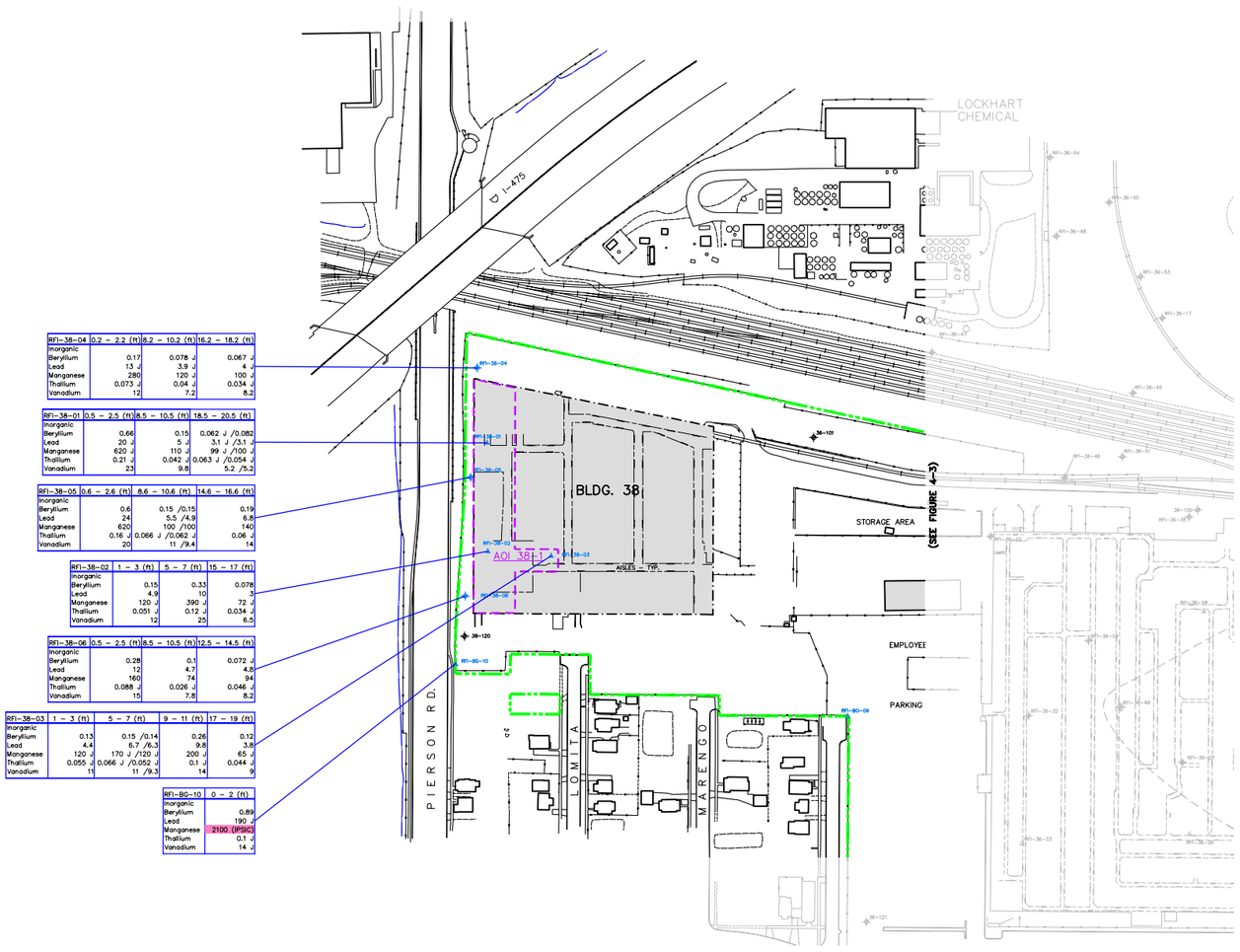
US EPA ARCHIVE DOCUMENT



SITE LOCATION



RFI-38-04	0.2 – 2.2 (ft)	8.2 – 10.2 (ft)	16.2 – 18.2 (ft)
Inorganic			
Beryllium	0.17	0.078 J	0.067 J
Lead	13 J	3.9 J	4 J
Manganese	280	120 J	100 J
Thallium	0.073 J	0.04 J	0.034 J
Vanadium	12	7.2	8.2

RFI-38-01	0.5 – 2.5 (ft)	8.5 – 10.5 (ft)	18.5 – 20.5 (ft)
Inorganic			
Beryllium	0.66	0.15	0.062 J /0.082
Lead	20 J	5 J	3.1 J /3.1 J
Manganese	620 J	110 J	99 J /100 J
Thallium	0.21 J	0.042 J	0.063 J /0.054 J
Vanadium	23	9.8	5.2 /5.2

RFI-38-05	0.6 – 2.6 (ft)	8.6 – 10.6 (ft)	14.6 – 16.6 (ft)
Inorganic			
Beryllium	0.6	0.15 /0.15	0.19
Lead	24	5.5 /4.9	6.8
Manganese	620	100 /100	140
Thallium	0.16 J	0.066 J /0.062 J	0.06 J
Vanadium	20	11 /9.4	14

RFI-38-02	1 – 3 (ft)	5 – 7 (ft)	15 – 17 (ft)
Inorganic			
Beryllium	0.15	0.33	0.078
Lead	4.9	10	3
Manganese	120 J	390 J	72 J
Thallium	0.051 J	0.12 J	0.034 J
Vanadium	12	25	6.5

RFI-38-06	0.5 – 2.5 (ft)	8.5 – 10.5 (ft)	12.5 – 14.5 (ft)
Inorganic			
Beryllium	0.28	0.1	0.072 J
Lead	12	4.7	4.8
Manganese	160	74	94
Thallium	0.088 J	0.026 J	0.046 J
Vanadium	15	7.8	8.2

RFI-38-03	1 – 3 (ft)	5 – 7 (ft)	9 – 11 (ft)	17 – 19 (ft)
Inorganic				
Beryllium	0.13	0.15 /0.14	0.26	0.12
Lead	4.4	6.7 /6.3	9.8	3.8
Manganese	120 J	170 J /120 J	200 J	65 J
Thallium	0.055 J	0.066 J /0.052 J	0.1 J	0.044 J
Vanadium	11	11 /9.3	14	9

RFI-BG-10	0 – 2 (ft)
Inorganic	
Beryllium	0.89
Lead	190 J
Manganese	2100 (IPSIC)
Thallium	0.1 J
Vanadium	14 J

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE-SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY-WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ND (0.039)-CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS-NOT ANALYZED FOR THIS CONSTITUENT.
9. J-ESTIMATED CONCENTRATION.

0 150' 300'
GRAPHIC SCALE

JULY 2006

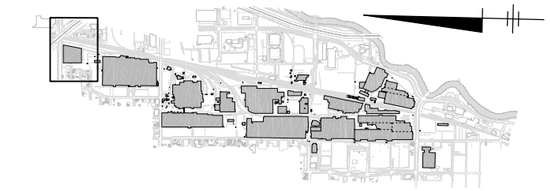
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

SOIL ANALYTICAL DATA - BUILDING 38 AREA

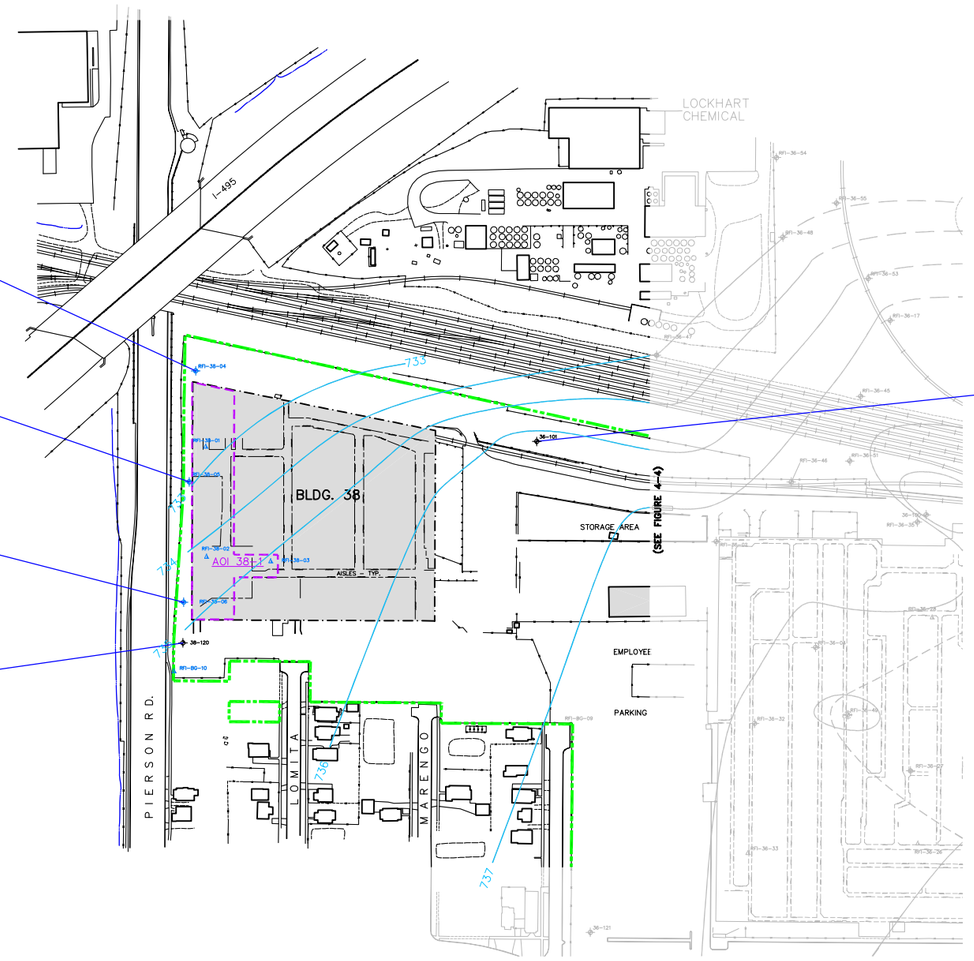
BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 4-1

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES LAF GMS
64410112/RFI-06/64410C01.DWG



SITE LOCATION



RFI-38-04	9/27/2001	6/13/2002	3/25/2003
Inorganic			
Beryllium	0.0011 J	ND(0.0004 J)	ND(0.0004)
Lead	0.00044	0.001 J	ND(0.0004)
Manganese	0.88 J (RDW)	0.49	0.24
Thallium	0.00024 J	0.000045 J	0.000068 J
Vanadium	ND(0.0008)	0.00075 J	ND(0.0008)
Inorganic-Dissolved			
Beryllium	ND(0.0004)	ND(0.0004)	NS
Lead	ND(0.0004)	0.0065 (GW,RDW)	NS
Manganese	0.77 J	1.7 J (RDW)	NS
Thallium	ND(0.0002)	ND(0.0002)	NS
Vanadium	ND(0.0008)	0.0045	NS

RFI-38-05	9/28/2001
Inorganic	
Beryllium	0.0015 J
Lead	0.00051
Manganese	0.55 J
Thallium	0.00046 J
Vanadium	ND(0.0008)
Inorganic-Dissolved	
Beryllium	ND(0.0004)
Lead	ND(0.0004)
Manganese	0.52 J
Thallium	ND(0.0002)
Vanadium	ND(0.0008)

RFI-38-06	9/28/2001	2/21/2002	6/13/2002	3/25/2003	10/13/2004
Inorganic					
Beryllium	0.0015 J /0.034 (GW,RDW)	NS	ND(0.0004 J)	ND(0.0004)	ND(0.001)
Lead	0.00048 /0.0007 J	NS	0.000093 J	0.00022 J	NS
Manganese	0.55 J /1 (RDW)	NS	0.41	0.34	NS
Thallium	0.0038 J (GW,RDW) /0.0049 (GW,RDW)	NS	0.0022 (GW,RDW)	0.0026 (GW,RDW)	0.003 (GW,RDW)
Vanadium	ND(0.0008) /0.0054 J (RDW)	NS	ND(0.0008)	ND(0.0008)	NS
Inorganic-Dissolved					
Beryllium	ND(0.0004) /ND(0.0004)	NS	NS	NS	NS
Lead	ND(0.0004) /ND(0.0004)	NS	NS	NS	NS
Manganese	0.55 J /0.52 J	NS	NS	NS	NS
Thallium	0.0031 (GW,RDW) /0.003 (GW,RDW)	0.0034 (GW,RDW)	NS	NS	NS
Vanadium	ND(0.0008) /ND(0.0008)	NS	NS	NS	NS

38-120	9/27/2001
Inorganic	
Beryllium	0.0032 J
Lead	0.00056
Manganese	0.57 J
Thallium	0.0019 J
Vanadium	ND(0.0008)
Inorganic-Dissolved	
Beryllium	ND(0.0004)
Lead	ND(0.0004)
Manganese	0.41
Thallium	0.00089
Vanadium	ND(0.0008)

36-101	9/28/2001	6/13/2002
Inorganic		
Beryllium	0.00037 J	ND(0.0004 J)
Lead	0.00038 J	0.00013 J
Manganese	0.44 J	0.33 J
Thallium	0.00025 J	0.000056 J
Vanadium	ND(0.0008)	ND(0.0008)
Inorganic-Dissolved		
Beryllium	ND(0.0004)	NS
Lead	ND(0.0004)	NS
Manganese	0.45 J	NS
Thallium	ND(0.0002)	NS
Vanadium	ND(0.0008)	NS

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL)
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDW – INDUSTRIAL DRINKING WATER

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED IN DECEMBER 2004.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. RDW–EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
11. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.

0 150' 300'
GRAPHIC SCALE

JULY 2006

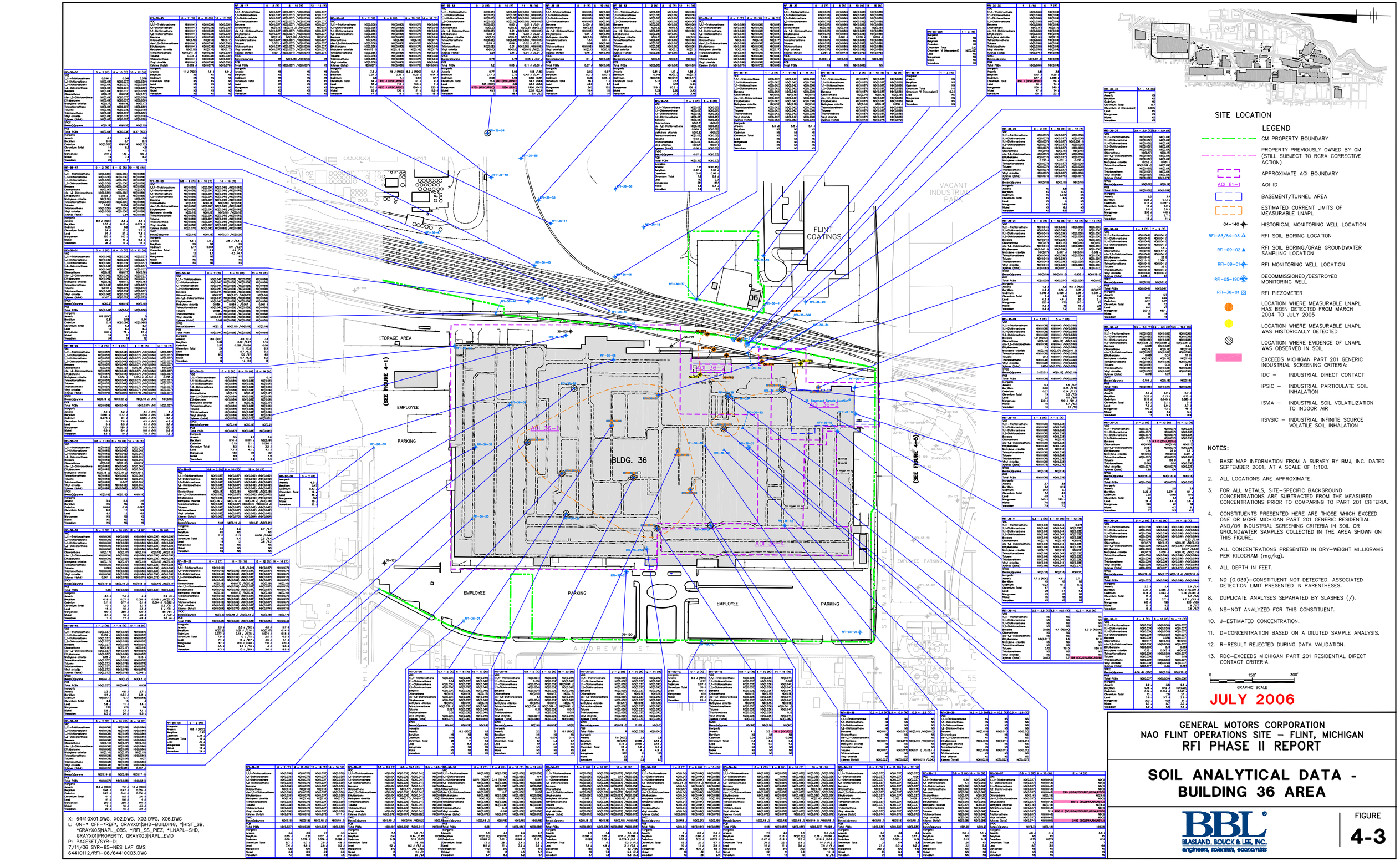
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

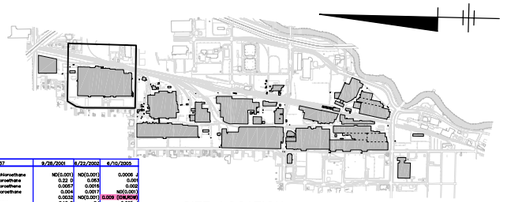
GROUNDWATER ANALYTICAL DATA - BUILDING 38 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 4-2

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG, X24.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES LAF GMS
64410112/RFI-06/64410C02.DWG


STORAGE AREA
(SEE FIGURE 4-1)
EMPLOYEE
PARKING
BLDG. 36
FLINT COATINGS
VACANT INDUSTRIAL PARK
AOI 36-1
AOI 36-2
AOI 36-3
36-Basement Sample Location
EMPLOYEE PARKING
ANDREW ST.
(SEE FIGURE 4-3)
RFI-36-01
RFI-36-02
RFI-36-03
RFI-36-04
RFI-36-05
RFI-36-06
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SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- APPROXIMATE AOI BOUNDARY
- AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL) (DASHED WHERE INFERED)
- (739.13) GROUNDWATER ELEVATION (IN FEET)
- [742.02] ANOMALOUS GROUNDWATER ELEVATION (IN FEET), NOT USED TO GENERATE GROUNDWATER ELEVATION CONTOURS
- 04-140 HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 RFI SOIL BORING LOCATION
- RFI-09-02 RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 RFI MONITORING WELL LOCATION
- RFI-12-13 DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDW – INDUSTRIAL DRINKING WATER

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED ON JULY 20, 2005.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. E–CONCENTRATION EXCEEDED THE LINEAR RANGE OF THE ANALYTICAL EQUIPMENT; HOWEVER THE RESULT WAS DEEMED ACCEPTABLE DURING DATA VALIDATION.
12. RDW–EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
13. RGVIA – EXCEEDS MICHIGAN PART 201 RESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR CRITERIA
14. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.

GRAPHIC SCALE 0 150' 300'

JULY 2006

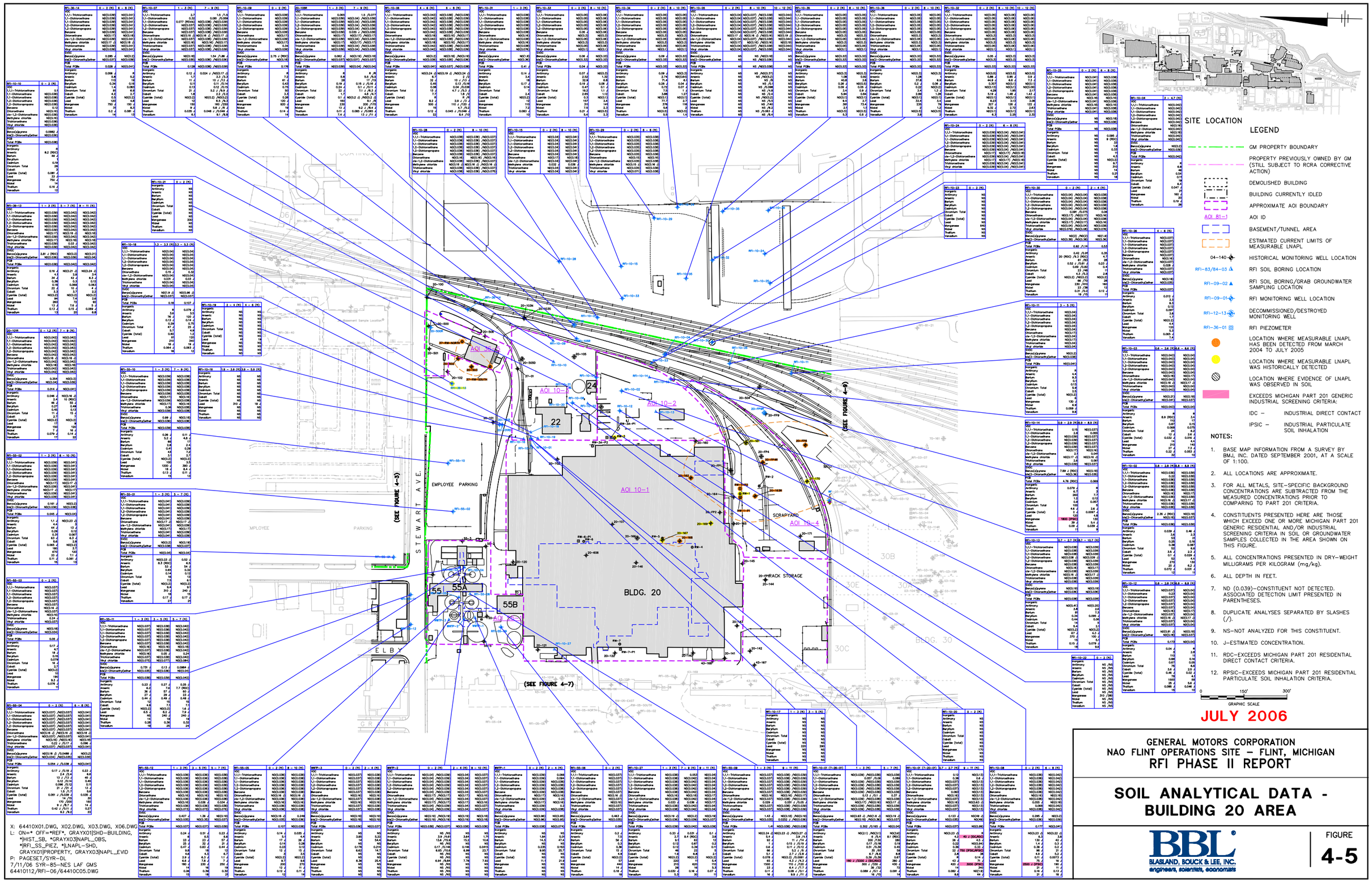
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - BUILDING 36 AREA

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 4-4

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD–BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C04.DWG



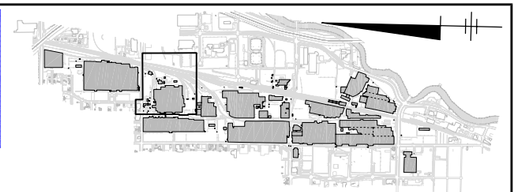
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

SOIL ANALYTICAL DATA - BUILDING 20 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 4-5

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD–BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C05.DWG



SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL) (DASHED WHERE INFERED)
- (739.13) — GROUNDWATER ELEVATION (IN FEET)
- [743.02] — ANOMALOUS GROUNDWATER ELEVATION (IN FEET), NOT USED TO GENERATE GROUNDWATER ELEVATION CONTOURS
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDW – INDUSTRIAL DRINKING WATER

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED ON JULY 25, 2005.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. R–RESULT REJECTED DURING DATA VALIDATION.
12. RDW–EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
13. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.
14. (slf) – SAMPLE WAS COLLECTED USING ULTRA LOW–FLOW PROCEDURES TO MINIMIZE TURBIDITY.

0 150' 300'
GRAPHIC SCALE

JULY 2006

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD–BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C06.DWG

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - BUILDING 20 AREA

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 4-6

43-101R	0.5 – 2 (ft)	8 – 10 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.038)	ND(0.041)
Trichloroethene	0.075	ND(0.041)
Vinyl chloride	ND(0.038)	ND(0.041)
SVOC		
Benzo(a)pyrene	0.13 J	0.0475 J
Inorganic		
Arsenic	3.5	4.6
Beryllium	0.3	0.32
Cobalt	3.3	3.7
Copper	150 J	38
Lead	160	400
Manganese	600	460
Nickel	18 J	21 J

RFI-05-11	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.043)	ND(0.042)	ND(0.041)
Trichloroethene	ND(0.043)	ND(0.042)	0.094
Vinyl chloride	ND(0.043)	ND(0.042)	ND(0.041)
SVOC			
Benzo(a)pyrene	ND(0.18)	ND(0.89)	ND(0.18)
Inorganic			
Arsenic	4.67 J	4.41 J	4.48
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	5.61 J	6.34 J	17.9 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-05-06	0 – 2 (ft)	8 – 10 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.036)	ND(0.039)
Trichloroethene	ND(0.036)	0.03 J
Vinyl chloride	ND(0.036)	ND(0.039)
SVOC		
Benzo(a)pyrene	ND(0.18)	ND(0.19 J)
Inorganic		
Arsenic	3.1	5.3
Beryllium	0.16	0.29
Cobalt	2.7	4.6
Copper	6.5 J	26 J
Lead	8.9 J	23 J
Manganese	130 J	240 J
Nickel	7	15

RFI-05-02	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.042) /ND(0.067)	ND(0.036)	ND(0.039)
Trichloroethene	ND(0.042) /ND(0.067)	ND(0.036)	ND(0.039)
Vinyl chloride	ND(0.042) /ND(0.067)	ND(0.036)	ND(0.039)
SVOC			
Benzo(a)pyrene	ND(0.18) /ND(0.18)	ND(0.18)	ND(0.18)
Inorganic			
Arsenic	7.55 J /5.89	5.73 J	4.22
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	7.13 J /6.03	6.75 J	5.89 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-05-01	1 – 3 (ft)	7 – 9 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.039)	ND(0.039)
Trichloroethene	ND(0.039)	ND(0.039)
Vinyl chloride	ND(0.039)	ND(0.039)
SVOC		
Benzo(a)pyrene	0.264 J	ND(0.19)
Inorganic		
Arsenic	3.1	3.3
Beryllium	0.082 J	0.16
Cobalt	2 J	2.7 J
Copper	4.6 J	5.1 J
Lead	3.5	150
Manganese	130	190
Nickel	5.2 J	5.9 J

RFI-05-22	0.5 – 2.5 (ft)	4 – 6 (ft)
VOC		
cis-1,2-Dichloroethene	NS	ND(0.041)
Trichloroethene	NS	ND(0.041)
Vinyl chloride	NS	ND(0.041)
SVOC		
Benzo(a)pyrene	NS	2.06 J (RDC)
Inorganic		
Arsenic	NS	4.6
Beryllium	NS	0.68 J
Cobalt	NS	4
Copper	NS	200
Lead	NS	310
Manganese	NS	930
Nickel	NS	45 J

RFI-05-23	1.3 – 3 (ft)	4 – 6 (ft)
VOC		
cis-1,2-Dichloroethene	NS	ND(0.036)
Trichloroethene	NS	ND(0.036)
Vinyl chloride	NS	ND(0.036)
SVOC		
Benzo(a)pyrene	NS	0.398
Inorganic		
Arsenic	NS	12 (RDC)
Beryllium	NS	0.58 J
Cobalt	NS	6.5
Copper	NS	100
Lead	NS	91
Manganese	NS	2400 (IPSIC)
Nickel	NS	89 J

RFI-05-21	0 – 2 (ft)	6 – 8 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.039)	ND(0.043)
Trichloroethene	ND(0.039)	ND(0.043)
Vinyl chloride	ND(0.039)	ND(0.043)
SVOC		
Benzo(a)pyrene	1.69 J	1.27 J
Inorganic		
Arsenic	4.2	4.6
Beryllium	0.41	0.7 J
Cobalt	3.9 J	5.7 J
Copper	21000 J (RDC)	30 J
Lead	3100 (IDC,RDC)	78
Manganese	220	120
Nickel	44 J	17 J

RFI-05-24	1 – 3 (ft)	3 – 5 (ft)
Inorganic		
Arsenic	NS	NS
Beryllium	NS	NS
Cobalt	NS	NS
Copper	NS	NS
Lead	42	34
Manganese	NS	NS
Nickel	NS	NS

RFI-05-10	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.035)	ND(0.042) /ND(0.045)	ND(0.039)
Trichloroethene	ND(0.035)	ND(0.042) /ND(0.045)	0.57
Vinyl chloride	ND(0.035)	ND(0.042) /ND(0.045)	ND(0.039)
SVOC			
Benzo(a)pyrene	ND(0.18 J)	ND(0.19) /ND(0.19 J)	ND(0.18 J)
Inorganic			
Arsenic	5.74 J	4.24 J /5.03 J	4.75
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	6.59 J	4.1 J /5.17 J	6.43 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-05-03	0.6 – 2.6 (ft)	8.6 – 10.6 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.039)	ND(0.038)
Trichloroethene	ND(0.039)	ND(0.038)
Vinyl chloride	ND(0.039)	ND(0.038)
SVOC		
Benzo(a)pyrene	ND(0.19)	ND(0.19)
Inorganic		
Arsenic	2.9	2.5
Beryllium	0.21	0.081 J
Cobalt	3.1 J	2 J
Copper	9.3 J	3.9 J
Lead	8.5	2.7
Manganese	160	110
Nickel	9.6 J	5.1 J

RFI-05-05	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.04)	ND(0.04)	ND(0.036)
Trichloroethene	ND(0.04)	ND(0.04)	ND(0.036)
Vinyl chloride	ND(0.04)	ND(0.04)	ND(0.036)
SVOC			
Benzo(a)pyrene	ND(0.18)	0.28	0.23
Inorganic			
Arsenic	4.88 J	4.18 J	5.5
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	8.77 J	5.04 J	9.4 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-05-04	8 – 10 (ft)	0 – 2 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.04)	ND(0.037)
Trichloroethene	ND(0.04)	0.23
Vinyl chloride	ND(0.04)	ND(0.037)
SVOC		
Benzo(a)pyrene	ND(0.19)	ND(0.18)
Inorganic		
Arsenic	10.7 (RDC)	4.43
Beryllium	NS	NS
Cobalt	NS	NS
Copper	NS	NS
Lead	9.69 J	9.87 J
Manganese	NS	NS
Nickel	NS	NS

RFI-05-07	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.039)	ND(0.044)	ND(0.037)
Trichloroethene	ND(0.039)	ND(0.044)	ND(0.037)
Vinyl chloride	ND(0.039)	ND(0.044)	ND(0.037)
SVOC			
Benzo(a)pyrene	ND(0.19)	ND(0.2)	ND(0.18)
Inorganic			
Arsenic	10.4 (RDC)	3.18	4.44
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	8.92 J	8.78 J	10.8 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-05-15	0.9 – 2.9 (ft)	6.9 – 8.9 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.036)	ND(0.036)
Trichloroethene	ND(0.036)	ND(0.036)
Vinyl chloride	ND(0.036)	ND(0.036)
SVOC		
Benzo(a)pyrene	ND(0.18) /ND(0.18)	ND(0.19 J)
Inorganic		
Arsenic	3.3 /3.7	6.9
Beryllium	0.11 /0.14	0.43
Cobalt	2.3 /3.1	7.6
Copper	5.8 /5.8	14
Lead	5.1 /6.1	12
Manganese	120 /160	270
Nickel	6.4 /8.3	18

RFI-05-08	0.7 – 2.7 (ft)	2.7 – 4.7 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.037)	ND(0.037) /ND(0.037)
Trichloroethene	ND(0.037)	ND(0.037) /ND(0.037)
Vinyl chloride	ND(0.037)	ND(0.037) /ND(0.037)
SVOC		
Benzo(a)pyrene	ND(0.18)	ND(0.18 J) /0.0559 J
Inorganic		
Arsenic	5.2	5.4 /5.3
Beryllium	0.27 J	0.55 J /0.63 J
Cobalt	3.7 J	3.2 J /3.3 J
Copper	11 J	16 J /15 J
Lead	29 J	57 J /49 J
Manganese	250 J	1200 J /1500 J
Nickel	11 J	11 J /11 J

RFI-05-25	0 – 2 (ft)
VOC	
cis-1,2-Dichloroethene	ND(0.039)
Trichloroethene	ND(0.039)
Vinyl chloride	ND(0.039)
SVOC	
Benzo(a)pyrene	ND(0.95 J)
Inorganic	
Arsenic	4.2
Beryllium	0.26 J
Cobalt	5.2
Copper	17
Lead	50
Manganese	300
Nickel	17 J

RFI-05-30	0 – 2 (ft)	6 – 8 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.039)	ND(0.038)
Trichloroethene	ND(0.039)	ND(0.038)
Vinyl chloride	ND(0.039)	ND(0.038)
SVOC		
Benzo(a)pyrene	0.143 J	ND(0.18)
Inorganic		
Arsenic	8.4 (RDC)	3.4
Beryllium	0.64	0.13
Cobalt	5.3	2.1
Copper	18	5.2
Lead	32	3.8
Manganese	220	120
Nickel	16	5.1

RFI-05-195	0.8 – 2.8 (ft)	6.8 – 8.8 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.038)	ND(0.038)
Trichloroethene	ND(0.038)	ND(0.038)
Vinyl chloride	ND(0.038)	ND(0.038)
SVOC		
Benzo(a)pyrene	ND(0.18)	ND(0.18)
Inorganic		
Arsenic	1.7	3.7
Beryllium	0.11	0.1
Cobalt	1.5 J	2 J
Copper	23 J	5.5 J
Lead	8.2	4.5
Manganese	94	130
Nickel	5.8 J	5.2 J

RFI-05-14	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.041)	ND(0.041)	0.2
Trichloroethene	0.16	ND(0.041)	1.9
Vinyl chloride	ND(0.041)	ND(0.041)	ND(0.039)
SVOC			
Benzo(a)pyrene	ND(0.19)	ND(0.2 J)	ND(0.18 J)
Inorganic			
Arsenic	3.39 J	6.87 J	4.72
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	4.66 J	6.21 J	6.83 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-05-20	0.7 – 2.7 (ft)	6.7 – 8.6 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.04)	ND(0.041)
Trichloroethene	0.16	ND(0.041)
Vinyl chloride	ND(0.04)	ND(0.041)
SVOC		
Benzo(a)pyrene	0.0375 J	0.0457 J
Inorganic		
Arsenic	5.7	4.1
Beryllium	0.4 J	0.18 J
Cobalt	5.4	3
Copper	93	10
Lead	54	14
Manganese	390 J	210 J
Nickel	16	9.6

RFI-05-31	7 – 9 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Cobalt	NS
Copper	NS
Lead	8.3 J
Manganese	NS
Nickel	NS

RFI-05-27	7 – 9 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Cobalt	NS
Copper	NS
Lead	5.5 J
Manganese	NS
Nickel	NS

RFI-05-12	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.046)	ND(0.043)	ND(0.036)
Trichloroethene	ND(0.046)	ND(0.042)	ND(0.036)
Vinyl chloride	ND(0.046)	ND(0.042)	ND(0.036)
SVOC			
Benzo(a)pyrene	ND(0.18)	ND(0.19)	ND(0.19 J)
Inorganic			
Arsenic	5.1	4.41	6.27
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	5.74 J	6.24 J	44.1 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-05-13	8 – 10 (ft)	10 – 12 (ft)	0 – 2 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.042)	ND(0.042)	ND(0.041)
Trichloroethene	ND(0.042)	ND(0.042)	ND(0.041)
Vinyl chloride	ND(0.042)	ND(0.042)	ND(0.041)
SVOC			
Benzo(a)pyrene	ND(0.19)	ND(0.2)	ND(0.18 J)
Inorganic			
Arsenic	4.92 J	7.38 J	4.68
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	10.9 J	7.34 J	8.47 J
Manganese	NS	NS	NS
Nickel	NS	NS	NS

RFI-BG-06	0 – 2 (ft)
Inorganic	
Arsenic	6.8 J /6.2 J
Beryllium	0.19 /0.34
Cobalt	3.2 J /4.3 J
Copper	25 J /34 J
Lead	50 J /65 J
Manganese	410 /270
Nickel	21 J /20 J

RFI-05-16	0.8 – 2.8 (ft)	8.8 – 10.8 (ft)	10.8 – 12.8 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.044)	ND(0.042)	ND(0.04)
Trichloroethene	ND(0.044)	ND(0.042)	ND(0.04)
Vinyl chloride	ND(0.044)	ND(0.042)	ND(0.04)
SVOC			
Benzo(a)pyrene	ND(0.21)	ND(0.2)	ND(0.2)
Inorganic			
Arsenic	4.2	4.9	7.9 (RDC)
Beryllium	0.17	0.29	0.16
Cobalt	3.1	4.3	3.5
Copper	7	12	8.6
Lead	6	7.1	7.4
Manganese	180	190	86
Nickel	8.2	12	8.5

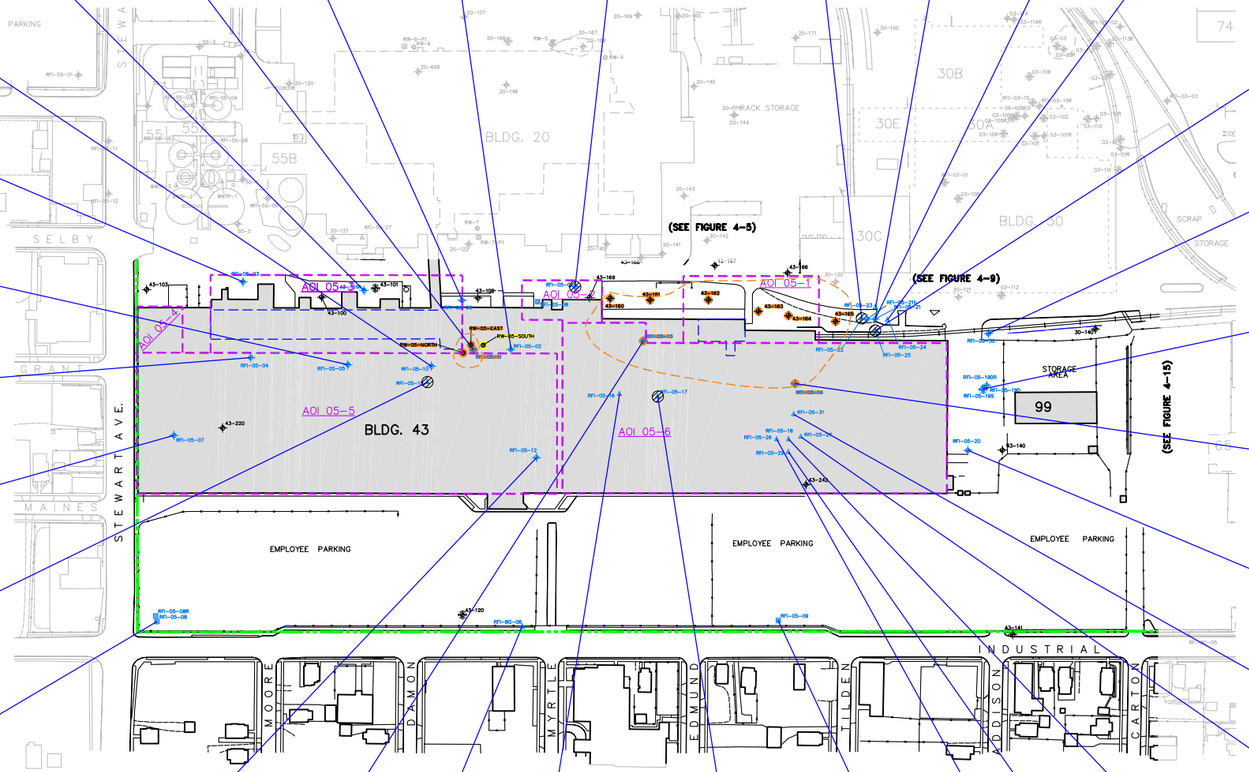
RFI-05-17	0.9 – 2.9 (ft)	8.9 – 10.9 (ft)	10.9 – 12.9 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.036)	ND(0.038)	ND(0.036) /ND(0.037)
Trichloroethene	ND(0.036)	ND(0.038)	ND(0.036) /ND(0.037)
Vinyl chloride	ND(0.036)	ND(0.038)	ND(0.036) /ND(0.037)
SVOC			
Benzo(a)pyrene	0.119 J	ND(0.18)	ND(0.18) /ND(0.18)
Inorganic			
Arsenic	4.8	5.1	4.8 /3.8
Beryllium	0.19	0.18	0.11 /0.1
Cobalt	4.2	3.8	2.6 /2.1
Copper	13	8.5	7 /5.7
Lead	12	6	6.6 /4.8
Manganese	170	200	120 /140
Nickel	11	9.7	6.4 /5.4

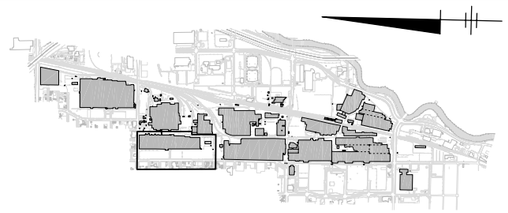
RFI-05-09	0.2 – 2.2 (ft)	6.2 – 8.2 (ft)
VOC		
cis-1,2-Dichloroethene	ND(0.042)	ND(0.041)
Trichloroethene	ND(0.042)	ND(0.041)
Vinyl chloride	ND(0.042)	ND(0.041)
SVOC		
Benzo(a)pyrene	0.329 J	1.82 J
Inorganic		
Arsenic	6.1	4.7
Beryllium	0.33 J	0.22 J
Cobalt	3.6 J	3.3 J
Copper	40 J	10 J
Lead	28 J	29 J
Manganese	440 J	170 J
Nickel	28 J	8.8 J

RFI-05-26	7 – 9 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Cobalt	NS
Copper	NS
Lead	540 JD (RDC)
Manganese	NS
Nickel	NS

RFI-05-29	7 – 9 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Cobalt	NS
Copper	NS
Lead	46 J
Manganese	NS
Nickel	NS

RFI-05-18	0.9 – 2.9 (ft)	6.9 – 8.9 (ft)	8.9 – 10.9 (ft)
VOC			
cis-1,2-Dichloroethene	ND(0.036)	ND(0.039)	ND(0.041)
Trichloroethene	ND(0.036)	ND(0.039)	ND(0.041)
Vinyl chloride	ND(0.036)	ND(0.039)	ND(0.041)
SVOC			
Benzo(a)pyrene	0.0403 J	0.945 J	ND(0.19 J)
Inorganic			
Arsenic	3.8	9.5 (RDC)	5.8
Beryllium	0.11	1.6	0.21
Cobalt	2.7	7.2	2.7
Copper	7.7	77	15
Lead	6.3	3500 (IDC,RDC)	51
Manganese	140	250	120
Nickel	8.4	20	8.2





SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDC – INDUSTRIAL DIRECT CONTACT
  - IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE-SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY-WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ND (0.039)-CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS-NOT ANALYZED FOR THIS CONSTITUENT.
9. J-ESTIMATED CONCENTRATION.
10. D-CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. RDC-EXCEEDS MICHIGAN PART 201 RESIDENTIAL DIRECT CONTACT CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES LAF GMS
64410112/RFI-06/64410C07.DWG

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

SOIL ANALYTICAL DATA - FACTORY 05 (BUILDING 43) AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 4-7

43-101R	11/15/2001	6/18/2002
VOC		
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.002)	NS
Inorganic		
Arsenic	0.067 (IDW,RDW)	0.056 (IDW,RDW)
Beryllium	ND(0.0004 J)	ND(0.0004 J)
Cobalt	0.0028	0.0017
Copper	ND(0.00096)	0.0023 J
Lead	0.00056	0.00088
Manganese	0.69 J	0.53
Nickel	0.0046	0.0047
Inorganic-Dissolved		
Arsenic	0.084 (IDW,RDW)	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.0032	NS
Copper	ND(0.0006)	NS
Lead	ND(0.0004)	NS
Manganese	0.76 J	NS
Nickel	0.0059	NS

RFI-05-06	9/25/2001	6/20/2002
VOC		
cis-1,2-Dichloroethene	0.0011	ND(0.001)
Trichloroethene	0.00093 J	0.0007 J
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.0022)	NS
Inorganic-Dissolved		
Arsenic	0.024	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.003	NS
Copper	0.0016	NS
Lead	ND(0.0004)	NS
Manganese	0.24 J	NS
Nickel	0.013 J	NS

20-140	2/22/2002	6/20/2002	3/31/2003	10/11/2004
VOC				
cis-1,2-Dichloroethene	0.0026 J	0.0029	0.0019	0.001
Trichloroethene	0.095 (IDW,RDW)	0.086 (IDW,RDW)	0.061 (IDW,RDW)	0.039 (IDW,RDW)
Vinyl chloride	0.0019	0.001	0.019 J (IDW,RDW)	0.007 (IDW,RDW)
SVOC				
Benzo(a)pyrene	ND(0.002)	NS	NS	NS
Inorganic				
Arsenic	NS	ND(0.001)	ND(0.001)	NS
Beryllium	NS	ND(0.0004)	ND(0.0004)	NS
Cobalt	NS	0.0091	0.006	NS
Copper	NS	0.012	0.012	NS
Lead	NS	0.0014	0.0011	NS
Manganese	NS	1.7 (ROW)	1.9 J (ROW)	NS
Nickel	NS	0.024	0.03	0.023
Inorganic-Dissolved				
Arsenic	0.0024 J	NS	NS	NS
Beryllium	0.0056 J (IDW,RDW)	NS	NS	NS
Cobalt	0.0069 J	NS	NS	NS
Copper	0.0074 J	NS	NS	NS
Lead	0.00053 J	NS	NS	NS
Manganese	2.2 J (ROW)	NS	NS	NS
Nickel	0.023 J	NS	NS	NS

43-168	9/27/2001	12/17/2002
VOC		
cis-1,2-Dichloroethene	ND(0.001)	NS
Trichloroethene	ND(0.001)	NS
Vinyl chloride	0.0011	NS
SVOC		
Benzo(a)pyrene	ND(0.0021)	NS
Inorganic		
Arsenic	NS	0.0044
Beryllium	NS	0.00024 J
Cobalt	NS	0.0026 J
Copper	NS	0.0066 J
Lead	NS	0.00074 J
Manganese	NS	1.8 J (RDW)
Nickel	NS	0.0093 J
Inorganic-Dissolved		
Arsenic	0.0061	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.0025	NS
Copper	0.0035	NS
Lead	ND(0.0004)	NS
Manganese	1.4 J (ROW)	NS
Nickel	0.013	NS

43-167	9/26/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.002)
Inorganic-Dissolved	
Arsenic	0.037
Beryllium	ND(0.0004)
Cobalt	0.0061
Copper	0.00095
Lead	ND(0.0004)
Manganese	0.28
Nickel	0.028

43-166	9/26/2001	6/19/2002
VOC		
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.002)	NS
Inorganic		
Arsenic	NS	0.029
Beryllium	NS	ND(0.0004 J)
Cobalt	NS	0.0042
Copper	NS	0.0066 J
Lead	NS	0.0003 J
Manganese	NS	1.2 (ROW)
Nickel	NS	0.013
Inorganic-Dissolved		
Arsenic	0.024	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.0059	NS
Copper	0.0017	NS
Lead	ND(0.0004)	NS
Manganese	1.6 (ROW)	NS
Nickel	0.013	NS

30-120	9/25/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0022)
Inorganic-Dissolved	
Arsenic	0.0044
Beryllium	ND(0.0004)
Cobalt	0.00088
Copper	0.0015
Lead	ND(0.0004)
Manganese	0.78 J
Nickel	0.0054

RFI-05-21	9/25/2001	3/27/2003
VOC		
cis-1,2-Dichloroethene	0.0012 /0.00066 J	NS
Trichloroethene	ND(0.001) /ND(0.001)	NS
Vinyl chloride	ND(0.001) /ND(0.001)	NS
SVOC		
Benzo(a)pyrene	ND(0.002) /ND(0.002)	NS
Inorganic		
Arsenic	NS	0.035
Beryllium	NS	ND(0.0004)
Cobalt	NS	0.0029
Copper	NS	0.0018
Lead	NS	0.00016 J
Manganese	NS	0.54
Nickel	NS	0.016
Inorganic-Dissolved		
Arsenic	0.046 /0.047	NS
Beryllium	ND(0.0004) /ND(0.0004)	NS
Cobalt	0.0027 /0.0028	NS
Copper	0.0017 /0.028	NS
Lead	ND(0.0004) /ND(0.0004)	NS
Manganese	0.36 J /0.35 J	NS
Nickel	0.0076 J /0.0075 J	NS

RFI-05-30	2/19/2002	6/12/2002	10/4/2004
VOC			
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)
Inorganic			
Arsenic	NS	NS	NS
Beryllium	NS	NS	NS
Cobalt	NS	NS	NS
Copper	NS	NS	NS
Lead	NS	NS	NS
Manganese	NS	NS	1.11 (RDW)
Nickel	NS	NS	NS

43-100	9/25/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.002)
Inorganic-Dissolved	
Arsenic	ND(0.001)
Beryllium	ND(0.0004)
Cobalt	ND(0.0002)
Copper	0.0068
Lead	ND(0.0004)
Manganese	ND(0.0004 J)
Nickel	0.0022

RFI-05-03	9/25/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0022)
Inorganic-Dissolved	
Arsenic	0.0069
Beryllium	ND(0.0004)
Cobalt	0.0022
Copper	0.0048
Lead	ND(0.0004)
Manganese	0.63 J
Nickel	0.0069 J

43-103	9/25/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.002)
Inorganic-Dissolved	
Arsenic	0.0011 J
Beryllium	ND(0.0004)
Cobalt	0.0012
Copper	0.0025
Lead	ND(0.0004)
Manganese	0.35 J
Nickel	0.0072

RFI-05-04	9/19/2001	6/21/2002
VOC		
cis-1,2-Dichloroethene	0.0057	0.009
Trichloroethene	0.029 (IDW,RDW)	0.024 (IDW,RDW)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.0021)	NS
Inorganic-Dissolved		
Arsenic	ND(0.001)	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.0044	NS
Copper	0.0028	NS
Lead	0.00054	NS
Manganese	0.53 J	NS
Nickel	0.0067	NS

RFI-05-07	9/20/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0021)
Inorganic-Dissolved	
Arsenic	ND(0.001)
Beryllium	ND(0.0004)
Cobalt	0.0008
Copper	0.0056
Lead	ND(0.0004)
Manganese	0.27
Nickel	0.0047

43-220	9/25/2001
VOC	
cis-1,2-Dichloroethene	0.0039
Trichloroethene	0.0008 J
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.002)
Inorganic-Dissolved	
Arsenic	ND(0.001)
Beryllium	ND(0.0004)
Cobalt	0.0008
Copper	0.011
Lead	ND(0.0004)
Manganese	0.41 J
Nickel	0.0046

RFI-05-05	9/19/2001	6/21/2002	4/3/2003
VOC			
cis-1,2-Dichloroethene	0.0037	0.0025	0.0014
Trichloroethene	0.022 (IDW,RDW)	0.016 (IDW,RDW)	0.0099 (IDW,RDW)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)
SVOC			
Benzo(a)pyrene	ND(0.0021)	NS	NS
Inorganic			
Arsenic	NS	NS	0.004
Beryllium	NS	NS	ND(0.0004)
Cobalt	NS	NS	0.0033
Copper	NS	NS	0.0039
Lead	NS	NS	0.0025
Manganese	NS	NS	0.76 J
Nickel	NS	NS	0.012
Inorganic-Dissolved			
Arsenic	0.0047	NS	NS
Beryllium	ND(0.0004)	NS	NS
Cobalt	0.002	NS	NS
Copper	0.0029	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	0.7 J	NS	NS
Nickel	0.015	NS	NS

30-140	9/25/2001	6/13/2002	3/27/2003	10/4/2004
VOC				
cis-1,2-Dichloroethene	ND(0.001)	NS	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	NS	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	NS	ND(0.001)	ND(0.001)
SVOC				
Benzo(a)pyrene	ND(0.002)	NS	NS	NS
Inorganic				
Arsenic	NS	ND(0.001)	ND(0.001)	NS
Beryllium	NS	ND(0.0004 J)	ND(0.0004)	NS
Cobalt	NS	0.0024	0.0013	NS
Copper	NS	0.0062	0.0027	NS
Lead	NS	ND(0.0004 J)	0.00023 J	NS
Manganese	NS	3.1 J (IDW,RDW)	0.81 2.17 (ROW)	
Nickel	NS	0.0095	0.011	NS
Inorganic-Dissolved				
Arsenic	ND(0.001)	NS	NS	NS
Beryllium	ND(0.0004)	NS	NS	NS
Cobalt	0.0022	NS	NS	NS
Copper	0.0041	NS	NS	NS
Lead	ND(0.0004)	NS	NS	NS
Manganese	2.1 J (ROW)	NS	NS	NS
Nickel	0.015	NS	NS	NS

RFI-05-190R	12/11/2001	12/18/2002
VOC		
cis-1,2-Dichloroethene	0.00052 J	ND(0.001)
Trichloroethene	0.0047	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.0021)	NS
Inorganic		
Arsenic	0.0072	0.017 J
Beryllium	0.0012 J	ND(0.0004)
Cobalt	0.0061	0.0037 J
Copper	0.00097	0.002 J
Lead	ND(0.00047)	0.00019 J
Manganese	1.1 (RDW)	0.88 (RDW)
Nickel	0.02	0.011 J
Inorganic-Dissolved		
Arsenic	0.0059	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.005	NS
Copper	0.002	NS
Lead	ND(0.0004)	NS
Manganese	0.97 (RDW)	NS
Nickel	0.019	NS

RFI-05-195	9/25/2001	6/12/2002	3/28/2003
VOC			
cis-1,2-Dichloroethene	0.081 (IDW,RDW)	0.046	0.034 /0.032
Trichloroethene	0.024 (IDW,RDW)	0.02 (IDW,RDW)	0.021 (IDW,RDW) /0.021 (IDW,RDW)
Vinyl chloride	0.019 (IDW,RDW)	0.016 J (IDW,RDW)	0.0074 (IDW,RDW) /0.007 (IDW,RDW)
SVOC			
Benzo(a)pyrene	ND(0.0022)	NS	NS
Inorganic			
Arsenic	NS	ND(0.001)	ND(0.001) /NS
Beryllium	NS	ND(0.0004 J)	ND(0.0004) /NS
Cobalt	NS	0.0098	0.011 /NS
Copper	NS	0.0039	0.0039 /NS
Lead	NS	0.00013 J	0.00022 J /NS
Manganese	NS	2.7 J (IDW,RDW)	1 (RDW) /NS
Nickel	NS	0.026	0.034 /NS
Inorganic-Dissolved			
Arsenic	0.0018 J	NS	NS
Beryllium	ND(0.0004)	NS	NS
Cobalt	0.0085	NS	NS
Copper	0.0043	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	1 J (RDW)	NS	NS
Nickel	0.023 J	NS	NS

43-140	9/26/2001	6/12/2002	4/3/2003	10/12/2004
VOC				
cis-1,2-Dichloroethene	ND(0.001)	0.00076 J	0.0033	0.004
Trichloroethene	0.025 (IDW,RDW)	0.058 (IDW,RDW)	0.22 D (IDW,RDW)	0.25 (IDW,RDW)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
SVOC				
Benzo(a)pyrene	ND(0.0021)	NS	NS	NS
Inorganic-Dissolved				
Arsenic	ND(0.001)	NS	NS	NS
Beryllium	ND(0.0004)	NS	NS	NS
Cobalt	0.00097 J	NS	NS	NS
Copper	0.0015	NS	NS	NS
Lead	ND(0.0004)	NS	NS	NS
Manganese	0.013 J	NS	NS	NS
Nickel	0.00095	NS	NS	NS

RFI-05-20	9/25/2001	6/12/2002	4/3/2003
VOC			
cis-1,2-Dichloroethene	0.0015	0.0017	0.0013
Trichloroethene	0.23 D (IDW,RDW)	0.14 D (IDW,RDW)	0.17 D (IDW,RDW)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)
SVOC			
Benzo(a)pyrene	ND(0.0022)	NS	NS
Inorganic-Dissolved			
Arsenic	0.0024 J	NS	NS
Beryllium	ND(0.0004)	NS	NS
Cobalt	0.0051	NS	NS
Copper	0.0082	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	0.59 J	NS	NS
Nickel	0.0081 J	NS	NS

RFI-05-08R	6/12/2002	3/27/2003
VOC		
cis-1,2-Dichloroethene	ND(0.001)	NS
Trichloroethene	ND(0.001)	NS
Vinyl chloride	ND(0.001)	NS
SVOC		
Benzo(a)pyrene	ND(0.002)	NS
Inorganic		
Arsenic	ND(0.001)	0.0017
Beryllium	ND(0.0004 J)	ND(0.0004)
Cobalt	0.0013	0.0012
Copper	0.0048	0.0022
Lead	0.00049	0.00088
Manganese	0.91 J (ROW)	0.47
Nickel	0.0058 J	0.013
Inorganic-Dissolved		
Arsenic	0.0016	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.00094	NS
Copper	ND(0.00093)	NS
Lead	ND(0.0004)	NS
Manganese	0.77 J	NS
Nickel	0.005	NS

RFI-05-10	9/19/2001	4/2/2003	10/12/2004
VOC			
cis-1,2-Dichloroethene	ND(0.001)	NS	ND(0.001)
Trichloroethene	ND(0.001)	NS	0.0004 J
Vinyl chloride	ND(0.001)	NS	ND(0.001)
SVOC			
Benzo(a)pyrene	ND(0.002)	NS	NS
Inorganic			
Arsenic	NS	0.00085 J	NS
Beryllium	NS	ND(0.0004)	NS
Cobalt	NS	0.099 (RDW)	NS
Copper	NS	0.0078	NS
Lead	NS	0.0017	NS
Manganese	NS	1.9 J (RDW)	NS
Nickel	NS	0.22 (IDW,RDW)	0.015
Inorganic-Dissolved			
Arsenic	0.023	NS	NS
Beryllium	ND(0.0004)	NS	NS
Cobalt	0.0032	NS	NS
Copper	0.013	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	0.86 J	NS	NS
Nickel	0.0078	NS	NS

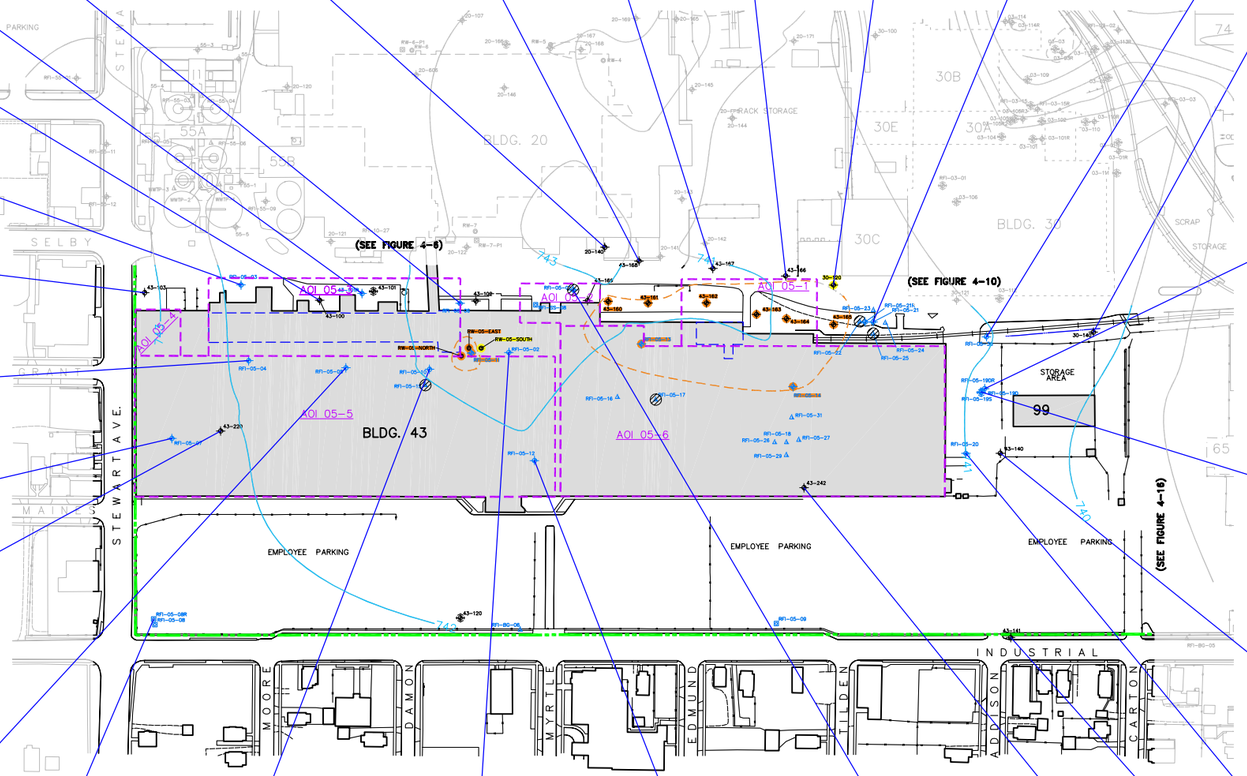
RFI-05-02	9/20/2001	4/3/2003
VOC		
cis-1,2-Dichloroethene	ND(0.001) /ND(0.001)	NS
Trichloroethene	0.0017 /0.0018	NS
Vinyl chloride	ND(0.001) /ND(0.001)	NS
SVOC		
Benzo(a)pyrene	ND(0.0021) /ND(0.0022)	NS
Inorganic		
Arsenic	NS	0.0011 J /0.00085 J
Beryllium	NS	ND(0.0004) /ND(0.0004)
Cobalt	NS	0.096 (RDW) /0.088 (RDW)
Copper	NS	0.01 /0.0086
Lead	NS	0.0022 /0.0021
Manganese	NS	1.9 J (RDW) /1.8 J (RDW)
Nickel	NS	0.21 (IDW,RDW) /0.2 (IDW,RDW)
Inorganic-Dissolved		
Arsenic	ND(0.001) /0.001 J	NS
Beryllium	ND(0.0004) /ND(0.0004)	NS
Cobalt	0.0085 /0.0088	NS
Copper	0.0066 /0.0097	NS
Lead	ND(0.0004) /ND(0.0004)	NS
Manganese	1.2 J (RDW) /1.3 J (RDW)	NS
Nickel	0.052 /0.054	NS

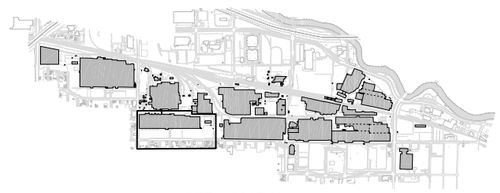
RFI-05-12	9/20/2001	6/14/2002
VOC		
cis-1,2-Dichloroethene	ND(0.001)	NS
Trichloroethene	ND(0.001)	NS
Vinyl chloride	ND(0.001)	NS
SVOC		
Benzo(a)pyrene	ND(0.0021)	NS
Inorganic		
Arsenic	NS	0.046
Beryllium	NS	ND(0.0004 J)
Cobalt	NS	0.003
Copper	NS	0.0068
Lead	NS	0.0013
Manganese	NS	0.39 J
Nickel	NS	0.02
Inorganic-Dissolved		
Arsenic	0.07 (IDW,RDW)	NS
Beryllium	ND(0.0004)	NS
Cobalt	0.0024	NS
Copper	0.0037	NS
Lead	ND(0.0004)	NS
Manganese	0.29	NS
Nickel	0.02	NS

RFI-05-01	9/25/2001	6/20/2002	3/31/2003
VOC			
cis-1,2-Dichloroethene	0.014	0.0078	0.009
Trichloroethene	0.012 (IDW,RDW)	0.0081 (IDW,RDW)	0.0094 (IDW,RDW)
Vinyl chloride	0.006 (IDW,RDW)	0.0022 (IDW,RDW)	0.0035 (IDW,RDW)
SVOC			
Benzo(a)pyrene	ND(0.0022)	NS	NS
Inorganic			
Arsenic	NS	0.01	NS
Beryllium	NS	ND(0.0004)	NS
Cobalt	NS	0.0026	NS
Copper	NS	0.0023	NS
Lead	NS	0.0017	NS
Manganese	NS	0.78	NS
Nickel	NS	0.033	NS
Inorganic-Dissolved			
Arsenic	0.018	NS	NS
Beryllium	ND(0.0004)	NS	NS
Cobalt	0.0023	NS	NS
Copper	0.0079	NS	NS
Lead	0.0011	NS	NS
Manganese	0.9 J (RDW)	NS	NS
Nickel	0.033 J	NS	NS

43-242	9/25/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.002)
Inorganic-Dissolved	
Arsenic	0.0012
Beryllium	ND(0.0004)
Cobalt	0.0033
Copper	0.011
Lead	ND(0.0004)
Manganese	0.48 J
Nickel	0.0082

43-141	9/25/2001
VOC	
cis-1,2-Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0021)
Inorganic-Dissolved	
Arsenic	ND(0.001)
Beryllium	ND(0.0004)
Cobalt	ND(0.0002)
Copper	0.0032
Lead	ND(0.0004)
Manganese	0.0042 J
Nickel	0.004





SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL)
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:

IDW – INDUSTRIAL DRINKING WATER

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED IN DECEMBER 2004.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. RDW–EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
12. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.

0 150' 300'
GRAPHIC SCALE

JULY 2006

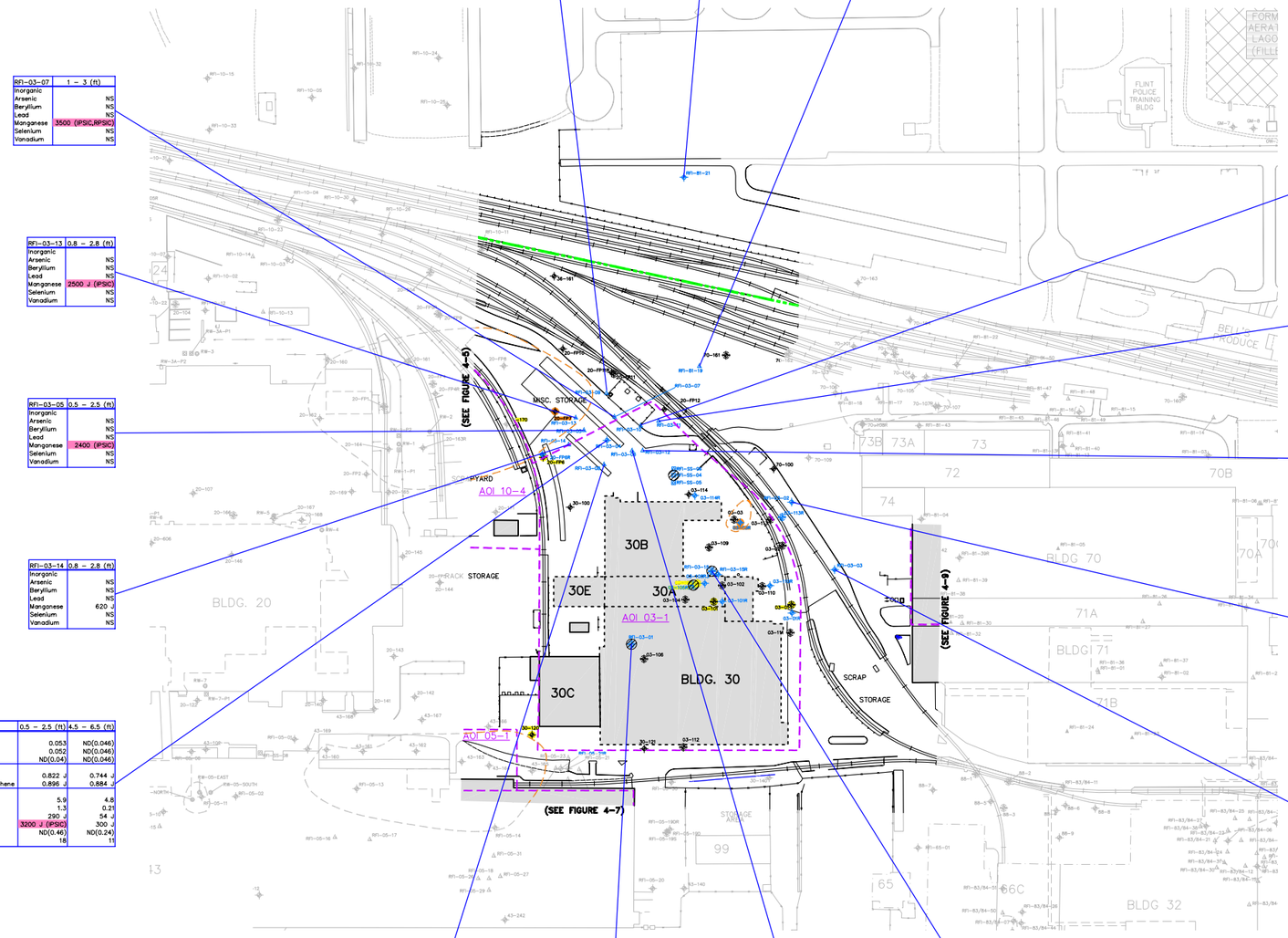
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7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C08.DWG

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - FACTORY 05 (BUILDING 43) AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 4-8



RFI-03-07	1 – 3 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	3500 (IPSIC,RPSIC)
Selenium	NS
Vanadium	NS

RFI-03-13	0.8 – 2.8 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	2500 J (IPSIC)
Selenium	NS
Vanadium	NS

RFI-03-05	0.5 – 2.5 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	2400 (IPSIC)
Selenium	NS
Vanadium	NS

RFI-03-14	0.8 – 2.8 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	620 J
Selenium	NS
Vanadium	NS

RFI-03-04	0.5 – 2.5 (ft)	4.5 – 6.5 (ft)
VOC		
Benzene	0.053	ND(0.046)
Trichloroethene	0.052	ND(0.046)
Vinyl chloride	ND(0.04)	ND(0.046)
SVOC		
Benzo(a)pyrene	0.822 J	0.744 J
Benzo(b)fluoranthene	0.896 J	0.884 J
Inorganic		
Arsenic	5.9	4.8
Beryllium	1.3	0.21
Lead	290 J	54 J
Manganese	3200 J (IPSIC)	300 J
Selenium	ND(0.46)	ND(0.24)
Vanadium	18	11

RFI-03-08	0.5 – 2.5 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	930
Selenium	NS
Vanadium	NS

RFI-03-01	2 – 4 (ft)	8 – 10 (ft)	10 – 12 (ft)
VOC			
Benzene	ND(0.041)	ND(0.041)	ND(0.05)
Trichloroethene	0.84	0.046	0.12
Vinyl chloride	ND(0.041)	ND(0.041)	ND(0.05)
SVOC			
Benzo(a)pyrene	0.0498 J	ND(0.2 J)	ND(0.24)
Benzo(b)fluoranthene	0.0686 J	ND(0.2 J)	ND(0.24)
Inorganic			
Arsenic	4.8	4.6	2.3
Beryllium	0.65 J	0.33	0.42 J
Lead	20	92	9.7
Manganese	120 J	95 J	170 J
Selenium	0.61 J	0.38 J	1.3
Vanadium	20	12	21

RFI-03-06	0.5 – 2.5 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	2300 (IPSIC)
Selenium	NS
Vanadium	NS

RFI-03-15	0.9 – 2.9 (ft)	6.9 – 8.9 (ft)
VOC		
Benzene	ND(0.039)	ND(0.039) /ND(0.038)
Trichloroethene	0.068	ND(0.039) /ND(0.038)
Vinyl chloride	ND(0.077)	ND(0.078) /ND(0.076)
SVOC		
Benzo(a)pyrene	8.23 (DC,RDC)	13.1 (DC,RDC) /14.9 (DC,RDC)
Benzo(b)fluoranthene	10.6	19.6 D /25.1 D (RDC)
Inorganic		
Arsenic	6.8	5.9 /5
Beryllium	0.57	0.19 /0.26
Lead	700 (RDC)	370 /230
Manganese	350	120 /93
Selenium	0.57	0.22 J /0.25
Vanadium	14	8.6 /11

RFI-81-21	0 – 2 (ft)	8 – 10 (ft)
VOC		
Benzene	ND(0.041)	ND(0.038)
Trichloroethene	ND(0.041)	ND(0.038)
Vinyl chloride	ND(0.041)	ND(0.038)
SVOC		
Benzo(a)pyrene	0.121 J	ND(0.18)
Benzo(b)fluoranthene	0.118 J	ND(0.18)
Inorganic		
Arsenic	22 J (RDC)	4.2 J
Beryllium	0.4 J	0.077 J
Lead	24 J	17 J
Manganese	21 J	170 J
Selenium	2.9 J	ND(0.094)
Vanadium	20 J	10 J

RFI-81-19	0 – 2 (ft)
VOC	
Benzene	0.26
Trichloroethene	ND(0.039)
Vinyl chloride	ND(0.039)
SVOC	
Benzo(a)pyrene	ND(0.19 J)
Benzo(b)fluoranthene	ND(0.19 J)
Inorganic	
Arsenic	12 J (RDC)
Beryllium	0.35 J
Lead	37 J
Manganese	54 J
Selenium	1.3 J
Vanadium	10 J

RFI-03-09	0 – 2 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	230 J
Selenium	NS
Vanadium	NS

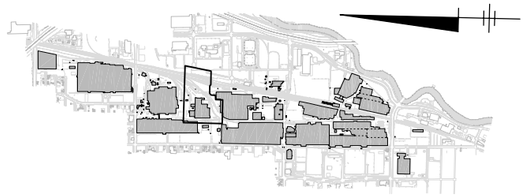
RFI-03-10	0 – 2 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	3100 J (IPSIC)
Selenium	NS
Vanadium	NS

RFI-03-11	0 – 2 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	4700 (IPSIC,RPSIC)
Selenium	NS
Vanadium	NS

RFI-03-12	0.8 – 2.8 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	3800 J (IPSIC,RPSIC)
Selenium	NS
Vanadium	NS

RFI-03-02	1 – 3 (ft)	3 – 5 (ft)	5 – 7 (ft)
VOC			
Benzene	ND(0.037)	ND(0.038)	ND(0.039) /ND(0.04)
Trichloroethene	0.049	0.28	0.67 /0.65
Vinyl chloride	ND(0.037)	ND(0.038)	ND(0.039) /ND(0.04)
SVOC			
Benzo(a)pyrene	ND(0.18)	ND(0.18)	ND(0.19) /ND(0.19)
Benzo(b)fluoranthene	ND(0.18)	ND(0.18)	ND(0.19) /ND(0.19)
Inorganic			
Arsenic	2.9	2.7	2.4 /2.1
Beryllium	0.16	0.09 J	0.13 J /0.095 J
Lead	8.6	7.8	11 /7.9
Manganese	150	120 J	110 J /110
Selenium	0.33 J	ND(0.078)	0.12 J /0.15
Vanadium	10	7	7.2 /6.5

RFI-03-03	0 – 2 (ft)
VOC	
Benzene	ND(0.04)
Trichloroethene	ND(0.04)
Vinyl chloride	ND(0.04)
SVOC	
Benzo(a)pyrene	0.194 J
Benzo(b)fluoranthene	0.267 J
Inorganic	
Arsenic	3.7
Beryllium	0.17 J
Lead	46
Manganese	190 J
Selenium	0.23 J
Vanadium	9.3



SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENT IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDC – INDUSTRIAL DIRECT CONTACT
  - IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE-SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY-WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ND (0.039)-CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS-NOT ANALYZED FOR THIS CONSTITUENT.
9. J-ESTIMATED CONCENTRATION.
10. D-CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. RDC-EXCEEDS MICHIGAN PART 201 RESIDENTIAL DIRECT CONTACT CRITERIA.
12. RPSIC EXCEEDS MICHIGAN PART 201 RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

SOIL ANALYTICAL DATA - BUILDING 30 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
4-9

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAOESET/SYR-DL
7/11/06 SYR-85-NES LAF GMS
64410112/RFI-06/64410C09.DWG

20-FP10	9/25/2001	2/22/2002
VOC		
Benzene	0.0061 (IDW,RDW)	ND(0.0022)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.0022)	NS
Benzo(b)fluoranthene	ND(0.0022)	NS
Inorganic-Dissolved		
Arsenic	0.038	NS
Beryllium	ND(0.0004)	NS
Lead	ND(0.0004)	NS
Manganese	0.18 J	NS
Selenium	ND(0.0014)	NS
Vanadium	ND(0.0008)	NS

20-FP11	9/25/2001	6/19/2002
VOC		
Benzene	0.00069 J	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.002)	NS
Benzo(b)fluoranthene	ND(0.002)	NS
Inorganic-Dissolved		
Arsenic	0.0045	NS
Beryllium	ND(0.0004)	NS
Lead	ND(0.0004)	NS
Manganese	0.31 J	NS
Selenium	0.0058	NS
Vanadium	ND(0.0008)	NS

RFI-81-21	10/4/2001	10/6/2004
VOC		
Benzene	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)

70-100	9/24/2001	6/13/2002	3/27/2003
VOC			
Benzene	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	0.003 (IDW,RDW)	0.0029 J (IDW,RDW)	0.0027 (IDW,RDW)
SVOC			
Benzo(a)pyrene	ND(0.002)	NS	NS
Benzo(b)fluoranthene	ND(0.002)	NS	NS
Inorganic-Dissolved			
Arsenic	0.0096 J	NS	NS
Beryllium	ND(0.0004)	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	0.15 J	NS	NS
Selenium	0.0021 J	NS	NS
Vanadium	ND(0.0008)	NS	NS

70-109	9/24/2001	3/26/2003
VOC		
Benzene	ND(0.001)	0.003
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.0022)	NS
Benzo(b)fluoranthene	ND(0.0022)	NS
Inorganic-Dissolved		
Arsenic	0.0024	NS
Beryllium	ND(0.0004 J)	NS
Lead	ND(0.0004)	NS
Manganese	0.059	NS
Selenium	ND(0.0014)	NS
Vanadium	ND(0.0008)	NS

RFI-03-04	9/21/2001	6/13/2002
VOC		
Benzene	ND(0.001)	NS
Trichloroethene	ND(0.001)	NS
Vinyl chloride	ND(0.001)	NS
SVOC		
Benzo(a)pyrene	ND(0.002)	NS
Benzo(b)fluoranthene	ND(0.002)	NS
Inorganic		
Arsenic	NS	0.012
Beryllium	NS	ND(0.0004 J)
Lead	NS	0.0004 J
Manganese	NS	0.63 J
Selenium	NS	ND(0.0014)
Vanadium	NS	ND(0.0008)
Inorganic-Dissolved		
Arsenic	0.09 (IDW,RDW)	NS
Beryllium	ND(0.0004 J)	NS
Lead	ND(0.0004)	NS
Manganese	0.76	NS
Selenium	ND(0.0014)	NS
Vanadium	ND(0.0008)	NS

RFI-03-02	2/26/2002	6/13/2002
VOC		
Benzene	ND(0.001)	ND(0.001) /ND(0.001)
Trichloroethene	0.0026	0.0021 /0.002
Vinyl chloride	ND(0.001)	ND(0.001) /ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.002)	NS
Benzo(b)fluoranthene	ND(0.002)	NS
Inorganic		
Arsenic	NS	0.0031 /0.0026
Beryllium	NS	ND(0.0004 J) /ND(0.0004 J)
Lead	NS	0.0013 J /0.0011 J
Manganese	NS	0.17 /0.17
Selenium	NS	0.0006 J /ND(0.0014)
Vanadium	NS	ND(0.0008) /ND(0.0008)
Inorganic-Dissolved		
Arsenic	0.011	NS
Beryllium	0.043 J (IDW,RDW)	NS
Lead	0.001 J	NS
Manganese	0.11 J	NS
Selenium	0.19 (IDW,RDW)	NS
Vanadium	0.0065 (RDW)	NS

20-FP6	9/25/2001	2/20/2002	6/19/2002	3/27/2003
VOC				
Benzene	0.00065 J	ND(0.001)	0.0005 J	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	0.0023 (IDW,RDW)	0.00057 J	0.0012	ND(0.001)
SVOC				
Benzo(a)pyrene	ND(0.0022)	NS	NS	NS
Benzo(b)fluoranthene	ND(0.0022)	NS	NS	NS
Inorganic-Dissolved				
Arsenic	ND(0.001)	NS	NS	NS
Beryllium	ND(0.0004)	NS	NS	NS
Lead	ND(0.0004)	NS	NS	NS
Manganese	0.31 J	NS	NS	NS
Selenium	ND(0.0014)	NS	NS	NS
Vanadium	ND(0.0008)	NS	NS	NS

03-02	9/20/2001	6/14/2002
VOC		
Benzene	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)pyrene	ND(0.0021)	NS
Benzo(b)fluoranthene	ND(0.0021)	NS
Inorganic-Dissolved		
Arsenic	0.0036	NS
Beryllium	ND(0.0004)	NS
Lead	ND(0.0004)	NS
Manganese	0.46	NS
Selenium	ND(0.0014)	NS
Vanadium	ND(0.0008)	NS

30-100	9/21/2001
VOC	
Benzene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0022)
Benzo(b)fluoranthene	ND(0.0022)
Inorganic-Dissolved	
Arsenic	0.0048
Beryllium	ND(0.0004 J)
Lead	ND(0.0004)
Manganese	0.73
Selenium	0.002 J
Vanadium	ND(0.0008)

03-114	9/21/2001
VOC	
Benzene	ND(0.001)
Trichloroethene	0.00066 J
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0022)
Benzo(b)fluoranthene	ND(0.0022)
Inorganic-Dissolved	
Arsenic	ND(0.0018)
Beryllium	ND(0.0004 J)
Lead	ND(0.0004)
Manganese	0.27
Selenium	0.0026 J
Vanadium	0.00089

03-114R	3/31/2003
VOC	
Benzene	ND(0.001)
Trichloroethene	0.011 (IDW,RDW)
Vinyl chloride	0.0084 (IDW,RDW)

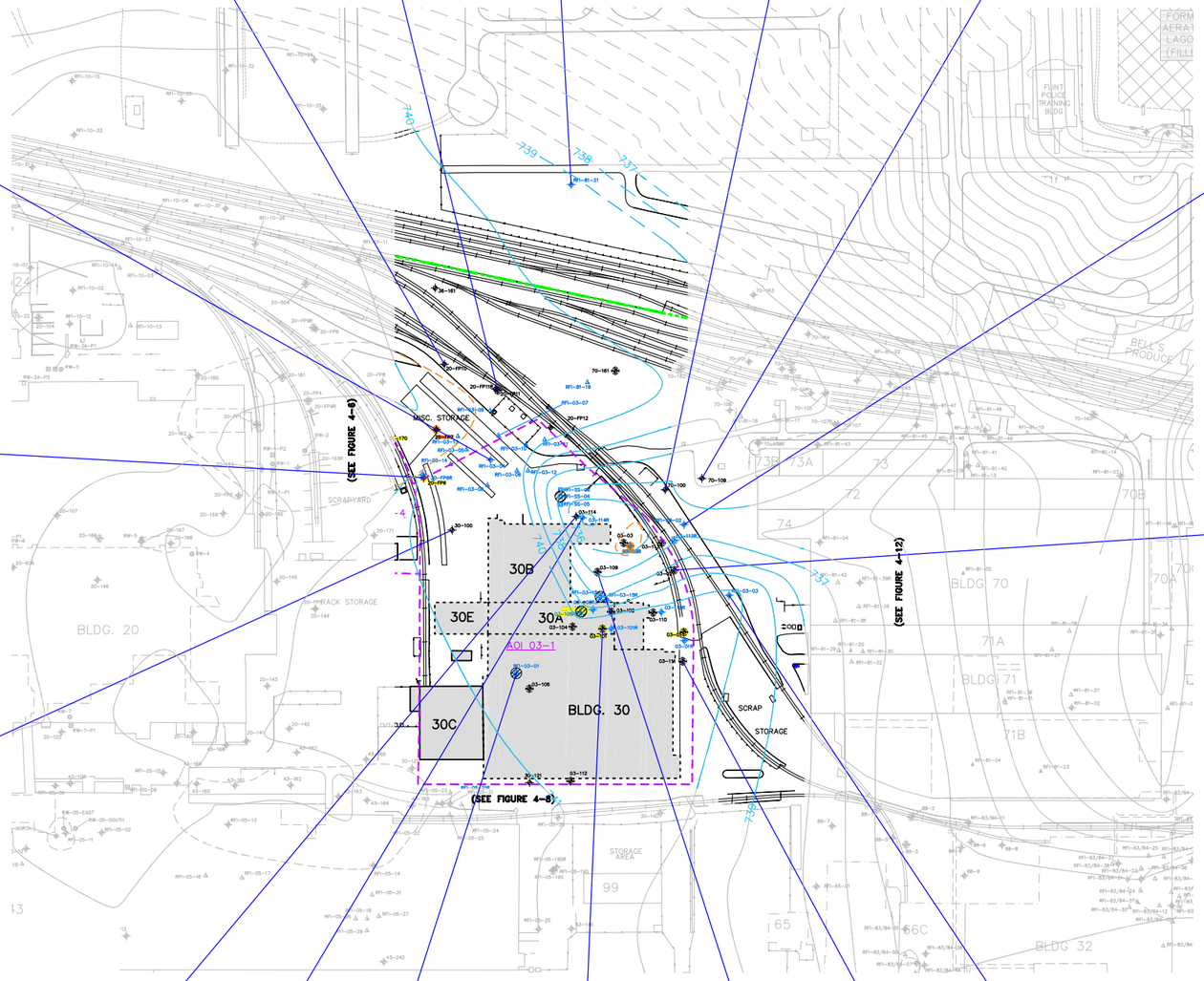
RFI-03-01	9/19/2001
VOC	
Benzene	ND(0.001)
Trichloroethene	0.00058 J
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0021)
Benzo(b)fluoranthene	ND(0.0021)
Inorganic-Dissolved	
Arsenic	0.011
Beryllium	ND(0.0004)
Lead	ND(0.0004)
Manganese	0.48 J
Selenium	ND(0.0014)
Vanadium	0.0014

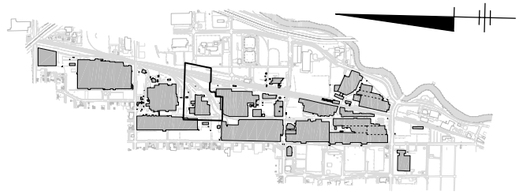
03-101	9/27/2001	6/25/2002
VOC		
Benzene	ND(0.001)	ND(0.001)
Trichloroethene	0.064 J (IDW,RDW)	0.057 (IDW,RDW)
Vinyl chloride	0.0091 (IDW,RDW)	0.0046 (IDW,RDW)
SVOC		
Benzo(a)pyrene	ND(0.0021)	NS
Benzo(b)fluoranthene	ND(0.0021)	NS
Inorganic-Dissolved		
Arsenic	0.029	NS
Beryllium	ND(0.0004)	NS
Lead	ND(0.0004)	NS
Manganese	0.45 J	NS
Selenium	ND(0.0014)	NS
Vanadium	ND(0.0008)	NS

03-109	9/26/2001
VOC	
Benzene	0.00066 J
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0021)
Benzo(b)fluoranthene	ND(0.0021)
Inorganic-Dissolved	
Arsenic	ND(0.001)
Beryllium	ND(0.0004)
Lead	ND(0.0004)
Manganese	1.5 (RDW)
Selenium	ND(0.0014)
Vanadium	ND(0.0008)

03-111	9/21/2001
VOC	
Benzene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0022)
Benzo(b)fluoranthene	ND(0.0022)
Inorganic-Dissolved	
Arsenic	0.002 J
Beryllium	ND(0.0004 J)
Lead	ND(0.0004)
Manganese	0.28
Selenium	ND(0.0014)
Vanadium	ND(0.0008)

RFI-03-03	9/21/2001
VOC	
Benzene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0022)
Benzo(b)fluoranthene	ND(0.0022)
Inorganic-Dissolved	
Arsenic	0.0017 J
Beryllium	ND(0.0004)
Lead	ND(0.0004)
Manganese	0.21
Selenium	ND(0.0014)
Vanadium	ND(0.0008)





SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL)
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  IDW – INDUSTRIAL DRINKING WATER

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED IN DECEMBER 2004.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. RDW–EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
11. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.

