOCS	2
2.2 SVOCS	2
2.3 PCBS	2
2.4 INORGANICS	2
3.0 CONCLUSIONS	4

LIST OF FIGURES
(Following Text)

FIGURE 2.1 DETECTED PARAMETERS ABOVE SOIL CLEANUP STANDARDS

LIST OF TABLES
(Following Text)

TABLE 2.1 SUMMARY OF DETECTED VOCs IN SOIL SAMPLES
TABLE 2.2 SUMMARY OF DETECTED SVOCs IN SOIL SAMPLES
TABLE 2.3 SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES

1.0 INTRODUCTION

Consistent with a request by General Motors Corporation (GM), Conestoga-Rovers & Associates (CRA) has developed the following addendum to the Parcel A-1 Phase II Environmental Site Assessment (Phase II ESA Addendum No. 1) for a portion of the GM Clark Avenue Facility in Detroit, Michigan. The Site is defined as Parcel A-1, as identified on a survey by David C. Adams & Son, dated November 14, 1997 (Site).

This Phase II ESA Addendum No. 1 was developed to address changes in applicable criteria issued by the Michigan Department of Environmental Quality (MDEQ) - Environmental Response Division (ERD) pursuant to Act 451, Part 201.

This Phase II ESA Addendum No. 1 compares the Phase II ESA analytical data from samples collected during the period from September 1996 to December 1997, to the following criteria:

- Direct Contact Criteria;
- Soil Saturation Criteria;
- Ambient Air; and
- Indoor Air.

2.0 ANALYTICAL RESULTS

The location and number of soil samples collected is described in the Phase II ESA Report. The following sections provide a summary of detected compounds in soil samples which exceed the most restrictive Act 451, Part 201 industrial soil criteria. Tables 2.1 through 2.3 present the values for the different soil quality standards evaluation. Figure 2.1 presents the detected parameters above soil cleanup standards.

2.1 VOCS

A summary of detected VOCs in soil samples is presented in Table 2.1. No parameters were detected above the most restrictive industrial soil criteria.

2.2 SVOCS

A summary of detected SVOCs in soil samples is presented in Table 2.2. No parameters were detected above the most restrictive industrial soil criteria.

2.3 PCBS

No parameters were detected above the method detection limits in any of the soil samples.

2.4 INORGANICS

A summary of detected inorganics in soil samples is presented in Table 2.3. The following soil samples contained lead above the most restrictive industrial soil criteria (Michigan Act 451, Part 201 Generic Industrial Direct Contact Criteria) of 400 mg/kg:

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<i>PAOC Number</i>	<i>Borehole Location</i>	<i>Sample Depth (feet bgs)</i>	<i>Analytical Result (mg/kg)</i>
A1-5	BH-201-96	4-6	720
A1-10	BH-31-96	10-12	10,700
A1-13	BH-119-96	1-2	401
A1-15	BH-29A-96	4-6	2,780

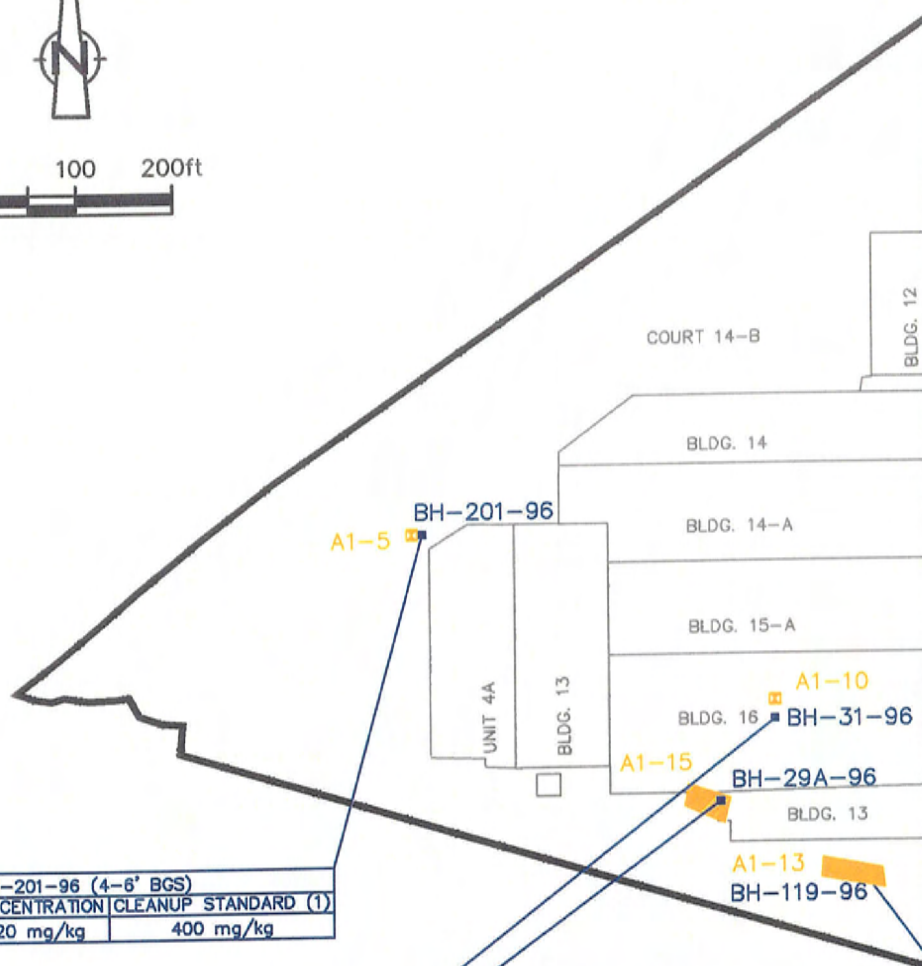
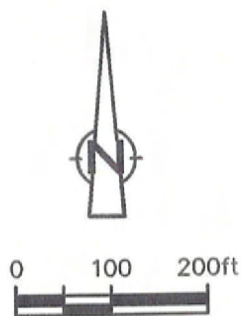
The above-noted exceedences were identified in the Phase II ESA Report and do not represent additional AOCs. The remaining samples did not contain any parameters at levels above the most restrictive industrial soil criteria.

3.0 CONCLUSIONS

Based on the results of the Phase II ESA and the re-evaluation of the data with respect to the revised industrial criteria presented in this addendum, four areas of concern (AOCs) were identified, as follows:

<i>AOC Number</i>	<i>Borehole Location</i>		<i>Contaminant of Concern</i>
A1-5	BH-201-96	4-6	lead
A1-10	BH-31-96	10-12	lead
A1-13	BH-119-96	1-2	lead
A1-15	BH-29A-96	4-6	lead

These AOCs were identified in the original Phase II ESA Report, and are not additional AOCs.



BH-201-96 (4-6' BGS)		
PARAMETER	CONCENTRATION	CLEANUP STANDARD (1)
LEAD	720 mg/kg	400 mg/kg

BH-29A-96 (4-6' BGS)		
PARAMETER	CONCENTRATION	CLEANUP STANDARD (1)
LEAD	2,780 mg/kg	400 mg/kg

BH-31-96 (10-12' BGS)		
PARAMETER	CONCENTRATION	CLEANUP STANDARD (1)
LEAD	10,700 mg/kg	400 mg/kg

BH-119-96 (1-2' BGS)		
PARAMETER	CONCENTRATION	CLEANUP STANDARD (1)
LEAD	401 mg/kg	400 mg/kg

LEGEND

- BH-201-96 PHASE II ESA BOREHOLE LOCATION
- A1-5 SURVEYED AOC LOCATION
- A1-15 SURVEYED AOC AREA

figure 2.1

DETECTED PARAMETERS ABOVE SOIL
CLEANUP STANDARDS-PARCEL A-1
GENERAL MOTORS CLARK AVENUE SITE
Detroit, Michigan

CRA

TABLE 2.1

**SUMMARY OF DETECTED VOCs IN SOIL SAMPLES
PHASE II ESA ADDENDUM NO. 1
PARCEL A-1
GM CLARK AVENUE FACILITY
DETROIT, MICHIGAN**

PAOC No. Sample Location Sample ID (S-8889-) Sample Depth (feet bgs) Date Sampled	Michigan Generic Residential Direct Contact Criteria (1)	Michigan Generic Industrial Direct Contact Criteria (2)	Soil Saturation (Csat)(4)	Residential Ambient Air Finite Source (5 m) VSIC (3)	Industrial/Commercial Ambient Air Finite Source (5 m) VSIC (3)	Residential Volatilization to Indoor Air Inhalation Criteria (4)	Industrial/Commercial Volatilization to Indoor Air Inhalation Criteria (4)	A1-5 BH-201-96 102596-SF-335 4-6 10/25/96
Parameter								
Volatile Organic Compounds (ug/kg)								
Acetone	11,000,000	74,000,000	110,000,000	46,000,000	110,000,000	290,000,000	540,000,000	ND(100)
Benzene	88,000	850,000	410,000	16,500	47,500	1,600	8,400	ND(10)
1,2-Dichlorobenzene	9,400,000	64,000,000	210,000	2,750,000	6,500,000	11,000,000	20,000,000	ND(10)
1,2-Dichloroethylene (total) (5)	1,200,000	8,200,000		405,000	800,000	26,000,000	4,900,000	ND(10)
Ethylbenzene	11,000,000	72,000,000	140,000	3,350,000	13,000,000	1,100,000	2,100,000	ND(10)
Methylene chloride	340,000	3,300,000	1,700,000	285,000	850,000	45,000	240,000	U(10)
Styrene	85,000	830,000	520,000	330,000	1,150,000	240,000	1,300,000	ND(10)
Tetrachloroethylene	50,000	490,000	88,000	235,000	700,000	11,000	60,000	ND(10)
Toluene	24,000,000	160,000,000	250,000	2,450,000	5,000,000	330,000	620,000	ND(10)
Trichloroethylene	160,000	1,600,000	500,000	80,000	240,000	7,000	37,000	ND(10)
Xylenes	200,000,000	1,000,000,000	130,000	28,500,000	60,000,000	6,300,000	12,000,000	ND(30)

Notes:

ND() - Parameter was not detected above level in parenthesis.

J - The associated numerical value is an estimated quantity.

U() - The analyte was analyzed for, but was not detected above the reported sample quantitation limit in parenthesis.

UJ - The analyte was not detected above the reported sample quantitation limit.

ID - Insufficient data to develop criterion.

PAOC - Potential Area of Concern.

bgs - below ground surface.

Shaded number indicates most restrictive industrial criterion.

(1) Values taken from MDEQ Operational Memorandum #8, Revision 4, dated June 5, 1995.

(2) Values taken from MDEQ Operational Memorandum #14, Revision 2, dated June 6, 1995.

(3) Values taken from MDEQ-ERD Part 201 Generic Soil Inhalation Criteria for Ambient Air: Technical Support Document, dated April 23, 1997 (Modifier of 0.5 used for 13-acre parcel).

(4) Values taken from MDEQ-ERD Draft Part 201 Generic Groundwater and Soil Volatilization to Indoor Air Criteria: Technical Support Document, dated December 21, 1997.

(5) Values used are for trans-1,2-Dichloroethylene.

TABLE 2.1

SUMMARY OF DETECTED VOCs IN SOIL SAMPLES
 PHASE II ESA ADDENDUM NO. 1
 PARCEL A-1
 GM CLARK AVENUE FACILITY
 DETROIT, MICHIGAN