0 150' 300'
GRAPHIC SCALE

JULY 2006

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - BUILDING 30 AREA

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 4-10

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG, X24.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES LAF GMS
64410112/RFI-06/64410C10.DWG

RFI-81-22	0 – 2 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.038)
1,1-Dichloroethane	ND(0.038)
1,1-Dichloroethene	ND(0.038)
cis-1,2-Dichloroethene	ND(0.038)
Tetrachloroethene	ND(0.038)
Trichloroethene	ND(0.038)
Trifluorotrichloroethane (Freon 113)	ND(0.16)
Vinyl chloride	ND(0.038)
SVOC	
Benzo(a)pyrene	ND(0.95)
bis(2-Ethylhexyl)phthalate	ND(0.95)
PCB	
Total PCBs	4.98 (RDC)
Inorganic	
Arsenic	24 (RDC)
Barium	90
Cadmium	0.65 J
Chromium Total	110 J
Cobalt	5.5
Lead	82
Manganese	350 J
Nickel	52
Vanadium	25
Zinc	200

RFI-81-16	0 – 2 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.039)
1,1-Dichloroethane	ND(0.039)
1,1-Dichloroethene	ND(0.039)
cis-1,2-Dichloroethene	ND(0.039)
Tetrachloroethene	ND(0.039)
Trichloroethene	ND(0.039)
Trifluorotrichloroethane (Freon 113)	ND(0.17)
Vinyl chloride	ND(0.039)
SVOC	
Benzo(a)pyrene	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19)
PCB	
Total PCBs	ND(0.039)
Inorganic	
Arsenic	7
Barium	52 J
Cadmium	0.32
Chromium Total	17
Cobalt	5.8
Lead	17 J
Manganese	420 J
Nickel	14
Vanadium	25
Zinc	54

RFI-81-50	4 – 6 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.06) /ND(0.06)
1,1-Dichloroethane	ND(0.06) /ND(0.06)
1,1-Dichloroethene	ND(0.06) /ND(0.06)
cis-1,2-Dichloroethene	ND(0.06) /ND(0.06)
Tetrachloroethene	ND(0.06) /ND(0.06)
Trichloroethene	ND(0.06) /ND(0.06)
Trifluorotrichloroethane (Freon 113)	ND(0.1) /ND(0.1)
Vinyl chloride	ND(0.1) /ND(0.1)
SVOC	
Benzo(a)pyrene	ND(0.3) /ND(0.3 J
bis(2-Ethylhexyl)phthalate	ND(0.3) /ND(0.3 J
PCB	
Total PCBs	ND(0.33) /ND(0.33)
Inorganic	
Arsenic	0.8 J /0.83 J
Barium	22.1 J /30.4 J
Cadmium	ND(0.14) /ND(0.13)
Chromium Total	4.13 /5.39
Cobalt	2.17 J /3.69 J
Lead	5.49 /5.39
Manganese	91.2 J /327 J
Nickel	3.8 /5.85
Vanadium	6.29 /5.09
Zinc	13.8 J /9.9 J

RFI-81-15	0 – 2 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.04)
1,1-Dichloroethane	ND(0.04)
1,1-Dichloroethene	ND(0.04)
cis-1,2-Dichloroethene	ND(0.04)
Tetrachloroethene	ND(0.04)
Trichloroethene	ND(0.04)
Trifluorotrichloroethane (Freon 113)	ND(0.17)
Vinyl chloride	ND(0.04)
SVOC	
Benzo(a)pyrene	ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.2)
PCB	
Total PCBs	ND(0.04)
Inorganic	
Arsenic	4.7
Barium	45 J
Cadmium	0.21
Chromium Total	10
Cobalt	4.4
Lead	22 J
Manganese	320 J
Nickel	9.1
Vanadium	18 J
Zinc	42

RFI-81-03	0 – 2 (ft)	8 – 10 (ft)	10 – 12 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.038)	ND(0.038)	ND(0.039)
1,1-Dichloroethane	ND(0.038)	ND(0.038)	ND(0.039)
1,1-Dichloroethene	ND(0.038)	ND(0.038)	ND(0.039)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.038)	ND(0.039)
Tetrachloroethene	ND(0.038)	ND(0.038)	ND(0.039)
Trichloroethene	ND(0.038)	ND(0.038)	ND(0.039)
Trifluorotrichloroethane (Freon 113)	ND(0.16)	ND(0.16)	ND(0.17)
Vinyl chloride	ND(0.038)	ND(0.038)	ND(0.039)
SVOC			
Benzo(a)pyrene	3.36 J (RDC)	0.426 J	0.132 J
bis(2-Ethylhexyl)phthalate	0.134 J	ND(0.18)	0.17 J
PCB			
Total PCBs	0.185	0.061	0.281
Inorganic			
Arsenic	13 (RDC)	3	5.2
Barium	79	34	42
Cadmium	0.92	0.053 J	0.2
Chromium Total	45	10	20
Cobalt	5.4	2.8	3.4
Lead	160 J	6 J	23 J
Manganese	1200	1000	1200
Nickel	44	6.1	10
Vanadium	17	13	17
Zinc	190	17	54

RFI-81-14	0 – 2 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.038)
1,1-Dichloroethane	ND(0.038)
1,1-Dichloroethene	ND(0.038)
cis-1,2-Dichloroethene	0.38
Tetrachloroethene	0.62
Trichloroethene	1.3
Trifluorotrichloroethane (Freon 113)	ND(0.1)
Vinyl chloride	ND(0.1)
SVOC	
Benzo(a)pyrene	0.05 J
bis(2-Ethylhexyl)phthalate	0.05 J
PCB	
Total PCBs	ND(0.039)
Inorganic	
Arsenic	3.5
Barium	46 J
Cadmium	0.21
Chromium Total	11
Cobalt	4.2
Lead	19 J
Manganese	270 J
Nickel	9.7
Vanadium	17
Zinc	42

RFI-81-51	0 – 2 (ft)	8 – 10 (ft)	11 – 13 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.06)	0.04 J	0.01 J
1,1-Dichloroethane	ND(0.06)	ND(0.06)	ND(0.06)
1,1-Dichloroethene	ND(0.06)	ND(0.06)	ND(0.06)
cis-1,2-Dichloroethene	0.38	ND(0.06)	0.01 J
Tetrachloroethene	0.62	2.46	0.41
Trichloroethene	1.3	7.35 (RSVIA)	1.54
Trifluorotrichloroethane (Freon 113)	ND(0.1)	ND(0.1)	ND(0.1)
Vinyl chloride	ND(0.1)	ND(0.1)	ND(0.1)
SVOC			
Benzo(a)pyrene	ND(0.33)	ND(0.33)	ND(0.33)
bis(2-Ethylhexyl)phthalate	1.48 J	1.65 J	2.64 J
PCB			
Total PCBs	1.38	3.71	2.29
Inorganic			
Arsenic	1.48 J	1.65 J	2.64 J
Barium	12.4 J	14.5 J	18.6 J
Cadmium	0.21	0.14	0.86
Chromium Total	2.59	5.62	16.9
Cobalt	1.38	3.71	2.29
Lead	16.6	19.5	9.06
Manganese	105	299	199
Nickel	3.55	6.63	8.97
Vanadium	3.21	4.22	10.3
Zinc	18.9 J	17.2 J	282 J

RFI-81-08	0 – 2 (ft)	6 – 8 (ft)
VOC		
1,1,1-Trichloroethane	ND(0.039)	ND(0.042)
1,1-Dichloroethane	ND(0.039)	ND(0.042)
1,1-Dichloroethene	ND(0.039)	ND(0.042)
cis-1,2-Dichloroethene	ND(0.039)	0.043
Tetrachloroethene	ND(0.039)	ND(0.042)
Trichloroethene	ND(0.039)	0.39
Trifluorotrichloroethane (Freon 113)	ND(0.17)	ND(0.18)
Vinyl chloride	ND(0.039)	ND(0.042)
SVOC		
Benzo(a)pyrene	ND(0.19)	ND(0.2 J)
bis(2-Ethylhexyl)phthalate	ND(0.19)	0.0941 J
PCB		
Total PCBs	0.095	ND(0.041)
Inorganic		
Arsenic	3.9	2.6
Barium	20	33
Cadmium	0.2	0.19 J
Chromium Total	8.5	8.6 J
Cobalt	2.8	3.9
Lead	33 J	16
Manganese	160	80 J
Nickel	8.3	8.9
Vanadium	11	15
Zinc	41	47

RFI-81-33	0 – 2 (ft)	8 – 10 (ft)	10 – 12 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.038)	ND(0.044)	ND(0.044)
1,1-Dichloroethane	ND(0.038)	ND(0.044)	ND(0.044)
1,1-Dichloroethene	ND(0.038)	ND(0.044)	ND(0.044)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.044)	ND(0.044)
Tetrachloroethene	ND(0.038)	ND(0.044)	ND(0.044)
Trichloroethene	ND(0.038)	ND(0.044)	ND(0.044)
Trifluorotrichloroethane (Freon 113)	ND(0.16)	ND(0.17)	ND(0.19)
Vinyl chloride	ND(0.038)	ND(0.044)	ND(0.044)
SVOC			
Benzo(a)pyrene	0.17 J	ND(0.19)	ND(0.21)
bis(2-Ethylhexyl)phthalate	0.0913 J	ND(0.19)	ND(0.21)
PCB			
Total PCBs	ND(0.037)	ND(0.039)	ND(0.044)
Inorganic			
Arsenic	4.2	6.7 D	10 (RDC)
Barium	90 J	57 J	110 J
Cadmium	0.4	0.1 D	0.12
Chromium Total	36	16 D	28
Cobalt	5	7.5 D	11
Lead	40	7.7 D	9.6
Manganese	1000 J	330 JD	790 J
Nickel	15	19 D	28
Vanadium	18	25 D	37
Zinc	66	41 D	39

RFI-81-17	0 – 2 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.038)
1,1-Dichloroethane	ND(0.038)
1,1-Dichloroethene	ND(0.038)
cis-1,2-Dichloroethene	ND(0.038)
Tetrachloroethene	ND(0.038)
Trichloroethene	ND(0.038)
Trifluorotrichloroethane (Freon 113)	ND(0.16)
Vinyl chloride	ND(0.038)
SVOC	
Benzo(a)pyrene	ND(0.18)
bis(2-Ethylhexyl)phthalate	ND(0.18)
PCB	
Total PCBs	0.433
Inorganic	
Arsenic	6.7
Barium	26 J
Cadmium	0.13
Chromium Total	5.2
Cobalt	4
Lead	13 J
Manganese	370 J
Nickel	13
Vanadium	7.7
Zinc	35

RFI-81-40	0 – 2 (ft)
Inorganic	
Arsenic	8.1 J (RDC)
Barium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Lead	NS
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

RFI-81-41	0 – 2 (ft)
Inorganic	
Arsenic	5.1 J
Barium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Lead	NS
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

RFI-81-11	0 – 2 (ft)	2 – 4 (ft)	4 – 6 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.039) /ND(0.042)	ND(0.037)	ND(0.04)
1,1-Dichloroethane	ND(0.039) /ND(0.042)	ND(0.037)	ND(0.04)
1,1-Dichloroethene	ND(0.039) /ND(0.042)	ND(0.037)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.039) /ND(0.042)	0.028 J	0.065
Tetrachloroethene	ND(0.039) /ND(0.042)	0.027 J	ND(0.04)
Trichloroethene	ND(0.039) /ND(0.042)	0.027 J	0.066
Trifluorotrichloroethane (Freon 113)	ND(0.17) /ND(0.18)	ND(0.16)	ND(0.17)
Vinyl chloride	ND(0.039) /ND(0.042)	ND(0.037)	0.029 J
SVOC			
Benzo(a)pyrene	ND(0.19) /ND(0.21)	4.57 EJ (RDC)	0.187 J
bis(2-Ethylhexyl)phthalate	ND(0.19) /ND(0.21)	0.0926 J	ND(0.2)
PCB			
Total PCBs	ND(0.04) /ND(0.043)	0.151	ND(0.04)
Inorganic			
Arsenic	3.3 /4.7	3.9	3.7
Barium	15 /22	18	20
Cadmium	0.12 /0.15	0.66	0.11
Chromium Total	6.6 /8.8	35	5.7
Cobalt	2.4 /3.3	2.9	2
Lead	7.6 J /10 J	72 J	21 J
Manganese	120 /160	340	73
Nickel	6.4 /8.9	16	6.1
Vanadium	12 /13	10	6.8
Zinc	25 /32	170	28

RFI-81-06	0.8 – 2.8 (ft)	2.8 – 4.8 (ft)	6.8 – 10.8 (ft)	12.8 – 14.8 (ft)
VOC				
1,1,1-Trichloroethane	ND(0.036)	ND(0.036)	ND(0.037)	ND(0.036)
1,1-Dichloroethane	ND(0.036)	ND(0.036)	ND(0.037)	ND(0.036)
1,1-Dichloroethene	ND(0.036)	ND(0.036)	ND(0.037)	ND(0.036)
cis-1,2-Dichloroethene	ND(0.036)	ND(0.036)	ND(0.037)	ND(0.036)
Tetrachloroethene	ND(0.036)	ND(0.036)	ND(0.037)	ND(0.036)
Trichloroethene	ND(0.036)	ND(0.036)	ND(0.037)	ND(0.036)
Trifluorotrichloroethane (Freon 113)	ND(0.15)	ND(0.15)	ND(0.16)	ND(0.16)
Vinyl chloride	ND(0.036)	ND(0.036)	ND(0.037)	ND(0.036)
SVOC				
Benzo(a)pyrene	ND(0.17)	ND(0.18)	0.37 J	ND(0.18)
bis(2-Ethylhexyl)phthalate	0.106 J	0.0808 J	ND(0.18)	ND(0.18)
PCB				
Total PCBs	0.032 J	ND(0.036)	ND(0.038)	ND(0.037)
Inorganic				
Arsenic	3.5	2.1	2.1	0.58
Barium	14	13	13	3.5
Cadmium	0.13	0.098	0.24	0.014 J
Chromium Total	11	15	31	4.7
Cobalt	3.1	2.2	1.7	0.53
Lead	8.3	9.1	19	2.4
Manganese	240	160	270	40
Nickel	12	9.1	14	2.8
Vanadium	9	6.7	6.9	2.5
Zinc	30	22	100	6.2

RFI-81-07	0.3 – 2.3 (ft)	4.3 – 6.3 (ft)
VOC		
1,1,1-Trichloroethane	0.71	ND(0.04)
1,1-Dichloroethane	ND(0.038)	ND(0.04)
1,1-Dichloroethene	ND(0.038)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.04)
Tetrachloroethene	ND(0.038 J)	ND(0.04 J)
Trichloroethene	2.1 J	0.15 J
Trifluorotrichloroethane (Freon 113)	ND(0.16)	ND(0.17)
Vinyl chloride	ND(0.038)	ND(0.04)
SVOC		
Benzo(a)pyrene	0.638 J	0.104 J
bis(2-Ethylhexyl)phthalate	0.104 J	ND(0.19)
PCB		
Total PCBs	0.69	0.051
Inorganic		
Arsenic	4.5	5.2
Barium	83 J	47 J
Cadmium	1.1	0.25
Chromium Total	42 J	27 J
Cobalt	4.5	6.7
Lead	130	200
Manganese	690	470
Nickel	22 J	28 J
Vanadium	13	18
Zinc	150	5

RFI-81-28	0.5 – 2.5 (ft)
Inorganic	
Arsenic	NS
Barium	NS
Cadmium	NS
Chromium Total	7.2
Chromium VI (Hexavalent)	ND(0.02)
Cobalt	NS
Lead	NS
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

RFI-81-09	0 – 2 (ft)	8 – 10 (ft)	10 – 12 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.047)	ND(0.039)	ND(0.039)
1,1-Dichloroethane	ND(0.047)	ND(0.039)	ND(0.039)
1,1-Dichloroethene	ND(0.047)	ND(0.039)	ND(0.039)
cis-1,2-Dichloroethene	ND(0.047)	ND(0.039)	ND(0.039)
Tetrachloroethene	ND(0.047)	0.049	0.045
Trichloroethene	ND(0.047)	ND(0.039)	ND(0.039)
Trifluorotrichloroethane (Freon 113)	ND(0.2)	ND(0.17)	ND(0.17)
Vinyl chloride	ND(0.047)	ND(0.039)	ND(0.039)
SVOC			
Benzo(a)pyrene	ND(0.23)	ND(0.18)	1.24 J
bis(2-Ethylhexyl)phthalate	ND(0.23)	ND(0.18)	ND(0.19)
PCB			
Total PCBs	ND(0.048)	ND(0.038)	ND(0.039)
Inorganic			
Arsenic	2.7	4.4	2.3
Barium	52	33	17
Cadmium	0.36 J	0.054 J	0.053 J
Chromium Total	16	6.7	7.5
Cobalt	3.3	3.1	2.5
Lead	13	12	5.5
Manganese	100 J	350 J	230 J
Nickel	8.9	6.6	6.6
Vanadium	14	15	11
Zinc	50	23	14 J

RFI-81-04	8 – 10 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.039)
1,1-Dichloroethane	ND(0.039)
1,1-Dichloroethene	ND(0.039)
cis-1,2-Dichloroethene	ND(0.039)
Tetrachloroethene	ND(0.039)
Trichloroethene	ND(0.039)
Trifluorotrichloroethane (Freon 113)	NS
Vinyl chloride	ND(0.039)
SVOC	
Benzo(a)pyrene	0.31 J
bis(2-Ethylhexyl)phthalate	ND(0.18)
Inorganic	
Arsenic	7.9 (RDC)
Barium	30 J
Cadmium	0.132
Chromium Total	15
Cobalt	NS
Lead	12.5 J
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

RFI-81-13	0 – 2 (ft)	6 – 8 (ft)	10 – 12 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.04)	ND(0.038)	NS
1,1-Dichloroethane	ND(0.04)	ND(0.038)	NS
1,1-Dichloroethene	ND(0.04)	ND(0.038)	NS
cis-1,2-Dichloroethene	ND(0.04)	ND(0.038)	NS
Tetrachloroethene	ND(0.04)	0.094	NS
Trichloroethene	ND(0.04)	ND(0.038)	NS
Trifluorotrichloroethane (Freon 113)	ND(0.17)	ND(0.16)	NS
Vinyl chloride	ND(0.04)	ND(0.038)	NS
SVOC			
Benzo(a)pyrene	0.119 J	0.0613 J	0.0818 J
bis(2-Ethylhexyl)phthalate	0.078 J	0.115 J	0.534 J
PCB			
Total PCBs	0.102 J	0.062 J	0.142
Inorganic			
Arsenic	56 (DC,RDC)	ND(4)	ND(5.5)
Barium	36	40	40
Cadmium	0.36	0.19	0.17
Chromium Total	270 (IPSC,RPSC)	9.3	12
Cobalt	15	3.1	3.7
Lead	27	42	36
Manganese	1100	250	240
Nickel	110	10	10
Vanadium	30	8.9	12
Zinc	42	45	41

RFI-81-13R	0 – 2 (ft)
Inorganic	
Arsenic	NS
Barium	NS
Cadmium	NS
Chromium Total	NS
Chromium VI (Hexavalent)	ND(0.03)
Cobalt	NS
Lead	NS
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

RFI-81-42	0.7 – 2 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.038)
1,1-Dichloroethane	ND(0.038)
1,1-Dichloroethene	ND(0.038)
cis-1,2-Dichloroethene	0.037 J
Tetrachloroethene	ND(0.038)
Trichloroethene	ND(0.16)
Trifluorotrichloroethane (Freon 113)	ND(0.076)
Vinyl chloride	NS
SVOC	
Benzo(a)pyrene	1.96 J
bis(2-Ethylhexyl)phthalate	0.5 J
PCB	
Total PCBs	1.91
Inorganic	
Arsenic	3.6 J
Barium	50
Cadmium	0.98
Chromium Total	26
Cobalt	4 J
Lead	200 J
Manganese	180
Nickel	23
Vanadium	14 J
Zinc	74 J

RFI-81-39R	1.7 – 3.7 (ft)	7.7 – 9.7 (ft)
VOC		
1,1,1-Trichloroethane	ND(0.037)	ND(0.035)
1,1-Dichloroethane	ND(0.037)	ND(0.035)
1,1-Dichloroethene	ND(0.037)	ND(0.035)
cis-1,2-Dichloroethene	0.041 J	0.036 J
Tetrachloroethene	ND(0.037)	ND(0.035)
Trichloroethene	ND(0.037)	ND(0.035)
Trifluorotrichloroethane (Freon 113)	ND(0.16)	ND(0.15)
Vinyl chloride	ND(0.074)	ND(0.07)
SVOC		
Benzo(a)pyrene	ND(0.91)	ND(0.88 J)
bis(2-Ethylhexyl)phthalate	ND(0.91)	ND(0.88)
PCB		
Total PCBs	ND(0.037)	ND(0.036)
Inorganic		
Arsenic	6.2 J	1.7 J
Barium	57	16
Cadmium	0.16	ND(0.055)
Chromium Total	24	5.3
Cobalt	3.9 J	1.7 J
Lead	49 J	5.8 J
Manganese	540	100
Nickel	11 J	4.8 J
Vanadium	19 J	7.2 J
Zinc	33 J	16 J

RFI-81-32	1 – 3 (ft)	3 – 5 (ft)
Inorganic		
Arsenic	NS	NS
Barium	NS	NS
Cadmium	NS	NS
Chromium Total	NS	NS
Cobalt	NS	NS
Lead	13 J	210 J
Manganese	350 J	540 J
Nickel	NS	NS
Vanadium	NS	NS
Zinc	NS	NS

RFI-81-30	1.2 – 3.2 (ft)	3.2 – 5.2 (ft)
Inorganic		
Arsenic	NS	NS
Barium	NS	NS
Cadmium	NS	NS
Chromium Total	NS	NS
Cobalt	NS	NS
Lead	92 J	140 J
Manganese	350 J	340 J
Nickel	NS	NS
Vanadium	NS	NS
Zinc	NS	NS

RFI-81-36	8 – 10 (ft)
Inorganic	
Arsenic	NS
Barium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Lead	NS
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

RFI-81-37	8 – 10 (ft)
Inorganic	
Arsenic	NS
Barium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Lead	5000 (DC,RDC)
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

RFI-81-25	0.8 – 2.8 (ft)	8 – 10 (ft)
Inorganic		
Arsenic	NS	NS
Barium	NS	NS
Cadmium	NS	NS
Chromium Total	NS	NS
Cobalt	NS	NS
Lead	550 J (RDC)	110 J
Manganese	NS	NS
Nickel	NS	NS
Vanadium	NS	NS
Zinc	NS	NS

RFI-81-38	1 – 3 (ft)
VOC	
1,1,1-Trichloroethane	47000 D (DC,SVIA,VSCI,RDC,RSVIA,RVSCI)
1,1-Dichloroethane	7000 D (DC,SVIA,VSCI,RDC,RSVIA,RVSCI)
1,1-Dichloroethene	10 EJ (SVIA,VSCI,RSVIA,RVSCI)
cis-1,2-Dichloroethene	0.12
Tetrachloroethene	0.1
Trichloroethene	4
Trifluorotrichloroethane (Freon 113)	64000 D (DC,SVIA,RDC,RSVIA)
Vinyl chloride	0.5 (RSVIA)
SVOC	
Benzo(a)pyrene	ND(5.2)
bis(2-Ethylhexyl)phthalate	ND(5.2)
PCB	
Total PCBs	ND(0.043)
Inorganic	
Arsenic	2.1 J
Barium	15 J
Cadmium	0.5
Chromium Total	3.7
Cobalt	0.34
Lead	5.8 J
Manganese	19 J
Nickel	1.4
Vanadium	2.2
Zinc	110 J

RFI-81-20	1 – 3 (ft)	3 – 5 (ft)	7 – 9 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.037)	ND(0.036)	ND(0.044)
1,1-Dichloroethane	ND(0.037)	ND(0.036)	ND(0.044)
1,1-Dichloroethene	ND(0.037)	ND(0.036)	ND(0.044)
cis-1,2-Dichloroethene	ND(0.037)	ND(0.036)	ND(0.044)
Tetrachloroethene	ND(0.037)	ND(0.036)	ND(0.044)
Trichloroethene	ND(0.037)	ND(0.036)	ND(0.044)
Trifluorotrichloroethane (Freon 113)	ND(0.16)	ND(0.15)	ND(0.19)
Vinyl chloride	ND(0.037)	ND(0.036)	ND(0.044)
SVOC			
Benzo(a)pyrene	0.811 J	0.279 J	0.118 J
bis(2-Ethylhexyl)phthalate	0.068 J	ND(0.18)	ND(0.22)
PCB			
Total PCBs	ND(0.037)	ND(0.037)	ND(0.045)
Inorganic			
Arsenic	9.2 (RDC)	2.8	3.6
Barium	560	66	27
Cadmium	2.1	0.15	0.078
Chromium Total	160	63	19
Cobalt	43	4.7	3.1
Lead	3100 (DC,RDC)	94	30
Manganese	750	1800 (PSIC)	450
Nickel	75	14	12
Vanadium	43	18	12
Zinc	1500	30	28

RFI-81-05	3 – 5 (ft)	9 – 11 (ft)
VOC		
1,1,1-Trichloroethane	ND(0.037) /ND(0.035)	ND(0.04)
1,1-Dichloroethane	ND(0.037) /ND(0.035)	ND(0.04)
1,1-Dichloroethene	ND(0.037) /ND(0.035)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.037) /ND(0.035)	ND(0.04)
Tetrachloroethene	ND(0.037) /ND(0.035)	ND(0.04)
Trichloroethene	0.042 /0.038	0.18
Trifluorotrichloroethane (Freon 113)	ND(0.16) /ND(0.15)	ND(0.17)
Vinyl chloride	ND(0.037) /ND(0.035)	ND(0.04)
SVOC		
Benzo(a)pyrene	ND(0.17 J) /ND(0.17 J)	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.17) /ND(0.17)	ND(0.19)
PCB		
Total PCBs	0.028 J /ND(0.036)	ND(0.039)
Inorganic		
Arsenic	2.1 /1.5	1.6
Barium	18 /22	20
Cadmium	0.068 /0.078	0.1
Chromium Total	4.2 /5.4	5.1
Cobalt	1.2 /1.2	1.1
Lead	5.4 /6.6	6.8
Manganese	49 /61	74
Nickel	3.3 /3.6	3.3
Vanadium	4.3 /4.7	4.9
Zinc	14 /14	19

RFI-81-01	2.5 – 4.5 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.039)
1,1-Dichloroethane	ND(0.039)
1,1-Dichloroethene	ND(0.039)
cis-1,2-Dichloroethene	ND(0.039)
Tetrachloroethene	ND(0.039)
Trichloroethene	ND(0.039)
Trifluorotrichloroethane (Freon 113)	ND(0.17)
Vinyl chloride	ND(0.039)
SVOC	
Benzo(a)pyrene	0.115 J
bis(2-Ethylhexyl)phthalate	ND(0.19 J)
PCB	
Total PCBs	ND(0.038)
Inorganic	
Arsenic	14 (RDC)
Barium	1000
Cadmium	3.4
Chromium Total	230
Cobalt	38
Lead	5500 (DC,RDC)
Manganese	1300
Nickel	170
Vanadium	38
Zinc	18 J

RFI-81-23	0.9 – 1.7 (ft)
VOC	
1,1,1-Trichloroethane	ND(0.04)
1,1-Dichloroethane	ND(0.04)
1,1-Dichloroethene	ND(0.04)
cis-1,2-Dichloroethene	0.99
Tetrachloroethene	ND(0.04)
Trichloroethene	ND(0.04)
Trifluorotrichloroethane (Freon 113)	ND(0.17)
Vinyl chloride	ND(0.04)
SVOC	
Benzo(a)pyrene	0.0573 J
bis(2-Ethylhexyl)phthalate	ND(0.19 J)
PCB	
Total PCBs	ND(0.04)
Inorganic	
Arsenic	3.7
Barium	17
Cadmium	0.15
Chromium Total	7.4
Cobalt	4
Lead	25
Manganese	180
Nickel	12
Vanadium	12
Zinc	36

RFI-81-02	4 – 6 (ft)	8 – 10 (ft)	12 – 14 (ft)
VOC			
1,1,1-Trichloroethane	ND(0.04)	ND(0.042)	ND(0.04)
1,1-Dichloroethane	ND(0.04)	ND(0.042)	ND(0.04)
1,1-Dichloroethene	ND(0.04)	ND(0.042)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.042)	ND(0.04)
Tetrachloroethene	ND(0.04)	ND(0.042)	ND(0.04)
Trichloroethene	ND(0.04)	ND(0.042)	ND(0.04)
Trifluorotrichloroethane (Freon 113)	ND(0.17)	ND(0.18)	ND(0.17)
Vinyl chloride	ND(0.04)	ND(0.042)	ND(0.04)
SVOC			
Benzo(a)pyrene	0.235 J	3.89 J (RDC)	ND(0.19 J)
bis(2-Ethylhexyl)phthalate	ND(0.2 J)	ND(0.2)	ND(0.19)
PCB			
Total PCBs	ND(0.041)	ND(0.042)	ND(0.04)
Inorganic			
Arsenic	10 (RDC)	19 (RDC)	5.8
Barium	310	2000	38
Cadmium	0.2	1.9	0.14
Chromium Total	42	190	8.9
Cobalt	14	64	3.8
Lead	1600 (DC,RDC)	69000 D (DC

70-165	9/26/2001	6/22/2002	3/28/2003	10/7/2004
VOC				
1,1,1-Trichloroethane	ND(0.001)	NS	NS	ND(0.001)
1,1-Dichloroethane	ND(0.001)	NS	NS	ND(0.001)
1,1-Dichloroethene	ND(0.001)	NS	NS	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)	NS	NS	ND(0.001)
Tetrachloroethene	ND(0.001)	NS	NS	ND(0.001)
Trichloroethene	ND(0.001)	NS	NS	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001 J)	NS	NS	ND(0.03)
Vinyl chloride	ND(0.001)	NS	NS	ND(0.001)
SVOC				
Benzo(a)pyrene	ND(0.0022)	NS	NS	NS
bis(2-Ethylhexyl)phthalate	0.00102 J	NS	NS	NS
PCB				
Total PCBs	ND(0.0001)	NS	NS	NS
PCB-Dissolved				
Total PCBs	ND(0.00012)	NS	NS	NS
Inorganic				
Arsenic	NS	0.0027	0.0029	NS
Barium	NS	0.02	0.043	NS
Cadmium	NS	0.000064 J	ND(0.00002)	NS
Chromium Total	NS	0.00042 J	0.00092	NS
Cobalt	NS	0.0019	0.0012	NS
Lead	NS	0.00023 J	0.027 (CW,RDW)	0.055 (CW,RDW)
Manganese	NS	1.2 J (RDW)	0.48	NS
Nickel	NS	0.0042	0.021	NS
Vanadium	NS	0.0003 J	0.0002 J	NS
Zinc	NS	0.029	0.017	NS
Inorganic-Dissolved				
Arsenic	0.0015 J	0.0029	NS	NS
Barium	0.037	0.017	NS	NS
Cadmium	ND(0.00002)	ND(0.00002)	NS	NS
Chromium Total	ND(0.0006)	ND(0.0006)	NS	NS
Cobalt	0.001 J	0.001 J	NS	NS
Lead	0.019 (CW,RDW)	ND(0.0004)	NS	NS
Manganese	0.72 J	1.1 J (RDW)	NS	NS
Nickel	0.0035 J	NS	NS	NS
Vanadium	ND(0.0008)	ND(0.0008)	NS	NS
Zinc	0.013 J	0.01 J	NS	NS

70-163	9/28/2001	6/20/2002	3/28/2003
VOC			
1,1,1-Trichloroethane	ND(0.001)	NS	NS
1,1-Dichloroethane	ND(0.001)	NS	NS
1,1-Dichloroethene	ND(0.001)	NS	NS
cis-1,2-Dichloroethene	0.0033	NS	NS
Tetrachloroethene	ND(0.001)	NS	NS
Trichloroethene	0.0022	NS	NS
Trifluorotrichloroethane (Freon 113)	ND(0.001)	NS	NS
Vinyl chloride	0.00063 J	NS	NS
SVOC			
Benzo(a)pyrene	ND(0.0021)	NS	NS
bis(2-Ethylhexyl)phthalate	ND(0.0051)	NS	NS
PCB			
Total PCBs	ND(0.00011)	NS	NS
PCB-Dissolved			
Total PCBs	ND(0.00011)	NS	NS
Inorganic			
Arsenic	0.01 J	0.0036	0.0053
Barium	0.068 J	0.028	0.038
Cadmium	0.00044 J	0.00019 J	0.00013 J
Chromium Total	0.0013	0.00054 J	0.00089
Cobalt	0.016 J	0.0034	0.014
Lead	0.00029 J	0.00037 J	0.0003 J
Manganese	3.2 J (CW,RDW)	2.1 (RDW)	2.4 (RDW)
Nickel	0.028 J	0.011	0.039
Vanadium	ND(0.0008)	0.00027 J	0.00024 J
Zinc	0.016 J	ND(0.016) J	0.0095 J
Inorganic-Dissolved			
Arsenic	ND(0.0075)	0.0019	NS
Barium	0.044 J	0.019	NS
Cadmium	ND(0.00002)	ND(0.00002)	NS
Chromium Total	ND(0.0006)	ND(0.0006)	NS
Cobalt	0.001 J	0.0009	NS
Lead	ND(0.0004)	ND(0.0004)	NS
Manganese	2.5 (RDW)	1.8 (RDW)	NS
Nickel	0.016 J	0.0092	NS
Vanadium	ND(0.0008)	ND(0.0008)	NS
Zinc	0.014 J	0.011 J	NS

70-160	9/26/2001	6/17/2002	3/28/2003
VOC			
1,1,1-Trichloroethane	ND(0.001)	ND(0.001)	NS
1,1-Dichloroethane	ND(0.001)	ND(0.001)	NS
1,1-Dichloroethene	ND(0.001)	ND(0.001)	NS
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)	NS
Tetrachloroethene	ND(0.001)	ND(0.001 J)	NS
Trichloroethene	ND(0.001)	ND(0.001)	NS
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	NS
Vinyl chloride	ND(0.001)	ND(0.001)	NS
SVOC			
Benzo(a)pyrene	ND(0.0022)	NS	NS
bis(2-Ethylhexyl)phthalate	ND(0.0054)	NS	NS
PCB			
Total PCBs	ND(0.00011)	NS	NS
PCB-Dissolved			
Total PCBs	ND(0.0001)	NS	NS
Inorganic			
Arsenic	NS	0.02	0.024 /0.025
Barium	NS	0.28	0.29 /0.29
Cadmium	NS	ND(0.00002)	ND(0.00002) /ND(0.00002)
Chromium Total	NS	ND(0.0006)	0.0014 /0.0014
Cobalt	NS	0.0076	0.0034 /0.0036
Lead	NS	0.00063 J	0.00042 J /0.00042 J
Manganese	NS	0.11	0.14 /0.14
Nickel	NS	0.0023	0.0096 /0.0097
Vanadium	NS	ND(0.0008)	0.0012 /0.0012
Zinc	NS	0.016 J	0.015 /0.016
Inorganic-Dissolved			
Arsenic	0.035	0.022	NS
Barium	0.31	0.27	NS
Cadmium	ND(0.00002)	ND(0.00002)	NS
Chromium Total	ND(0.0008)	0.00072	NS
Cobalt	0.00034 J	0.00059 J	NS
Lead	ND(0.0004)	ND(0.0004)	NS
Manganese	0.15	0.11	NS
Nickel	0.0032 J	0.0021 J	NS
Vanadium	ND(0.0008)	ND(0.0008)	NS
Zinc	0.026 J	0.01 J	NS

RFI-81-03	9/28/2001	3/27/2003	2/28/2005
VOC			
1,1,1-Trichloroethane	ND(0.001)	NS	ND(0.001)
1,1-Dichloroethane	ND(0.001)	NS	ND(0.001)
1,1-Dichloroethene	ND(0.001)	NS	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)	NS	ND(0.001)
Tetrachloroethene	ND(0.001)	NS	ND(0.001)
Trichloroethene	ND(0.001)	NS	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)	NS	ND(0.03)
Vinyl chloride	ND(0.001)	NS	ND(0.001)
SVOC			
Benzo(a)pyrene	ND(0.0022)	NS	NS
bis(2-Ethylhexyl)phthalate	0.00111 J	NS	NS
PCB			
Total PCBs	ND(0.00011)	NS	NS
PCB-Dissolved			
Total PCBs	ND(0.0001)	NS	NS
Inorganic			
Arsenic	NS	0.00091 J	NS
Barium	NS	0.086	NS
Cadmium	NS	ND(0.00002)	ND(0.00002)
Chromium Total	NS	0.0019	NS
Cobalt	NS	0.0033	NS
Lead	NS	0.00082	NS
Manganese	NS	0.045	NS
Nickel	NS	0.0076	NS
Vanadium	NS	0.00054 J	NS
Zinc	NS	0.013	NS
Inorganic-Dissolved			
Arsenic	ND(0.001)	NS	NS
Barium	0.059	NS	NS
Cadmium	ND(0.00002)	NS	NS
Chromium Total	ND(0.0008)	NS	NS
Cobalt	ND(0.0003)	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	0.52	NS	NS
Nickel	0.0045	NS	NS
Vanadium	ND(0.0008)	NS	NS
Zinc	0.0088	NS	NS

RFI-81-08	9/24/2001	6/17/2002	4/1/2003	10/7/2004	2/24/2005
VOC					
1,1,1-Trichloroethane	0.0012	0.0011	ND(0.001)	0.0004 J	ND(0.001)
1,1-Dichloroethane	0.0031	0.0011	0.0047	0.002	0.002
1,1-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	0.0036	0.0014	0.005	0.002	0.024
Tetrachloroethene	ND(0.001 J)	ND(0.001 J)	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	0.011 (CW,RDW)	0.0077 (CW,RDW)	0.0026	0.002	0.002
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.03)	ND(0.03)
Vinyl chloride	0.0007 (CW,RDW)	0.0006 J	0.029 (CW,RDW)	0.008 (CW,RDW)	0.012 J (CW,RDW)
SVOC					
Benzo(a)pyrene	ND(0.0022)	NS	NS	NS	NS
bis(2-Ethylhexyl)phthalate	ND(0.0056)	NS	NS	NS	NS
PCB					
Total PCBs	ND(0.00011)	NS	NS	NS	NS
PCB-Dissolved					
Total PCBs	ND(0.0001)	NS	NS	NS	NS
Inorganic					
Arsenic	NS	0.0011 J	0.0073	NS	NS
Barium	NS	0.13	NS	NS	NS
Cadmium	NS	ND(0.00002)	ND(0.00002)	NS	NS
Chromium Total	NS	0.00054 J	0.0013	NS	NS
Cobalt	NS	0.00067 J	0.0033	NS	NS
Lead	NS	0.00067 J	0.00039 J	ND(0.003)	NS
Manganese	NS	1.4 (RDW)	3.3 J (CW,RDW)	1.36 (RDW)	NS
Nickel	NS	0.015 J	0.031	NS	NS
Vanadium	NS	ND(0.0008)	ND(0.0008)	NS	NS
Zinc	NS	0.027 J	0.012 J	0.027 J	NS
Inorganic-Dissolved					
Arsenic	0.0078 J	0.001	NS	NS	NS
Barium	0.43 J	0.14	NS	NS	NS
Cadmium	ND(0.00002)	ND(0.00002)	NS	NS	NS
Chromium Total	0.00086 J	0.002	NS	NS	NS
Cobalt	0.0023 J	0.0006 J	NS	NS	NS
Lead	ND(0.0004)	ND(0.0004)	NS	NS	NS
Manganese	1.9 J (RDW)	1.6 (RDW)	NS	NS	NS
Nickel	0.016 J	0.015 J	NS	NS	NS
Vanadium	ND(0.0008)	ND(0.0008)	NS	NS	NS
Zinc	0.021 J	0.014 J	NS	NS	NS

RFI-81-50	4/4/2005
Inorganic	
Arsenic	NS
Barium	NS
Cadmium	NS
Chromium Total	NS
Cobalt	NS
Lead	ND(0.003) /ND(0.003)
Manganese	NS
Nickel	NS
Vanadium	NS
Zinc	NS

70-102	9/27/2001
VOC	
1,1,1-Trichloroethane	ND(0.001)
1,1-Dichloroethane	ND(0.001)
1,1-Dichloroethene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Tetrachloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.002)
bis(2-Ethylhexyl)phthalate	ND(0.0051 J)
PCB	
Total PCBs	ND(0.0001)
PCB-Dissolved	
Total PCBs	ND(0.0001)
Inorganic	
Arsenic	0.0046 J
Barium	0.085 J
Cadmium	ND(0.00002)
Chromium Total	0.001
Cobalt	0.0011 J
Lead	0.0004 J
Manganese	0.46
Nickel	0.018 J
Vanadium	ND(0.0008)
Zinc	0.065 J
Inorganic-Dissolved	
Arsenic	0.0028 J
Barium	0.057
Cadmium	ND(0.00002)
Chromium Total	ND(0.0006)
Cobalt	0.00091 J
Lead	ND(0.0004)
Manganese	0.41
Nickel	0.014
Vanadium	ND(0.0008)
Zinc	0.073