PAOC No.	AI-5	AI-5	AI-6	AI-6	AI-7	AI-7	AI-7	AI-11	AI-12	AI-13	AI-17
Sample Location	BH-201-96	BH-202-96	BH-199-96	BH-200-96	BH-121-96	BH-121-96	BH-121-96	BH-122-96	BH-32-96	BH-119-96	BH-204-96
Sample ID (S-8889-)	102596-SF-336	102596-SF-338	102496-SF-332	102496-SF-333	091396-PFR-154	091396-PFR-154	091396-PFR-155	091396-PFR-157	091396-SF-065	091396-PR-149	102596-SF-342
Sample Depth (feet bgs)	4-6 (Dup.)	4-6	8-10	6-7.5	14-15	14-15	14-15 (Dup.)	15-16	10-12	1-2	6-8
Date Sampled	10/25/96	10/25/96	10/24/96	10/24/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	10/25/96
Parameter											
<u>Volatile Organic Compounds (µg/l)</u>											
Acetone	U(160)	ND(10)	ND(10)	ND(10)	ND(100) UJ	ND(100) UJ	ND(100) UJ	ND(100) UJ	ND(100) UJ	ND(100)	U(430)
Benzene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(15) UJ	ND(10)	ND(10) UJ
1,2-Dichlorobenzene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(15) UJ	ND(10)	ND(10) UJ
1,2-Dichloroethylene (total) (5)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(15) UJ	ND(10)	ND(10) UJ
Ethylbenzene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	30	ND(10)	ND(10) UJ
Methylene chloride	ND(10)	U(11)	U(21)	U(26)	U(15)	U(15)	U(11)	U(15)	ND(15) UJ	U(10)	ND(10) UJ
Styrene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	15	ND(10)	ND(10) UJ
Tetrachloroethylene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(15) UJ	ND(10)	ND(10) UJ
Toluene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	33	ND(10)	ND(10) UJ
Trichloroethylene	ND(10)	ND(10)	ND(10)	ND(10)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(15) UJ	ND(10)	ND(10) UJ
Xylenes	ND(30)	ND(10)	ND(30)	ND(30)	ND(30) UJ	ND(30) UJ	ND(30) UJ	ND(30) UJ	680	ND(30)	ND(30) UJ

TABLE 2.2

**SUMMARY OF DETECTED SVOCs IN SOIL SAMPLES
PHASE II ESA ADDENDUM NO. 1**

**PARCEL A-1
GM CLARK AVENUE FACILITY
DETROIT, MICHIGAN**

PAOC No. Sample Location Sample ID (S-8889-) Sample Depth (feet bgs) Date Sampled	Michigan Generic Residential Direct Contact Criteria (1)	Michigan Generic Industrial Direct Contact Criteria (2)	Soil Saturation (Csat)/(4)	Residential Ambient Air Finite Source (5m) VSIC (3)	Industrial/Commercial Ambient Air Finite Source (5m) VSIC (3)	Residential Volatilization to Indoor Air Inhalation Criteria (4)	Industrial/Commercial Volatilization to Indoor Air Inhalation Criteria (4)	A1-1 BH-248-97 120897-SF-523 3-5 12/8/97	A1-2 BH-248-97 120897-SF-528 4-6 12/8/97
Parameter									
Semi-Volatile Organic Compounds (ug/kg)									
Arenaphthene	76,000,000	810,000,000	NA	750,000,000	1,850,000,000	190,000,000	350,000,000	ND(330)	ND(330)
Anthracene	420,000,000	1,000,000,000	NA	490,000,000	1,150,000,000	1,000,000,000 B	1,000,000,000 B	ND(330)	ND(330)
Benzo(a)anthracene	14,000	210,000	-	ID	ID	-	-	520	370
Benzo(a)pyrene	1,400	21,000	-	220,000	800,000	-	-	470	450
Benzo(b)fluoranthene	14,000	210,000	NA	ID	ID	ID	ID	360	390
Benzo(g,h,i)perylene	1,500,000	16,000,000	-	ID	ID	-	-	ND(330)	340
Benzo(k)fluoranthene	140,000	210,000	-	ID	ID	-	-	390	360
Benzy butyl phthalate	68,000,000	720,000,000	-	3,900,000,000	9,500,000,000	-	-	ND(330)	ND(330)
Bis(2-Ethylhexyl)phthalate	700,000	11,000,000	-	8,000,000,000	31,000,000,000	-	-	ND(330)	ND(330)
Carbazole	-	-	-	ID	ID	-	-	ND(330)	ND(330)
Chrysene	1,400,000	21,000,000	NA	ID	ID	ID	ID	530	420
Di-n-butylphthalate	51,000,000	540,000,000	-	13,500,000,000	38,000,000,000	-	-	ND(330)	ND(330)
Dibenzofuran	1,400	21,000	-	ID	ID	-	-	ND(330)	ND(330)
Dibenzofuran	ID	ID	NA	ID	ID	ID	ID	ND(330)	ND(330)
Fluorene	51,000,000	540,000,000	NA	265,000,000	650,000,000	1,000,000,000 B	1,000,000,000 B	970	670
Indeno(1,2,3-c,d)pyrene	14,000	210,000	NA	44,500,000	105,000,000	580,000,000	1,000,000,000 B	ND(330)	ND(330)
Naphthalene	15,000,000	160,000,000	-	ID	ID	-	-	ND(330)	330
Phenanthrene	1,500,000	16,000,000	NA	4,900,000	11,500,000	42,000,000	78,000,000	ND(330)	ND(330)
Pyrene	32,000,000	340,000,000	NA	235,000,000	550,000,000	15,000,000	28,000,000	570	600
						1,000,000,000 B	1,000,000,000 B	960	

Notes:

ND() - Parameter was not detected above level in parenthesis.

J - The associated numerical value is an estimated quantity.

UI - The compound was analyzed for but not detected. The sample quantitation limit is an estimated value.

NA - Not applicable

ID - Inadequate data to develop criterion.

-- Criterion not available.

PAOC - Potential Area of Concern.

bgs - below ground surface

B - Calculated criterion exceeds 100%, hence it is reduced to 100% (1.0E+9). Evaluation of free phase phase contaminant, environmental impacts, adverse aesthetics and acute or point contact toxicity is required.

Shaded number indicates most restrictive industrial criterion.

Boxed number indicates exceedance of at least one soil criterion.

Underlined number indicates exceedance of most restrictive industrial criterion.

(1) Values taken from MDEQ Operational Memorandum #8, Revision 4, dated June 5, 1995.

(2) Values taken from MDEQ Operational Memorandum #14, Revision 2, dated June 6, 1995.

(3) Values taken from MDEQ-ERD Part 201 Generic Soil Inhalation Criteria for Ambient Air: Technical Support Document, dated April 23, 1997 (Modifier of 0.5 used for 13-acre parcel).

(4) Values taken from MDEQ-ERD Draft Part 201 Generic Groundwater and Soil Volatilization to Indoor Air Criteria: Technical Support Document, dated December 21, 1997.

TABLE 2.2

**SUMMARY OF DETECTED SVOCs IN SOIL SAMPLES
PHASE II ESA ADDENDUM NO. 1**

**PARCEL A-1
GM CLARK AVENUE FACILITY
DETROIT, MICHIGAN**

PAOC No.	Sample Location	Sample ID (S-8889-)	Sample Depth (feet bgs)	Date Sampled	Parameter	AI-4	AI-4	AI-4	AI-5	AI-5	AI-5	AI-6	AI-6	AI-7	AI-7	AI-7	AI-7
		BH-114C-96				AI-4	AI-4	AI-4	AI-5	AI-5	AI-5	AI-6	AI-6	AI-7	AI-7	AI-7	AI-7
		BH-115-96				BH-115-96	BH-115-96	BH-115-96	BH-201-96	BH-201-96	BH-202-96	BH-199-96	BH-200-96	BH-121-96	BH-121-96	BH-121-96	BH-121-96
		091296-PFR-138				091296-PFR-138	091296-PFR-139	091296-PFR-140	102596-SF-336	102596-SF-336	102596-SF-338	102496-SF-331	102496-SF-333	091396-PFR-151	091396-PFR-153	091396-PFR-154	091396-PFR-154
		9-10				9-10	6-7	8-9	4-6 (Dup.)	4-6 (Dup.)	4-6	6-7	6-7.5	9-10	10-11	14-15	14-15
		9/12/96				9/12/96	9/12/96	9/12/96	10/25/96	10/25/96	10/25/96	10/24/96	10/24/96	9/13/96	9/13/96	9/13/96	9/13/96
Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter	Parameter
<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>	<u>Semi-Volatile Organic Compounds (ug)</u>
Acenaphthene	Acenaphthene	Acenaphthene	Acenaphthene	Acenaphthene	Acenaphthene	ND(410)	ND(460)	ND(420)	570	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Anthracene	Anthracene	Anthracene	Anthracene	Anthracene	Anthracene	ND(410)	ND(460)	ND(420)	1,200	ND(330)	ND(330)	ND(330)	ND(330)	1,900	ND(800)	ND(430)	ND(430)
Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	ND(410)	ND(460)	ND(420)	1,200	ND(330)	ND(330)	ND(330)	ND(330)	3,700	ND(800)	ND(430)	ND(430)
Benzo(a)pyrene	Benzo(a)pyrene	Benzo(a)pyrene	Benzo(a)pyrene	Benzo(a)pyrene	Benzo(a)pyrene	ND(410)	ND(460)	ND(420)	1,000	ND(330)	ND(330)	ND(330)	ND(330)	2,600	ND(800)	ND(430)	ND(430)
Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	ND(410)	ND(460)	ND(420)	890	ND(330)	ND(330)	ND(330)	ND(330)	2,400	ND(800)	ND(430)	ND(430)
Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	ND(410)	ND(460)	ND(420)	430	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene	ND(410)	ND(460)	ND(420)	950	ND(330)	ND(330)	ND(330)	ND(330)	2,300	ND(800)	ND(430)	ND(430)
Benzyl butyl phthalate	Benzyl butyl phthalate	Benzyl butyl phthalate	Benzyl butyl phthalate	Benzyl butyl phthalate	Benzyl butyl phthalate	ND(410)	ND(460)	ND(420)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	1,400	1,400
Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	Bis(2-Ethylhexyl)phthalate	ND(410)	ND(460)	ND(420)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Carbazole	Carbazole	Carbazole	Carbazole	Carbazole	Carbazole	ND(410)	ND(460)	ND(420)	420	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Chrysene	Chrysene	Chrysene	Chrysene	Chrysene	Chrysene	ND(410)	ND(460)	ND(420)	1,700	ND(330)	ND(330)	ND(330)	ND(330)	3,400	ND(800)	ND(430)	ND(430)
Di-n-butylphthalate	Di-n-butylphthalate	Di-n-butylphthalate	Di-n-butylphthalate	Di-n-butylphthalate	Di-n-butylphthalate	520	620	2,700	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	3,600	1,900	1,900
Dibenzofuran	Dibenzofuran	Dibenzofuran	Dibenzofuran	Dibenzofuran	Dibenzofuran	ND(410)	ND(460)	ND(420)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Fluoranthene	Fluoranthene	Fluoranthene	Fluoranthene	Fluoranthene	Fluoranthene	ND(410)	ND(460)	ND(420)	360	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Fluorene	Fluorene	Fluorene	Fluorene	Fluorene	Fluorene	ND(410)	ND(460)	ND(420)	3,300	ND(330)	ND(330)	ND(330)	ND(330)	8,400	ND(800)	ND(430)	ND(430)
Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	ND(410)	ND(460)	ND(420)	550	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Naphthalene	Naphthalene	Naphthalene	Naphthalene	Naphthalene	Naphthalene	ND(410)	ND(460)	ND(420)	360	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Phenanthrene	Phenanthrene	Phenanthrene	Phenanthrene	Phenanthrene	Phenanthrene	ND(410)	ND(460)	ND(420)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1,300)	ND(800)	ND(430)	ND(430)
Pyrene	Pyrene	Pyrene	Pyrene	Pyrene	Pyrene	ND(410)	ND(460)	ND(420)	3,500	ND(330)	ND(330)	ND(330)	ND(330)	7,000	ND(800)	ND(430)	ND(430)
						ND(410)	ND(460)	ND(420)	2,200	380	360	1,600	2,400	7,100	ND(800)	ND(430)	ND(430)