RFI-81-13	9/24/2001	3/27/2003
VOC		
1,1,1-Trichloroethane	0.00063 J	NS
1,1-Dichloroethane	0.0018	NS
1,1-Dichloroethene	ND(0.001)	NS
cis-1,2-Dichloroethene	ND(0.001)	NS
Tetrachloroethene	ND(0.001)	NS
Trichloroethene	0.0029	NS
Trifluorotrichloroethane (Freon 113)	ND(0.001)	NS
Vinyl chloride	ND(0.001)	NS
SVOC		
Benzo(a)pyrene	ND(0.0021)	NS
bis(2-Ethylhexyl)phthalate	ND(0.0053)	NS
PCB		
Total PCBs	ND(0.00011)	NS
PCB-Dissolved		
Total PCBs	ND(0.00011)	NS
Inorganic		
Arsenic	NS	0.001 J
Barium	NS	0.5 J
Cadmium	NS	ND(0.00002)
Chromium Total	NS	0.00086
Cobalt	NS	0.00018 J
Lead	NS	0.00045
Manganese	NS	0.18
Nickel	NS	0.0057
Vanadium	NS	ND(0.0008)
Zinc	NS	0.016
Inorganic-Dissolved		
Arsenic	0.0023 J	NS
Barium	0.5 J	NS
Cadmium	ND(0.00002)	NS
Chromium Total	ND(0.0006)	NS
Cobalt	NS	NS
Lead	ND(0.0004)	NS
Manganese	0.18 J	NS
Nickel	0.0044	NS
Vanadium	ND(0.0008)	NS
Zinc	0.014	NS

RFI-81-33	2/19/2002	6/20/2002	4/3/2003	10/8/2004
VOC				
1,1,1-Trichloroethane	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethane	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Tetrachloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.03)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Inorganic				
Arsenic	NS	0.0056	0.0049	NS
Barium	NS	0.12	0.11	0.121
Cadmium	NS	ND(0.00002)	0.000072 J	ND(0.00002)
Chromium Total	NS	0.00046 J	0.00026 J	NS
Cobalt	NS	0.0013	0.0014	NS
Lead	NS	0.00025 J	0.00015 J	ND(0.003)
Manganese	NS	0.88 (RDW)	0.79 J	NS
Nickel	NS	0.004	0.005	ND(0.005)
Vanadium	NS	ND(0.0008)	0.000098 J	NS
Zinc	NS	ND(0.015 J)	0.033	ND(0.005)
Inorganic-Dissolved				
Arsenic	NS	0.0048	NS	NS
Barium	NS	0.1	NS	NS
Cadmium	NS	ND(0.00002)	NS	NS
Chromium Total	NS	0.0033	NS	NS
Cobalt	NS	0.0012	NS	NS
Lead	NS	ND(0.0004)	NS	NS
Manganese	NS	0.77	NS	NS
Nickel	NS	0.0032	NS	NS
Vanadium	NS	0.00093	NS	NS
Zinc	NS	0.0083 J	NS	NS

RFI-81-11	9/24/2001	6/19/2002	4/1/2003
VOC			
1,1,1-Trichloroethane	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethane	0.0043	0.0036	0.0013
1,1-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	0.00055 J	ND(0.001)	ND(0.001)
Tetrachloroethene	ND(0.001 J)	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	0.0016	0.0012	ND(0.001)
SVOC			
Benzo(a)pyrene	ND(0.0022)	NS	NS
bis(2-Ethylhexyl)phthalate	ND(0.0055)	NS	NS
PCB			
Total PCBs	ND(0.00011)	NS	NS
PCB-Dissolved			
Total PCBs	ND(0.00011)	NS	NS
Inorganic			
Arsenic	NS	0.011	0.0064
Barium	NS	0.22	1
Cadmium	NS	ND(0.00002)	ND(0.00002)
Chromium Total	NS	0.00097	0.0019
Cobalt	NS	0.00026	0.0012
Lead	NS	0.047 (CW,RDW)	0.021 (CW,RDW)
Manganese	NS	0.45	2 J (RDW)
Nickel	NS	0.003	0.025
Vanadium	NS	0.0008 J	ND(0.0008)
Zinc	NS	0.015 J	0.025
Inorganic-Dissolved			
Arsenic	0.013 J	0.0097	NS
Barium	0.37 J	0.18	NS
Cadmium	ND(0.00002)	ND(0.00002)	NS
Chromium Total	ND(0.0006)	0.0033	NS
Cobalt	0.00029	0.00022	NS
Lead	ND(0.0004)	ND(0.0004)	NS
Manganese	0.46 J	0.37 J	NS
Nickel	0.0043	0.0034	NS
Vanadium	ND(0.0008)	0.00085	NS
Zinc	0.012	0.013	NS

86-100	9/24/2001	6/18/2002	4/1/2003	10/7/2004
VOC				
1,1,1-Trichloroethane	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethane	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	0.0052	0.047	0.0027	0.008
Tetrachloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	0.0038	0.032 (CW,RDW)	0.0018	0.007 (CW,RDW)
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.03)
Vinyl chloride	0.0034 (CW,RDW)	0.047 J (CW,RDW)	ND(0.001)	0.009 (CW,RDW)
SVOC				
Benzo(a)pyrene	ND(0.0022)	NS	NS	NS
bis(2-Ethylhexyl)phthalate	ND(0.0056)	NS	NS	NS
PCB				
Total PCBs	ND(0.00011)	NS	NS	NS
PCB-Dissolved				
Total PCBs	ND(0.0001)	NS	NS	NS
Inorganic				
Arsenic	NS	0.0029	0.003 J	NS
Barium	NS	1.2	0.484	1.44
Cadmium	NS	0.00033	0.0098 (CW,RDW)	0.0008
Chromium Total	NS	0.0008 J	0.0034	NS
Cobalt	NS	0.0019	0.072 (RDW)	NS
Lead	NS	0.0008 J	0.033 (CW,RDW)	0.006 (CW,RDW)
Manganese	NS	1.2 (RDW)	1.7 J (RDW)	NS
Nickel	NS	0.0098	0.24 (CW,RDW)	0.006
Vanadium	NS	ND(0.0008)	ND(0.0008)	NS
Zinc	NS	0.068 J	6 (CW,RDW)	0.042
Inorganic-Dissolved				
Arsenic	0.0058	NS	NS	NS
Barium	2.5 (CW,RDW)	NS	NS	NS
Cadmium	0.00084	NS	NS	NS
Chromium Total	ND(0.0006)	NS	NS	NS
Cobalt	0.0049	NS	NS	NS
Lead	0.0013	NS	NS	NS
Manganese	1.1 (RDW)	NS	NS	NS
Nickel	0.014	NS	NS	NS
Vanadium	ND(0.0008)	NS	NS	NS
Zinc	0.14	NS	NS	NS

RFI-81-05	9/19/2001
VOC	
1,1,1-Trichloroethane	ND(0.001)
1,1-Dichloroethane	ND(0.001)
1,1-Dichloroethene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Tetrachloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0021)
bis(2-Ethylhexyl)phthalate	ND(0.0051)
PCB	
Total PCBs	ND(0.00011)
PCB-Dissolved	
Total PCBs	ND(0.00012)

RFI-81-20	9/19/2001
VOC	
1,1,1-Trichloroethane	ND(0.001)
1,1-Dichloroethane	ND(0.001)
1,1-Dichloroethene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Tetrachloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.0022)
bis(2-Ethylhexyl)phthalate	ND(0.0056)
PCB	
Total PCBs	ND(0.00011)
PCB-Dissolved	
Total PCBs	ND(0.00011)

RFI-81-02	10/13/2001	6/20/2002	4/2/2003
VOC			
1,1,1-Trichloroethane	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethane	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	0.0029 J	0.001	ND(0.001)
Tetrachloroethene	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	0.0018	ND(0.001)	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	0.012 (CW,RDW)	0.0072 (CW,RDW)	0.01 (CW,RDW)
SVOC			
Benzo(a)pyrene	ND(0.0021)	NS	NS
bis(2-Ethylhexyl)phthalate	ND(0.0053)	NS	NS
PCB			
Total PCBs	ND(0.0001)	NS	NS
PCB-Dissolved			
Total PCBs	ND(0.0001)	NS	NS
Inorganic			
Arsenic	NS	0.08 (CW,RDW)	0.091 (CW,RDW)
Barium	NS	NS	0.66
Cadmium	NS	ND(0.00002)	ND(0.00002)
Chromium Total	NS	0.0015	0.0023
Cobalt	NS	0.0038	0.0031
Lead	NS	0.0014	0.01 (CW,RDW)
Manganese	NS	0.066	0.3 J
Nickel	NS	0.017	0.024
Vanadium	NS	ND(0.0008)	0.00075 J
Zinc	NS	ND(0.029 J)	0.026
Inorganic-Dissolved			
Arsenic	0.063 (CW,RDW)	0.073 (CW,RDW)	NS
Barium	0.54	0.87	NS
Cadmium	ND(0.00002)	ND(0.00002)	NS
Chromium Total	0.0015	0.0055	NS
Cobalt	0.0019	0.0032	NS
Lead	0.00058	0.00043	NS
Manganese	0.058	0.058	NS
Nickel	0.008	0.015	NS
Vanadium	ND(0.0008)	ND(0.0008)	NS
Zinc	0.026	0.02 J	NS

RFI-81-24	9/7/2001
VOC	
1,1,1-Trichloroethane	ND(0.001)
1,1-Dichloroethane	ND(0.001)
1,1-Dichloroethene	ND(0.001)
cis-1,2-Dichloroethene	0.0028
Tetrachloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)
Vinyl chloride	0.0015
SVOC	
Benzo(a)pyrene	ND(0.002)
bis(2-Ethylhexyl)phthalate	ND(0.005)
PCB	
Total PCBs	ND(0.0001)
PCB-Dissolved	
Total PCBs	ND(0.0001)
Inorganic	
Arsenic	0.02
Barium	0.18
Cadmium	0.00025
Chromium Total	0.0013
Cobalt	0.00033
Lead	ND(0.0004)
Manganese	0.029
Nickel	0.0037
Vanadium	0.012 (RDW)
Zinc	0.01 J
Inorganic-Dissolved	
Arsenic	0.02
Barium	0.18
Cadmium	ND(0.00002)
Chromium Total	0.00097
Cobalt	0.0012
Lead	ND(0.0004)
Manganese	0.14
Nickel	0.005
Vanadium	0.0082 (RDW)
Zinc	0.024 J

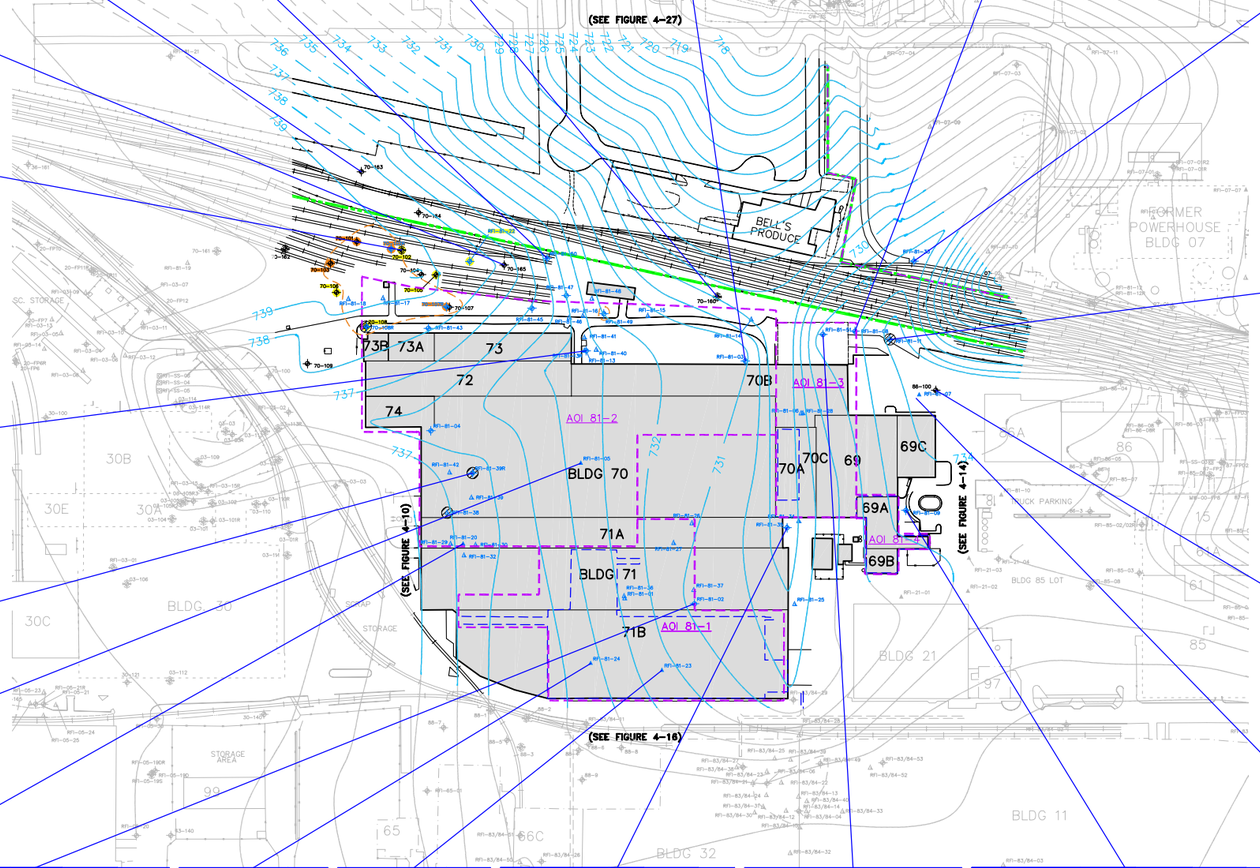
RFI-81-23	9/7/2001
VOC	
1,1,1-Trichloroethane	ND(0.001)
1,1-Dichloroethane	ND(0.001)
1,1-Dichloroethene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Tetrachloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)pyrene	ND(0.002 J)
bis(2-Ethylhexyl)phthalate	ND(0.005)
PCB	
Total PCBs	ND(0.0001)
PCB-Dissolved	
Total PCBs	ND(0.0001)
Inorganic	
Arsenic	0.039
Barium	0.48
Cadmium	ND(0.00002)
Chromium Total	0.00097
Cobalt	0.0012
Lead	ND(0.0004)
Manganese	0.14
Nickel	0.005
Vanadium	0.0082 (RDW)
Zinc	0.024 J

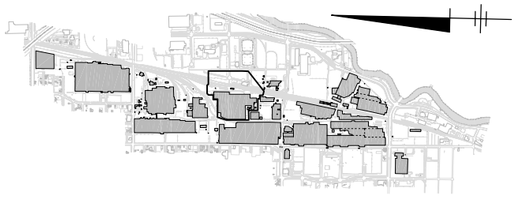
RFI-81-35	2/19/2002	6/18/2002	4/1/2003
VOC			
1,1,1-Trichloroethane	ND(0.001)	ND(0.001)	NS
1,1-Dichloroethane	ND(0.001)	ND(0.001)	NS
1,1-Dichloroethene	ND(0.001)	ND(0.001)	NS
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)	NS
Tetrachloroethene	ND(0.001)	ND(0.001)	NS
Trichloroethene	ND(0.001)	ND(0.001)	NS
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	NS
Vinyl chloride	ND(0.001)	ND(0.001)	NS
Inorganic			
Arsenic	NS	0.0096	0.0033
Barium	NS	0.083 J	0.1
Cadmium	NS	0.00013 J	ND(0.00002)
Chromium Total	NS	0.0037 J	0.0014
Cobalt	NS	0.00078	0.00031
Lead	NS	0.0061 (CW,RDW)	0.0005
Manganese	NS	0.21	0.24 J
Nickel	NS	0.0045	0.006
Vanadium	NS	0.012 (RDW)	0.0028
Zinc	NS	0.02 J	0.0085

RFI-81-51	4/4/2005
VOC	
1,1,1-Trichloroethane	ND(0.001) /ND(0.001)
1,1-Dichloroethane	0.004 /0.004
1,1-Dichloroethene	0.0006 J /0.0005 J
cis-1,2-Dichloroethene	0.162 (DW,RDW) /0.159 (DW,RDW)
Tetrachloroethene	ND(0.001) /ND(0.001)
Trichloroethene	0.0008 J /0.0008 J
Trifluorotrichloroethane (Freon 113)	ND(0.03) /ND(0.03)
Vinyl chloride	0.064 (DW,RDW) /0.065 (DW,RDW)

RFI-81-09	9/24/2001	2/22/2002	6/18/2002	4/1/2003
VOC				
1,1,1-Trichloroethane	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethane	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Tetrachloroethene	0.0059 (CW,RDW)	0.011 J (CW,RDW)	0.01 J (CW,RDW)	0.0028
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)	0.0017 J
SVOC				
Benzo(a)pyrene	ND(0.0021)	NS	NS	NS
bis(2-Ethylhexyl)phthalate	ND(0.0053)	NS	NS	NS
PCB				
Total PCBs	ND(0.00012)	NS	NS	NS
PCB-Dissolved				
Total PCBs	ND(0.00011)	NS	NS	NS
Inorganic-Dissolved				
Arsenic	0.0026 J	NS	NS	NS
Barium	0.24 J	NS	NS	NS
Cadmium	0.00021 J	NS	NS	NS
Chromium Total	ND(0.0006)	NS	NS	NS
Cobalt	0.002	NS	NS	NS
Lead	ND(0.0004)	NS	NS	NS
Manganese	0.7 J	NS	NS	NS
Nickel	0.006	NS	NS	NS
Vanadium	ND(0.0008)	NS	NS	NS
Zinc	0.008 J	NS	NS	NS

RFI-81-07	7/27/2001
VOC	
1,1,1-Trichloroethane	ND(0.001)
1,1-Dichloroethane	ND(0.001)
1,1-Dichloroethene	ND(0.001)
cis-1,2-Dichloroethene	0.0019 J
Tetrachloroethene	ND(0.001 J)
Trichloroethene	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(0.001)
Vinyl chloride	0.0017 J
SVOC	
Benzo(a)pyrene	ND(0.002)
bis(2-Ethylhexyl)phthalate	0.00637 (DW,RDW)
PCB	
Total PCBs	ND(0.0001)
PCB-Dissolved	
Total PCBs	ND(0.0001)
Inorganic-Dissolved	
Arsenic	0.0035 J
Barium	0.83
Cadmium	0.0013
Chromium Total	ND(0.0018)
Cobalt	0.0042
Lead	0.0067 (DW,RDW)
Manganese	2.6 (DW,RDW)
Nickel	0.091
Vanadium	0.016 (RDW)
Zinc	0.034





SITE LOCATION

RFI-07-10	0 – 2 (ft)	6 – 8 (ft)
VOC		
1,1-Dichloroethene	ND(0.04)	ND(0.038)
1,2-Dichloroethane	ND(0.04)	ND(0.038)
Benzene	ND(0.04)	ND(0.038)
Chloroethane	ND(0.17)	ND(0.16)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.038)
Methylene chloride	0.036 J	0.035 J
Tetrachloroethene	ND(0.04)	ND(0.038)
Trichloroethene	ND(0.04)	ND(0.038)
Vinyl chloride	ND(0.079)	ND(0.077)
SVOC		
2-Methylnaphthalene	ND(0.2)	ND(0.19)
Benzo(a)pyrene	0.0472 J	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.2)	ND(0.19)
Pentachlorophenol	ND(0.77)	ND(0.76)
Inorganic		
Arsenic	4.9	18 (RDC)
Beryllium	0.33	0.23
Lead	11 J	6.5 J
Manganese	190 J	290 J
Selenium	0.35	0.15
Vanadium	27	18

RFI-07-09	0 – 2 (ft)
VOC	
1,1-Dichloroethene	ND(0.041)
1,2-Dichloroethane	ND(0.041)
Benzene	ND(0.041)
Chloroethane	ND(0.17)
cis-1,2-Dichloroethene	ND(0.041)
Methylene chloride	ND(0.17)
Tetrachloroethene	ND(0.041)
Trichloroethene	ND(0.041)
Vinyl chloride	ND(0.041)
SVOC	
2-Methylnaphthalene	0.173 J
Benzo(a)pyrene	0.0472 J
bis(2-Ethylhexyl)phthalate	ND(0.2)
Pentachlorophenol	ND(0.79)
Inorganic	
Arsenic	4.6
Beryllium	0.51
Lead	81 J
Manganese	900 J
Selenium	0.24 J
Vanadium	21

RFI-07-04	0 – 2 (ft)	4 – 6 (ft)
VOC		
1,1-Dichloroethene	ND(0.051)	ND(0.043)
1,2-Dichloroethane	ND(0.051)	ND(0.043)
Benzene	0.2	ND(0.043)
Chloroethane	ND(0.22)	ND(0.18)
cis-1,2-Dichloroethene	ND(0.051)	ND(0.043)
Methylene chloride	ND(0.22)	ND(0.18)
Tetrachloroethene	ND(0.051)	ND(0.043)
Trichloroethene	ND(0.051)	ND(0.043)
Vinyl chloride	ND(0.051)	ND(0.043)
SVOC		
2-Methylnaphthalene	0.608	ND(0.21)
Benzo(a)pyrene	0.125 J	ND(0.21)
bis(2-Ethylhexyl)phthalate	ND(0.25)	ND(0.21)
Pentachlorophenol	ND(0.97)	ND(0.84)
Inorganic		
Arsenic	16 (RDC)	12 (RDC)
Beryllium	1.1	0.61
Lead	200 J	12 J
Manganese	390 J	510 J
Selenium	1.5	ND(0.11)
Vanadium	40	35

RFI-07-02	0.8 – 2.8 (ft)	2.8 – 4.8 (ft)
VOC		
1,1-Dichloroethene	ND(0.038)	ND(0.041)
1,2-Dichloroethane	ND(0.038)	ND(0.041)
Benzene	ND(0.038)	ND(0.041)
Chloroethane	ND(0.16)	ND(0.17)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.041)
Methylene chloride	ND(0.16)	ND(0.17)
Tetrachloroethene	ND(0.038)	ND(0.041)
Trichloroethene	ND(0.038)	ND(0.041)
Vinyl chloride	ND(0.038)	ND(0.041)
SVOC		
2-Methylnaphthalene	ND(0.18)	ND(0.2)
Benzo(a)pyrene	ND(0.18)	ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.72)	ND(0.78)
Pentachlorophenol	ND(0.72)	ND(0.78)
Inorganic		
Arsenic	5.2	2.6
Beryllium	0.2	0.46
Lead	9.7	7.6
Manganese	300 J	180 J
Selenium	0.53 J	0.49 J
Vanadium	16	18

RFI-07-03	0 – 2 (ft)
VOC	
1,1-Dichloroethene	ND(0.039)
1,2-Dichloroethane	ND(0.039)
Benzene	ND(0.039)
Chloroethane	ND(0.17)
cis-1,2-Dichloroethene	ND(0.039)
Methylene chloride	ND(0.17)
Tetrachloroethene	ND(0.039)
Trichloroethene	ND(0.039)
Vinyl chloride	ND(0.039)
SVOC	
2-Methylnaphthalene	ND(0.19)
Benzo(a)pyrene	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19)
Pentachlorophenol	ND(0.76)
Inorganic	
Arsenic	3.5
Beryllium	0.33
Lead	30 J
Manganese	160 J
Selenium	0.33 J
Vanadium	16

RFI-07-11	0 – 2 (ft)	8 – 10 (ft)	12 – 14 (ft)
VOC			
1,1-Dichloroethene	ND(0.039)	ND(0.04)	ND(0.037)
1,2-Dichloroethane	ND(0.039)	ND(0.04)	ND(0.037)
Benzene	ND(0.039)	ND(0.04)	ND(0.037)
Chloroethane	ND(0.17)	ND(0.18)	ND(0.16)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.04)	ND(0.037)
Methylene chloride	0.049 J	ND(0.04)	ND(0.037)
Tetrachloroethene	ND(0.039) J	ND(0.04)	ND(0.037)
Trichloroethene	ND(0.039)	ND(0.04)	ND(0.037)
Vinyl chloride	ND(0.078)	ND(0.08)	ND(0.074)
SVOC			
2-Methylnaphthalene	ND(0.19)	ND(0.2)	ND(0.18)
Benzo(a)pyrene	ND(0.19)	ND(0.2)	ND(0.18)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.2)	ND(0.18)
Pentachlorophenol	ND(0.76)	ND(0.77)	ND(0.72)
Inorganic			
Arsenic	6.1	5.1	6.1
Beryllium	0.35	0.48	0.39
Lead	42 J	6.8	6.8
Manganese	860 J	200 J	220 J
Selenium	0.34	ND(0.25)	ND(0.19)
Vanadium	21	27	26

RFI-07-06	0.5 – 2.5 (ft)	6.5 – 8.5 (ft)
VOC		
1,1-Dichloroethene	ND(0.036)	ND(0.04)
1,2-Dichloroethane	ND(0.036)	ND(0.04)
Benzene	ND(0.036)	ND(0.04)
Chloroethane	ND(0.15)	ND(0.17)
cis-1,2-Dichloroethene	ND(0.036)	ND(0.04)
Methylene chloride	ND(0.15)	ND(0.17)
Tetrachloroethene	0.23	0.23
Trichloroethene	ND(0.036)	ND(0.04)
Vinyl chloride	ND(0.036)	ND(0.04)
SVOC		
2-Methylnaphthalene	ND(0.18)	ND(0.2)
Benzo(a)pyrene	ND(0.18)	ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.18)	ND(0.2)
Pentachlorophenol	ND(0.69)	ND(0.77)
Inorganic		
Arsenic	3.4	3.1
Beryllium	0.14	0.14
Lead	12 J	4.1 J
Manganese	160 J	100 J
Selenium	ND(0.19)	ND(0.21)
Vanadium	8.8	9.8

RFI-07-01	0.3 – 2.3 (ft)	3.3 – 4.3 (ft)
VOC		
1,1-Dichloroethene	ND(0.041)	ND(0.04)
1,2-Dichloroethane	ND(0.041)	ND(0.04)
Benzene	ND(0.041)	ND(0.04)
Chloroethane	ND(0.18)	ND(0.18)
cis-1,2-Dichloroethene	ND(0.041)	ND(0.04)
Methylene chloride	ND(0.18)	0.035 J
Tetrachloroethene	ND(0.041)	ND(0.04)
Trichloroethene	ND(0.041)	ND(0.04)
Vinyl chloride	ND(0.082)	ND(0.08)
SVOC		
2-Methylnaphthalene	ND(0.2)	0.246
Benzo(a)pyrene	4.04 J (RDC)	0.097 J
bis(2-Ethylhexyl)phthalate	0.074 J	ND(0.2)
Pentachlorophenol	0.074 J	ND(0.2)
Inorganic		
Arsenic	4.8	6.1
Beryllium	0.29	0.35
Lead	8.1	3.2
Manganese	380 J	410 J
Selenium	ND(0.7)	ND(0.73)
Vanadium	13	20

RFI-07-08	4 – 6 (ft)
VOC	
1,1-Dichloroethene	ND(0.041)
1,2-Dichloroethane	ND(0.041)
Benzene	ND(0.041)
Chloroethane	ND(0.18)
cis-1,2-Dichloroethene	0.1 J
Methylene chloride	ND(0.18)
Tetrachloroethene	ND(0.041)
Trichloroethene	ND(0.041)
Vinyl chloride	ND(0.082)
SVOC	
2-Methylnaphthalene	0.246
Benzo(a)pyrene	4.04 J (RDC)
bis(2-Ethylhexyl)phthalate	0.965 J
Pentachlorophenol	ND(0.79)
Inorganic	
Arsenic	8.4 (RDC)
Beryllium	0.59 J
Lead	5.1 J
Manganese	290
Selenium	ND(0.63)
Vanadium	48

RFI-07-07	0.5 – 2.5 (ft)	8.5 – 10.5 (ft)	14.5 – 16.5 (ft)
VOC			
1,1-Dichloroethene	ND(0.038)	ND(0.038)	ND(0.046)
1,2-Dichloroethane	ND(0.038)	ND(0.038)	ND(0.046)
Benzene	ND(0.038)	ND(0.038)	ND(0.046)
Chloroethane	ND(0.16)	ND(0.16)	ND(0.19)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.038)	ND(0.046)
Methylene chloride	ND(0.16)	ND(0.16)	ND(0.23)
Tetrachloroethene	ND(0.038)	ND(0.038)	ND(0.046)
Trichloroethene	ND(0.038)	ND(0.038)	ND(0.046)
Vinyl chloride	ND(0.038)	ND(0.038)	ND(0.046)
SVOC			
2-Methylnaphthalene	ND(0.19)	ND(0.18)	ND(0.22)
Benzo(a)pyrene	ND(0.19)	ND(0.18)	ND(0.22)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.18)	ND(0.22)
Pentachlorophenol	ND(0.73)	ND(0.71)	ND(0.86)
Inorganic			
Arsenic	4.1	28 (RDC)	4.4
Beryllium	0.19	0.11	0.14
Lead	5.1 J	3.3 J	4 J
Manganese	220 J	170	110 J
Selenium	ND(0.3)	ND(0.065)	ND(0.35)
Vanadium	14	7.2	8.8

RFI-86-03	2 – 4 (ft)	4 – 6 (ft)
VOC		
1,1-Dichloroethene	ND(0.043)	ND(0.042)
1,2-Dichloroethane	ND(0.043)	ND(0.042)
Benzene	ND(0.043)	ND(0.042)
Chloroethane	ND(0.18)	ND(0.18)
cis-1,2-Dichloroethene	ND(0.043)	ND(0.042)
Methylene chloride	ND(0.18)	ND(0.18)
Tetrachloroethene	0.06	0.055
Trichloroethene	0.2 J	0.15
Vinyl chloride	ND(0.043)	ND(0.042)
SVOC		
2-Methylnaphthalene	ND(0.21)	ND(0.2)
Benzo(a)pyrene	ND(0.21)	ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.21)	ND(0.2)
Pentachlorophenol	ND(0.82)	ND(0.8)
Inorganic		
Arsenic	9.8 (RDC)	34 (RDC)
Beryllium	0.98	0.14
Lead	14 J	4.7 J
Manganese	400	130
Selenium	0.19 J	0.28 J
Vanadium	48	13

RFI-86-04	1 – 3 (ft)	3 – 5 (ft)
VOC		
1,1-Dichloroethene	ND(0.04)	ND(0.04)
1,2-Dichloroethane	ND(0.04 J)	ND(0.04)
Benzene	ND(0.04)	ND(0.04)
Chloroethane	ND(0.17)	ND(0.17)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.04)
Methylene chloride	ND(0.17 J)	ND(0.17 J)
Tetrachloroethene	ND(0.04)	ND(0.04)
Trichloroethene	ND(0.04)	ND(0.04)
Vinyl chloride	ND(0.08)	ND(0.08)
SVOC		
2-Methylnaphthalene	ND(0.19)	ND(0.19)
Benzo(a)pyrene	0.177 J	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19 J)	ND(0.19)
Pentachlorophenol	ND(0.75)	ND(0.76)
Inorganic		
Arsenic	4.5	4.5
Beryllium	0.29	0.15
Lead	630 J (RDC)	460 J (RDC)
Manganese	270 J	280 J
Selenium	ND(0.63 J)	ND(0.33 J)
Vanadium	15	9.3

RFI-86-05	1 – 3 (ft)	3 – 5 (ft)	5 – 7 (ft)
VOC			
1,1-Dichloroethene	ND(0.038)	ND(0.038)	ND(0.041)
1,2-Dichloroethane	ND(0.038)	ND(0.038)	ND(0.041)
Benzene	ND(0.038)	ND(0.038)	ND(0.041)
Chloroethane	ND(0.16)	ND(0.16)	ND(0.17)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.038)	ND(0.041)
Methylene chloride	ND(0.16)	ND(0.16)	0.15 J
Tetrachloroethene	0.077	0.18	0.054
Trichloroethene	0.081	ND(0.043)	0.28
Vinyl chloride	ND(0.038)	ND(0.038)	ND(0.041)
SVOC			
2-Methylnaphthalene	ND(0.19)	ND(0.18)	ND(0.19)
Benzo(a)pyrene	ND(0.19)	ND(0.18)	ND(0.19)
bis(2-Ethylhexyl)phthalate	0.474 J	ND(0.18)	0.217 J
Pentachlorophenol	ND(0.75)	ND(0.71)	ND(0.77)
Inorganic			
Arsenic	5.8	3.3	4
Beryllium	0.4	0.29	0.36
Lead	27 J	7.6 J	10 J
Manganese	1000 J	490 J	310 J
Selenium	0.66	0.23 J	0.26 J
Vanadium	16	11	15

RFI-86-02	1 – 3 (ft)	7 – 9 (ft)
VOC		
1,1-Dichloroethene	ND(0.038)	ND(0.037) /ND(0.037)
1,2-Dichloroethane	ND(0.038)	ND(0.037) /ND(0.037)
Benzene	ND(0.038)	ND(0.037) /ND(0.037)
Chloroethane	ND(0.17)	ND(0.16 J) /ND(0.16)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.037) /ND(0.037)
Methylene chloride	ND(0.17 J)	ND(0.16) /ND(0.16)
Tetrachloroethene	ND(0.038)	ND(0.037) /ND(0.037)
Trichloroethene	ND(0.038)	ND(0.037) /ND(0.037)
Vinyl chloride	ND(0.038)	ND(0.037) /ND(0.037)
SVOC		
2-Methylnaphthalene	ND(0.19)	ND(0.19) /ND(0.18)
Benzo(a)pyrene	ND(0.19)	ND(0.19) /ND(0.9 J) /ND(0.89 J)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.19) /ND(0.89 J) /ND(0.88 J)
Pentachlorophenol	ND(0.74)	ND(0.74) /ND(0.5 J) /ND(0.5 J)
Inorganic		
Arsenic	2.7	3.5 /2.9
Beryllium	0.13 J	0.095 J /0.088 J
Lead	2.2	6 /3.4
Manganese	80 J	120 J /85 J
Selenium	0.41 J	0.33 J /0.32 J
Vanadium	10	12 /8.6

RFI-86-01	0.5 – 2.5 (ft)	4.5 – 6.5 (ft)	8.5 – 10.5 (ft)
VOC			
1,1-Dichloroethene	ND(0.038)	ND(0.037)	ND(0.04) /ND(0.04)
1,2-Dichloroethane	ND(0.038)	ND(0.037 J)	ND(0.04 J) /ND(0.04 J)
Benzene	0.1	ND(0.037)	ND(0.04) /ND(0.04)
Chloroethane	ND(0.16)	ND(0.16)	ND(0.17) /ND(0.17)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.037)	ND(0.04 J) /ND(0.04 J)
Methylene chloride	ND(0.16)	ND(0.16)	ND(0.17) /ND(0.17)
Tetrachloroethene	0.011 J	ND(0.037 J)	ND(0.04 J) /ND(0.04 J)
Trichloroethene	ND(0.038)	ND(0.037)	ND(0.04) /ND(0.04)
Vinyl chloride	ND(0.038)	ND(0.037)	ND(0.04) /ND(0.04)
SVOC			
2-Methylnaphthalene	0.658	ND(0.18)	ND(0.19) /ND(0.19)
Benzo(a)pyrene	3.85 J (RDC)	0.733	ND(0.19) /ND(0.19)
bis(2-Ethylhexyl)phthalate	0.109 J	ND(0.18)	ND(0.19) /ND(0.19)
Pentachlorophenol	ND(0.74)	ND(0.72)	ND(0.77) /ND(0.76)
Inorganic			
Arsenic	12 J (RDC)	7.4 J	3.3 J /3 J
Beryllium	0.68 J	0.19 J	1.6 J /1.1 J
Lead	110 J	7.7 J	2.4 J /2.9 J
Manganese	380 J	230 J	3200 J (IPSIC) /1100 J
Selenium	0.89 J	ND(1.6)	ND(1.8) /ND(1.6)
Vanadium	15	14	13 /5.7

RFI-86-14	0.5 – 2.5 (ft)	4.5 – 6.5 (ft)
VOC		
1,1-Dichloroethene	ND(0.037)	ND(0.041)
1,2-Dichloroethane	ND(0.037)	ND(0.041)
Benzene	ND(0.037)	ND(0.041)
Chloroethane	ND(0.16)	ND(0.18)
cis-1,2-Dichloroethene	ND(0.037)	ND(0.041)
Methylene chloride	0.056 J	0.059 J
Tetrachloroethene	ND(0.037)	ND(0.041)
Trichloroethene	ND(0.037)	ND(0.041)
Vinyl chloride	ND(0.037)	ND(0.041)
SVOC		
2-Methylnaphthalene	ND(0.18)	ND(0.2)
Benzo(a)pyrene	ND(0.18)	ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.18)	ND(0.2)
Pentachlorophenol	ND(0.71)	ND(0.79)
Inorganic		
Arsenic	2.4	6.7 D
Beryllium	0.22 J	1.2 D
Lead	4	10 D
Manganese	100	480 D
Selenium	0.34 J	ND(0.38 D)
Vanadium	8	38 D

RFI-07-05	1 – 3 (ft)	5 – 7 (ft)	9 – 11 (ft)
VOC			
1,1-Dichloroethene	ND(0.036)	ND(0.039) /ND(0.04)	ND(0.038)
1,2-Dichloroethane	ND(0.036)	ND(0.039) /ND(0.04)	ND(0.038)
Benzene	ND(0.036)	ND(0.039) /ND(0.04)	ND(0.038)
Chloroethane	ND(0.15)	ND(0.17) /ND(0.17)	ND(0.16)
cis-1,2-Dichloroethene	ND(0.036)	ND(0.039) /ND(0.04)	ND(0.038)
Methylene chloride	ND(0.15)	ND(0.17) /ND(0.17)	ND(0.16)
Tetrachloroethene	ND(0.036)	ND(0.039) /ND(0.04)	ND(0.038)
Trichloroethene	ND(0.036)	ND(0.039) /ND(0.04)	ND(0.038)
Vinyl chloride	ND(0.036)	ND(0.039) /ND(0.04)	ND(0.038)
SVOC			
2-Methylnaphthalene	ND(0.18)	ND(0.19) /ND(0.19)	ND(0.19)
Benzo(a)pyrene	0.0377 J	ND(0.19) /ND(0.19)	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.18)	ND(0.19) /ND(0.19)	ND(0.19)
Pentachlorophenol	ND(0.7)	ND(0.75) /ND(0.76)	ND(0.73)
Inorganic			
Arsenic	5.7	2.3 /2.8	2.7
Beryllium	0.18 J	0.17 J /0.24 J	0.14 J
Lead	14 J	5.2 J /8.1 J	4.4 J
Manganese	290 J	110 J /150 J	150 J
Selenium	0.44 J	0.2 J /0.15 J	0.35 J
Vanadium	12	12 /15	10

RFI-86-16	0.8 – 2.8 (ft)	7.8 – 9.8 (ft)	9.8 – 11.8 (ft)
VOC			
1,1-Dichloroethene	ND(0.036)	ND(0.043)	ND(0.047)
1,2-Dichloroethane	ND(0.036 J)	ND(0.043 J)	ND(0.047 J)
Benzene	ND(0.036)	ND(0.043)	ND(0.047)
Chloroethane	ND(0.15)	ND(0.19)	ND(0.19)
cis-1,2-Dichloroethene	ND(0.036)	ND(0.043)	ND(0.047)
Methylene chloride	ND(0.15)	1.1	ND(0.19)
Tetrachloroethene	ND(0.036)	ND(0.043)	ND(0.047)
Trichloroethene	ND(0.036)	ND(0.043)	ND(0.047)
Vinyl chloride	ND(0.072)	ND(0.087)	ND(0.093)
SVOC			
2-Methylnaphthalene	ND(0.18)	ND(0.21)	ND(0.23)
Benzo(a)pyrene	ND(0.18)	ND(0.21)	ND(0.23)
bis(2-Ethylhexyl)phthalate	ND(0.18)	ND(0.21)	ND(0.23)
Pentachlorophenol	R	ND(0.84)	ND(0.89)
Inorganic			
Arsenic	3.9	6.2	7.9 (RDC)
Beryllium	0.13 J	0.56 J	0.69 J
Lead	9.5	12	14
Manganese	150	340	410
Selenium	0.23 J	0.26	0.23
Vanadium	12	35	42

RFI-86-15	0.3 – 2.3 (ft)
VOC	
1,1-Dichloroethene	ND(0.039)
1,2-Dichloroethane	ND(0.039)
Benzene	ND(0.039)
Chloroethane	ND(0.17)
cis-1,2-Dichloroethene	ND(0.039)
Methylene chloride	0.031 J
Tetrachloroethene	ND(0.039)
Trichloroethene	ND(0.039)
Vinyl chloride	ND(0.039)
SVOC	
2-Methylnaphthalene	ND(0.19)
Benzo(a)pyrene	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19)
Pentachlorophenol	ND(0.74)
Inorganic	
Arsenic	3.3
Beryllium	0.25
Lead	9.4
Manganese	130
Selenium	0.34 J
Vanadium	10

RFI-86-06D	2 – 4 (ft)	6 – 8 (ft)
VOC		
1,1-Dichloroethene	ND(0.042)	ND(0.052)
1,2-Dichloroethane	ND(0.042)	ND(0.052)
Benzene	ND(0.042)	ND(0.052)
Chloroethane	ND(0.18)	ND(0.22)
cis-1,2-Dichloroethene	ND(0.042)	ND(0.052)
Methylene chloride	ND(0.18)	ND(0.22)
Tetrachloroethene	ND(0.042)	ND(0.052)
Trichloroethene	ND(0.042)	0.073
Vinyl chloride	ND(0.042)	ND(0.052)
SVOC		
2-Methylnaphthalene	ND(0.2)	ND(0.26)
Benzo(a)pyrene	0.0570 J	0.074 J
bis(2-Ethylhexyl)phthalate	ND(0.2)	ND(0.26)
Pentachlorophenol	ND(0.78)	ND(1)
Inorganic		
Arsenic	4.8	13 (RDC)
Beryllium	0.56 J	0.72 J
Lead	110 J	260 J
Manganese	210 J	350 J
Selenium	0.36 J	1.1 J
Vanadium	16	29

RFI-86-10	6.5 – 8.5 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Lead	NS
Manganese	320
Selenium	NS
Vanadium	NS

RFI-86-13	0.8 – 2.8 (ft)	2.8 – 4.8 (ft)
Inorganic		
Arsenic	11 (RDC)	6.2
Beryllium	NS	NS
Lead	NS	NS
Manganese	NS	NS
Selenium	NS	NS
Vanadium	NS	NS

RFI-86-17	1 – 3 (ft)
Inorganic	
Arsenic	190 J (DC,RDC)
Beryllium	NS
Lead	NS
Manganese	NS
Selenium	NS
Vanadium	NS

RFI-86-11	0.7 – 2.7 (ft)	2.7 – 4.7 (ft)
Inorganic		
Arsenic	35 (RDC)	8.5 (RDC)
Beryllium	NS	NS
Lead	NS	NS
Manganese	NS	NS
Selenium	NS	NS
Vanadium	NS	NS

RFI-86-12	0.8 – 2.8 (ft)	2.8 – 4.8 (ft)
Inorganic		
Arsenic	56 (DC,RDC)	4.7
Beryllium	NS	NS
Lead	NS	NS
Manganese	NS	NS
Selenium	NS	NS
Vanadium	NS	NS

RFI-86-18	1 – 3 (ft)
Inorganic	
Arsenic	19 J (RDC)
Beryllium	NS
Lead	NS
Manganese	NS
Selenium	NS
Vanadium	NS

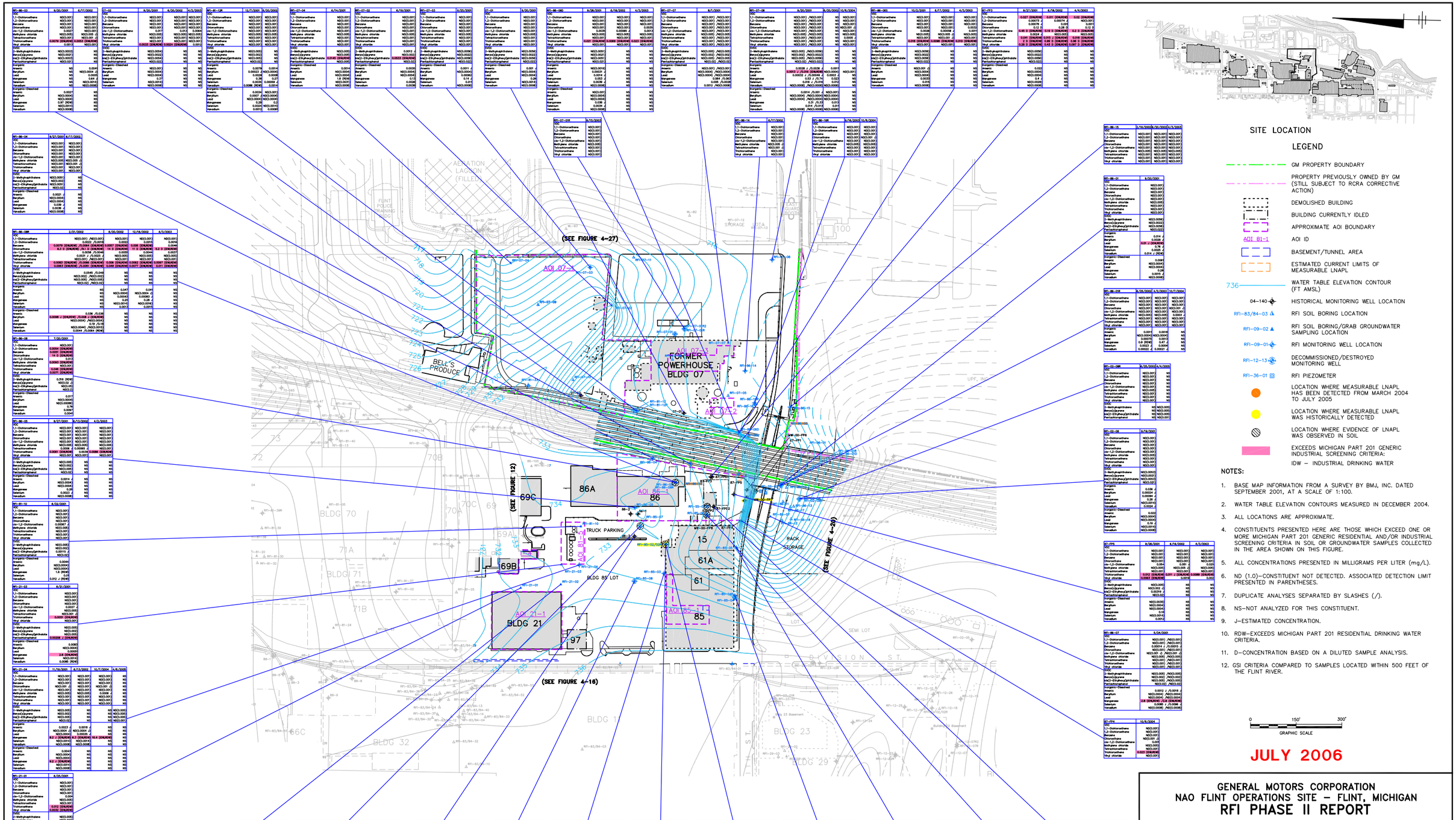
RFI-86-08	0.6 – 2.6 (ft)	6.6 – 10.6 (ft)	10.6 – 12.6 (ft)
VOC			
1,1-Dichloroethene	ND(0.038)	ND(0.045)	ND(0.044)
1,2-Dichloroethane	ND(0.038)	ND(0.045)	ND(0.044)
Benzene	0.08	ND(0.045)	ND(0.044)
Chloroethane	ND(0.16)	ND(0.19)	0.18 J
cis-1,2-Dichloroethene	ND(0.038)	0.097	ND(0.044)
Methylene chloride	ND(0.16)	ND(0.19)	ND(0.19)
Tetrachloroethene	0.11 J	ND(0.045)	ND(0.044)
Trichloroethene	5.5 D	3.3	ND(0.044)
Vinyl chloride	ND(0.038)	ND(0.045)	ND(0.044)
SVOC			
2-Methylnaphthalene	0.131 J	ND(0.22)	ND(0.21)
Benzo(a)pyrene	1.7	ND(0.22)	ND(0.21)
bis(2-Ethylhexyl)phthalate	0.151 J	ND(0.22)	ND(0.21)
Pentachlorophenol	ND(0.74)	ND(0.85)	ND(0.83)
Inorganic			
Arsenic	8.4 (RDC)	12 (RDC)	9.5 (RDC)
Beryllium	0.87	1.3	0.66
Lead	170 J	99 J	14 J
Manganese	370 J	820 J	410 J
Selenium	0.65	ND(0.47)	0.66
Vanadium	18	25	38

RFI-85-07	0.5 – 2.5 (ft)	8 – 10 (ft)	11 – 13 (ft)
VOC			
1,1-Dichloroethene	ND(0.039)	ND(0.043)	ND(0.042)
1,2-Dichloroethane	ND(0.039)	ND(0.043)	ND(0.042)
Benzene	0.042	ND(0.043)	ND(0.042)
Chloroethane	ND(0.17 J)	ND(0.19 J)	ND(0.18)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.043)	ND(0.042)
Methylene chloride	ND(0.17)	ND(0.19)	ND(0.18)
Tetrachloroethene	ND(0.039 J)	ND(0.043 J)	ND(0.042)
Trichloroethene	ND(0.039)	ND(0.043)	ND(0.042)
Vinyl chloride	ND(0.039)	ND(0.043)	ND(0.042)
SVOC			
2-Methylnaphthalene	0.124 J	ND(0.21)	0.83 J
Benzo(a)pyrene	0.0472 J	ND(0.21)	ND(0.21)
bis(2-Ethylhexyl)phthalate	ND(0.19 J)	ND(0.21)	ND(0.21)
Pentachlorophenol	ND(0.75)	ND(0.82)	ND(0.81)
Inorganic			
Arsenic	8.7 (RDC)	5.2	7.2
Beryllium	0.6	0.43	0.55
Lead	66	16	12
Manganese	140	340	490
Selenium	0.23	0.25 J	ND(0.087)
Vanadium	17	20	31

RFI-85-06	0.7 – 2.7 (ft)	8.7 – 10.7 (ft)	10.7 – 12.7 (ft)
VOC			
1,1-Dichloroethene	ND(0.037)	ND(0.041)	ND(0.037)
1,2-Dichloroethane	ND(0.037 J)	ND(0.041 J)	ND(0.037 J)
Benzene	ND(0.037)	ND(0.041)	ND(0.037)
Chloroethane	ND(0.16)	ND(0.18)	ND(0.16)
cis-1,2-Dichloroethene	ND(0.037)	ND(0.041)	ND(0.037)
Methylene chloride	ND(0.16 J)	ND(0.18 J)	ND(0.16 J)
Tetrachloroethene	ND(0.037)	ND(0.041)	2.2
Trichloroethene	ND(0.037)	ND(0.041)	2.8
Vinyl chloride	ND(0.037)	ND(0.041)	ND(0.037)
SVOC			
2-Methylnaphthalene	ND(0.18)	ND(0.2)	ND(0.18)
Benzo(a)pyrene	0.0343 J	ND(0.2)	ND(0.18)
bis(2-Ethylhexyl)phthalate	ND(0.18)	ND(0.2)	ND(0.18)
Pentachlorophenol	ND(0.73)	ND(0.77)	ND(0.72)
Inorganic			
Arsenic	3.2	3.1	3.3
Beryllium	0.18 J	0.18 J	0.095 J
Lead	5.8	5	3.7
Manganese	130 J	87 J	100 J
Selenium	0.2 J	0.19 J	0.17 J
Vanadium	10	9.8	6.9

RFI-85-02	3.3 – 3.3 (ft)	7.3 – 9.3 (ft)	9.3 – 11.3 (ft)
VOC			
1,1-Dichloroethene	ND(0.038)	ND(0.043)	ND(0.038)
1,2-Dichloroethane	ND(0.038 J)	ND(0.043 J)	ND(0.038 J)
Benzene	ND(0.038)	ND(0.043)	ND(0.038)
Chloroethane	ND(0.16)	ND(0.18)	ND(0.16)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.043)	ND(0.038)
Methylene chloride	ND(0.16 J)	ND(0.18 J)	ND(0.16 J)
Tetrachloroethene	ND(0.038)	ND(0.043)	ND(0.038)
Trichloroethene	0.081	ND(0.043)	0.28
Vinyl chloride	ND(0.038)	ND(0.043)	ND(0.038)
SVOC			
2-Methylnaphthalene	ND(0.18)	ND(0.21)	ND(0.18)
Benzo(a)pyrene	0.0339 J	ND(0.21)	ND(0.18)
bis(2-Ethylhexyl)phthalate	0.182	ND(0.21)	ND(0.18)
Pentachlorophenol	ND(0.71)	ND(0.83)	ND(0.71)
Inorganic			
Arsenic	2.5	4.7	2.8
Beryllium	0.21 J	0.56 J	0.28 J
Lead	6.3	8.3	2.8
Manganese	120 J	150 J	68 J
Selenium	0.16 J	0.18 J	0.094 J
Vanadium	9.2	29	6.8

RFI-85-08	0.5 – 2.5 (ft)	6.5 – 8.5 (ft)
VOC		
1,1-Dichloroethene	ND(0.037 J)	ND(0.04 J)
1,2-Dichloroethane	ND(0.037 J)	ND(0.04 J)
Benzene	ND(0.037 J)	ND(0.04 J)
Chloroethane	ND(0.16 J)	ND(0.17 J)
cis-1,2-Dichloroethene	ND(0.037 J)	ND(0.04 J)
Methylene chloride	0.07 J	0.09 J
Tetrachloroethene	ND(0.037 J



SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL)
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA: IDW – INDUSTRIAL DRINKING WATER

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED IN DECEMBER 2004.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)—CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS—NOT ANALYZED FOR THIS CONSTITUENT.
9. J—ESTIMATED CONCENTRATION.
10. RDW—EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
11. D—CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
12. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.

0 150' 300'
GRAPHIC SCALE

JULY 2006

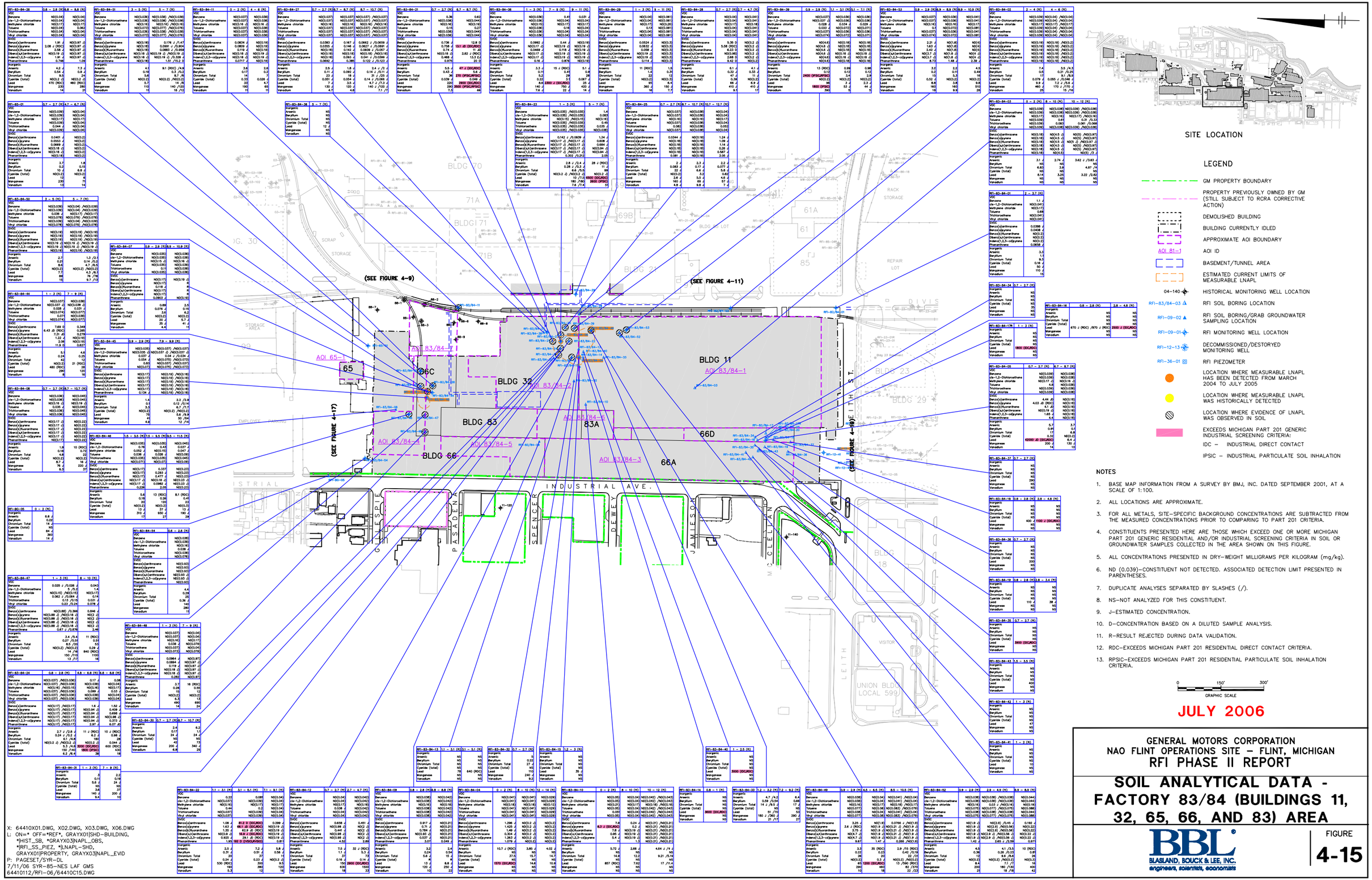
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - BUILDINGS 07, 21, 85 AND 86 AREA

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 4-14

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG, X24.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD—BUILDING,
*|HIST_SB, *GRAYX03|NAPL_OBS,
*|RFI_SS_PIEZ, *|LNAPL-SHD,
GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
6/4/07 SYR-85-NES LAF GMS
64410112/RFI-06/64410C14.DWG



RFI–83–84–26	0.8 – 2.8 (ft)	2.8 – 4.8 (ft)
VOC		
Benzene	ND(0.04)	ND(0.04)
cis–1,2–Dichloroethene	ND(0.04)	ND(0.04)
Methylene chloride	ND(0.17)	ND(0.17)
Toluene	ND(0.04)	0.062
Trichloroethene	ND(0.04)	ND(0.04)
Vinyl chloride	ND(0.04)	ND(0.04)
SVOC		
Benzo(a)anthracene	1.91 J	ND(0.97 J)
Benzo(a)pyrene	2.08 J (RDC)	0.0991 J (RDC)
Benzo(b)fluoranthene	2.58 J	ND(0.97 J)
Dibenz(a,h)anthracene	ND(0.18 J)	ND(0.19 J)
Indeno(1,2,3–cd)pyrene	1.91 J	ND(0.97 J)
Phenanthrene	0.746 J	1.09 J
Inorganic		
Arsenic	4.2 J	7.3 J
Beryllium	0.54 J	0.8 J
Chromium Total	23	34
Cyanide (total)	ND(0.2 J)	ND(0.2 J)
Lead	470 (RDC)	460 (RDC)
Manganese	210	280
Vanadium	14	21

RFI–83–84–51	3 – 5 (ft)	5 – 7 (ft)
VOC		
Benzene	ND(0.036)	ND(0.038) / ND(0.038)
cis–1,2–Dichloroethene	ND(0.036)	ND(0.038) / ND(0.038)
Methylene chloride	ND(0.16)	ND(0.16) / ND(0.16)
Toluene	ND(0.036)	ND(0.077) / ND(0.076)
Trichloroethene	ND(0.036)	ND(0.038) / ND(0.038)
Vinyl chloride	ND(0.036)	ND(0.077) / ND(0.076)
SVOC		
Benzo(a)anthracene	ND(0.18)	0.176 J / 1.47
Benzo(a)pyrene	ND(0.18)	0.0991 J / 0.904
Benzo(b)fluoranthene	ND(0.18)	0.0883 J / 0.959
Dibenz(a,h)anthracene	ND(0.19 J)	ND(0.19 J) / 0.328 J
Indeno(1,2,3–cd)pyrene	ND(0.18 J)	ND(0.19 J) / 0.328 J
Phenanthrene	ND(0.18)	1.59 / 15.2 D
Inorganic		
Arsenic	4.1	9.1 (RDC) / 4.9
Beryllium	0.19	0.3 / 0.3
Chromium Total	5.6	11 / 8.2
Cyanide (total)	ND(0.2)	ND(0.2) / ND(0.2)
Lead	11	14 / 26
Manganese	110	180 / 170
Vanadium	11	18 / 12

RFI–83–84–11	0 – 2 (ft)	4 – 6 (ft)
VOC		
Benzene	ND(0.037)	ND(0.038)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.038)
Methylene chloride	ND(0.16 J)	ND(0.16 J)
Toluene	ND(0.037)	ND(0.038)
Trichloroethene	ND(0.037)	ND(0.038)
Vinyl chloride	ND(0.037)	ND(0.038)
SVOC		
Benzo(a)anthracene	0.0834 J	ND(0.19)
Benzo(a)pyrene	0.0859 J	ND(0.19)
Benzo(b)fluoranthene	0.119 J	ND(0.19)
Dibenz(a,h)anthracene	ND(0.19 J)	ND(0.19 J)
Indeno(1,2,3–cd)pyrene	ND(0.18 J)	ND(0.19 J)
Phenanthrene	0.0717 J	ND(0.19)
Inorganic		
Arsenic	3.8	2.8
Beryllium	0.17	0.2
Chromium Total	14	11
Cyanide (total)	0.33	0.226 J
Lead	330	43
Manganese	180	160
Vanadium	11	9.1

RFI–83–84–27	0.7 – 2.7 (ft)	2.7 – 4.7 (ft)	4.7 – 10.7 (ft)
VOC			
Benzene	ND(0.037)	ND(0.037)	ND(0.037) / ND(0.037)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.037)	ND(0.037) / ND(0.037)
Methylene chloride	ND(0.16)	ND(0.16)	ND(0.16) / ND(0.16)
Toluene	ND(0.037)	ND(0.037)	ND(0.037) / ND(0.037)
Trichloroethene	ND(0.037)	ND(0.037)	ND(0.037) / ND(0.037)
Vinyl chloride	ND(0.037)	ND(0.037)	ND(0.037) / ND(0.037)
SVOC			
Benzo(a)anthracene	0.0363 J	0.167	0.0662 J / 0.0659 J
Benzo(a)pyrene	0.0310 J	0.148	0.0627 J / 0.0591 J
Benzo(b)fluoranthene	ND(0.18)	0.142	0.0609 J / 0.057 J
Dibenz(a,h)anthracene	ND(0.18)	ND(0.18)	ND(0.18) / ND(0.18)
Indeno(1,2,3–cd)pyrene	ND(0.18)	0.093	0.041 J / 0.0399 J
Phenanthrene	0.0892 J	0.385	0.122 J / 0.123 J
Inorganic			
Arsenic	2.5	1.8	2.4 J / 2 J
Beryllium	0.11 J	0.092 J	0.14 J / 0.11 J
Chromium Total	22	19	31 J / 25 J
Cyanide (total)	0.091 J	0.054 J	0.14 J / 0.068 J
Lead	53	34	47 J / 31 J
Manganese	152	122	140 J / 120 J
Vanadium	7.3	4.8	7.1 J / 7 J

RFI–83–84–21	0.7 – 2.7 (ft)	6.7 – 8.7 (ft)
VOC		
Benzene	0.36	0.62
cis–1,2–Dichloroethene	ND(0.038)	ND(0.044)
Methylene chloride	ND(0.16)	ND(0.18)
Toluene	0.15	0.27
Trichloroethene	ND(0.038)	ND(0.044)
Vinyl chloride	ND(0.038)	ND(0.044)
SVOC		
Benzo(a)anthracene	0.736 J	12.8 D
Benzo(a)pyrene	0.758 J	13.1 J (DC (DC(RDC)
Benzo(b)fluoranthene	0.74 J	11 J
Dibenz(a,h)anthracene	0.178 J	2.62 J (RDC)
Indeno(1,2,3–cd)pyrene	0.469 J	13.3 J
Phenanthrene	0.876 J	20 D
Inorganic		
Arsenic	5.5 J	47 J (DC(RDC)
Beryllium	0.43 J	5.6 J
Chromium Total	30	270 (IPSIC/IPSIC)
Cyanide (total)	0.038 J	0.049 J
Lead	230	2900 (DC(RDC)
Manganese	220	1600 (IPSIC)
Vanadium	7.5	66

RFI–83–84–06	1 – 3 (ft)	7 – 9 (ft)	9 – 11 (ft)
VOC			
Benzene	ND(0.036)	0.41	0.031 J
cis–1,2–Dichloroethene	ND(0.036)	ND(0.04)	ND(0.04)
Methylene chloride	ND(0.15)	ND(0.17)	ND(0.17)
Toluene	ND(0.036)	0.18	ND(0.04)
Trichloroethene	ND(0.036)	ND(0.04)	ND(0.04)
Vinyl chloride	ND(0.036)	ND(0.04)	ND(0.04)
SVOC			
Benzo(a)anthracene	0.0992 J	0.44 J	ND(0.19)
Benzo(a)pyrene	0.0737 J	ND(0.19 J)	ND(0.19 J)
Benzo(b)fluoranthene	0.0469 J	0.118 J	ND(0.19 J)
Dibenz(a,h)anthracene	ND(0.19 J)	ND(0.19 J)	ND(0.19 J)
Indeno(1,2,3–cd)pyrene	ND(0.17 J)	ND(0.19 J)	ND(0.19 J)
Phenanthrene	0.16 J	0.873	ND(0.19)
Inorganic			
Arsenic	3.3 J	15 J (RDC)	5.1 J
Beryllium	0.11 J	0.45 J	0.16 J
Chromium Total	9.2	39 J	13 J
Cyanide (total)	0.22 J	2300 J (DC(RDC)	0.067 J
Lead	4.8 J	750 J	45 J
Manganese	180 J	1400 J	160 J
Vanadium	7.6 J	22 J	14 J

RFI–83–84–29	1 – 3 (ft)	9 – 11 (ft)
VOC		
Benzene	ND(0.04)	ND(0.041)
cis–1,2–Dichloroethene	ND(0.04)	ND(0.041)
Methylene chloride	ND(0.17)	ND(0.28)
Toluene	0.13	ND(0.041)
Trichloroethene	ND(0.04)	ND(0.041)
Vinyl chloride	ND(0.04)	ND(0.041)
SVOC		
Benzo(a)anthracene	0.0524 J	ND(0.2 J)
Benzo(a)pyrene	0.0432 J	ND(0.2 J)
Benzo(b)fluoranthene	0.058 J	ND(0.2 J)
Dibenz(a,h)anthracene	ND(0.19 J)	ND(0.2 J)
Indeno(1,2,3–cd)pyrene	ND(0.19 J)	ND(0.2 J)
Phenanthrene	0.116 J	ND(0.2 J)
Inorganic		
Arsenic	11 (RDC)	1.5
Beryllium	1.4	0.31
Chromium Total	43	11
Cyanide (total)	ND(0.2)	ND(0.3)
Lead	360	19
Manganese	410	110
Vanadium	16	7.7

RFI–83–84–28	0.7 – 2.7 (ft)	2.7 – 4.7 (ft)
VOC		
Benzene	0.43	ND(0.041)
cis–1,2–Dichloroethene	ND(0.04)	ND(0.041)
Methylene chloride	ND(0.17)	ND(0.18)
Toluene	0.33 J	ND(0.041)
Trichloroethene	ND(0.04)	ND(0.041)
Vinyl chloride	ND(0.04)	ND(0.041)
SVOC		
Benzo(a)anthracene	5.35 D	ND(0.2 J)
Benzo(a)pyrene	5.58 (RDC) D	ND(0.2 J)
Benzo(b)fluoranthene	6.23 D	ND(0.2 J)
Dibenz(a,h)anthracene	0.668 J	ND(0.2 J)
Indeno(1,2,3–cd)pyrene	2.68 D	ND(0.2 J)
Phenanthrene	5.42 D	ND(0.2 J)
Inorganic		
Arsenic	6.1 J	4.1 J
Beryllium	0.32 J	0.33 J
Chromium Total	47 J	34 J
Cyanide (total)	0.38 J	ND(0.2 J)
Lead	410 J	4.9 J
Manganese	410 J	410 J
Vanadium	3.5	17

RFI–83–84–39	0.9 – 2.9 (ft)	3.1 – 5.1 (ft)	5.1 – 7.1 (ft)
VOC			
Benzene	ND(0.037)	ND(0.038)	ND(0.036)
cis–1,2–Dichloroethene	ND(0.037 J)	ND(0.038)	ND(0.036)
Methylene chloride	0.028 J	0.034 J	0.029 J
Toluene	0.033 J	ND(0.072)	ND(0.071)
Trichloroethene	ND(0.037)	ND(0.038)	ND(0.036)
Vinyl chloride	ND(0.037)	ND(0.038)	ND(0.036)
SVOC			
Benzo(a)anthracene	ND(4.6)	ND(0.18)	ND(0.18)
Benzo(a)pyrene	ND(4.6 J)	ND(0.18)	ND(0.18)
Benzo(b)fluoranthene	ND(4.6 J)	ND(0.18)	ND(0.18)
Dibenz(a,h)anthracene	ND(4.6 J)	ND(0.18 J)	ND(0.18 J)
Indeno(1,2,3–cd)pyrene	ND(4.6)	ND(0.18 J)	ND(0.18 J)
Phenanthrene	ND(4.6)	ND(0.18)	ND(0.18)
Inorganic			
Arsenic	13 (RDC)	0.99	0.98
Beryllium	0.72	0.12	0.12
Chromium Total	2900 (IPSIC/IPSIC)	5.4	2.2
Cyanide (total)	ND(0.2)	ND(0.2)	ND(0.2)
Lead	1800 (IPSIC)	2.3 J	2.4 J
Manganese	390	5	4.4 J
Vanadium			

RFI–83–84–53	0.9 – 2.9 (ft)	3.9 – 5.9 (ft)	8.9 – 10.9 (ft)
VOC			
Benzene	ND(0.037)	ND(0.036)	ND(0.041)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.036)	ND(0.041)
Methylene chloride	ND(0.16)	ND(0.16)	ND(0.17)
Toluene	0.1	ND(0.072)	ND(0.081)
Trichloroethene	ND(0.037)	ND(0.036)	ND(0.041)
Vinyl chloride	ND(0.037)	ND(0.036)	ND(0.041)
SVOC			
Benzo(a)anthracene	2.21 J	ND(1.8)	ND(4)
Benzo(a)pyrene	1.83 J	ND(1.8)	ND(4)
Benzo(b)fluoranthene	2.42 J	ND(1.8)	ND(4)
Dibenz(a,h)anthracene	ND(3.7 J)	ND(1.8 J)	ND(4 J)
Indeno(1,2,3–cd)pyrene	ND(3.7 J)	ND(1.8 J)	ND(4 J)
Phenanthrene	2.1 J	1.48 J	2.39 J
Inorganic			
Arsenic	3.2	2.2	4.5
Beryllium	0.2	0.11	0.49
Chromium Total	17	5.3	19
Cyanide (total)	0.52 J	ND(0.2)	ND(0.3)
Lead	18	3.6	5.8
Manganese	160	140	370
Vanadium	18	9.9	28

RFI–83–84–02	2 – 4 (ft)	4 – 6 (ft)
VOC		
Benzene	ND(0.039)	ND(0.04) / ND(0.04)
cis–1,2–Dichloroethene	ND(0.039)	ND(0.04) / ND(0.04)
Methylene chloride	ND(0.17)	ND(0.17) / ND(0.17)
Toluene	ND(0.039)	ND(0.04) / ND(0.04)
Trichloroethene	ND(0.039)	ND(0.04) / ND(0.04)
Vinyl chloride	ND(0.039)	ND(0.04) / ND(0.04)
SVOC		
Benzo(a)anthracene	ND(0.19)	ND(0.19) / ND(0.2)
Benzo(a)pyrene	ND(0.19)	ND(0.19) / ND(0.2)
Benzo(b)fluoranthene	ND(0.19)	ND(0.19) / ND(0.2)
Dibenz(a,h)anthracene	ND(0.19 J)	ND(0.19 J) / ND(0.2 J)
Indeno(1,2,3–cd)pyrene	ND(0.19)	ND(0.19) / ND(0.2)
Phenanthrene	ND(0.19)	ND(0.19) / ND(0.2)
Inorganic		
Arsenic	7.4	3.5 / 4.3
Beryllium	0.5	0.21 / 0.25
Chromium Total	17	7.1 / 8.9
Cyanide (total)	0.079 J	0.055 J / 0.046 J
Lead	46 J	170 J / 110 J
Manganese	460 J	170 J / 180 J
Vanadium	25	15 / 18

RFI–83–84–03	0 – 2 (ft)	8 – 10 (ft)	10 – 12 (ft)
VOC			
Benzene	ND(0.039)	ND(0.038)	ND(0.039) / ND(0.038)
cis–1,2–Dichloroethene	ND(0.039)	ND(0.038)	ND(0.039) / ND(0.038)
Methylene chloride	ND(0.17)	ND(0.16)	ND(0.17) / ND(0.16)
Toluene	ND(0.039)	0.01	0.31 / 0.33
Trichloroethene	ND(0.039)	ND(0.038)	0.061 / 0.068
Vinyl chloride	ND(0.039)	ND(0.038)	ND(0.039) / ND(0.038)
SVOC			
Benzo(a)anthracene	ND(0.18)	ND(4.5)	ND(5) / ND(4.97)
Benzo(a)pyrene	ND(0.18)	ND(4.5)	ND(5) / ND(4.97)
Benzo(b)fluoranthene	ND(0.18)	ND(4.5)	ND(5) / ND(4.97) J
Dibenz(a,h)anthracene	ND(0.18)	ND(4.5)	ND(5) / ND(4.97)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(4.5)	ND(5) / ND(4.97)
Phenanthrene	ND(0.18)	ND(4.5)	ND(5) / ? J
Inorganic			
Arsenic	3.1 J	2.74 J	3.42 J / 3.63 J
Beryllium	NS	NS	NS / NS
Chromium Total	6.83 J	3.8 J	4.97 J / NS
Cyanide (total)	NS	NS	NS / NS
Lead	8.14 J	3.25 J	3.22 J / 2.62 J
Manganese	NS	NS	NS / NS
Vanadium	NS	NS	NS / NS

RFI–83–84–01	2 – 3.7 (ft)
VOC	
Benzene	1.1 J
cis–1,2–Dichloroethene	ND(0.041)
Methylene chloride	ND(0.17)
Toluene	0.88 J
Trichloroethene	ND(0.041)
Vinyl chloride	ND(0.041)
SVOC	
Benzo(a)anthracene	0.0388 J
Benzo(a)pyrene	0.0458 J
Benzo(b)fluoranthene	ND(0.2)
Dibenz(a,h)anthracene	ND(0.2)
Indeno(1,2,3–cd)pyrene	ND(0.2)
Phenanthrene	0.0858 J
Inorganic	
Arsenic	3.3
Beryllium	1.1
Chromium Total	8.3
Cyanide (total)	0.16 J
Lead	50 J
Manganese	110 J
Vanadium	15

RFI–83–84–50	3 – 5 (ft)	5 – 7 (ft)
VOC		
Benzene	ND(0.039)	ND(0.04) / ND(0.039)
cis–1,2–Dichloroethene	ND(0.039)	ND(0.04) / ND(0.039)
Methylene chloride	ND(0.17)	ND(0.17) / ND(0.17)
Toluene	ND(0.078)	ND(0.08) / ND(0.079)
Trichloroethene	ND(0.039)	ND(0.04) / ND(0.039)
Vinyl chloride	ND(0.078)	ND(0.079) / ND(0.078)
SVOC		
Benzo(a)anthracene	ND(0.19)	ND(0.19) / ND(0.19)
Benzo(a)pyrene	ND(0.19)	ND(0.19) / ND(0.19)
Benzo(b)fluoranthene	ND(0.19)	ND(0.19) / ND(0.19)
Dibenz(a,h)anthracene	ND(0.19 J)	ND(0.19 J) / ND(0.19 J)
Indeno(1,2,3–cd)pyrene	ND(0.19 J)	ND(0.19 J) / ND(0.19 J)
Phenanthrene	ND(0.19)	ND(0.19) / ND(0.19)
Inorganic		
Arsenic	2.7	1.3 / 2.1
Beryllium	0.21 J	0.14 / 0.2
Chromium Total	8.6	4.7 / 6.5
Cyanide (total)	ND(0.2)	ND(0.2) / ND(0.2)
Lead	7.1	4.3 / 6.1
Manganese	88	76 / 78
Vanadium	15	9.7 / 13

RFI–83–84–07	0.9 – 2.9 (ft)	8.9 – 10.9 (ft)
VOC		
Benzene	ND(0.035)	ND(0.038)
cis–1,2–Dichloroethene	ND(0.035)	ND(0.038)
Methylene chloride	ND(0.15)	ND(0.16)
Toluene	ND(0.035)	ND(0.038)
Trichloroethene	0.11	ND(0.038)
Vinyl chloride	ND(0.035)	ND(0.038)
SVOC		
Benzo(a)anthracene	ND(0.17)	ND(0.19) J
Benzo(a)pyrene	ND(0.17)	ND(0.19)
Benzo(b)fluoranthene	0.118 J	0.2
Dibenz(a,h)anthracene	ND(0.17)	ND(0.19)
Indeno(1,2,3–cd)pyrene	ND(0.17)	ND(0.19)
Phenanthrene	0.0903 J	ND(0.19)
Inorganic		
Arsenic	0.89	2.5
Beryllium	0.078 J	0.25 J
Chromium Total	3.6	6.2
Cyanide (total)	ND(0.2)	ND(0.2)
Lead	20 J	5.7 J
Manganese	35 J	41 J
Vanadium	4.4	11

RFI–83–84–45	0.9 – 2.9 (ft)	7.9 – 9.9 (ft)
VOC		
Benzene	ND(0.035)	ND(0.037) / ND(0.037)
cis–1,2–Dichloroethene	ND(0.035 J)	ND(0.037 J) / ND(0.037 J)
Methylene chloride	0.037 J	0.04 J / 0.034 J
Toluene	0.054 J	ND(0.075) / ND(0.073)
Trichloroethene	0.83	ND(0.037) / ND(0.037)
Vinyl chloride	ND(0.077)	ND(0.075) / ND(0.073)
SVOC		
Benzo(a)anthracene	ND(0.17)	ND(0.19) / ND(0.18)
Benzo(a)pyrene	ND(0.17)	ND(0.19) / ND(0.18)
Benzo(b)fluoranthene	ND(0.17)	ND(0.19) / ND(0.18)
Dibenz(a,h)anthracene	ND(0.17)	ND(0.19) / ND(0.18)
Indeno(1,2,3–cd)pyrene	ND(0.17)	ND(0.19) / ND(0.18)
Phenanthrene	0.134 J	ND(0.19) / ND(0.18)
Inorganic		
Arsenic	1.4	2.2 / 2.9
Beryllium	0.5	0.12 / 0.14
Chromium Total	3.3	6.7 / 7.1
Cyanide (total)	ND(0.2)	ND(0.2) / ND(0.2)
Lead	75	5.8 / 9.9
Manganese	45	60 / 74
Vanadium	4.8	12 / 14

RFI–83–84–46	1.5 – 3.5 (ft)	7.5 – 9.5 (ft)	9.5 – 11.5 (ft)
VOC			
Benzene	ND(0.035)	ND(0.035)	ND(0.045)
cis–1,2–Dichloroethene	0.76	0.43	0.037 J
Methylene chloride	0.052 J	ND(0.15)	0.047 J
Toluene	0.0362 J	0.088	ND(0.045)
Trichloroethene	ND(0.035)	ND(0.035)	ND(0.045)
Vinyl chloride	ND(0.071)	ND(0.07)	ND(0.09)
SVOC			
Benzo(a)anthracene	ND(0.17)	0.337	ND(0.23)
Benzo(a)pyrene	ND(0.17)	0.293 J	ND(0.23)
Benzo(b)fluoranthene	ND(0.17)	0.477 J	ND(0.23)
Dibenz(a,h)anthracene	ND(0.17 J)	ND(0.18 J)	ND(0.23 J)
Indeno(1,2,3–cd)pyrene	ND(0.17 J)	0.0982 J	ND(0.23 J)
Phenanthrene	0.226	2.05	ND(0.23)
Inorganic			
Arsenic	5.6	13 (RDC)	8.1 (RDC)
Beryllium	0.16	0.26	0.4
Chromium Total	13	27	21
Cyanide (total)	ND(0.2)	ND(0.2)	ND(0.3)
Lead	310 J	630 J	190 J
Manganese	17	27	29
Vanadium			

RFI–83–84–36	5 – 7 (ft)
Inorganic	
Arsenic	NS
Beryllium	NS
Chromium Total	NS
Cyanide (total)	12 J
Lead	NS
Manganese	NS
Vanadium	NS

RFI–83–84–34	0.4 – 2.6 (ft)
VOC	
Benzene	ND(0.038)
cis–1,2–Dichloroethene	ND(0.038)
Methylene chloride	ND(0.16)
Toluene	0.038 J
Trichloroethene	ND(0.038)
Vinyl chloride	ND(0.078)
SVOC	
Benzo(a)anthracene	ND(0.93)
Benzo(a)pyrene	ND(0.93)
Benzo(b)fluoranthene	ND(0.93)
Dibenz(a,h)anthracene	ND(0.93 J)
Indeno(1,2,3–cd)pyrene	ND(0.93 J)
Phenanthrene	ND(0.93)
Inorganic	
Arsenic	4.4
Beryllium	0.28
Chromium Total	28
Cyanide (total)	0.36 J
Lead	140
Manganese	280
Vanadium	11

RFI–83–84–23	1 – 3 (ft)	5 – 7 (ft)
VOC		
Benzene	ND(0.035) / ND(0.035)	1.4
cis–1,2–Dichloroethene	ND(0.035) / ND(0.035)	0.063 J
Methylene chloride	ND(0.15) / ND(0.15)	ND(0.16)
Toluene	ND(0.035) / ND(0.035)	0.49
Trichloroethene	ND(0.035) / ND(0.035)	0.039 J
Vinyl chloride	ND(0.035) / ND(0.035)	ND(0.038)
SVOC		
Benzo(a)anthracene	0.142 J / 0.0839 J	1.34 J
Benzo(a)pyrene	ND(0.17 J) / ND(0.17 J)	0.628 J
Benzo(b)fluoranthene	ND(0.17 J) / ND(0.17 J)	0.684 J
Dibenz(a,h)anthracene	ND(0.17 J) / ND(0.17 J)	ND(0.19 J)
Indeno(1,2,3–cd)pyrene	ND(0.17 J) / ND(0.17 J)	ND(0.84 J)
Phenanthrene	0.302 / 0.212 J	2.05 J
Inorganic		
Arsenic	2.8 / 2.4 J	28 J (RDC)
Beryllium	0.28 J / 0.25 J	11 J
Chromium Total	6.6 / 5.7 J	240 J
Cyanide (total)	ND(0.2 J) / ND(0.2 J)	4500 (DC(RDC)
Lead	180 / 150 J	4500 (IPSIC)
Manganese	180 / 160 J	1600 (IPSIC)
Vanadium	7.6 / 7.4	51

RFI–83–84–25	0.7 – 2.7 (ft)	6.7 – 10.7 (ft)	10.7 – 12.7 (ft)
VOC			
Benzene	ND(0.037)	ND(0.038)	ND(0.04)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.038)	ND(0.04)
Methylene chloride	ND(0.16)	ND(0.16)	ND(0.17)
Toluene	ND(0.037)	ND(0.038)	0.11 J
Trichloroethene	ND(0.037)	ND(0.038)	ND(0.04)
Vinyl chloride	ND(0.037)	ND(0.038)	ND(0.04)
SVOC			
Benzo(a)anthracene	0.0344 J	ND(0.18)	1.24 J
Benzo(a)pyrene	ND(0.18)	ND(0.18)	1.09 J
Benzo(b)fluoranthene	ND(0.18)	ND(0.18)	1.14 J
Dibenz(a,h)anthracene	ND(0.18)	ND(0.18)	0.28 J
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.18)	0.567 J
Phenanthrene	0.081 J	ND(0.18)	1.05 J
Inorganic			
Arsenic	2 J	3.3 J	2.2 J
Beryllium	0.083 J	0.17 J	0.077 J
Chromium Total	5.2 J	6.8 J	5.8 J
Cyanide (total)	ND(0.2)	ND(0.2)	ND(0.2)
Lead	2.6 J	5.3 J	4.8 J
Manganese	160 J	69 J	57 J
Vanadium	4.8 J	9.8 J	7 J

RFI–83–84–09	0.8 – 2.8 (ft)	8.8 – 8.8 (ft)
VOC		
Benzene	ND(0.038)	ND(0.042)
cis–1,2–Dichloroethene	ND(0.038)	ND(0.042)
Methylene chloride	ND(0.16)	ND(0.18)
Toluene	ND(0.038)	ND(0.042)
Trichloroethene	ND(0.038)	ND(0.042)
Vinyl chloride	ND(0.038)	ND(0.042)
SVOC		
Benzo(a)anthracene	0.817 J	ND(0.21)
Benzo(a)pyrene	0.71 J	ND(0.21)
Benzo(b)fluoranthene	0.784 J	ND(0.21)
Dibenz(a,h)anthracene	ND(0.93 J)	ND(0.21)
Indeno(1,2,3–cd)pyrene	0.537 J	ND(0.21)
Phenanthrene	3.07	0.049 J
Inorganic		
Arsenic	3.2	2.4
Beryllium	0.24 J	0.14 J
Chromium Total	5.4 J	15 J
Cyanide (total)	0.3 J	NS
Lead	13 J	8.8 J
Manganese	150 J	250 J
Vanadium	10 J	22 J

RFI–83–84–04	0 – 2 (ft)	8 – 10 (ft)	12 – 14 (ft)
VOC			
Benzene	ND(0.041)	ND(0.041)	ND(0.029)
cis–1,2–Dichloroethene	ND(0.041)	ND(0.041)	ND(0.029)
Methylene chloride	ND(0.18)	ND(0.18)	ND(0.12)
Toluene	ND(0.041)	ND(0.041)	ND(0.029)
Trichloroethene	ND(0.041)	ND(0.041)	ND(0.029)
Vinyl chloride	ND(0.041)	ND(0.041)	ND(0.029)
SVOC			
Benzo(a)anthracene	1.298 J	ND(0.2 J)	ND(0.2)
Benzo(a)pyrene	1.425 J	ND(0.2 J)	ND(0.2)
Benzo(b)fluoranthene	1.492 J	ND(0.2 J)	ND(0.2)
Dibenz(a,h)anthracene	0.304 J	ND(0.2 J)	ND(0.2)
Indeno(1,2,3–cd)pyrene	1.263 J	ND(0.2 J)	ND(0.2)
Phenanthrene	1.079 J	ND(0.2)	ND(0.2)
Inorganic			
Arsenic	10.7 J (RDC)	3.85 J	4.02 J
Beryllium	1.1 J	ND	ND
Chromium Total	37.5	15.7	14.7
Cyanide (total)	0.18 J	0.14 J	ND
Lead	1570 (DC(RDC)	14.6	10.6
Manganese	1100	1000	1000
Vanadium	18	35	31