TABLE 2.2

SUMMARY OF DETECTED SVOCs IN SOIL SAMPLES

PHASE II ESA ADDENDUM NO. 1

PARCEL A-1

GM CLARK AVENUE FACILITY
DETROIT, MICHIGAN

PAOC No.	A1-7	A1-9	A1-9	A1-10	A1-11	A1-11	A1-11	A1-11	A1-12	A1-13
Sample Location	BH-121-96	BH-113A-96	BH-113A-96	BH-31-96	BH-122-96	BH-122-96	BH-123-96	BH-123-96	BH-32-96	BH-118-96
Sample ID (S-8889-)	091396-PFR-155	091296-PFR-134	091296-PFR-135	091396-SF-064	091396-PFR-156	091396-PFR-157	091396-PFR-158	091396-PFR-159	091396-SF-065	091396-PFR-147
Sample Depth (feet bgs)	14-15 (Dup.)	9-10	15-16	14-16 (Dup.)	4-5	15-16	11-12	15-16	10-12	0-2
Date Sampled	9/13/96	9/12/96	9/12/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96
Parameter										
<u>Semi-Volatile Organic Compounds (ug</u>										
Acenaphthene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Anthracene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Benzo(a)anthracene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Benzo(a)pyrene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Benzo(b)fluoranthene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Benzo(g,h,i)perylene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Benzo(k)fluoranthene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Benzyl butyl phthalate	1,200	ND(400)	ND(430)	ND(440)	1,000	860	ND(830)	ND(830)	ND(4,100)	ND(340)
Bis(2-Ethylhexyl)phthalate	2,400	ND(400)	ND(430)	ND(440)	1,900	1,100	ND(830)	ND(830)	19,000	ND(340)
Carbazole	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Chrysene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Di-n-butylphthalate	2,300	2,200	3,400	570	2,400	2,900	4,000	3,100	ND(4,100)	ND(340)
Dibenz(a,h)anthracene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Dibenzofuran	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Fluoranthene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Fluorene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	650
Indeno(1,2,3-c,d)pyrene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Naphthalene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	ND(340)
Phenanthrene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	450
Pyrene	ND(410)	ND(400)	ND(430)	ND(440)	ND(350)	ND(840)	ND(830)	ND(830)	ND(4,100)	520

TABLE 2.2
SUMMARY OF DETECTED SVOCs IN SOIL SAMPLES
PHASE II ESA ADDENDUM NO. 1
PARCEL A-1
GM CLARK AVENUE FACILITY
DETROIT, MICHIGAN

PAOC No.	A1-13	A1-15	A1-15	A1-17
Sample Location	BH-119-96	BH-28-96	BH-29A-96	BH-203C-96
Sample ID (S-8889-)	091396-PFR-149	091296-SF-057	091296-SF-058	102596-SF-340
Sample Depth (feet bgs)	1-2	12-14	4-6	3.5-5.5
Date Sampled	9/13/96	9/12/96	9/12/96	10/25/96
Parameter				
<u>Semi-Volatile Organic Compounds (ug)</u>				
Acenaphthene	ND(780)	ND(410)	ND(410)	ND(330)
Anthracene	ND(780)	ND(410)	ND(410)	ND(330)
Benzof(a)anthracene	1,400	ND(410)	ND(410)	ND(330)
Benzof(a)pyrene	1,200	ND(410)	ND(410)	ND(330)
Benzof(b)fluoranthene	1,000	ND(410)	ND(410)	ND(330)
Benzof(g,h,i)perylene	ND(780)	ND(410)	ND(410)	ND(330)
Benzof(k)fluoranthene	1,100	ND(410)	ND(410)	ND(330)
Benzyl butyl phthalate	ND(780)	ND(410)	ND(410)	ND(330)
Bis(2-Ethylhexyl)phthalate	ND(780)	ND(410)	ND(410)	ND(330)
Carbazole	1,400	ND(410)	ND(410)	ND(330)
Chrysene	1,400	ND(410)	ND(410)	ND(330)
Di-n-butylphthalate	ND(780)	4,300	ND(410)	ND(330)
DiBenzo(a,h)anthracene	ND(780)	ND(410)	ND(410)	ND(330)
DiBenzofuran	ND(780)	ND(410)	ND(410)	ND(330)
Fluoranthene	2,900	ND(410)	500	350
Fluorene	ND(780)	ND(410)	ND(410)	ND(330)
Indeno(1,2,3-c,d)pyrene	ND(780)	ND(410)	ND(410)	ND(330)
Naphthalene	ND(780)	ND(410)	ND(410)	ND(330)
Phenanthrene	2,600	ND(410)	450	520
Pyrene	2,700	ND(410)	540	450

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES
PHASE II ESA ADDENDUM NO. 1
PARCEL A-1
GM CLARK AVENUE FACILITY
DETROIT, MICHIGAN

PAOC No.	Michigan Generic Residential Direct Contact Criteria (1)	Michigan Generic Industrial Direct Contact Criteria (2)	Soil Saturation (Csat) (4)	Residential Ambient Air Finite Source (5 m) VSIC (3)	Industrial/Commercial Ambient Air Finite Source (5 m) VSIC (3)	Residential Volatilization to Indoor Air Inhalation Criteria (4)	Industrial/Commercial Volatilization to Indoor Air Inhalation Criteria (4)	A1-1 BH-245-97 120897-SF-523 3-5 12/8/97	A1-1 BH-245-97 120897-SF-524 7-9 12/8/97
Sample ID (S-8889-)									
Sample Depth (feet bgs)									
Date Sampled									
Inorganics (mg/kg)									
Arsenic	6.6	100	NA	ID	ID	--	--	5	4.2
Barium	30,000	320,000	NA	ID	ID	--	--	40.0 J	52.2 J
Cadmium	210	2,300	NA	ID	ID	--	--	1.6 J	1.2 J
Chromium	2,000	22,000	NA	ID	ID	--	--	8.70	10.90
Copper	16,000	170,000	NA	ID	ID	--	--	43.9	17.4
Lead	400	400	NA	ID	ID	--	--	37.6 J	10.3 J
Mercury	130	1,400	NA	ID	ID	--	--	ND(0.1)	ND(0.1)
Selenium	2,100	23,000	NA	ID	ID	--	--	ND(0.6) UJ	ND(1.0) UJ
Silver	2,000	21,000	NA	ID	ID	--	--	ND(0.6)	ND(0.6)
Zinc	140,000	1,000,000	NA	ID	ID	--	--	23.0 J	57.9 J

Notes:

ND() - Parameter was not detected above level in parentheses.

J - The associated numerical value is an estimated quantity.

UJ - The compound was analyzed for but not detected. The sample quantitation limit is an estimated value.

NA - Not applicable.

ID - Insufficient data to develop criterion.

--- Criterion not available.

PAOC - Potential Area of Concern

bgs - below ground surface.

Shaded number indicates most restrictive industrial criterion.

Boxed number indicates exceedance of at least one soil criterion.

Underlined number indicates exceedance of most restrictive industrial criterion.

(1) Values taken from MDEQ Operational Memorandum #8, Revision 4, dated June 5, 1995.

(2) Values taken from MDEQ Operational Memorandum #14, Revision 2, dated June 6, 1995.

(3) Values taken from MDEQ-ERD Part 201 Generic Soil Inhalation Criteria for Ambient Air: Technical Support Document, dated April 23, 1997 (Modifier of 0.5 used for 13-acre parcel).