RFI–83–84–10	0 – 2 (ft)	8 – 10 (ft)	10 – 12 (ft)
VOC			
Benzene	ND(0.05)	ND(0.04)	ND(0.042) / ND(0.043)
cis–1,2–Dichloroethene	ND(0.05)	ND(0.04)	ND(0.042) / ND(0.043)
Methylene chloride	ND(0.17)	ND(0.16) / ND(0.16)	ND(0.17) / ND(0.17)
Toluene	ND(0.05)	ND(0.04)	ND(0.042) / ND(0.043)
Trichloroethene	0.05	ND(0.04)	ND(0.042) / ND(0.043)
Vinyl chloride	ND(0.05)	ND(0.04)	ND(0.042) / ND(0.043)
SVOC			
Benzo(a)anthracene	7.8	0.24 J	ND(0.21) / ND(0.21)
Benzo(a)pyrene	7.8	ND(0.19 J)	ND(0.21) / ND(0.21)
Benzo(b)fluoranthene	8.2	ND(0.19 J)	ND(0.21) / ND(0.21)
Dibenz(a,h)anthracene	0.95 J	ND(0.19 J)	ND(0.21) / ND(0.21)
Indeno(1,2,3–cd)pyrene	5.4 J	ND(0.19

SB-2	9/20/2001
VOC	
Benzene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Methylene chloride	ND(0.005)
Toluene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
Dibenz(a,h)anthracene	ND(0.002)
Indeno(1,2,3-cd)pyrene	ND(0.002)
Phenanthrene	ND(0.005)
Inorganic	
Arsenic	NS
Beryllium	NS
Chromium Total	NS
Cyanide (total)	ND(0.005)
Lead	NS
Manganese	NS
Vanadium	NS
Inorganic-Dissolved	
Arsenic	0.0064
Beryllium	ND(0.0004)
Chromium Total	ND(0.0006)
Cyanide (total)	ND(0.005)
Lead	ND(0.0004)
Manganese	0.074
Vanadium	ND(0.0008)

RFI-83-84-11	9/24/2001	6/19/2002	4/1/2003	10/7/2004
VOC				
Benzene	0.04 (DW,RDW)	0.16 D (DW,RDW)	0.023 (DW,RDW)	0.067 (DW,RDW)
cis-1,2-Dichloroethene	0.0054	0.0009 J	0.001	ND(0.005)
Methylene chloride	ND(0.005)	ND(0.005 J)	ND(0.005)	0.01 J (DW,RDW)
Toluene	0.011	2.3 D (DW,RDW)	0.012	0.64
Trichloroethene	0.035 (DW,RDW)	0.0019	ND(0.001)	ND(0.005)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.005)
SVOC				
Benzo(a)anthracene	ND(0.0011)	NS	NS	NS
Benzo(a)pyrene	ND(0.0022)	NS	NS	NS
Benzo(b)fluoranthene	ND(0.0022)	NS	NS	NS
Dibenz(a,h)anthracene	ND(0.0022)	NS	NS	NS
Indeno(1,2,3-cd)pyrene	ND(0.0022)	NS	NS	NS
Phenanthrene	ND(0.0056)	NS	NS	NS
Inorganic				
Arsenic	NS	0.0047	NS	NS
Beryllium	NS	ND(0.0004 J)	NS	NS
Chromium Total	NS	0.0023	NS	NS
Cyanide (total)	0.0079	0.0048 J	NS	NS
Lead	NS	0.0016	NS	NS
Manganese	NS	0.39	NS	NS
Vanadium	NS	0.0029	NS	NS
Inorganic-Dissolved				
Arsenic	0.0062	0.0034	NS	NS
Beryllium	ND(0.0004 J)	ND(0.0004 J)	NS	NS
Chromium Total	ND(0.0006)	0.0033	NS	NS
Cyanide (total)	0.0064	0.0053	NS	NS
Lead	ND(0.0004)	ND(0.0004)	NS	NS
Manganese	0.56	0.25 J	NS	NS
Vanadium	0.0064 (RDW)	0.0011	NS	NS

RFI-83-84-27	2/21/2002	6/18/2002	4/2/2003	10/7/2004
VOC				
Benzene	ND(0.001)	NS	ND(0.001)	0.0004 J
cis-1,2-Dichloroethene	ND(0.001)	NS	ND(0.001)	ND(0.001)
Methylene chloride	ND(0.005)	NS	ND(0.005)	ND(0.005)
Toluene	ND(0.001)	NS	ND(0.001)	0.0004 J
Trichloroethene	ND(0.001)	NS	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	NS	ND(0.001)	ND(0.001)
SVOC				
Benzo(a)anthracene	ND(0.001)	NS	NS	NS
Benzo(a)pyrene	ND(0.002)	NS	NS	NS
Benzo(b)fluoranthene	ND(0.002)	NS	NS	NS
Dibenz(a,h)anthracene	ND(0.002)	NS	NS	NS
Indeno(1,2,3-cd)pyrene	ND(0.002)	NS	NS	NS
Phenanthrene	ND(0.005)	NS	NS	NS
Inorganic				
Arsenic	NS	0.0031	NS	NS
Beryllium	NS	ND(0.0004 J)	NS	ND(0.001)
Chromium Total	NS	0.001	NS	NS
Cyanide (total)	0.0072	0.0074	NS	NS
Lead	NS	0.00092	NS	NS
Manganese	NS	0.17	NS	NS
Vanadium	NS	0.00054 J	NS	NS
Inorganic-Dissolved				
Arsenic	0.0047 J	NS	NS	NS
Beryllium	0.021 J (DW,RDW)	NS	NS	NS
Chromium Total	0.012	NS	NS	NS
Cyanide (total)	0.0066	NS	NS	NS
Lead	0.00088	NS	NS	NS
Manganese	0.2	NS	NS	NS
Vanadium	ND(0.0008)	NS	NS	NS

RFI-83-84-29	2/21/2002	6/18/2002	4/1/2003
VOC			
Benzene	ND(0.001)	NS	NS
cis-1,2-Dichloroethene	ND(0.001)	NS	NS
Methylene chloride	ND(0.005)	NS	NS
Toluene	ND(0.001)	NS	NS
Trichloroethene	ND(0.001)	NS	NS
Vinyl chloride	ND(0.001)	NS	NS
SVOC			
Benzo(a)anthracene	ND(0.001)	NS	NS
Benzo(a)pyrene	ND(0.002)	NS	NS
Benzo(b)fluoranthene	ND(0.002)	NS	NS
Dibenz(a,h)anthracene	ND(0.002)	NS	NS
Indeno(1,2,3-cd)pyrene	ND(0.002)	NS	NS
Phenanthrene	ND(0.005)	NS	NS
Inorganic			
Arsenic	NS	0.0055	0.0061
Beryllium	NS	ND(0.0004 J)	ND(0.0004)
Chromium Total	NS	0.00071	0.00095
Cyanide (total)	0.0023 J	ND(0.005)	ND(0.005)
Lead	NS	0.0003 J	0.00013 J
Manganese	NS	1.2 (RDW)	0.57 J
Vanadium	NS	ND(0.0008)	ND(0.0008)
Inorganic-Dissolved			
Arsenic	0.0079	NS	NS
Beryllium	0.023 J (DW,RDW)	NS	NS
Chromium Total	0.014	NS	NS
Cyanide (total)	0.0033 J	NS	NS
Lead	0.00062 J	NS	NS
Manganese	1.1 (RDW)	NS	NS
Vanadium	0.00099	NS	NS

RFI-83-84-02	10/1/2001	12/18/2002
VOC		
Benzene	ND(0.001)	NS
cis-1,2-Dichloroethene	ND(0.001)	NS
Methylene chloride	ND(0.005)	NS
Toluene	ND(0.001)	NS
Trichloroethene	ND(0.001)	NS
Vinyl chloride	ND(0.001)	NS
SVOC		
Benzo(a)anthracene	ND(0.001)	NS
Benzo(a)pyrene	ND(0.002)	NS
Benzo(b)fluoranthene	ND(0.002)	NS
Dibenz(a,h)anthracene	ND(0.002)	NS
Indeno(1,2,3-cd)pyrene	ND(0.002)	NS
Phenanthrene	ND(0.005)	NS
Inorganic		
Arsenic	NS	0.0081
Beryllium	NS	ND(0.0004 J)
Chromium Total	NS	0.0018 J
Cyanide (total)	0.0083	0.003 J
Lead	NS	0.00065 J
Manganese	NS	1 (RDW)
Vanadium	NS	0.00024 J
Inorganic-Dissolved		
Arsenic	ND(0.067)	NS
Beryllium	ND(0.0004)	NS
Chromium Total	ND(0.0006)	NS
Cyanide (total)	0.0085	NS
Lead	ND(0.0004)	NS
Manganese	1.1	NS
Vanadium	ND(0.0008)	NS

RFI-83-84-02-ULF	10/1/2001
Inorganic	
Arsenic	NS
Beryllium	NS
Chromium Total	NS
Cyanide (total)	0.01
Lead	NS
Manganese	NS
Vanadium	NS

RFI-83-84-01	9/21/2001	4/4/2005
VOC		
Benzene	0.0011	NS
cis-1,2-Dichloroethene	0.00059 J	NS
Methylene chloride	ND(0.005)	NS
Toluene	ND(0.001)	NS
Trichloroethene	0.0016	NS
Vinyl chloride	ND(0.001)	NS
SVOC		
Benzo(a)anthracene	ND(0.001)	ND(0.005) /ND(0.005)
Benzo(a)pyrene	ND(0.002)	ND(0.005) /ND(0.005)
Benzo(b)fluoranthene	ND(0.002)	ND(0.005) /ND(0.005)
Dibenz(a,h)anthracene	ND(0.002)	ND(0.005) /ND(0.005)
Indeno(1,2,3-cd)pyrene	ND(0.002)	ND(0.005) /ND(0.005)
Phenanthrene	ND(0.005)	ND(0.005) /ND(0.005)
Inorganic		
Arsenic	NS	NS
Beryllium	NS	NS
Chromium Total	NS	NS
Cyanide (total)	0.051	NS
Lead	NS	NS
Manganese	NS	NS
Vanadium	NS	NS
Inorganic-Dissolved		
Arsenic	0.0018 J	NS
Beryllium	ND(0.0004)	NS
Chromium Total	0.001	NS
Cyanide (total)	0.05	NS
Lead	ND(0.0004)	NS
Manganese	0.48	NS
Vanadium	ND(0.0008)	NS

SB-7	9/20/2001	6/14/2002
VOC		
Benzene	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)	ND(0.001)
Methylene chloride	ND(0.005)	ND(0.005)
Toluene	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)
SVOC		
Benzo(a)anthracene	ND(0.0011)	NS
Benzo(a)pyrene	ND(0.0021)	NS
Benzo(b)fluoranthene	ND(0.0021)	NS
Dibenz(a,h)anthracene	ND(0.0021)	NS
Indeno(1,2,3-cd)pyrene	ND(0.0021)	NS
Phenanthrene	ND(0.0053)	NS
Inorganic		
Arsenic	NS	0.0031
Beryllium	NS	ND(0.0004 J)
Chromium Total	NS	0.00055 J
Cyanide (total)	0.0058	NS
Lead	NS	0.00014 J
Manganese	NS	1.1 J (RDW)
Vanadium	NS	ND(0.0008)
Inorganic-Dissolved		
Arsenic	0.0058	NS
Beryllium	ND(0.0004)	NS
Chromium Total	0.00075	NS
Cyanide (total)	0.0042 J	NS
Lead	ND(0.0004)	NS
Manganese	0.73	NS
Vanadium	ND(0.0008)	NS

RFI-65-01	9/24/2001	6/13/2002	4/1/2003
VOC			
Benzene	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	0.049	0.037	0.019
Methylene chloride	ND(0.005)	ND(0.005)	ND(0.005)
Toluene	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	0.042 (DW,RDW)	0.046 (DW,RDW)	0.036 (DW,RDW)
Vinyl chloride	ND(0.001)	ND(0.001)	ND(0.001)
SVOC			
Benzo(a)anthracene	ND(0.0011)	NS	NS
Benzo(a)pyrene	ND(0.0022)	NS	NS
Benzo(b)fluoranthene	ND(0.0022)	NS	NS
Dibenz(a,h)anthracene	ND(0.0022)	NS	NS
Indeno(1,2,3-cd)pyrene	ND(0.0022)	NS	NS
Phenanthrene	ND(0.0056)	NS	NS
Inorganic			
Arsenic	NS	ND(0.001)	NS
Beryllium	NS	ND(0.0004 J)	NS
Chromium Total	NS	0.0021	NS
Cyanide (total)	0.004 J	NS	NS
Lead	NS	0.00028 J	NS
Manganese	NS	1.9 J (RDW)	NS
Vanadium	NS	0.00056 J	NS
Inorganic-Dissolved			
Arsenic	ND(0.0018)	NS	NS
Beryllium	ND(0.0004 J)	NS	NS
Chromium Total	0.0013	NS	NS
Cyanide (total)	0.0029 J	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	1.3 (RDW)	NS	NS
Vanadium	ND(0.0008)	NS	NS

RFI-83-84-51	9/19/2003	10/14/2003
VOC		
Benzene	ND(0.001)	NS
cis-1,2-Dichloroethene	ND(0.001)	NS
Methylene chloride	ND(0.005)	NS
Toluene	ND(0.001)	NS
Trichloroethene	ND(0.001)	NS
Vinyl chloride	ND(0.001)	NS
SVOC		
Benzo(a)anthracene	NS	ND(0.001) /ND(0.001)
Benzo(a)pyrene	NS	ND(0.002) /ND(0.002)
Benzo(b)fluoranthene	NS	ND(0.002) /ND(0.002)
Dibenz(a,h)anthracene	NS	ND(0.002) /ND(0.002)
Indeno(1,2,3-cd)pyrene	NS	ND(0.002) /ND(0.002)
Phenanthrene	NS	ND(0.005) /ND(0.005)
Inorganic		
Arsenic	0.11 J (DW,RDW)	NS
Beryllium	0.14 J (DW,RDW)	NS
Chromium Total	0.016	NS
Cyanide (total)	ND(0.005)	NS
Lead	0.0081 (DW,RDW)	NS
Manganese	0.36 J	NS
Vanadium	0.01 J (RDW)	NS
Inorganic-Dissolved		
Arsenic	0.097 J (DW,RDW)	NS
Beryllium	0.027 J (DW,RDW)	NS
Chromium Total	0.0025 J	NS
Cyanide (total)	ND(0.005)	NS
Lead	0.00052 J	NS
Manganese	0.18 J	NS
Vanadium	ND(0.0008 J)	NS

RFI-83-84-08	7/31/2001
VOC	
Benzene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Methylene chloride	ND(0.005)
Toluene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002 J)
Benzo(b)fluoranthene	ND(0.002 J)
Dibenz(a,h)anthracene	ND(0.002 J)
Indeno(1,2,3-cd)pyrene	ND(0.002 J)
Phenanthrene	ND(0.005)
Inorganic-Dissolved	
Arsenic	0.055 (DW,RDW)
Beryllium	ND(0.0004)
Chromium Total	0.0023
Cyanide (total)	0.0021 J
Lead	ND(0.0004)
Manganese	0.16
Vanadium	ND(0.0008)

RFI-83-84-05	7/31/2001
VOC	
Benzene	ND(0.001)
cis-1,2-Dichloroethene	0.003
Methylene chloride	ND(0.005)
Toluene	ND(0.001)
Trichloroethene	0.004
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
Dibenz(a,h)anthracene	ND(0.002)
Indeno(1,2,3-cd)pyrene	ND(0.002)
Phenanthrene	ND(0.005)
Inorganic-Dissolved	
Arsenic	0.036
Beryllium	ND(0.0004)
Chromium Total	0.0036
Cyanide (total)	0.0017 J
Lead	0.02 (DW,RDW)
Manganese	0.41
Vanadium	0.0014

RFI-83-84-20	2/22/2002	6/20/2002	4/2/2003
VOC			
Benzene	ND(0.001)	NS	NS
cis-1,2-Dichloroethene	0.00083 J	NS	NS
Methylene chloride	ND(0.005)	NS	NS
Toluene	ND(0.001)	NS	NS
Trichloroethene	0.0015	NS	NS
Vinyl chloride	ND(0.001)	NS	NS
SVOC			
Benzo(a)anthracene	ND(0.001)	NS	NS
Benzo(a)pyrene	ND(0.002 J)	NS	NS
Benzo(b)fluoranthene	ND(0.002 J)	NS	NS
Dibenz(a,h)anthracene	ND(0.002 J)	NS	NS
Indeno(1,2,3-cd)pyrene	ND(0.002 J)	NS	NS
Phenanthrene	ND(0.005)	NS	NS
Inorganic			
Arsenic	NS	0.014	0.023
Beryllium	NS	ND(0.0004)	ND(0.0004)
Chromium Total	NS	0.00061	0.00029 J
Cyanide (total)	0.0011 J	ND(0.005)	ND(0.005)
Lead	NS	0.017 (DW,RDW)	0.0016
Manganese	NS	0.61	0.6 J
Vanadium	NS	ND(0.0008)	0.00009 J
Inorganic-Dissolved			
Arsenic	0.017 J	NS	NS
Beryllium	0.011 J (DW,RDW)	NS	NS
Chromium Total	0.014 J	NS	NS
Cyanide (total)	ND(0.005)	NS	NS
Lead	0.0033 J	NS	NS
Manganese	0.92 J (RDW)	NS	NS
Vanadium	0.0023 J	NS	NS

11-140	9/28/2001
VOC	
Benzene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Methylene chloride	ND(0.005)
Toluene	0.00078 J
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.0011 J)
Benzo(a)pyrene	ND(0.0022 J)
Benzo(b)fluoranthene	ND(0.0022 J)
Dibenz(a,h)anthracene	ND(0.0022 J)
Indeno(1,2,3-cd)pyrene	ND(0.0022 J)
Phenanthrene	ND(0.0056 J)
Inorganic	
Arsenic	NS
Beryllium	NS
Chromium Total	NS
Cyanide (total)	0.0017 J
Lead	NS
Manganese	NS
Vanadium	NS
Inorganic-Dissolved	
Arsenic	ND(0.001)
Beryllium	ND(0.0004 J)
Chromium Total	ND(0.0006 J)
Cyanide (total)	0.0028 J
Lead	ND(0.0004)
Manganese	0.22
Vanadium	ND(0.0008)

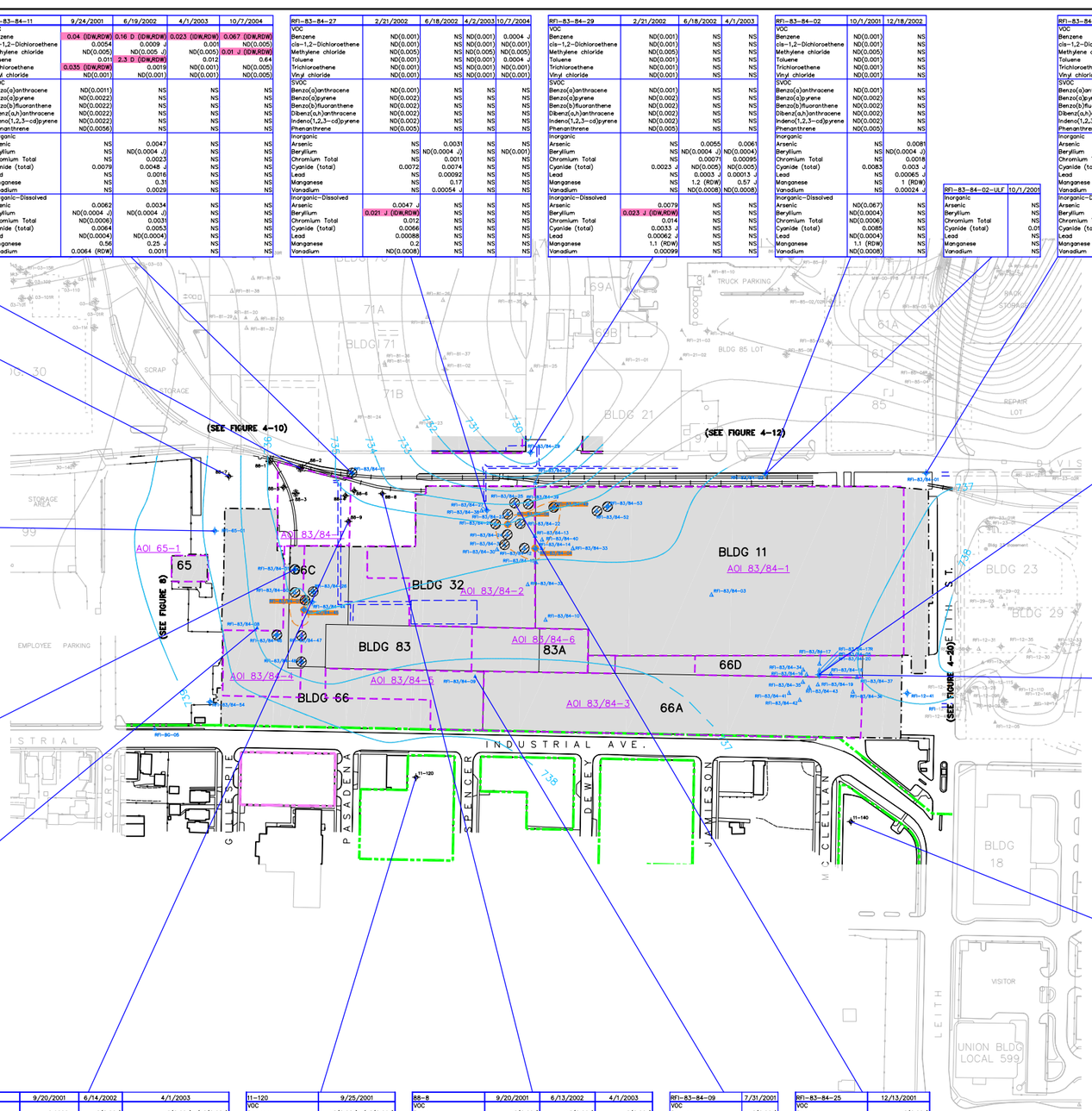
SB-9	9/20/2001	6/14/2002	4/1/2003
VOC			
Benzene	0.00061 J	ND(0.001)	ND(0.001) /ND(0.001)
cis-1,2-Dichloroethene	0.088 D (DW,RDW)	0.024	0.0016 /0.0014
Methylene chloride	ND(0.005)	ND(0.005 J)	ND(0.005) /ND(0.005)
Toluene	ND(0.001)	ND(0.001)	ND(0.001) /ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001) /ND(0.001)
Vinyl chloride	0.15 D (DW,RDW)	0.1 (DW,RDW)	0.1 D (DW,RDW) /0.1 D (DW,RDW)
SVOC			
Benzo(a)anthracene	ND(0.0011)	NS	NS
Benzo(a)pyrene	ND(0.0022)	NS	NS
Benzo(b)fluoranthene	ND(0.0022)	NS	NS
Dibenz(a,h)anthracene	ND(0.0022)	NS	NS
Indeno(1,2,3-cd)pyrene	ND(0.0022)	NS	NS
Phenanthrene	ND(0.0056)	NS	NS
Inorganic			
Arsenic	NS	NS	NS
Beryllium	NS	NS	NS
Chromium Total	NS	NS	NS
Cyanide (total)	0.0099	NS	NS
Lead	NS	NS	NS
Manganese	NS	NS	NS
Vanadium	NS	NS	NS
Inorganic-Dissolved			
Arsenic	0.036	NS	NS
Beryllium	ND(0.0004)	NS	NS
Chromium Total	ND(0.0006)	NS	NS
Cyanide (total)	0.0089	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	0.077	NS	NS
Vanadium	ND(0.0008)	NS	NS

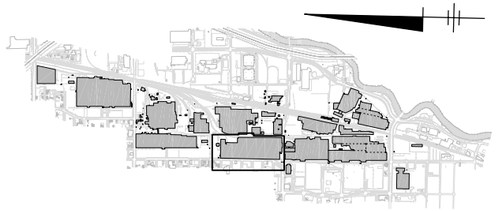
11-120	9/25/2001
VOC	
Benzene	ND(0.001) /ND(0.001)
cis-1,2-Dichloroethene	ND(0.001) /ND(0.001)
Methylene chloride	ND(0.005) /ND(0.005)
Toluene	ND(0.001) /ND(0.001)
Trichloroethene	ND(0.001) /ND(0.001)
Vinyl chloride	ND(0.001) /ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001) /ND(0.001)
Benzo(a)pyrene	ND(0.002) /ND(0.002)
Benzo(b)fluoranthene	ND(0.002) /ND(0.002)
Dibenz(a,h)anthracene	ND(0.002) /ND(0.002)
Indeno(1,2,3-cd)pyrene	ND(0.002) /ND(0.002)
Phenanthrene	ND(0.005) /ND(0.005)
Inorganic	
Arsenic	NS
Beryllium	NS
Chromium Total	NS
Cyanide (total)	0.0027 J /0.0033 J
Lead	NS
Manganese	NS
Vanadium	NS
Inorganic-Dissolved	
Arsenic	0.0031 J /0.0026 J
Beryllium	ND(0.0004) /ND(0.0004)
Chromium Total	0.0006 /0.00072
Cyanide (total)	0.0035 J /0.0038 J
Lead	ND(0.0004) /ND(0.0004)
Manganese	0.13 J /0.12 J
Vanadium	ND(0.0008) /ND(0.0008)

68-8	9/20/2001	6/13/2002	4/1/2003
VOC			
Benzene	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	0.0013	0.0009 J	ND(0.001)
Methylene chloride	ND(0.005)	ND(0.005)	ND(0.005)
Toluene	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	0.0052 (DW,RDW)	0.0038 (DW,RDW)	0.012 J (DW,RDW)
SVOC			
Benzo(a)anthracene	ND(0.001)	NS	NS
Benzo(a)pyrene	ND(0.002)	NS	NS
Benzo(b)fluoranthene	ND(0.002)	NS	NS
Dibenz(a,h)anthracene	ND(0.002)	NS	NS
Indeno(1,2,3-cd)pyrene	ND(0.002)	NS	NS
Phenanthrene	ND(0.005)	NS	NS
Inorganic			
Arsenic	NS	NS	NS
Beryllium	NS	NS	NS
Chromium Total	NS	NS	NS
Cyanide (total)	0.004 J	NS	NS
Lead	NS	NS	NS
Manganese	NS	NS	NS
Vanadium	NS	NS	NS
Inorganic-Dissolved			
Arsenic	0.039	NS	NS
Beryllium	ND(0.0004)	NS	NS
Chromium Total	ND(0.0006)	NS	NS
Cyanide (total)	0.0049 J	NS	NS
Lead	ND(0.0004)	NS	NS
Manganese	0.4	NS	NS
Vanadium	ND(0.0008)	NS	NS

RFI-83-84-09	7/31/2001
VOC	
Benzene	ND(0.001)
cis-1,2-Dichloroethene	ND(0.001)
Methylene chloride	ND(0.005)
Toluene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	0.00055 J
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
Dibenz(a,h)anthracene	ND(0.002)
Indeno(1,2,3-cd)pyrene	ND(0.002)
Phenanthrene	ND(0.005)
Inorganic	
Arsenic	0.0094
Beryllium	ND(0.0004)
Chromium Total	0.0014
Cyanide (total)	ND(0.005)
Lead	ND(0.0004)
Manganese	0.17
Vanadium	0.00092

RFI-83-84-25	12/13/2001
VOC	
Benzene	ND(0.001)
cis-1,2-Dichloroethene	0.075 (DW,RDW)
Methylene chloride	ND(0.005)
Toluene	ND(0.001)
Trichloroethene	0.001
Vinyl chloride	0.069 (DW,RDW)
SVOC	
Benzo(a)anthracene	ND(0.0011)
Benzo(a)pyrene	ND(0.0021)
Benzo(b)fluoranthene	ND(0.0021)
Dibenz(a,h)anthracene	ND(0.0021)
Indeno(1,2,3-cd)pyrene	ND(0.0021)
Phenanthrene	ND(0.0053)
Inorganic	
Arsenic	0.1 J (DW,RDW)
Beryllium	0.0046 J (DW,RDW)
Chromium Total	0.0024 J
Cyanide (total)	0.042
Lead	0.00039 J
Manganese	0.17 J
Vanadium	ND(0.0008)
Inorganic-Dissolved	
Arsenic	0.095 (DW,RDW)
Beryllium	0.00081
Chromium Total	ND(0.0006)
Cyanide (total)	0.038
Lead	ND(0.0004)
Manganese	0.12
Vanadium	ND(0.0008)





SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL)
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA: IDW – INDUSTRIAL DRINKING WATER

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED IN DECEMBER 2004.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. RDW–EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
12. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.
13. (ULF) – SAMPLE WAS COLLECTED USING ULTRA LOW-FLOW PROCEDURES TO MINIMIZE TUBIDITY.

0 150' 300'
GRAPHIC SCALE

JULY 2006

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG, X24.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD–BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C16.DWG

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - FACTORY 83/84 (BUILDINGS 11, 32, 65, 66, AND 83) AREA

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 4-16

EP_94-02B	0.5 – 2.5 (ft)	2.5 – 4.5 (ft)	4.5 – 6.5 (ft)
VOC			
1,1-Dichloroethene	ND(0.039)	ND(0.038)	ND(0.038)
Benzene	ND(0.039)	ND(0.038)	ND(0.038)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.038)	ND(0.038)
Trichloroethene	ND(0.039)	ND(0.038)	ND(0.038)
Vinyl chloride	ND(0.039)	ND(0.038)	ND(0.038)
SVOC			
Benzo(a)anthracene	ND(0.19)	ND(0.19)	ND(0.19)
Benzo(a)pyrene	ND(0.19)	ND(0.19)	ND(0.19)
Benzo(b)fluoranthene	0.12 J	ND(0.2)	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.2)	ND(0.19)
Di-n-butylphthalate	0.069 J	ND(0.2)	ND(0.19)
Indeno(1,2,3-cd)pyrene	0.157 J	ND(0.19)	ND(0.19)
PCB			
Total PCBs	ND(0.04)	ND(0.038)	ND(0.038)

EP_94-02	0.33 – 2 (ft)	8 – 10 (ft)	16 – 18 (ft)
VOC			
1,1-Dichloroethene	ND(0.039)	ND(0.041)	ND(0.037)
Benzene	ND(0.039)	ND(0.041)	ND(0.037)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.041)	ND(0.037)
Trichloroethene	ND(0.039)	ND(0.041)	ND(0.037)
Vinyl chloride	ND(0.039)	ND(0.041)	ND(0.037)
SVOC			
Benzo(a)anthracene	ND(0.95) J-	ND(0.2)	ND(0.18)
Benzo(a)pyrene	ND(0.95) J-	ND(0.2)	ND(0.18)
Benzo(b)fluoranthene	ND(0.95) J-	ND(0.2)	ND(0.18)
bis(2-Ethylhexyl)phthalate	ND(0.95) J-	ND(0.2)	ND(0.18)
Di-n-butylphthalate	ND(0.95) J-	ND(0.2)	ND(0.18)
Indeno(1,2,3-cd)pyrene	ND(0.95) J-	ND(0.2 J-	ND(0.18)
PCB			
Total PCBs	6.9 (ROC)	ND(0.04)	ND(0.038)
Inorganic			
Arsenic	6.8 J	10 J (ROC)	5.4 J
Beryllium	0.46	0.26	0.26
Chromium Total	10	22	11 J-
Cyanide (total)	0.088 J	ND(0.43)	ND(0.4)
Lead	130 J-	11 J-	5.8 J-
Manganese	390 J-	410 J-	350 J-
Nickel	11	29	13
Selenium	ND(1.9 J-	ND(1.7 J-	ND(1.8 J-
Silver	0.32 J-	0.097 J-	0.11 J-
Vanadium	15 J-	38 J-	17 J-

EP_94-02A	2.5 – 4.5 (ft)	4.5 – 6.5 (ft)
VOC		
1,1-Dichloroethene	ND(0.04)	ND(0.037)
Benzene	ND(0.04)	ND(0.037)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.037)
Trichloroethene	ND(0.04)	ND(0.037)
Vinyl chloride	ND(0.04)	ND(0.037)
SVOC		
Benzo(a)anthracene	ND(0.19 J)	ND(0.18)
Benzo(a)pyrene	ND(0.19 J)	ND(0.18)
Benzo(b)fluoranthene	ND(0.19 J)	ND(0.18)
bis(2-Ethylhexyl)phthalate	ND(0.19 J)	ND(0.18)
Di-n-butylphthalate	ND(0.19)	ND(0.18)
Indeno(1,2,3-cd)pyrene	ND(0.19 J)	ND(0.18)
PCB		
Total PCBs	ND(0.04)	ND(0.037)

EP_94-02D	0.5 – 2.5 (ft)	2.5 – 4.5 (ft)
PCB		
Total PCBs	ND(0.037)	ND(0.04)

EP_94-02B	0.5 – 2.5 (ft)	2.5 – 4.5 (ft)
PCB		
Total PCBs	ND(0.038)	ND(0.039)

SD_94-EP-03	0.5 – 2 (ft)	8 – 10 (ft)	16 – 18 (ft)
VOC			
1,1-Dichloroethene	ND(0.039)	ND(0.038)	ND(0.043) /ND(0.042)
Benzene	ND(0.039)	ND(0.038)	ND(0.043) /ND(0.042)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.038)	ND(0.043) /ND(0.042)
Trichloroethene	ND(0.039)	ND(0.038)	ND(0.043) /ND(0.042)
Vinyl chloride	ND(0.039)	ND(0.038)	ND(0.043) /ND(0.042)
SVOC			
Benzo(a)anthracene	ND(0.19)	ND(0.19)	ND(0.21) /ND(0.2)
Benzo(a)pyrene	ND(0.19)	ND(0.19)	ND(0.21) /ND(0.2)
Benzo(b)fluoranthene	ND(0.19)	ND(0.19)	ND(0.21) /ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.19)	ND(0.21) /ND(0.2)
Di-n-butylphthalate	ND(0.19)	ND(0.19)	ND(0.21) /ND(0.2)
Indeno(1,2,3-cd)pyrene	ND(0.19)	ND(0.19)	ND(0.21) /ND(0.2)
PCB			
Total PCBs	ND(0.039)	ND(0.039)	ND(0.043) /ND(0.042)
Inorganic			
Arsenic	8.4 J (ROC)	5 J	10 J (ROC) /9.6 J (ROC)
Beryllium	0.62	0.46	1.1
Chromium Total	15	14	28 /29
Cyanide (total)	0.14 J	0.059 J	0.039 J /0.079 J
Lead	12 J	7.4 J	14 J /13 J
Manganese	300 J	310 J	400 J /400 J
Nickel	16	17	35 /34
Selenium	ND(2.2) J	ND(1.9 J	ND(1.8 J) /ND(1.9 J)
Silver	0.17 J	0.082 J	0.16 J /0.15 J
Vanadium	24 J	23 J	46 J /44 J

RFI-94-05	0.5 – 2 (ft)	8 – 10 (ft)	18 – 20 (ft)
VOC			
1,1-Dichloroethene	ND(0.038)	ND(0.039)	ND(0.039) /ND(0.038)
Benzene	ND(0.038)	ND(0.039)	ND(0.039) /ND(0.038)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.039)	ND(0.039) /ND(0.038)
Trichloroethene	0.13	ND(0.039)	ND(0.039) /ND(0.038)
Vinyl chloride	ND(0.038)	ND(0.039)	ND(0.039) /ND(0.038)
SVOC			
Benzo(a)anthracene	0.12 J	ND(0.19)	ND(0.19) /ND(0.18)
Benzo(a)pyrene	0.0887 J	ND(0.19)	ND(0.19) /ND(0.18)
Benzo(b)fluoranthene	0.112 J	ND(0.19)	ND(0.19) /ND(0.18)
bis(2-Ethylhexyl)phthalate	0.128 J	ND(0.19)	ND(0.19) /ND(0.18)
Di-n-butylphthalate	ND(0.18)	ND(0.19)	ND(0.19) /ND(0.18)
Indeno(1,2,3-cd)pyrene	ND(0.18 J	ND(0.19)	ND(0.19) /ND(0.18)
PCB			
Total PCBs	ND(0.038)	ND(0.039)	ND(0.039) /ND(0.037)
Inorganic			
Arsenic	7	5.5	8.1 (ROC) /5.6
Beryllium	0.45	0.53	0.81 J /0.7 J
Chromium Total	15	19	28 J /11
Cyanide (total)	ND(0.22) J-	0.034 J	ND(0.23) /0.061 J
Lead	160	9.6	9.5 J /5.3 J
Manganese	310 J	380 J	410 J /270 J
Nickel	17 J	22 J	22 J /12 J
Selenium	ND(1.5) J-	ND(1.9) J-	ND(1.8) /ND(1.8)
Silver	0.13 J	0.33 J	0.14 J /0.087 J
Vanadium	20 J	34 J	34 J /17 J

RFI-94-03	0.8 – 2 (ft)	2 – 4 (ft)
VOC		
1,1-Dichloroethene	ND(0.04)	ND(0.04)
Benzene	ND(0.04)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.04)
Trichloroethene	ND(0.04)	ND(0.04)
Vinyl chloride	ND(0.04)	ND(0.04)
SVOC		
Benzo(a)anthracene	0.0927 J	0.252 J
Benzo(a)pyrene	0.0884 J	0.183 J
Benzo(b)fluoranthene	0.0954 J	0.261 J
bis(2-Ethylhexyl)phthalate	0.0861 J	ND(0.2)
Di-n-butylphthalate	ND(0.2)	0.069 J
Indeno(1,2,3-cd)pyrene	0.0548 J	ND(0.2)
PCB		
Total PCBs	ND(0.041)	ND(0.041)
Inorganic		
Arsenic	3.3	3.1
Beryllium	0.25	0.35
Chromium Total	44	36
Cyanide (total)	0.022 J	ND(0.2)
Lead	140	150
Manganese	390	720
Nickel	29	19
Selenium	ND(1.8)	ND(1.9)
Silver	0.18 J	0.11 J
Vanadium	11 J	9 J

RFI-94-08	1 – 3 (ft)	9 – 11 (ft)	13 – 15 (ft)
VOC			
1,1-Dichloroethene	ND(0.04)	ND(0.045)	ND(0.042)
Benzene	ND(0.04)	ND(0.045)	ND(0.042)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.045)	ND(0.042)
Trichloroethene	0.041	ND(0.045)	ND(0.042)
Vinyl chloride	ND(0.04)	ND(0.045)	ND(0.042)
SVOC			
Benzo(a)anthracene	0.055	ND(0.22)	0.059 J
Benzo(a)pyrene	0.0477 J	ND(0.22)	0.0377 J
Benzo(b)fluoranthene	0.0647 J	ND(0.22)	ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.2)	ND(0.22)	ND(0.2)
Di-n-butylphthalate	ND(0.2)	ND(0.22)	ND(0.2)
Indeno(1,2,3-cd)pyrene	ND(0.2)	ND(0.22)	ND(0.2)
PCB			
Total PCBs	ND(0.041)	ND(0.045)	ND(0.042)
Inorganic			
Arsenic	13 J (ROC)	5.5 J	5.4 J
Beryllium	4.1	5.7 J	4.1 J
Chromium Total	18	79 J	14 J
Cyanide (total)	0.057 J	ND(0.23)	ND(0.2)
Lead	100	16 J	12 J
Manganese	760 J	560 J	450 J
Nickel	24 J	28 J	14 J
Selenium	ND(0.54) J-	ND(0.23) J-	0.1 J-
Silver	0.29 J	0.47 J	0.22 J
Vanadium	22 J	100 J	32 J

RFI-94-06	0.7 – 2 (ft)	8 – 10 (ft)
VOC		
1,1-Dichloroethene	ND(0.039)	ND(0.041) /ND(0.039)
Benzene	ND(0.039)	ND(0.041) /ND(0.039)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.041) /ND(0.039)
Trichloroethene	ND(0.039)	ND(0.041) /ND(0.039)
Vinyl chloride	ND(0.039)	ND(0.041) /ND(0.039)
SVOC		
Benzo(a)anthracene	0.0899 J	ND(0.2) /ND(0.19)
Benzo(a)pyrene	0.0839 J	ND(0.2) /ND(0.19)
Benzo(b)fluoranthene	0.12 J	ND(0.2) /ND(0.19)
bis(2-Ethylhexyl)phthalate	0.0942 J	ND(0.2) /ND(0.19)
Di-n-butylphthalate	0.069 J	ND(0.2) /ND(0.19)
Indeno(1,2,3-cd)pyrene	0.0651 J	ND(0.2) /ND(0.19)
PCB		
Total PCBs	ND(0.038)	ND(0.041) /ND(0.039)
Inorganic		
Arsenic	10 (ROC)	12 (ROC) /8.3 (ROC)
Beryllium	0.41	0.24 /0.32
Chromium Total	15	10 /15
Cyanide (total)	0.042 J	ND(0.2) /0.055 J
Lead	79	5.7 /5.2
Manganese	380 J	260 J /420 J
Nickel	16 J	12 J /15 J
Selenium	0.68 J	ND(1.8) /ND(1.8)
Silver	0.15 J	0.085 J /0.17 J
Vanadium	22 J	16 J /23 J

RFI-94-10	0.5 – 2.5 (ft)	4.5 – 6.5 (ft)
VOC		
1,1-Dichloroethene	ND(0.041)	ND(0.04)
Benzene	ND(0.041)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.041)	ND(0.04)
Trichloroethene	ND(0.041)	ND(0.04)
Vinyl chloride	ND(0.081)	ND(0.079)
SVOC		
Benzo(a)anthracene	ND(2)	ND(0.19)
Benzo(a)pyrene	ND(2)	ND(0.19)
Benzo(b)fluoranthene	ND(2)	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(2)	ND(0.19)
Di-n-butylphthalate	ND(2)	ND(0.19)
Indeno(1,2,3-cd)pyrene	ND(2 J-	ND(0.19 J-
PCB		
Total PCBs	ND(0.041)	ND(0.04)
Inorganic		
Arsenic	3.8	4.6
Beryllium	0.25	0.3
Chromium Total	8	12
Cyanide (total)	ND(0.2)	ND(0.2)
Lead	24	12
Manganese	220 J-	190 J-
Nickel	7.5	13
Selenium	ND(2.2)	ND(0.11)
Silver	0.028 J	0.046 J
Vanadium	14	20

RFI-94-11	1.5 – 3.5 (ft)	8 – 10 (ft)	10.5 – 12.5 (ft)
VOC			
1,1-Dichloroethene	ND(0.04)	ND(0.04)	ND(0.04)
Benzene	ND(0.04)	ND(0.04)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.04)	ND(0.04)
Trichloroethene	ND(0.04)	ND(0.04)	ND(0.04)
Vinyl chloride	ND(0.04)	ND(0.04)	ND(0.04)
SVOC			
Benzo(a)anthracene	ND(0.3)	ND(0.3)	ND(0.3)
Benzo(a)pyrene	ND(0.3)	ND(0.3)	ND(0.3)
Benzo(b)fluoranthene	ND(0.3)	ND(0.3)	ND(0.3)
bis(2-Ethylhexyl)phthalate	ND(0.3)	ND(0.3)	ND(0.3)
Di-n-butylphthalate	ND(0.3)	ND(0.3)	ND(0.3)
Indeno(1,2,3-cd)pyrene	ND(0.3)	ND(0.3)	ND(0.3)
PCB			
Total PCBs	ND(0.33)	ND(0.33)	ND(0.33)
Inorganic			
Arsenic	4.3	5.3 /6.3	2.2
Beryllium	0.54	0.42 /ND(0.39)	0.96
Chromium Total	19	13 /13	8
Cyanide (total)	ND(0.17)	ND	ND
Lead	62	6 /ND(7)	3.1
Manganese	380	300 /410	230 J-
Nickel	13	19 /14	8.6
Selenium	ND(1)	ND(0.93) /ND(0.42)	ND(0.42)
Silver	ND(0.17)	ND(0.15) /ND(0.5)	ND(0.17)
Vanadium	19	20 /16	12