(4) Values taken from MDEQ-ERD Draft Part 201 Generic Groundwater and Soil Volatilization to Indoor Air Criteria: Technical Support Document, dated December 21, 1997.

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES
 PHASE II ESA ADDENDUM NO. 1
 PARCEL A-1
 GM CLARK AVENUE FACILITY
 DETROIT, MICHIGAN

PAOC No.	A1-1	A1-1	A1-2	A1-2	A1-2	A1-3	A1-3	A1-3	A1-3	A1-4	A1-4
Sample Location	BH-246-97	BH-246-97	BH-247-97	BH-248-97	BH-248-97	BH-249-97	BH-250-97	BH-250-97	BH-250-97	BH-114B-96	BH-114C-96
Sample ID (S-8889-)	120897-SF-525	120897-SF-526	120897-SF-527	120897-SF-528	120897-SF-529	120897-SF-530	120897-SF-531	120897-SF-532	120897-SF-532	091296-PFR-136	091296-PFR-137
Sample Depth (feet bgs)	4-6	6-8	6-8	4-6	8-10	6-8	8-10	12-14	12-14	6-7	5-6
Date Sampled	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/8/97	12/9/97	12/9/97	9/12/96	9/12/96
Inorganics (mg/kg)											
Arsenic	4.2	3.3	7.4	3.3	5.5	31.9	3.8	4.1	4.1	4.31	5.2
Barium	47.8 J	41.4 J	5.5 J	29.9 J	41.6 J	49.9 J	49.9	52.3	52.3	23.4 J	36.9 J
Barium	1.1 J	0.6 J	2.0 J	1.2 J	1.5 J	2.2 J	0.08	0.21	0.21	0.326	0.118
Cadmium	10.00	6.40	149.00	7.40	12.50	64.30	14.80	11.30	11.30	6.47 J	10.80
Chromium	51.1	13.4	27.1	20.1	17.0	10.2	78.9 J	16.8 J	16.8 J	21.0 J	16.7 J
Copper	9.3 J	11.6 J	44.3 J	25.5 J	8.2 J	7.9 J	102.000	7.200	7.200	26.100	78.500
Lead	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.120)	ND(0.130)
Mercury	ND(1.0) UJ	ND(0.6) UJ	ND(0.6) UJ	ND(0.5) UJ	ND(0.6) UJ	ND(0.6) UJ	ND(0.6)	ND(0.6)	ND(0.6)	ND(1.20)	ND(1.30)
Selenium	ND(0.6)	ND(0.6)	ND(0.6)	ND(0.5)	ND(0.6)	ND(0.6)	ND(0.6) UJ	ND(0.6) UJ	ND(0.6) UJ	ND(0.599)	ND(0.650)
Silver	53.1 J	25.5 J	43.4 J	79.8 J	34.1 J	242 J	35.700	38.200	38.200	112 J	29.7 J
Zinc											

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES
 PHASE II ESA ADDENDUM NO.1
 PARCEL A-1
 GM CLARK AVENUE FACILITY
 DETROIT, MICHIGAN

PAOC No.	A1-4	A1-4	A1-4	A1-4	A1-5	A1-5	A1-5	A1-5	A1-5	A1-5	A1-6	A1-6
Sample Location	BH-114C-96	BH-115-96	BH-115-96'	BH-115-96'	BH-201-96	BH-201-96	BH-201-96	BH-201-96	BH-202-96	BH-202-96	BH-199-96	BH-199-96
Sample ID (S-8889-)	091296-PFR-138	091296-PFR-139	091296-PFR-140	091296-PFR-140	102596-SF-335	102596-SF-336	102596-SF-337	102596-SF-338	102596-SF-339	102496-SF-331	102496-SF-332	102496-SF-332
Sample Depth (feet bgs)	9-10	6-7	8-9	8-9	4-6	4-6 (Dup.)	10-12	4-6	10-12	6-7	8-10	8-10
Date Sampled	9/12/96	9/12/96	9/12/96	9/12/96	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	10/24/96	10/24/96	10/24/96
<u>Inorganics (mg/kg)</u>												
Arsenic	4.5	4.7	3.3	3.3	7.4 J	5.9 J	1.2 J	6.5 J	1.3 J	3.8 J	9.4 J	9.4 J
Barium	53.9 J	126 J	57.1 J	57.1 J	81	44	64	49	80	42 J	120 J	120 J
Cadmium	0.295	0.167	0.127	0.127	0.57	0.3	0.16	0.26	0.29	0.15 J	0.072 J	0.072 J
Chromium	11.30	9.34	14.70	14.70	9.9 J	7.2 J	12 J	9.8 J	13 J	6.70	18.00	18.00
Copper	18.7 J	14.9 J	28.9 J	28.9 J	36 J	18 J	17 J	43 J	17 J	45 J	22 J	22 J
Lead	15.000	17.100	7.360	7.360	720.000	120.000	9.600	110.000	8.000	50.000	14.000	14.000
Mercury	ND(0.124)	ND(0.129)	ND(0.129)	ND(0.129)	0.28 J	0.19 J	ND(0.10) UJ	0.31 J	ND(0.10) UJ	ND(0.10)	ND(0.10)	ND(0.10)
Selenium	ND(1.24)	ND(1.29)	ND(1.26)	ND(1.26)	ND(0.50) UJ	ND(0.50) UJ	ND(0.50) UJ	ND(0.50) UJ	0.53 J	ND(0.50) UJ	0.59 J	0.59 J
Silver	ND(0.620)	ND(0.644)	ND(0.628)	ND(0.628)	5.10	8.00	6.30	5.60	3.80	ND(0.50)	ND(0.50)	ND(0.50)
Zinc	45.5 J	28.5 J	52.8 J	52.8 J	120 J	54 J	46 J	55 J	55 J	21 J	51 J	51 J

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES
 PHASE II ESA ADDENDUM NO. 1
 PARCEL A-1
 GM CLARK AVENUE FACILITY
 DETROIT, MICHIGAN

PAOC No.	A1-6	A1-7	A1-7	A1-7	A1-7	A1-7	A1-7	A1-7	A1-8	A1-8	A1-8
Sample Location	BH-200-96	BH-120-96	BH-120-96	BH-120-96	BH-121-96	BH-121-96	BH-121-96	BH-121-96	BH-22-96	BH-22-96	BH-23-96
Sample ID (S-3889-)	102496-SF-334	091396-PFR-151	091396-PFR-152	091396-PFR-153	091396-PFR-154	091396-PFR-155	14-15 (Dup.)	091196-SF-045	091196-SF-046	091196-SF-047	
Sample Depth (feet bgs)	6-7.5	9-10	16-17	10-11	14-15	14-15		10-12	14-16	10-12	
Date Sampled	10/24/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/11/96	9/11/96	9/11/96	
Inorganics (mg/kg)											
Arsenic	3.9 J	8.4 J	5.52	2.55	7.69	8.27		2.85 J	7.31 J	2.96 J	
Barium	36 J	78 J	70.4	16.8	132	61.4		29.3	70.9	34.6	
Cadmium	0.12 J	0.12 J	0.175	ND(0.096)	0.264	0.234		ND(0.099)	0.120 J	ND(0.090)	
Chromium	20.00	15.00	21.10	7.84	30.50	16.60		9.21	27.40	12.40	
Copper	18 J	14 J	15.1	12.3	19.4	14.7		17.3 J	18.0 J	33.4 J	
Lead	48.000	13.000	8.200	12.600	11.200	8.160		18.800	10.500	50.000	
Mercury	ND(0.10)	ND(0.10)	ND(0.129)	ND(0.121)	ND(0.128)	ND(0.127)		ND(0.124)	ND(0.128)	ND(0.113)	
Selenium	ND(0.50) UJ	ND(0.50) UJ	ND(1.29)	ND(1.21)	ND(1.28)	ND(1.27)		ND(1.24)	ND(1.28)	ND(1.13)	
Silver	ND(0.50)	ND(0.50)	ND(0.645)	ND(0.604)	ND(0.643)	ND(0.636)		ND(0.619)	ND(0.641)	ND(0.565)	
Zinc	41 J	43 J	58.000	20.400	56.700	59.800		28.3 J	61.0 J	18.7 J	

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES

PHASE II ESA ADDENDUM NO. 1

PARCEL A-1

GM CLARK AVENUE FACILITY
DETROIT, MICHIGAN

PAOC No.	A1-8	A1-9	A1-9	A1-9	A1-9	A1-9	A1-9	A1-9	A1-9	A1-10	A1-10	A1-10	A1-10
Sample Location	BH-23-96	BH-112-96	BH-112C-96	BH-112C-96	BH-112C-96	BH-112C-96	BH-112C-96	BH-113A-96	BH-113A-96	BH-30-96	BH-30-96	BH-30-96	BH-31-96
Sample ID (S-8889-)	091196-SF-048	091196-PFR-127	091196-PFR-130	091196-PFR-131	091196-PFR-132	091196-PFR-134	091296-PFR-135	091296-PFR-134	091296-PFR-135	091396-SF-060	091396-SF-061	091396-SF-062	091396-SF-062
Sample Depth (feet bgs)	14-16	2-3	10-12	12-14	12-14 (Dup.)	9-10	15-16	9-10	15-16	4-6	12-14	10-12	10-12
Date Sampled	9/11/96	9/11/96	9/11/96	9/11/96	9/11/96	9/12/96	9/12/96	9/12/96	9/12/96	9/13/96	9/13/96	9/13/96	9/13/96
<u>Inorganics (mg/kg)</u>													
Arsenic	2.46 J	3.49 J	7.45 J	6.32 J	7.80 J	4.22	7.72	3.74	4.96	4.75			
Barium	16.4	28.7	80.2	60.4	61.2	55.4 J	177 J	68.9 J	47.0 J	306			
Cadmium	ND(0.106)	0.157 J	0.219 J	0.119 J	0.150 J	ND(0.094)	0.142	0.351	0.142	0.564			
Chromium	6.36	5.74	15.20	10.40	19.40	9.40	17.00	18.3 J	26.8 J	38.50			
Chromium	5.50 J	6.62 J	111 J	7.50 J	16.3 J	32.4 J	19.3 J	20.4	15.5	220.0			
Copper	2.660	11.600	109.000	6.890	6.510	92.200	11.000	53.8 J	15.2 J	10700.000			
Lead	ND(0.133)	ND(0.107)	ND(0.127)	ND(0.122)	ND(0.120)	ND(0.118)	ND(0.126)	ND(0.128)	ND(0.126)	0.3			
Mercury	ND(1.33)	ND(1.07)	ND(1.27)	ND(1.22)	ND(1.20)	ND(1.18)	1.5	ND(1.29)	ND(1.26)	ND(1.70)			
Selenium	ND(0.663)	ND(0.537)	ND(0.634)	ND(0.608)	ND(0.602)	ND(0.592)	ND(0.632)	ND(0.646)	ND(0.631)	ND(0.849)			
Silver	29.6 J	33.2 J	53.5 J	30.6 J	52.2 J	46.7 J	51.7 J	72.400	80.500	724.000			
Zinc													

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES
 PHASE II ESA ADDENDUM NO. 1
 PARCEL A-1
 GM CLARK AVENUE FACILITY
 DETROIT, MICHIGAN

PAOC No.	A1-10	A1-10	A1-11	A1-11	A1-11	A1-11	A1-11	A1-11	A1-12	A1-12	A1-12	A1-12
Sample Location	BH-31-96	BH-31-96	BH-122-96	BH-122-96	BH-122-96	BH-122-96	BH-123-96	BH-123-96	BH-32-96	BH-32-96	BH-33-96	BH-33-96
Sample ID (S-8889-)	091396-SF-063	091396-SF-064	091396-PFR-156	091396-PFR-157	091396-PFR-158	091396-PFR-159	091396-PFR-158	091396-PFR-159	091396-SF-066	091396-SF-067	091396-SF-068	091396-SF-068
Sample Depth (feet bgs)	14-16	14-16 (Dup.)	4-5	15-16	11-12	15-16	11-12	15-16	12-14	8-10	12-14	12-14
Date Sampled	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96	9/13/96
Inorganics (mg/kg)												
Arsenic	5.94	6.42	24	8.24	1.13	12	5.52	1.47	2.47	5.84		
Barium	51.4 J	57.7 J	19.2	60.4	50.3	105	116 J	23.3 J	38.8 J	61.7 J		
Cadmium	0.168	0.188	0.281	ND(0.103)	ND(0.094)	0.129	0.276	0.305	0.264	0.24		
Chromium	24.9 J	25.8 J	6.42	17.30	22.60	24.70	10.2 J	21.6 J	7.82 J	19.2 J		
Chromium	14.8	14.3	15.6	12.8	8.2	16.7	19.3	7.8	6.6	14.1		
Copper	8.93 J	9.04 J	26.200	7.500	23.700	12.200	10.5 J	14.8 J	11.2 J	9.56 J		
Lead	ND(0.128)	ND(0.128)	ND(0.106)	ND(0.128)	ND(0.118)	ND(0.136)	ND(0.122)	ND(0.124)	ND(0.117)	ND(0.123)		
Mercury	ND(1.28)	ND(1.28)	ND(1.06)	ND(1.28)	ND(1.18)	ND(1.36)	2.2	ND(1.24)	ND(1.17)	ND(1.23)		
Selenium	ND(0.641)	ND(0.640)	ND(0.531)	ND(0.642)	ND(0.591)	ND(0.682)	ND(0.608)	ND(0.622)	ND(0.587)	ND(0.615)		
Silver	56.500	58.400	46.700	57.100	19.200	58.700	75.200	56.700	66.600	52.900		
Zinc												