RFI-94-07	2 – 4 (ft)	4 – 6 (ft)
VOC		
1,1-Dichloroethene	ND(0.039)	ND(0.042)
Benzene	ND(0.039)	ND(0.042)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.042)
Trichloroethene	ND(0.039)	ND(0.042)
Vinyl chloride	ND(0.039)	ND(0.042)
SVOC		
Benzo(a)anthracene	ND(0.96)	ND(0.2)
Benzo(a)pyrene	ND(0.96)	ND(0.2)
Benzo(b)fluoranthene	ND(0.96)	ND(0.2)
bis(2-Ethylhexyl)phthalate	ND(0.96)	ND(0.2)
Di-n-butylphthalate	ND(0.96)	ND(0.2)
Indeno(1,2,3-cd)pyrene	ND(0.96)	ND(0.2)
PCB		
Total PCBs	ND(0.04)	ND(0.04)
Inorganic		
Arsenic	8.2 J (ROC)	4.2 J
Beryllium	0.54	0.42 J
Chromium Total	17 J	20 J
Cyanide (total)	0.099 J	ND(0.4)
Lead	8.7 J	10 J
Manganese	300 J	410 J
Nickel	12 J	23 J
Selenium	ND(1.5 J-	ND(0.42)
Silver	0.062 J	0.092 J
Vanadium	24 J	34 J

RFI-94-01	0.5 – 2 (ft)	2 – 4 (ft)
VOC		
1,1-Dichloroethene	ND(0.037)	ND(0.04)
Benzene	ND(0.037)	ND(0.04)
cis-1,2-Dichloroethene	ND(0.037)	ND(0.04)
Trichloroethene	ND(0.037)	ND(0.04)
Vinyl chloride	ND(0.037)	ND(0.04)
SVOC		
Benzo(a)anthracene	ND(0.18)	ND(0.19)
Benzo(a)pyrene	ND(0.18)	ND(0.19)
Benzo(b)fluoranthene	ND(0.18)	ND(0.19)
bis(2-Ethylhexyl)phthalate	0.102 J	ND(0.19)
Di-n-butylphthalate	0.0505 J	ND(0.2)
Indeno(1,2,3-cd)pyrene	0.19 J	0.119 J
PCB		
Total PCBs	0.147 J	0.22
Inorganic		
Arsenic	13 (ROC)	12 (ROC)
Beryllium	0.45 J	0.46 J
Chromium Total	31 J	34 J
Cyanide (total)	0.0553 J	0.061 J
Lead	63 J	53 J
Manganese	490	400
Nickel	18 J	20 J
Selenium	0.63 J	0.58 J
Silver	0.13 J	0.094 J
Vanadium	11	12

RFI-94-04	0.4 – 2 (ft)	8 – 10 (ft)
VOC		
1,1-Dichloroethene	ND(0.041)	ND(0.039)
Benzene	ND(0.041)	ND(0.039)
cis-1,2-Dichloroethene	ND(0.041)	ND(0.039)
Trichloroethene	ND(0.041)	ND(0.039)
Vinyl chloride	ND(0.041)	ND(0.039)
SVOC		
Benzo(a)anthracene	0.123 J /0.173 J	ND(0.19)
Benzo(a)pyrene	ND(0.2) /0.095 J	ND(0.19)
Benzo(b)fluoranthene	ND(0.2) /0.158 J	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.2) /ND(0.19)	ND(0.19 J-
Di-n-butylphthalate	0.152 J /ND(0.19)	ND(0.2)
Indeno(1,2,3-cd)pyrene	ND(0.2) /ND(0.19)	ND(0.19)
PCB		
Total PCBs	ND(0.041) /ND(0.039)	ND(0.039)
Inorganic		
Arsenic	8.1 (ROC) /8.1	8.2 (ROC)
Beryllium	0.47 J-	0.3 J-
Chromium Total	39 /63	14
Cyanide (total)	0.028 J /0.092 J	0.04 J
Lead	120 /110	8
Manganese	560 /460	310
Nickel	38 /40	18
Selenium	0.86 J /0.43 J	ND(1.9)
Silver	0.15 J /0.066 J	0.076 J
Vanadium	22 J /24 J	18 J

RFI-84-11	0.5 – 2.5 (ft)	3.5 – 5.5 (ft)
VOC		
1,1-Dichloroethene	ND(0.06)	ND(0.06)
Benzene	ND(0.06)	ND(0.06)
cis-1,2-Dichloroethene	ND(0.06)	ND(0.06)
Trichloroethene	ND(0.06)	ND(0.06)
Vinyl chloride	ND(0.06)	ND(0.06)
SVOC		
Benzo(a)anthracene	0.033 J	ND(0.19)
Benzo(a)pyrene	0.0293 J	ND(0.19)
Benzo(b)fluoranthene	0.0505 J	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.19)
Di-n-butylphthalate	ND(0.19)	ND(0.19)
Indeno(1,2,3-cd)pyrene	ND(0.19)	ND(0.19)
PCB		
Total PCBs	ND(0.037)	ND(0.038)
Inorganic		
Arsenic	8.8 J	6.2 J
Beryllium	0.54 J	0.34 J
Chromium Total	39 J	14 J
Cyanide (total)	0.028 J	ND(0.4)
Lead	120 J	8 J
Manganese	560 J	310 J
Nickel	38 J	18 J
Selenium	0.86 J	ND(1.9)
Silver	0.15 J	0.076 J
Vanadium	22 J	18 J

RFI-94-09	0.5 – 2.5 (ft)	8 – 10 (ft)
VOC		
1,1-Dichloroethene	ND(0.05)	ND(0.07)
Benzene	ND(0.05)	ND(0.07)
cis-1,2-Dichloroethene	ND(0.05)	ND(0.07)
Trichloroethene	ND(0.05)	ND(0.07)
Vinyl chloride	ND(0.1)	ND(0.14)

RFI-84-08	2 – 3 (ft)	8 – 10 (ft)	28 – 30 (ft)
VOC			
1,1-Dichloroethene	ND(0.05)	ND(0.07)	ND(0.07)
Benzene	ND(0.05)	ND(0.07)	ND(0.07)
cis-1,2-Dichloroethene	ND(0.05)	ND(0.07)	ND(0.07)
Trichloroethene	ND(0.05)	0.02 J	ND(0.07)
Vinyl chloride	ND(0.1)	ND(0.14)	ND(0.13)
SVOC			
Benzo(a)anthracene	ND(0.33)	0.2 J	ND(0.33)
Benzo(a)pyrene	ND(0.33)	0.1 J	ND(0.33)
Benzo(b)fluoranthene	ND(0.33)	0.1 J	ND(0.33)
bis(2-Ethylhexyl)phthalate	ND(0.33)	ND(0.33)	ND(0.33)
Di-n-butylphthalate	ND(0.33)	ND(0.33)	ND(0.33)
Indeno(1,2,3-cd)pyrene	ND(0.33)	0.3 J	ND(0.33)
PCB			
Total PCBs	ND(0.33)	ND(0.33)	ND(0.33)
Inorganic			
Arsenic	10 J (ROC)	9 J (ROC)	6.2 J
Beryllium	0.59 J	0.4 J	0.3 J
Chromium Total	150	11	9.2
Cyanide (total)	61 J-	19 J	ND(0.2)
Lead	1600 (DPSD)	340	3.6
Manganese	87 J	32 J	20
Nickel	0.35 J	0.82 J	0.5 J
Selenium	0.15 J	0.12 J	ND(1.8)
Silver	16 J	27 J	0.17 J
Vanadium			5.5

RFI-84-09	0.5 – 2.5 (ft)	8 – 10 (ft)
VOC		
1,1-Dichloroethene	ND(0.05)	ND(0.07)
Benzene	ND(0.05)	ND(0.07)
cis-1,2-Dichloroethene	ND(0.05)	ND(0.07)
Trichloroethene	ND(0.05)	ND(0.07)
Vinyl chloride	ND(0.1)	ND(0.14)

RFI-84-03	0.8 – 2 (ft)	8 – 10 (ft)	12 – 14 (ft)
VOC			
1,1-Dichloroethene	ND(0.037)	ND(0.042)	ND(0.042)
Benzene	ND(0.037)	ND(0.042)	ND(0.042)
cis-1,2-Dichloroethene	ND(0.037)	ND(0.042)	ND(0.042)
Trichloroethene	ND(0.037)	ND(0.042)	ND(0.042)
Vinyl chloride	ND(0.037)	ND(0.042)	ND(0.042)
SVOC			
Benzo(a)anthracene	0.0888 J	ND(0.2)	ND(0.2)
Benzo(a)pyrene	0.0838 J	ND(0.2)	ND(0.2)
Benzo(b)fluoranthene	0.102 J	ND(0.2)	ND(0.2)
bis(2-Ethylhexyl)phthalate	0.0602 J	0.0561 J	0.0774 J
Di-n-butylphthalate	0.0435 J	ND(0.2)	ND(0.2)
Indeno(1,2,3-cd)pyrene	ND(0.037)	ND(0.042)	ND(0.041)
PCB			
Total PCBs	ND(0.037)	ND(0.042)	ND(0.041)
Inorganic			
Arsenic	6.8	11 (ROC)	6.2
Beryllium	0.56	1.6	0.47 J
Chromium Total	14	19	3.4
Cyanide (total)	0.16 J	ND(0.4)	0.053 J
Lead	16	10	2.1
Manganese	430	330	94
Nickel	20	24	3.7
Selenium	ND(1.9)	ND(1.8)	ND(1.8)
Silver	0.083 J	0.099 J	0.083 J
Vanadium	18 J	27 J	4 J

RFI-84-10	0.7 – 2.7 (ft)	2.7 – 4.7 (ft)
VOC		
1,1-Dichloroethene	ND(0.05)	ND(0.06)
Benzene	ND(0.05)	ND(0.06)
cis-1,2-Dichloroethene	ND(0.05)	ND(0.06)
Trichloroethene	ND(0.05)	ND(0.06)
Vinyl chloride	ND(0.1)	ND(0.1)

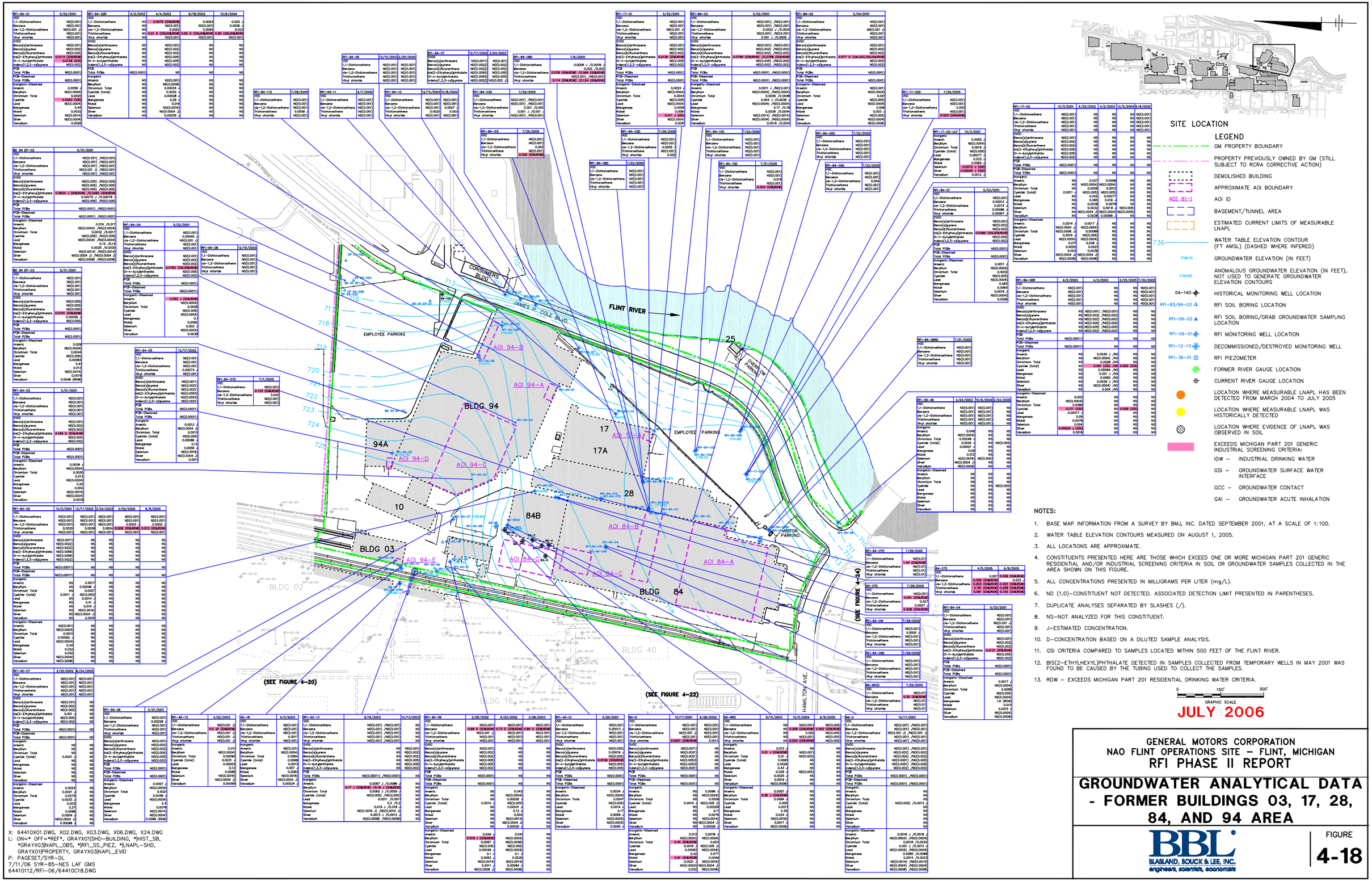
RFI-84-02	0.8 – 2 (ft)	8 – 10 (ft)
VOC		
1,1-Dichloroethene	ND(0.038)	ND(0.039)
Benzene	ND(0.038)	ND(0.039)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.039)
Trichloroethene	ND(0.038)	ND(0.039)
Vinyl chloride	ND(0.038)	ND(0.039)
SVOC		
Benzo(a)anthracene	0.905 J	ND(0.19)
Benzo(a)pyrene	0.77 J	ND(0.19)
Benzo(b)fluoranthene	0.933 J	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.19 J-
Di-n-butylphthalate	ND(0.19)	0.0899 J
Indeno(1,2,3-cd)pyrene	0.411 J	ND(0.19)
PCB		
Total PCBs	ND(0.038)	ND(0.039)
Inorganic		
Arsenic	4.3	2
Beryllium	0.34	0.092 J
Chromium Total	7.8	3.5
Cyanide (total)	0.04 J	ND(0.2)
Lead	47	2.2
Manganese	220	67
Nickel	11	4
Selenium	ND(1.3)	ND(1.4)
Silver	0.06 J	ND(0.17)
Vanadium	10 J	4.3 J

RFI-84-01	0.5 – 2 (ft)	8 – 10 (ft)	16 – 17.5 (ft)
VOC			
1,1-Dichloroethene	ND(0.04)	ND(0.039)	ND(0.038)
Benzene	ND(0.04)	ND(0.039)	ND(0.038)
cis-1,2-Dichloroethene	ND(0.04)	ND(0.039)	ND(0.038)
Trichloroethene	0.46	ND(0.039)	ND(0.038)
Vinyl chloride	ND(0.04)	ND(0.039)	ND(0.038)
SVOC			
Benzo(a)anthracene	1.237 J	ND(0.19)	ND(0.19)
Benzo(a)pyrene	1.081 J	ND(0.19)	ND(0.19)
Benzo(b)fluoranthene	1.307 J	ND(0.19)	ND(0.19)
bis(2-Ethylhexyl)phthalate	0.0939 J	ND(0.19)	ND(0.19)
Di-n-butylphthalate	0.052 J	ND(0.19)	ND(0.19)
Indeno(1,2,3-cd)pyrene	0.0852 J	ND(0.19)	ND(0.19)
PCB			
Total PCBs	ND(0.04)	ND(0.038)	ND(0.038)
Inorganic			
Arsenic	12 (ROC)	4.8	8 (ROC)
Beryllium	3.7	0.43	1.5
Chromium Total	15	19	5.6
Cyanide (total)	0.65	0.017 J	ND(0.4)
Lead	600 (ROC)	7.3	320
Manganese	370	350	420
Nickel	34	21	26
Selenium	1.2 J	ND(1.3)	ND(1.4)
Silver	0.3 J	0.087 J	0.14 J
Vanadium	23 J	20 J	20 J

RFI-84-06	0.9 – 2 (ft)	4 – 6 (ft)
VOC		
1,1-Dichloroethene	ND(0.038)	ND(0.039)
Benzene	0.011 J	ND(0.039)
cis-1,2-Dichloroethene	ND(0.038)	ND(0.039)
Trichloroethene	ND(0.038)	ND(0.039)
Vinyl chloride	ND(0.038)	ND(0.039)
SVOC		
Benzo(a)anthracene	0.487	ND(0.19)
Benzo(a)pyrene	0.552	ND(0.19)
Benzo(b)fluoranthene	0.537 J	ND(0.19)
bis(2-Ethylhexyl)phthalate	ND(0.19)	ND(0.19)
Di-n-butylphthalate	ND(0.19)	ND(0.19)
Indeno(1,2,3-cd)pyrene	0.25 J	ND(0.19)
PCB		
Total PCBs	ND(0.038)	ND(0.039)
Inorganic		
Arsenic	6.4 J	6.3 J
Beryllium	2.9 J	0.48 J
Chromium Total	11	16
Cyanide (total)	0.062 J	0.0054 J
Lead	430 J (ROC)	7 J
Manganese	380 J	240 J
Nickel	32	17
Selenium	ND(1.8)	ND(1.7
Silver	0.15 J	0.056 J
Vanadium	19	23

RFI-84-07	2 – 4 (ft)	8 – 10 (ft)	14 – 16 (ft)
VOC			
1,1-Dichloroethene	ND(0.06)	ND(0.07)	ND(0.06)
Benzene	ND(0.06)	ND(0.07)	ND(0.06)
cis-1,2-Dichloroethene	ND(0.06)	ND(0.07)	ND(0.06)
Trichloroethene	ND(0.06)	ND(0.07)	ND(0.06)
Vinyl chloride	ND(0.1)	ND(0.14)	ND(0.11)
SVOC			
Benzo(a)anthracene	ND(0.33)	ND(0.33)	ND(0.33)
Benzo(a)pyrene	ND(0.33)	ND(0.33)	ND(0.33)
Benzo(b)fluoranthene	ND(0.33)	ND(0.33)	ND(0.33)
bis(2-Ethylhexyl)phthalate	ND(0.33)	ND(0.33)	ND(0.33)
Di-n-butylphthalate	ND(0.33)	ND(0.33)	ND(0.33)
Indeno(1,2,3-cd)pyrene	ND(0.33)	ND(0.33)	ND(0.33)
PCB			
Total PCBs	ND(0.33)	ND(0.33)	ND(0.33)
Inorganic			
Arsenic	1.82	1.8	2.78
Beryllium	0.19 J	0.18 J	0.51
Chromium Total	3.7	3.6	13.1
Cyanide (total)	ND(0.17)	ND(0.17)	ND(0.13)
Lead	13.1	4.8	11
Manganese	330	204	442
Nickel	7.8	6.1	24.7
Selenium	ND(0.87)	ND(0.44)	ND(0.82)
Silver	ND(0.1)	ND(0.1)	ND(0.1)
Vanadium	6.2	8.5	16.2

RFI-94-12	0.7 – 2 (ft)	2 – 4 (ft)
VOC		
1,1-Dichloroethene	ND(0.039)	ND(0.042)
Benzene	ND(0.039)	ND(0.042)
cis-1,2-Dichloroethene	ND(0.039)	ND(0.042)
Trichloroethene	ND(0.039)	ND(0.042)
Vinyl chloride	ND(0.039)	ND(0.042)
SVOC		
Benzo(a)anthracene	0.195 J	0.119 J
Benzo(a)pyrene	0.293 J	0.168 J
Benzo(b)fluoranthene	0.309 J	0.253 J
bis(2-Ethylhexyl)phthalate	ND(0.19 J)	ND(0.2)
Di-n-butylphthalate	0.0505 J	ND(0.2)
Indeno(1,2,3-cd)pyrene	0.19 J	0.119 J
PCB		
Total PCBs	0.147 J	0.22
Inorganic		
Arsenic	13 (ROC)	12 (ROC)
Beryllium	0.45 J	0.46 J
Chromium Total	31 J	34 J
Cyanide (total)	0.0553 J	0.061 J
Lead	63 J	53 J
Manganese	490	400
Nickel	18 J	20 J
Selenium	0.63 J	0.58 J



SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL) (DASHED WHERE INFERED)
- [738.13] — GROUNDWATER ELEVATION (IN FEET)
- [742.02] — ANOMALOUS GROUNDWATER ELEVATION (IN FEET), NOT USED TO GENERATE GROUNDWATER ELEVATION CONTOURS
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- FORMER RIVER GAUGE LOCATION
- CURRENT RIVER GAUGE LOCATION
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDW – INDUSTRIAL DRINKING WATER
  - GSI – GROUNDWATER SURFACE WATER INTERFACE
  - GCC – GROUNDWATER CONTACT
  - GAI – GROUNDWATER ACUTE INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED ON AUGUST 1, 2005.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.
12. BIS(2–ETHYLHEXYL)PHTHALATE DETECTED IN SAMPLES COLLECTED FROM TEMPORARY WELLS IN MAY 2001 WAS FOUND TO BE CAUSED BY THE TUBING USED TO COLLECT THE SAMPLES.
13. RDW – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG, X24.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD–BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C18.DWG

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - FORMER BUILDINGS 03, 17, 28, 84, AND 94 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
4-18

RFI–84–01	5/22/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001) J
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	0.0114 (CRA/RDW)
Di–n–butylphthalate	0.0128 (GSI)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.0056 J
Beryllium	ND(0.0004)
Chromium Total	0.0025
Cyanide	0.0053 (GSI)
Lead	ND(0.0004)
Manganese	0.44
Nickel	0.0032
Selenium	ND(0.0014)
Silver	ND(0.0004)
Vanadium	0.0026

RFI–84–02B	5/31/2001
VOC	
1,1–Dichloroethene	ND(0.001) /ND(0.001)
Benzene	ND(0.001) /ND(0.001)
cis–1,2–Dichloroethene	ND(0.001) /ND(0.001)
Trichloroethene	ND(0.001 J) /ND(0.001)
Vinyl chloride	ND(0.001) /ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.005) /ND(0.005)
Benzo(a)pyrene	ND(0.005) /ND(0.005)
Benzo(b)fluoranthene	ND(0.005) /ND(0.005)
bis(2–Ethylhexyl)phthalate	0.0624 J (CRA/RDW) /0.0483 (CRA/RDW)
Di–n–butylphthalate	0.00075 J /0.00078 J
Indeno(1,2,3–cd)pyrene	ND(0.005) /ND(0.005)
PCB	
Total PCBs	ND(0.0001) /ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001) /ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.019 /0.017
Beryllium	ND(0.0004) /ND(0.0004)
Chromium Total	0.0032 /0.0017
Cyanide	ND(0.005) /ND(0.005)
Lead	ND(0.0004) /ND(0.0004)
Manganese	0.14 /0.14
Nickel	0.0035 /0.0035
Selenium	ND(0.0014) /ND(0.0014)
Silver	ND(0.0004 J) /ND(0.0004 J)
Vanadium	ND(0.0008) /ND(0.0008)

RD_94 EP–02	5/31/2001
VOC	
1,1–Dichloroethene	ND(0.001) /ND(0.001)
Benzene	ND(0.001) /ND(0.001)
cis–1,2–Dichloroethene	ND(0.001) /ND(0.001)
Trichloroethene	ND(0.001 J) /ND(0.001)
Vinyl chloride	ND(0.001) /ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.005) /ND(0.005)
Benzo(a)pyrene	ND(0.005) /ND(0.005)
Benzo(b)fluoranthene	ND(0.005) /ND(0.005)
bis(2–Ethylhexyl)phthalate	0.0624 J (CRA/RDW) /0.0483 (CRA/RDW)
Di–n–butylphthalate	0.00075 J /0.00078 J
Indeno(1,2,3–cd)pyrene	ND(0.005) /ND(0.005)
PCB	
Total PCBs	ND(0.0001) /ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001) /ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.019 /0.017
Beryllium	ND(0.0004) /ND(0.0004)
Chromium Total	0.0032 /0.0017
Cyanide	ND(0.005) /ND(0.005)
Lead	ND(0.0004) /ND(0.0004)
Manganese	0.14 /0.14
Nickel	0.0035 /0.0035
Selenium	ND(0.0014) /ND(0.0014)
Silver	ND(0.0004 J) /ND(0.0004 J)
Vanadium	ND(0.0008) /ND(0.0008)

RFI–84–03	5/31/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	0.184 D (CRA/RDW)
Di–n–butylphthalate	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.0039 J
Beryllium	ND(0.0004)
Chromium Total	0.0025
Cyanide	0.013 J
Lead	ND(0.0004)
Manganese	0.25
Nickel	0.004
Selenium	ND(0.0014)
Silver	ND(0.0004)
Vanadium	0.0018

RFI–84–04	5/22/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001) J
cis–1,2–Dichloroethene	ND(0.001 J)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	0.0762 (CRA/RDW)
Di–n–butylphthalate	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.000011)
Inorganic–Dissolved	
Arsenic	0.052 J (CRA/RDW)
Beryllium	ND(0.0004)
Chromium Total	0.0036
Cyanide	ND(0.005)
Lead	0.0092
Manganese	0.1
Nickel	0.0092
Selenium	0.002 J
Silver	ND(0.0004)
Vanadium	0.0039

RFI–84–05	12/17/2002
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	0.00074 J
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.0011)
Benzo(a)pyrene	ND(0.0021)
Benzo(b)fluoranthene	ND(0.0021)
bis(2–Ethylhexyl)phthalate	ND(0.00553)
Di–n–butylphthalate	ND(0.0053)
Indeno(1,2,3–cd)pyrene	ND(0.0021)
PCB	
Total PCBs	ND(0.00011)
PCB–Dissolved	
Total PCBs	ND(0.00011)
Inorganic–Dissolved	
Arsenic	0.0012 J
Beryllium	ND(0.0004) J
Chromium Total	0.0013
Cyanide (total)	ND(0.005)
Lead	0.00086 J
Manganese	0.12
Nickel	0.0056 J
Selenium	ND(0.0014)
Silver	ND(0.0004 J)
Vanadium	0.001

RFI–84–06	5/31/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	ND(0.005)
Di–n–butylphthalate	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.029
Beryllium	ND(0.0004)
Chromium Total	0.0044
Cyanide	ND(0.005)
Lead	0.00083
Manganese	0.41
Nickel	0.012
Selenium	ND(0.0014)
Silver	0.0019
Vanadium	0.0048 (RDW)

RFI–84–07S	7/1/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	0.133 (CRA/RDW)
cis–1,2–Dichloroethene	0.002
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–08	12/18/2003
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–09	12/15/2003	2/25/2005
VOC		
1,1–Dichloroethene	ND(0.001)	ND(0.001)
Benzene	ND(0.001)	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)	ND(0.001)
Trichloroethene	ND(0.001)	ND(0.001)
Vinyl chloride	ND(0.001)	ND(0.001)

RFI–84–07	12/17/2002	3/24/2003
SVOC		
Benzo(a)anthracene	ND(0.0011)	ND(0.001)
Benzo(a)pyrene	ND(0.0022)	ND(0.002)
Benzo(b)fluoranthene	ND(0.0022)	ND(0.002)
bis(2–Ethylhexyl)phthalate	ND(0.0055)	ND(0.005)
Di–n–butylphthalate	ND(0.0053)	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.0022)	ND(0.002) J

RFI–84–08D	7/8/2005
VOC	
1,1–Dichloroethene	0.0008 J /0.0009 J
Benzene	0.002 /0.002
cis–1,2–Dichloroethene	0.078 (CRA/RDW) /0.084 (CRA/RDW)
Trichloroethene	0.114 (CRA/RDW) /0.124 (CRA/RDW)
Vinyl chloride	

RFI–84–11	4/7/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–10	12/15/2003	10/8/2004
VOC		
1,1–Dichloroethene	ND(0.001)	ND(0.001)
Benzene	ND(0.001)	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)	0.0007 J
Trichloroethene	0.0025	0.003
Vinyl chloride	ND(0.001)	ND(0.001)

RFI–84–115	7/28/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	0.0008 J
Vinyl chloride	ND(0.001)

RFI–84–035	7/29/2005
VOC	
1,1–Dichloroethene	ND(0.001) /ND(0.001)
Benzene	ND(0.001) /ND(0.001)
cis–1,2–Dichloroethene	0.001 J /0.001 J
Trichloroethene	ND(0.001) /ND(0.001)
Vinyl chloride	

RFI–84–03	7/29/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	0.002
Trichloroethene	ND(0.001)
Vinyl chloride	0.005 (CRA/RDW)

RFI–84–085	7/22/2000
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–030	7/29/2000
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	0.002

RFI–84–100	7/21/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	0.004 (CRA/RDW)

RFI–84–105	7/22/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–095	7/22/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–090	7/22/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–08D	7/21/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–17–01	5/23/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	0.0022 J
Trichloroethene	ND(0.001)
Vinyl chloride	0.001 J
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	0.0136 (CRA/RDW)
Di–n–butylphthalate	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.0024 J
Beryllium	ND(0.0004)
Chromium Total	0.0044
Cyanide	ND(0.005)
Lead	ND(0.0004)
Manganese	0.0056
Nickel	0.0068
Selenium	0.019 J (GSI)
Silver	ND(0.0004)
Vanadium	0.0041

RFI–84–03	5/22/2001
VOC	
1,1–Dichloroethene	ND(0.001) /ND(0.001)
Benzene	ND(0.001) /ND(0.001)
cis–1,2–Dichloroethene	ND(0.001) /ND(0.001)
Trichloroethene	ND(0.001) /ND(0.001)
Vinyl chloride	ND(0.001) /ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001) /ND(0.001)
Benzo(a)pyrene	ND(0.002) /ND(0.002)
Benzo(b)fluoranthene	ND(0.002) /ND(0.002)
bis(2–Ethylhexyl)phthalate	0.0789 (CRA/RDW) /0.0758 (CRA/RDW)
Di–n–butylphthalate	ND(0.005) /ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002) /ND(0.002)
PCB	
Total PCBs	ND(0.0001) /ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001) /ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.0011 J /0.0011 J
Beryllium	ND(0.0004) /ND(0.0004)
Chromium Total	0.0036 /0.0048
Cyanide	0.004 J /0.0039 J
Lead	ND(0.0004) /ND(0.0004)
Manganese	0.17 /0.18
Nickel	0.0049 /0.0044
Selenium	ND(0.0014) /ND(0.0014)
Silver	ND(0.0004) /ND(0.0004)
Vanadium	0.0019 /0.0044

RFI–84–02	5/24/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001) J
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	0.577 D (GAI,GCC,GSI,CRA,RDW)
Di–n–butylphthalate	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001)
Inorganic–Dissolved	
Arsenic	ND(0.001)
Beryllium	ND(0.0004)
Chromium Total	0.001
Cyanide	ND(0.005)
Lead	ND(0.0004)
Manganese	0.063 J
Nickel	ND(0.0014)
Selenium	ND(0.0014)
Silver	ND(0.0004)
Vanadium	ND(0.0008)

RFI–17–020	7/29/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	0.003 (CRA/RDW)
Vinyl chloride	

RFI–17–02–I&F	10/3/2001
Inorganic	
Arsenic	0.0055 J
Beryllium	ND(0.0004)
Chromium Total	0.0019 J
Cyanide (total)	ND(0.005)
Lead	0.00172 J
Manganese	0.033 J
Nickel	0.0068 J
Selenium	0.0073 J (GSI)
Silver	0.0045 J (GSI)
Vanadium	0.0012 J

RFI–84–01	5/23/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	0.00012 J
cis–1,2–Dichloroethene	0.0074 J
Trichloroethene	0.00086 J
Vinyl chloride	0.00067 J
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	0.0365 (CRA/RDW)
Di–n–butylphthalate	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.0011 J
Beryllium	ND(0.0004)
Chromium Total	0.0032
Cyanide	ND(0.005)
Lead	ND(0.0004)
Manganese	0.045
Nickel	0.0085
Selenium	0.0018 J
Silver	ND(0.0004)
Vanadium	0.0026

RFI–84–06R	4/2/2003	4/3/2003	2/25/2005	7/22/2005
VOC				
1,1–Dichloroethene	ND(0.001)	NS	NS	ND(0.001)
Benzene	ND(0.001)	NS	NS	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)	NS	NS	ND(0.001)
Trichloroethene	ND(0.001)	NS	NS	ND(0.001)
Vinyl chloride	ND(0.001)	NS	NS	ND(0.001)
SVOC				
Benzo(a)anthracene	NS	ND(0.001)	ND(0.001)	NS
Benzo(a)pyrene	NS	ND(0.002)	ND(0.002)	NS
Benzo(b)fluoranthene	NS	ND(0.002)	ND(0.002)	NS
bis(2–Ethylhexyl)phthalate	NS	ND(0.005)	ND(0.005)	NS
Di–n–butylphthalate	NS	ND(0.005)	ND(0.005)	NS
Indeno(1,2,3–cd)pyrene	NS	ND(0.002)	ND(0.002)	NS
PCB				
Total PCBs	ND(0.00011)	NS	NS	NS
PCB–Dissolved				
Total PCBs	ND(0.00011)	NS	NS	NS
Inorganic				
Arsenic	NS	0.0035 J	NS	NS
Beryllium	NS	ND(0.0004)	NS	NS
Chromium Total	NS	0.0028 J	NS	NS
Cyanide (total)	NS	0.061 (GSI)	NS	0.062 (GSI)
Lead	NS	0.00094 J	NS	NS
Manganese	NS	0.031 J	NS	NS
Nickel	NS	0.0090 J	NS	NS
Selenium	NS	0.0029 J	NS	NS
Silver	NS	ND(0.0004)	NS	NS
Vanadium	NS	0.004	NS	NS
Inorganic–Dissolved				
Arsenic	0.003	NS	NS	NS
Beryllium	ND(0.0004)	NS	NS	NS
Chromium Total	0.0065	NS	NS	NS
Cyanide	0.071 (GSI)	NS	0.058 (GSI)	NS
Lead	0.00017 J	NS	NS	NS
Manganese	0.05	NS	NS	NS
Nickel	0.0078	NS	NS	NS
Selenium	0.004	NS	NS	NS
Silver	0.00026 J (GSI)	NS	NS	NS
Vanadium	0.0016	NS	NS	NS

RFI–09–48	4/24/2003	10/6/2004	7/24/2005
VOC			
1,1–Dichloroethene	ND(0.001)	ND(0.001)	NS
Benzene	ND(0.001)	ND(0.001)	NS
cis–1,2–Dichloroethene	ND(0.001)	ND(0.001)	NS
Trichloroethene	ND(0.001)	ND(0.001)	NS
Vinyl chloride	ND(0.001)	ND(0.001)	NS
Inorganic			
Arsenic	0.048	NS	NS
Beryllium	ND(0.0004)	NS	NS
Chromium Total	0.00049 J	NS	NS
Cyanide (total)	0.0028 J	ND(0.005)	NS
Lead	0.00021 J	NS	NS
Manganese	0.09	NS	NS
Nickel	0.012	NS	NS
Selenium	ND(0.0014)	ND(0.0050)	NS
Silver	ND(0.0004 J)	NS	NS
Vanadium	ND(0.0008)	NS	NS
Inorganic–Dissolved			
Arsenic	NS	NS	NS
Beryllium	NS	NS	NS
Chromium Total	NS	NS	NS
Cyanide	NS	NS	NS
Lead	NS	NS	NS
Manganese	NS	NS	NS
Nickel	NS	NS	NS
Selenium	NS	NS	NS
Silver	NS	NS	NS
Vanadium	NS	NS	NS

RFI–17–02	10/3/2001	4/25/2002	4/2/2003	10/5/2004	4/9/2005
VOC					
1,1–Dichloroethene	ND(0.001)	NS	NS	NS	ND(0.001)
Benzene	ND(0.001)	NS	NS	NS	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)	NS	NS	NS	ND(0.001)
Trichloroethene	ND(0.001)	NS	NS	NS	ND(0.001)
Vinyl chloride	ND(0.001)	NS	NS	NS	ND(0.001)
SVOC					
Benzo(a)anthracene	ND(0.001)	NS	NS	NS	NS
Benzo(a)pyrene	ND(0.002)	NS	NS	NS	NS
Benzo(b)fluoranthene	ND(0.002)	NS	NS	NS	NS
bis(2–Ethylhexyl)phthalate	ND(0.005)	NS	NS	NS	NS
Di–n–butylphthalate	ND(0.005)	NS	NS	NS	NS
Indeno(1,2,3–cd)pyrene	ND(0.002)	NS	NS	NS	NS
PCB					
Total PCBs	ND(0.0001)	NS	NS	NS	NS
PCB–Dissolved					
Total PCBs	ND(0.0001)	NS	NS	NS	NS
Inorganic					
Arsenic	NS	0.027	0.0058	NS	NS
Beryllium	NS	ND(0.0004)	ND(0.0004)	NS	NS
Chromium Total	NS	0.0026	0.0015 J	NS	NS
Cyanide (total)	0.0011 J	ND(0.005)	ND(0.005)	NS	NS
Lead	NS	0.002	0.0007 J	NS	NS
Manganese	NS	0.085	0.016 J	NS	NS
Nickel	NS	0.0036	0.0079 J	NS	NS
Selenium	NS	0.0033	0.0018 J	ND(0.005)	NS
Silver	NS	ND(0.0004) J	ND(0.0004)	ND(0.0005)	NS
Vanadium	NS	0.0036	0.00056 J	NS	NS
Inorganic–Dissolved					
Arsenic	0.0014 J	0.0017 J	NS	NS	NS
Beryllium	ND(0.0004 J)	ND(0.0004)	NS	NS	NS
Chromium Total	ND(0.0006 J)	0.00089 J	NS	NS	NS
Cyanide	0.0018 J	ND(0.005)	NS	NS	NS
Lead	ND(0.0004)	ND(0.0004)	NS	NS	NS
Manganese	0.077	0.039 J	NS	NS	NS
Nickel	0.0025	0.0021 J	NS	NS	NS
Selenium	0.0035 J	ND(0.0014)	NS	NS	NS
Silver	ND(0.0004 J)	ND(0.0004 J)	NS	NS	NS
Vanadium	ND(0.0006)	ND(0.0008)	NS	NS	NS

RFI–84–04	5/23/2001
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001 J)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)
SVOC	
Benzo(a)anthracene	ND(0.001)
Benzo(a)pyrene	ND(0.002)
Benzo(b)fluoranthene	ND(0.002)
bis(2–Ethylhexyl)phthalate	0.0121 (CRA/RDW)
Di–n–butylphthalate	ND(0.005)
Indeno(1,2,3–cd)pyrene	ND(0.002)
PCB	
Total PCBs	ND(0.0001)
PCB–Dissolved	
Total PCBs	ND(0.0001)
Inorganic–Dissolved	
Arsenic	0.0017 J
Beryllium	ND(0.0004)
Chromium Total	0.0068
Cyanide	ND(0.005)
Lead	ND(0.0004)
Manganese	1.6 (RDW)
Nickel	0.013
Selenium	0.0015 J
Silver	ND(0.0004)
Vanadium	ND(0.0008)

RFI–84–070	7/28/2005
VOC	
1,1–Dichloroethene	ND(0.01)
Benzene	1.44 (CRA/RDW)
cis–1,2–Dichloroethene	ND(0.01)
Trichloroethene	ND(0.01)
Vinyl chloride	ND(0.01)

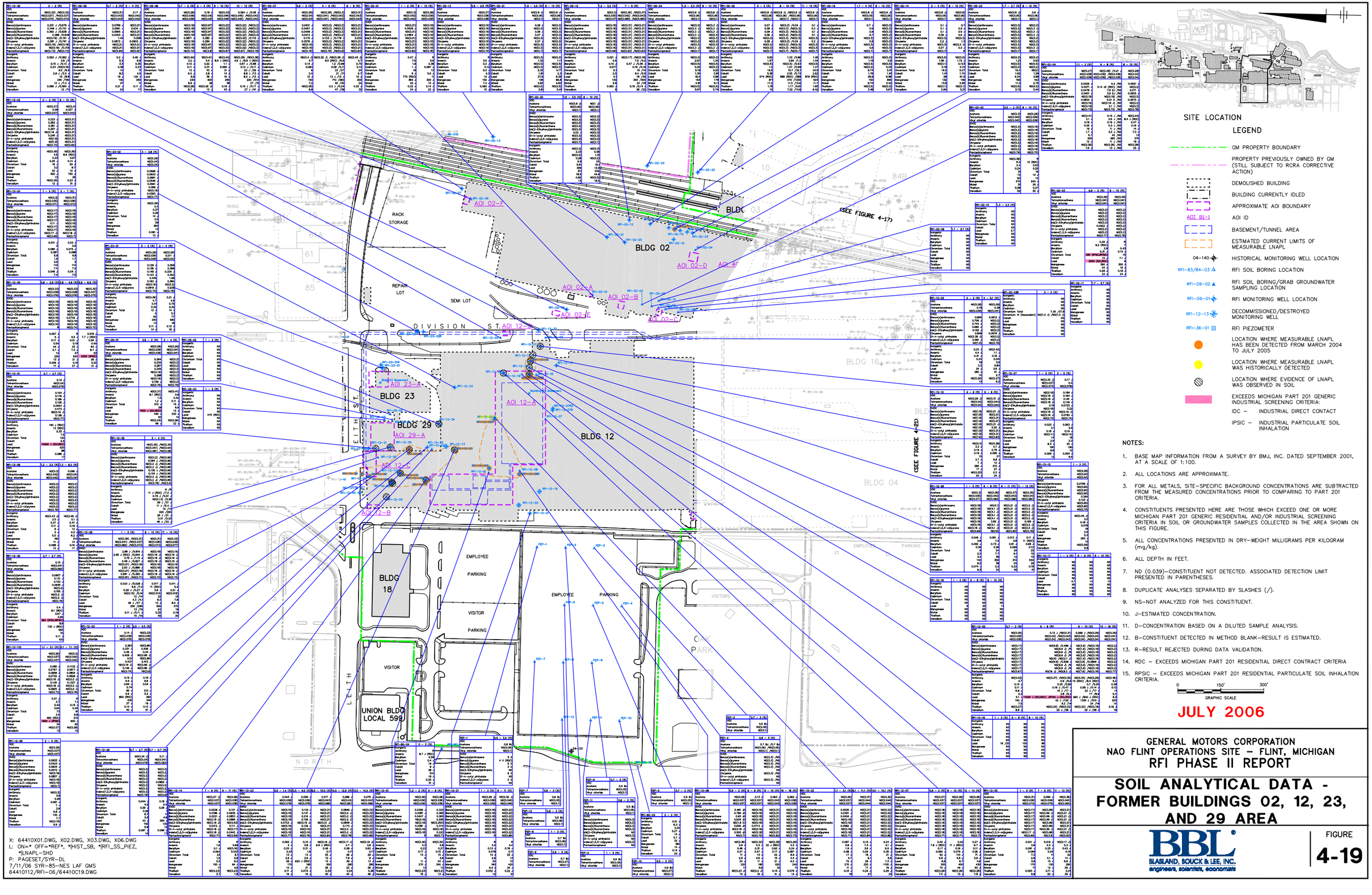
RFI–84–070	7/28/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	0.051 (CRA/RDW)
cis–1,2–Dichloroethene	0.027
Trichloroethene	0.0007
Vinyl chloride	0.008 (CRA/RDW)