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES
 PHASE II ESA ADDENDUM NO. 1
 PARCEL A-1
 GM CLARK AVENUE FACILITY
 DETROIT, MICHIGAN

PAOC No.	A1-13	A1-13	A1-13	A1-13	A1-14	A1-14	A1-14	A1-14	A1-14	A1-14	A1-15
Sample Location	BH-118-96	BH-118-96	BH-119-96	BH-119-96	BH-24A-96	BH-24A-96	BH-24A-96	BH-25-96	BH-25-96	BH-25-96	BH-28-96
Sample ID (S-8889-)	091396-PFR-147	091396-PFR-148	091396-PFR-149	091396-PFR-150	091196-SF-049	091196-SF-050	091196-SF-051	091296-SF-052	091296-SF-053	091296-SF-056	
Sample Depth (feet bgs)	0-2	8-9	1-2	7-8	6-8	10-12	4-6	14-16	14-16 (Dup.)	6-8	
Date Sampled	9/13/96	9/13/96	9/13/96	9/13/96	9/11/96	9/11/96	9/12/96	9/12/96	9/12/96	9/12/96	
<u>Inorganics (mg/kg)</u>											
Arsenic	7.4	4.39	9.46	3.79	1.26 J	7.35 J	8.36	6.16	3.9	2.22	
Barium	17.9 J	50.9 J	149	80	13.4	81.3	233 J	97.0 J	35.9 J	49.8 J	
Cadmium	0.341	ND(0.103)	0.708	0.259	0.116 J	0.170 J	0.903	0.13	ND(0.098)	ND(0.096)	
Chromium	8.43 J	19.6 J	18.10	18.50	3.86	15.80	15.70	19.40	15.70	22.20	
Copper	14.2	14.6	91.8	16.1	2.03 J	20.1 J	65.8 J	20.6 J	23.4 J	27.7 J	
Lead	9.68 J	7.16 J	401.000	7.990	5.140	7.640	284.000	10.200	7.220	222.000	
Mercury	ND(0.105)	ND(0.128)	0.7	ND(0.131)	ND(0.116)	ND(0.124)	0.174 J	ND(0.127)	ND(0.123)	13.5 J	
Selenium	ND(1.05)	ND(1.28)	ND(1.22)	ND(1.31)	ND(1.16)	ND(1.24)	1.3	1.8	ND(1.23)	ND(1.21)	
Silver	ND(0.523)	ND(0.642)	ND(0.612)	ND(0.655)	ND(0.583)	ND(0.621)	ND(0.602)	ND(0.637)	ND(0.615)	ND(0.604)	
Zinc	68.000	56.400	230.000	52.600	13.2 J	51.5 J	402 J	59.2 J	64.6 J	26.4 J	

TABLE 2.3

SUMMARY OF DETECTED INORGANICS IN SOIL SAMPLES
 PHASE II ESA ADDENDUM NO. 1
 PARCEL A-1
 GM CLARK AVENUE FACILITY
 DETROIT, MICHIGAN

PAOC No.	A1-15	A1-15	A1-15	A1-16	A1-16	A1-17	A1-17	A1-17	A1-17
Sample Location	BH-28-96	BH-29A-96	BH-29A-96	BH-26-96	BH-26-96	BH-203C-96	BH-203C-96	BH-204-96	BH-204-96
Sample ID (S-8889-)	091296-SF-057	091296-SF-058	091296-SF-059	091296-SF-054	091296-SF-055	102596-SF-340	102596-SF-341	102596-SF-342	102596-SF-343
Sample Depth (feet bgs)	12-14	4-5	13-14	8-10	10-12	3.5-5.5	9.5-11.5	6-8	10-12
Date Sampled	9/12/96	9/12/96	9/12/96	9/12/96	9/12/96	10/25/96	10/25/96	10/25/96	10/25/96
<u>Inorganics (mg/kg)</u>									
Arsenic	5.98	15.7	6.32	2.25	14.7	1.7 J	1.5 J	5.6 J	1.1 J
Barium	53.3 J	138 J	48.4 J	17.1	85.4	250	77	71	87
Cadmium	0.307	1.5	0.119	ND(0.102)	0.153	0.15	0.33	0.28	0.32
Chromium	11.90	207.00	14.10	4.06	15.50	80 J	17 J	39 J	18 J
Copper	18.5 J	88.6 J	16.8 J	3.5	19.6	86 J	23 J	28 J	15 J
Lead	11.600	2780.000	8.710	22.700	14.800	180.000	10.000	240.000	8.700
Mercury	ND(0.120)	ND(0.135)	ND(0.123)	ND(0.127)	ND(0.130)	ND(0.10) UJ	ND(0.10) UJ	ND(0.10) UJ	ND(0.10) UJ
Selenium	ND(1.20)	ND(1.35)	ND(1.23)	ND(1.27)	ND(1.30)	ND(0.50) UJ	0.63 J	0.59 J	0.52 J
Silver	ND(0.598)	ND(0.675)	ND(0.615)	ND(0.637)	ND(0.651)	7.20	12.00	5.40	7.00
Zinc	50.5 J	429 J	45.9 J	13.0 J	57.1 J	67 J	61 J	25 J	64 J