RFI–84–06	7/28/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	0.0005 J
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–040	7/28/2005
VOC	
1,1–Dichloroethene	ND(0.001)
Benzene	ND(0.001)
cis–1,2–Dichloroethene	ND(0.001)
Trichloroethene	ND(0.001)
Vinyl chloride	ND(0.001)

RFI–84–6R2D	7/29/2005
VOC	
1,1–Dichloroethene	ND(0.01)
Benzene	0.35 (CRA/RDW)
cis–1,2–Dichloroethene	ND(0.01)
Trichloroethene	ND(0.01)
Vinyl chloride	ND(0.01)

B4–075	4/5/2005	6/8/2005
VOC		
1,1–Dichloroethene	0.007	0.008 (CRA/RDW)
Benzene	0.006 (CRA/RDW)	0.003 J
cis–1,2–Dichloroethene	0.293 (CRA/RDW)	0.322 (CRA/RDW)
Trichloroethene	0.191 (CRA/RDW)	0.258 (CRA/RDW)
Vinyl chloride	0.061 (CRA/RDW



SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 01-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDC — INDUSTRIAL DIRECT CONTACT
  - IPSIC — INDUSTRIAL PARTICULATE SOIL INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE–SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY–WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ALL DEPTH IN FEET.
7. ND (0.039)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
8. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
9. NS–NOT ANALYZED FOR THIS CONSTITUENT.
10. J–ESTIMATED CONCENTRATION.
11. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
12. B–CONSTITUENT DETECTED IN METHOD BLANK–RESULT IS ESTIMATED.
13. R–RESULT REJECTED DURING DATA VALIDATION.
14. RDC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DIRECT CONTRACT CRITERIA
15. RPSIC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

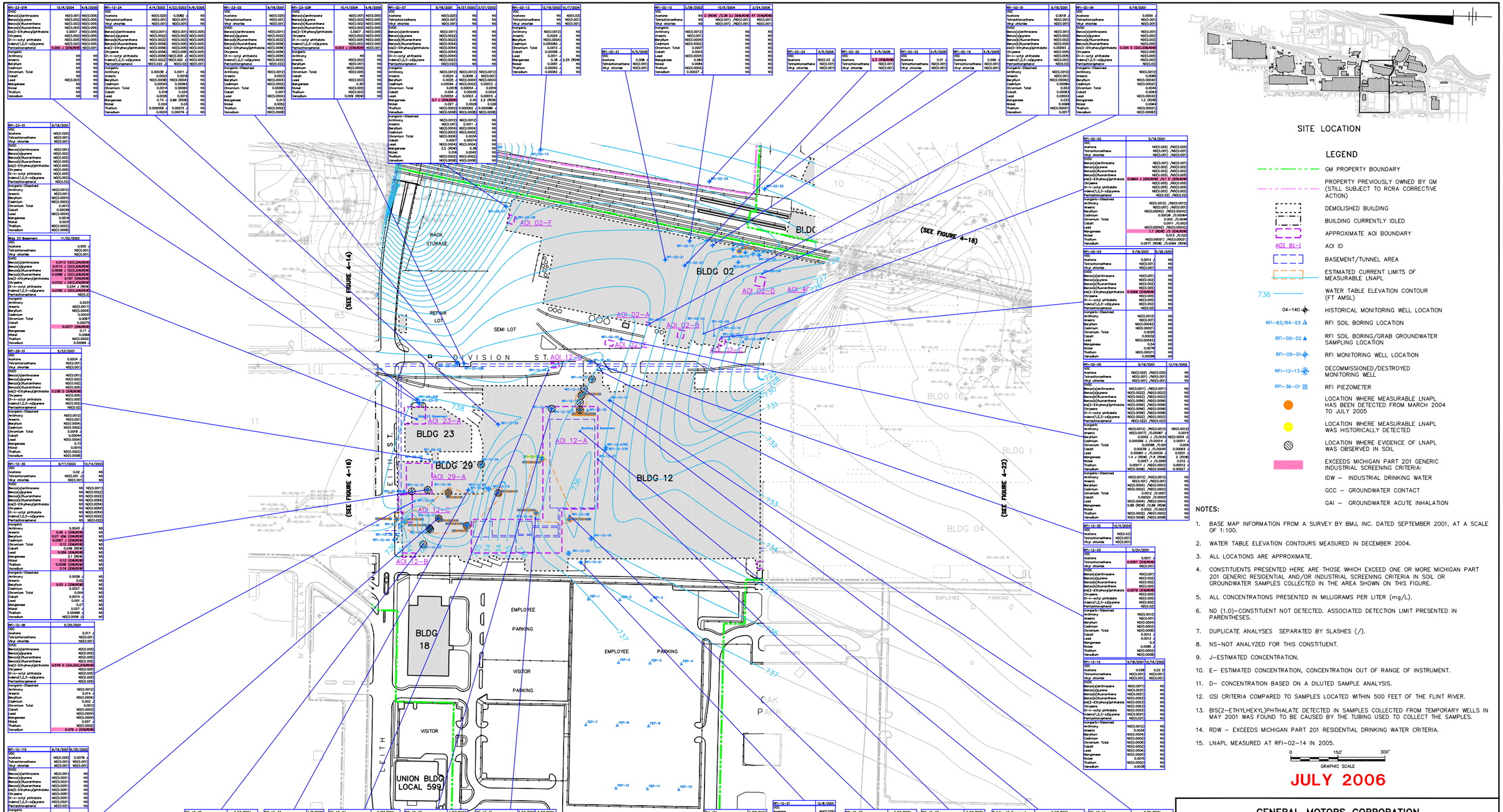
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

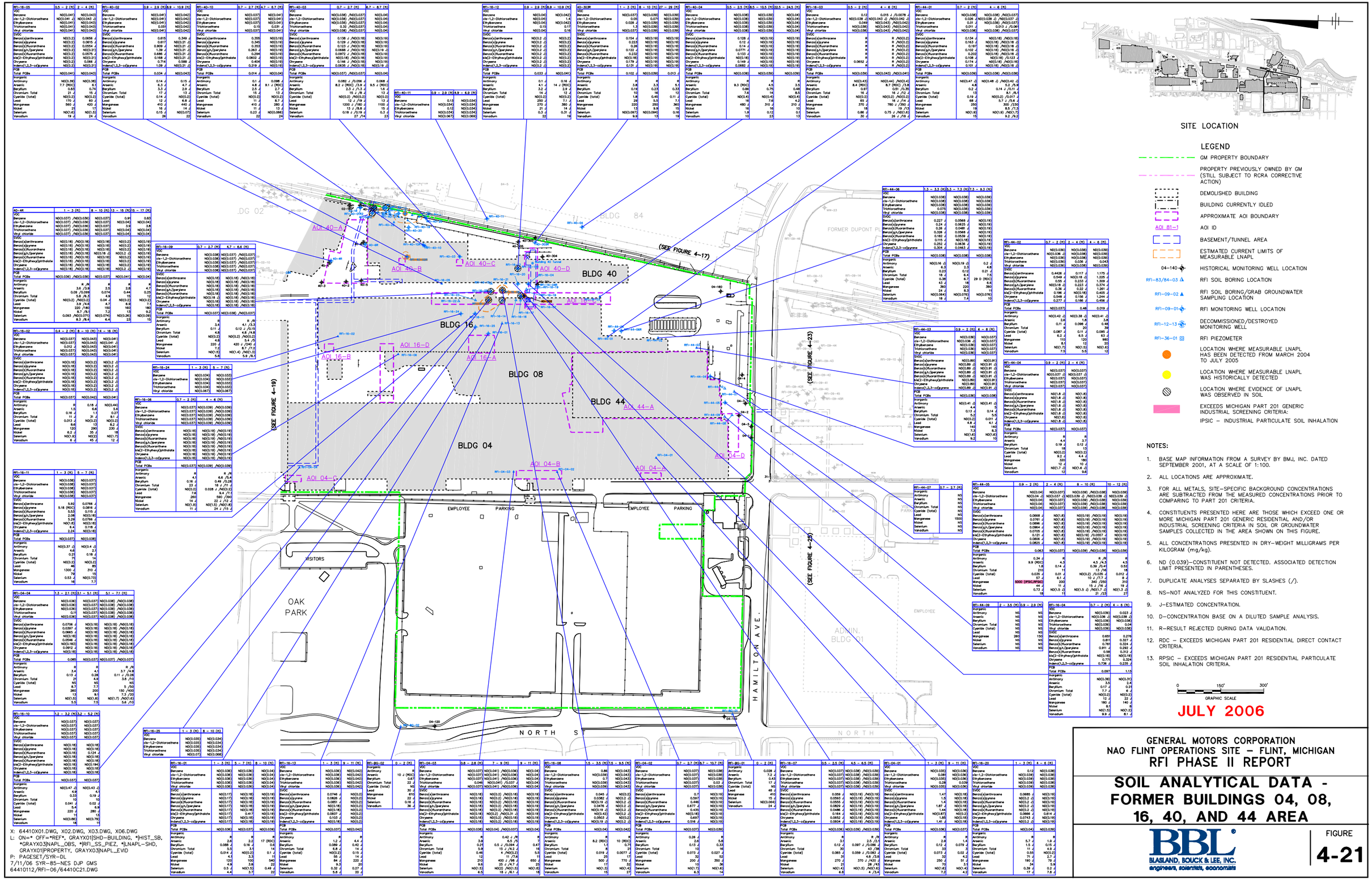
SOIL ANALYTICAL DATA - FORMER BUILDINGS 02, 12, 23, AND 29 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 4-19

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF* , *HIST_SB, *RFI_SS_PIEZ, *LNAPL–SHD
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C19.DWG


BLDG 23
BLDG 29
BLDG 12
BLDG 02
BLDG 18
BLDG 16
BLDG 04
UNION BLDG LOCAL 599
RACK STORAGE
REPAIR LOT
SEMI LOT
EMPLOYEE PARKING
VISITOR PARKING
OAK PARK
DIVISION ST.
LEITH ST.
MCLAUGHLIN ST.
(SEE FIGURE 4-14)
(SEE FIGURE 4-16)
(SEE FIGURE 4-18)
(SEE FIGURE 4-22)
AOI 02-A
AOI 02-B
AOI 02-C
AOI 02-D
AOI 02-E
AOI 02-F
AOI 12-A
AOI 12-B
AOI 12-C
AOI 23-A
AOI 29-A
AOI 29-B
AOI 29-C
AOI 29-D
AOI 47-121
RFI-02-13
RFI-02-14
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RFI-02-22
RFI-02-24
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SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81–1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04–140 — HISTORICAL MONITORING WELL LOCATION
- RFI–83/84–03 — RFI SOIL BORING LOCATION
- RFI–09–02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI–09–01 — RFI MONITORING WELL LOCATION
- RFI–12–13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI–36–01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA: IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE–SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY–WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ND (0.039)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. D–CONCENTRATION BASE ON A DILUTED SAMPLE ANALYSIS.
11. R–RESULT REJECTED DURING DATA VALIDATION.
12. RDC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DIRECT CONTACT CRITERIA.
13. RPSIC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

SOIL ANALYTICAL DATA - FORMER BUILDINGS 04, 08, 16, 40, AND 44 AREA

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 4-21

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD–BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES DJP GMS
64410112/RFI–06/64410C21.DWG

RFI–16–05

	0.5 – 2 (ft)	2 – 4 (ft)
VOC		
Benzene	ND(0.041)	ND(0.043)
cis–1,2–Dichloroethene	ND(0.041) J	ND(0.043) J
Ethylbenzene	ND(0.041)	ND(0.043)
Trichloroethene	ND(0.041)	ND(0.043)
Vinyl chloride	ND(0.041)	ND(0.043)
SVOC		
Benzo(a)anthracene	ND(0.2) J	0.0656 J
Benzo(a)pyrene	ND(0.2) J	0.0615 J
Benzo(b)fluoranthene	ND(0.2) J	0.0554 J
Benzo(g,h,i)perylene	ND(0.2) J	ND(0.21) J
Benzo(k)fluoranthene	ND(0.2) J	ND(0.21) J
bis(2–Ethylhexyl)phthalate	ND(0.2) J	ND(0.21) J
Chrysene	ND(0.2) J	0.068 J
Indeno(1,2,3–cd)pyrene	ND(0.2) J	ND(0.21)
PCB		
Total PCBs	ND(0.041)	ND(0.043)
Inorganic		
Antimony	ND(0.39)	ND(0.38)
Arsenic	7.7 (RDC)	8.1
Beryllium	0.83	0.74
Chromium, Total	21 J	15 J
Cyanide (total)	ND(0.2)	ND(0.2)
Lead	170 J	60 J
Manganese	560 J	420 J
Nickel	25	17
Selenium	ND(1.6)	ND(1.5)
Vanadium	19 J	24 J

RFI–16–09

	0.7 – 2.7 (ft)	4.7 – 6.6 (ft)
VOC		
Benzene	ND(0.038)	ND(0.037)
cis–1,2–Dichloroethene	ND(0.038)	ND(0.037)
Ethylbenzene	ND(0.038)	ND(0.037)
Trichloroethene	ND(0.038)	ND(0.037)
Vinyl chloride	ND(0.038)	ND(0.037)
SVOC		
Benzo(a)anthracene	ND(0.18)	ND(0.18)
Benzo(a)pyrene	ND(0.18)	ND(0.18)
Benzo(b)fluoranthene	ND(0.18)	ND(0.18)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.18)
Benzo(k)fluoranthene	ND(0.18)	ND(0.18)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.18)
Chrysene	ND(0.18)	ND(0.18)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.18)
PCB		
Total PCBs	ND(0.037)	ND(0.037)
Inorganic		
Antimony	0.98 J	ND(0.4) J
Arsenic	4.8 J	8.1 J (RDC)
Beryllium	2.5 J	2.7 J
Chromium, Total	15 J	13 J
Cyanide (total)	ND(0.2) J	ND(0.2) J
Lead	11 J	8.7 J
Manganese	410 J	280 J
Nickel	13 J	13 J
Selenium	0.23 J	ND(0.066) J
Vanadium	22 J	24 J

RFI–16–10

	1.2 – 3.2 (ft)	3.2 – 5.2 (ft)
VOC		
Benzene	ND(0.037)	ND(0.037)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.037)
Ethylbenzene	ND(0.037)	ND(0.037)
Trichloroethene	ND(0.037)	ND(0.037)
Vinyl chloride	ND(0.037)	ND(0.037)
SVOC		
Benzo(a)anthracene	ND(0.18)	ND(0.18)
Benzo(a)pyrene	ND(0.18)	ND(0.18)
Benzo(b)fluoranthene	ND(0.18)	ND(0.18)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.18)
Benzo(k)fluoranthene	ND(0.18)	ND(0.18)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.194) J
Chrysene	ND(0.18)	ND(0.18)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.18)
PCB		
Total PCBs	ND(0.037)	ND(0.037)
Inorganic		
Antimony	ND(0.4) J	ND(0.43) J
Arsenic	4.3	6.8
Beryllium	0.33 J	0.19 J
Chromium, Total	10 J	10 J
Cyanide (total)	0.041 J	0.02 J
Lead	5.4 J	8.8 J
Manganese	220 J	280 J
Nickel	11 J	14 J
Selenium	ND(0.88)	ND(0.79)
Vanadium	18 J	18 J

RFI–16–11

	1 – 3 (ft)	5 – 7 (ft)
VOC		
Benzene	ND(0.038)	ND(0.037)
cis–1,2–Dichloroethene	ND(0.038)	ND(0.037)
Ethylbenzene	ND(0.038)	ND(0.037)
Trichloroethene	ND(0.038)	ND(0.037)
Vinyl chloride	ND(0.038)	ND(0.037)
SVOC		
Benzo(a)anthracene	5.92	0.0766 J
Benzo(a)pyrene	5.18 (RDC)	0.0816 J
Benzo(b)fluoranthene	5.53	0.110 J
Benzo(g,h,i)perylene	2.08	ND(0.18)
Benzo(k)fluoranthene	5.29	0.0798 J
bis(2–Ethylhexyl)phthalate	ND(1.85)	ND(0.18)
Chrysene	6.41	0.118 J
Indeno(1,2,3–cd)pyrene	2.24	ND(0.18)
PCB		
Total PCBs	ND(0.037)	ND(0.038)
Inorganic		
Antimony	ND(0.37) J	ND(0.4) J
Arsenic	5.8	6.3
Beryllium	0.72	0.18 J
Chromium, Total	14	14
Cyanide (total)	ND(0.2)	ND(0.2)
Lead	40	80
Manganese	1300 J	310 J
Nickel	15	15
Selenium	0.53 J	ND(0.73)
Vanadium	16	7.7

RFI–16–12

	0.9 – 2.8 (ft)	6.8 – 10.8 (ft)
VOC		
Benzene	ND(0.04)	ND(0.042)
cis–1,2–Dichloroethene	ND(0.04)	1.4
Ethylbenzene	ND(0.04)	ND(0.042)
Trichloroethene	0.15	0.17
Vinyl chloride	ND(0.04)	0.16
SVOC		
Benzo(a)anthracene	ND(0.2) J	ND(0.2)
Benzo(a)pyrene	ND(0.2) J	ND(0.2)
Benzo(b)fluoranthene	ND(0.2) J	ND(0.2)
Benzo(g,h,i)perylene	ND(0.2) J	ND(0.2)
Benzo(k)fluoranthene	ND(0.2) J	ND(0.2)
bis(2–Ethylhexyl)phthalate	ND(0.2) J	ND(0.2)
Chrysene	ND(0.2) J	ND(0.2)
Indeno(1,2,3–cd)pyrene	ND(0.2) J	ND(0.2)
PCB		
Total PCBs	0.033 J	ND(0.041)
Inorganic		
Antimony	0.1 J	0.16 J
Arsenic	4.1 J	14 J (RDC)
Beryllium	3.2 J	2.9 J
Chromium, Total	14 J	12 J
Cyanide (total)	ND(0.2) J	ND(0.2) J
Lead	250 J	7.1 J
Manganese	270 J	380 J
Nickel	21 J	14 J
Selenium	0.3 J	0.31 J
Vanadium	22 J	16 J

RFI–16–13

	1 – 3 (ft)	9 – 11 (ft)
VOC		
Benzene	ND(0.038)	ND(0.042)
cis–1,2–Dichloroethene	ND(0.038)	ND(0.042)
Ethylbenzene	ND(0.038)	ND(0.042)
Trichloroethene	ND(0.038)	ND(0.042)
Vinyl chloride	ND(0.038)	ND(0.042)
SVOC		
Benzo(a)anthracene	0.0746 J	ND(0.2)
Benzo(a)pyrene	0.0826 J	ND(0.2)
Benzo(b)fluoranthene	0.0851 J	ND(0.2)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.2)
Benzo(k)fluoranthene	ND(0.18)	ND(0.2)
bis(2–Ethylhexyl)phthalate	0.0807 J	ND(0.2)
Chrysene	0.103 J	ND(0.2)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.2)
PCB		
Total PCBs	ND(0.037)	ND(0.042)
Inorganic		
Antimony	1.2 J	4.4 J
Arsenic	0.089 J	0.42 J
Beryllium	6.8 J	14 J
Chromium, Total	0.15 J	0.15 J
Cyanide (total)	55 J	14 J
Lead	84 J	220 J
Manganese	9.3 J	20
Nickel	0.32 J	0.27 J
Selenium	5.8 J	20 J
Vanadium	4.4 J	22

RFI–16–15

	1 – 3 (ft)	5 – 7 (ft)	8 – 10 (ft)
VOC			
Benzene	ND(0.034)	ND(0.033)	
cis–1,2–Dichloroethene	ND(0.034)	ND(0.033)	
Ethylbenzene	ND(0.034)	ND(0.033)	
Trichloroethene	ND(0.034)	ND(0.033)	
Vinyl chloride	ND(0.067)	ND(0.067)	
SVOC			
Benzo(a)anthracene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(a)pyrene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(b)fluoranthene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(k)fluoranthene	ND(0.18)	ND(0.19)	ND(0.19)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.19)	ND(0.19)
Chrysene	ND(0.18)	ND(0.19)	ND(0.19)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.19)	ND(0.19)
PCB			
Total PCBs	ND(0.037)	ND(0.039)	ND(0.039)
Inorganic			
Antimony	R	R	R
Arsenic	4.1	6.6	7.4
Beryllium	0.11 J	0.49 J	0.53 J
Chromium, Total	23 J	18 J	17 J
Cyanide (total)	ND(0.2)	ND(0.2)	ND(0.2)
Lead	7.6 J	9.4 J	7.5 J
Manganese	220 J	560 J	360 J
Nickel	14 J	22 J	12 J
Selenium	ND(1.6)	ND(1.5)	ND(1.6)
Vanadium	11 J	24 J	15 J

RFI–16–24

	1 – 3 (ft)	5 – 7 (ft)
VOC		
Benzene	ND(0.034)	ND(0.033)
cis–1,2–Dichloroethene	ND(0.034)	ND(0.033)
Ethylbenzene	ND(0.034)	ND(0.033)
Trichloroethene	ND(0.034)	ND(0.033)
Vinyl chloride	ND(0.067)	ND(0.067)

RFI–16–25

	1 – 3 (ft)	8 – 10 (ft)
VOC		
Benzene	ND(0.035)	ND(0.034)
cis–1,2–Dichloroethene	ND(0.035)	ND(0.034)
Ethylbenzene	ND(0.035)	ND(0.034)
Trichloroethene	ND(0.035)	ND(0.034)
Vinyl chloride	ND(0.07)	ND(0.068)

RFI–16–06

	0.7 – 2 (ft)	4 – 6 (ft)
VOC		
Benzene	ND(0.037)	ND(0.039)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.039)
Ethylbenzene	ND(0.037)	ND(0.039)
Trichloroethene	ND(0.037)	ND(0.039)
Vinyl chloride	ND(0.037)	ND(0.039)
SVOC		
Benzo(a)anthracene	ND(0.18)	ND(0.19)
Benzo(a)pyrene	ND(0.18)	ND(0.19)
Benzo(b)fluoranthene	ND(0.18)	ND(0.19)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.19)
Benzo(k)fluoranthene	ND(0.18)	ND(0.19)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.19)
Chrysene	ND(0.18)	ND(0.19)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.19)
PCB		
Total PCBs	ND(0.037)	ND(0.039)
Inorganic		
Antimony	R	R
Arsenic	3.4	4.1
Beryllium	0.11 J	0.12 J
Chromium, Total	4.6	4.8
Cyanide (total)	ND(0.2)	ND(0.2)
Lead	4.6	4.7
Manganese	220 J	420 J
Nickel	7.2 J	8.7 J
Selenium	ND(1.5)	ND(1.4)
Vanadium	5.6	5.9

RFI–16–01

	1 – 3 (ft)	5 – 7 (ft)	8 – 10 (ft)
VOC			
Benzene	ND(0.038)	ND(0.038)	ND(0.04)
cis–1,2–Dichloroethene	ND(0.038)	ND(0.038)	ND(0.04)
Ethylbenzene	ND(0.038)	ND(0.038)	ND(0.04)
Trichloroethene	ND(0.038)	ND(0.038)	ND(0.04)
Vinyl chloride	ND(0.038)	ND(0.038)	ND(0.04)
SVOC			
Benzo(a)anthracene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(a)pyrene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(b)fluoranthene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.19)	ND(0.19)
Benzo(k)fluoranthene	ND(0.18)	ND(0.19)	ND(0.19)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.19)	ND(0.19)
Chrysene	ND(0.18)	ND(0.19)	ND(0.19)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.19)	ND(0.19)
PCB			
Total PCBs	ND(0.037)	ND(0.037)	ND(0.039)
Inorganic			
Antimony	1.2 J	0.98 J	0.98 J
Arsenic	5.2	5.3	5.4
Beryllium	0.61 J	0.61 J	0.62 J
Chromium, Total	14 J	13 J	13 J
Cyanide (total)	ND(0.2) J	ND(0.2) J	ND(0.2) J
Lead	40 J	40 J	40 J
Manganese	1300 J	1200 J	1100 J
Nickel	15 J	15 J	14 J
Selenium	0.53 J	0.49 J	0.46 J
Vanadium	16 J	15 J	14 J

RFI–16–02

	0.4 – 2 (ft)	8 – 10 (ft)	14 – 16 (ft)
VOC			
Benzene	ND(0.037)	ND(0.043)	ND(0.041)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.043)	ND(0.041)
Ethylbenzene	0.012 J	ND(0.043)	ND(0.041)
Trichloroethene	ND(0.037)	ND(0.043)	ND(0.041)
Vinyl chloride	ND(0.037)	ND(0.043)	ND(0.041)
SVOC			
Benzo(a)anthracene	ND(0.18)	ND(0.2)	ND(0.2)
Benzo(a)pyrene	ND(0.18)	ND(0.2)	ND(0.2)
Benzo(b)fluoranthene	ND(0.18)	ND(0.2)	ND(0.2)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.2)	ND(0.2)
Benzo(k)fluoranthene	ND(0.18)	ND(0.2)	ND(0.2)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.2)	ND(0.2)
Chrysene	ND(0.18)	ND(0.2)	ND(0.2)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.2)	ND(0.2)
PCB			
Total PCBs	ND(0.037)	ND(0.042)	ND(0.041)
Inorganic			
Antimony	R	0.18 J	ND(0.44)
Arsenic	1.5	6.8	5.6
Beryllium	0.16 J	1.1	0.37
Chromium, Total	11 J	21 J	9.1 J
Cyanide (total)	0.013 J	ND(0.2)	ND(0.2)
Lead	8.6	13	8.2
Manganese	120	290	230
Nickel	8.2 J	20 J	18
Selenium	ND(1.8)	ND(2)	ND(1.7)
Vanadium	8 J	45 J	12 J

RFI–16–03

	0.7 – 2.7 (ft)	4.7 – 6.7 (ft)
VOC		
Benzene	ND(0.038)	ND(0.037)
cis–1,2–Dichloroethene	ND(0.038)	ND(0.037)
Ethylbenzene	ND(0.038)	ND(0.037)
Trichloroethene	0.32	ND(0.037)
Vinyl chloride	ND(0.038)	ND(0.037)
SVOC		
Benzo(a)anthracene	0.138 J	ND(0.18)
Benzo(a)pyrene	0.129 J	ND(0.18)
Benzo(b)fluoranthene	0.123 J	ND(0.18)
Benzo(g,h,i)perylene	0.0688 J	ND(0.18)
Benzo(k)fluoranthene	0.0972 J	ND(0.18)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.18)
Chrysene	0.146 J	ND(0.18)
Indeno(1,2,3–cd)pyrene	0.0635 J	ND(0.18)
PCB		
Total PCBs	ND(0.037)	ND(0.037)
Inorganic		
Antimony	0.082 J /0.096 J	0.068 J
Arsenic	8.2 J (RDC) /3.9 J	9.5 J (RDC)
Beryllium	2.3 J /1.3 J	1.6 J
Chromium, Total	14 J /9 J	13 J
Cyanide (total)	ND(0.2) /ND(0.2)	ND(0.2)
Lead	12 J /19 J	13 J
Manganese	1200 J /180 J	1100 J
Nickel	13 J /8.6 J	15 J
Selenium	0.18 J /0.19 J	0.3 J
Vanadium	27 J /14 J	23 J

RFI–16–04

	1.3 – 2.1 (ft)	3.1 – 5.1 (ft)	5.1 – 7.1 (ft)
VOC			
Benzene	ND(0.036)	ND(0.037)	ND(0.038) /ND(0.038)
cis–1,2–Dichloroethene	ND(0.036)	ND(0.037)	ND(0.038) /ND(0.038)
Ethylbenzene	ND(0.036)	ND(0.037)	ND(0.038) /ND(0.038)
Trichloroethene	0.11	ND(0.037)	ND(0.038) /ND(0.038)
Vinyl chloride	ND(0.036)	ND(0.037)	ND(0.038) /ND(0.038)
SVOC			
Benzo(a)anthracene	0.0706 J	ND(0.18)	ND(0.18) /ND(0.18)
Benzo(a)pyrene	0.0397 J	ND(0.18)	ND(0.18) /ND(0.18)
Benzo(b)fluoranthene	0.0663 J	ND(0.18)	ND(0.18) /ND(0.18)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.18)	ND(0.18) /ND(0.18)
Benzo(k)fluoranthene	0.0548 J	ND(0.18)	ND(0.18) /ND(0.18)
bis(2–Ethylhexyl)phthalate	ND(0.183)	ND(0.18)	ND(0.18) /ND(0.18)
Chrysene	0.0692 J	ND(0.18)	ND(0.18) /ND(0.18)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.18)	ND(0.18) /ND(0.18)
PCB			
Total PCBs	0.085	ND(0.037)	ND(0.037) /ND(0.037)
Inorganic			
Antimony	R	R	R /R
Arsenic	3.4	4.1	3.7 /4.9
Beryllium	0.13 J	0.28 J	0.11 J /0.28 J
Chromium, Total	21 J	4.9 J	3.8 J /10 J
Cyanide (total)	NS	NS	NS
Lead	8.7 J	7.7 J	5 J /50 J
Manganese	260 J	200 J	150 J /400 J
Nickel	13 J	9 J	7.3 J /20 J
Selenium	ND(1.5)	ND(1.8)	ND(1.7) /ND(1.6)
Vanadium	5.5 J	7.5 J	5.8 J /10 J

RFI–16–07

	0.5 – 2.5 (ft)	4.5 – 6.5 (ft)
VOC		
Benzene	ND(0.037)	ND(0.038) /ND(0.039)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.038) /ND(0.039)
Ethylbenzene	ND(0.037)	ND(0.038) /ND(0.039)
Trichloroethene	ND(0.037)	ND(0.038) /ND(0.039)
Vinyl chloride	ND(0.037)	ND(0.038) /ND(0.039)
SVOC		
Benzo(a)anthracene	0.059 J	ND(0.19) /ND(0.19)
Benzo(a)pyrene	0.0597 J	ND(0.19) /ND(0.19)
Benzo(b)fluoranthene	0.0555 J	ND(0.19) /ND(0.19)
Benzo(g,h,i)perylene	0.0653 J	ND(0.19) /ND(0.19)
Benzo(k)fluoranthene	0.0496 J	ND(0.19) /ND(0.19)
bis(2–Ethylhexyl)phthalate	0.164 J	ND(0.19) /ND(0.19)
Chrysene	0.0652 J	ND(0.19) /ND(0.19)
Indeno(1,2,3–cd)pyrene	0.0654 J	ND(0.19) /ND(0.19)
PCB		
Total PCBs	ND(0.037)	ND(0.039)
Inorganic		
Antimony	0.26 J	5.8
Arsenic	3.9	0.13 J /0.53 J
Beryllium	0.2	0.33
Chromium, Total	5.9	15 J /A2 J
Cyanide (total)	0.46	4 J /ND(0.2)
Lead	12	11 J /7.6 J
Manganese	210	400 J /98 J
Nickel	9.6	25 J /A7 J
Selenium	ND(1.5)	ND(2) /ND(1.5)
Vanadium	6.5	18 J /R1 J

RFI–16–08

	1.5 – 3.5 (ft)	7.5 – 9.5 (ft)
VOC		
Benzene	0.86	ND(0.043)
cis–1,2–Dichloroethene	ND(0.039)	ND(0.043)
Ethylbenzene	0.7	ND(0.043)
Trichloroethene	ND(0.039)	ND(0.043)
Vinyl chloride	ND(0.039)	ND(0.043)
SVOC		
Benzo(a)anthracene	0.045 J	ND(0.2)
Benzo(a)pyrene	0.0362 J	ND(0.2)
Benzo(b)fluoranthene	ND(0.19 J)	ND(0.2)
Benzo(g,h,i)perylene	0.0478 J	ND(0.2)
Benzo(k)fluoranthene	ND(0.19 J)	ND(0.2)
bis(2–Ethylhexyl)phthalate	ND(0.42)	ND(0.2)
Chrysene	0.0563 J	ND(0.2)
Indeno(1,2,3–cd)pyrene	ND(0.19 J)	ND(0.2)
PCB		
Total PCBs	ND(0.04)	ND(0.043)
Inorganic		
Antimony	8.2 (RDC)	10 (RDC)
Arsenic	1.1	0.71
Beryllium	8	25
Chromium, Total	0.019 J	0.0077 J
Lead	25	17
Manganese	500 J	770 J
Nickel	17	30
Selenium	ND(1.5)	ND(1.4)
Vanadium	15	27

RFI–16–14

	1 – 3 (ft)	5 – 7 (ft)
VOC		
Benzene	ND(0.034)	ND(0.033)
cis–1,2–Dichloroethene	ND(0.034)	ND(0.033)
Ethylbenzene	ND(0.034)	ND(0.033)
Trichloroethene	ND(0.034)	ND(0.033)
Vinyl chloride	ND(0.067)	ND(0.067)
SVOC		
Benzo(a)anthracene	ND(0.18)	ND(0.18)
Benzo(a)pyrene	ND(0.18)	ND(0.18)
Benzo(b)fluoranthene	ND(0.18)	ND(0.18)
Benzo(g,h,i)perylene	ND(0.18)	ND(0.18)
Benzo(k)fluoranthene	ND(0.18)	ND(0.18)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.18)
Chrysene	ND(0.18)	ND(0.18)
Indeno(1,2,3–cd)pyrene	ND(0.18)	ND(0.18)
PCB		
Total PCBs	ND(0.037)	ND(0.038)
Inorganic		
Antimony	R	R
Arsenic	3.8	3.3
Beryllium	0.19 J	0.23 J
Chromium, Total	10	16
Cyanide (total)	1.8 J	0.45 J
Lead	29	5.5
Manganese	220	250
Nickel	13	9.9
Selenium	ND(0.097)	ND(0.094)
Vanadium	9.9 J	13 J

RFI–16–17

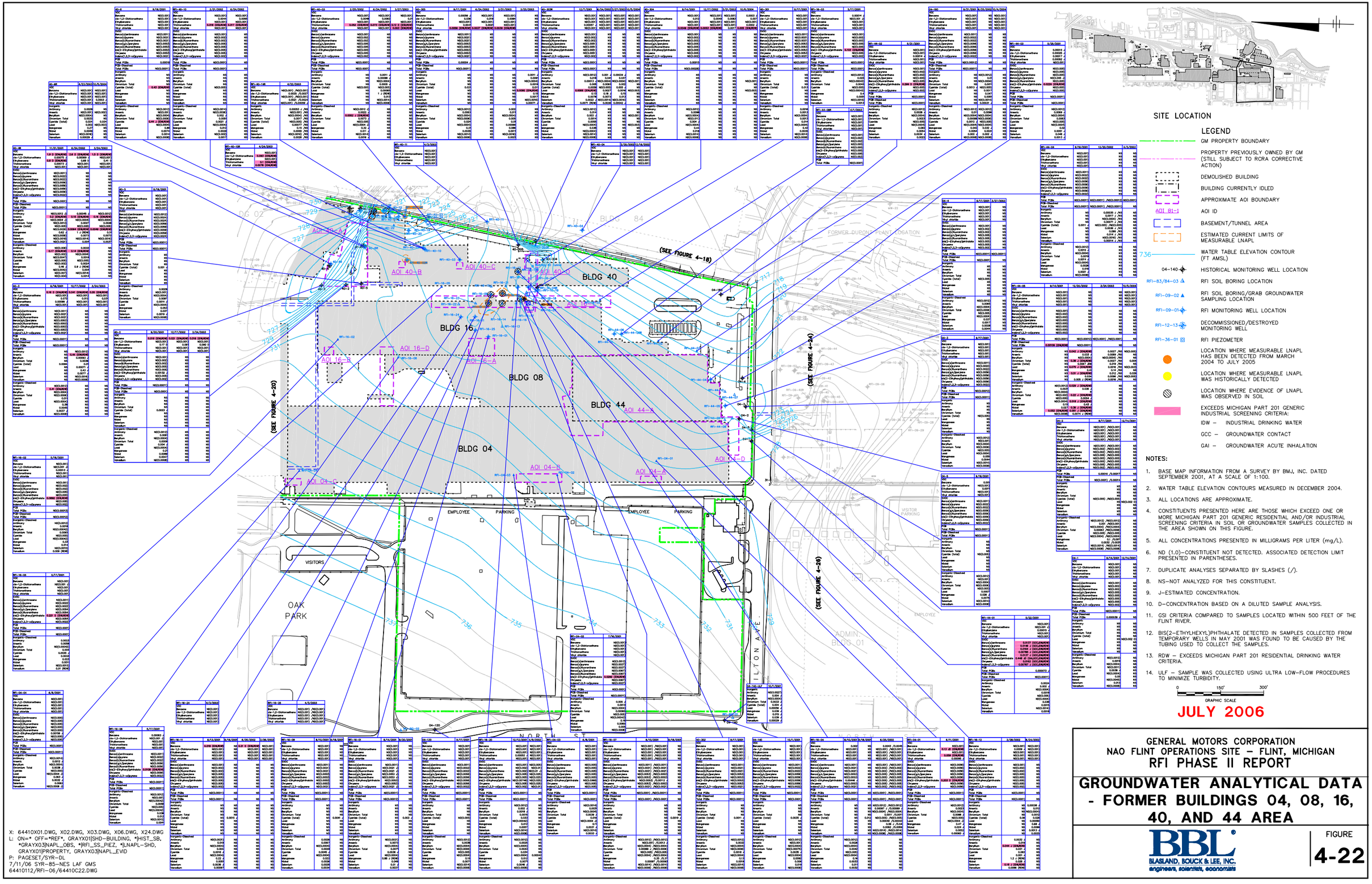
	0.7 – 2.7 (ft)	8.7 – 10.7 (ft)
VOC		
Benzene	ND(0.037)	ND(0.038)
cis–1,2–Dichloroethene	ND(0.037)	ND(0.038)
Ethylbenzene	ND(0.037)	0.43
Trichloroethene	ND(0.037)	0.03 J
Vinyl chloride	ND(0.037)	ND(0.038)
SVOC		
Benzo(a)anthracene	0.7	ND(0.19)
Benzo(a)pyrene	0.597	ND(0.19)
Benzo(b)fluoranthene	0.446	ND(0.19)
Benzo(g,h,i)perylene	0.677 J	ND(0.19)
Benzo(k)fluoranthene	0.435	ND(0.19)
bis(2–Ethylhexyl)phthalate	ND(0.18)	ND(0.19)
Chrysene	0.697	ND(0.19)
Indeno(1,2,3–cd)pyrene	0.514	ND(0.19)
PCB		
Total PCBs	ND(0.037)	ND(0.039)
Inorganic		
Antimony	0.26 J	5.8
Arsenic	2.6	0.53
Beryllium	0.13 J	0.33
Chromium, Total	10	16
Cyanide (total)	0.073 J	0.027 J
Lead	32	52
Manganese	200 J	350 J
Nickel	10	36
Selenium	ND(1.6)	ND(1.6)
Vanadium	6.5	14

RFI–16–18

	1 – 3 (ft)	9 – 11 (ft)
VOC		
Benzene	ND(0.035)	ND(0.036)
cis–1,2–Dichloroethene	ND(0.035)	ND(0.036)
Ethylbenzene	0.28	0.036
Trichloroethene	ND(0.035)	ND(0.036)
Vinyl chloride	ND(0.07)	ND(0.071)
SVOC		
Benzo(a)anthracene	1.47	ND(0.18)
Benzo(a)pyrene	1.36	ND(0.18)
Benzo(b)fluoranthene	1.4	ND(0.18)
Benzo(g,h,i)perylene	1.87 J	ND(0.18)
Benzo(k)fluoranthene	1.44	ND(0.18)
bis(2–Ethylhexyl)phthalate	ND(0.87)	ND(0.18)
Chrysene	1.85	ND(0.18)
Indeno(1,2,3–cd)pyrene	1.49 J	ND(0.18)
PCB		
Total PCBs	ND(0.038)	ND(0.039)
Inorganic		
Antimony	ND(0.41) J	ND(0.41) J
Arsenic	4.4	0.14 J
Beryllium	0.13 J	0.54
Chromium, Total	5.2	5.5
Cyanide (total)	ND(0.2)	0.011 J
Lead	4.8 J	4.1 J
Manganese	140	140
Nickel	7.3	8.3
Selenium	ND(1.6)	ND(1.6)
Vanadium	9.2	10

RFI–16–20

	1 – 3 (ft)	4 – 6 (ft)
VOC		
Benzene	0.12	ND(0.038)
cis–1,2–Dichloroethene	ND(0.039)	ND(0.038) J
Ethylbenzene	ND(0.039)	ND(0.038)
Trichloroethene	ND(0.039)	ND(0.038)
Vinyl chloride	ND(0.039)	ND(0.038)
SVOC		
Benzo(a)anthracene	0.0685 J	ND(0.19)
Benzo(a)pyrene	ND(0.2) J	ND(0.19)
Benzo(b)fluoranthene	ND(0.2) J	ND(0.19)
Benzo(g,h,i)perylene	ND(0.2) J	ND(0.19)
Benzo(k)fluoranthene	ND(0.2) J	ND(0.19)
bis(2–Ethylhexyl)phthalate	0.0868 J	0.0741 J
Chrysene	0.0743 J	ND(0.19)
Indeno(1,2,3–cd)pyrene	ND(0.2) J	ND(0.19)
PCB		
Total PCBs	ND(0.04)	ND(0.038)
Inorganic		
Antimony	0.8	1.9 J
Arsenic	5.7 J	0.15 J
Beryllium	0.12 J	4.8 J
Chromium, Total	11 J	3 J
Cyanide (total)	0.055 J	ND(0.2)
Lead	71 J	2.7 J
Manganese	190 J	79 J
Nickel	34 J	5.



SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL)
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDW – INDUSTRIAL DRINKING WATER
  - GCC – GROUNDWATER CONTACT
  - GAI – GROUNDWATER ACUTE INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED IN DECEMBER 2004.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. J–ESTIMATED CONCENTRATION.
10. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
11. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.
12. BIS(2–ETHYLHEXYL)PHTHALATE DETECTED IN SAMPLES COLLECTED FROM TEMPORARY WELLS IN MAY 2001 WAS FOUND TO BE CAUSED BY THE TUBING USED TO COLLECT THE SAMPLES.
13. RDW – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.
14. ULF – SAMPLE WAS COLLECTED USING ULTRA LOW–FLOW PROCEDURES TO MINIMIZE TURBIDITY.

0 150' 300'
GRAPHIC SCALE

JULY 2006

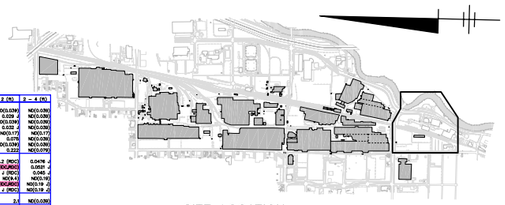
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L: ON=* OFF=*REF*, GRAYX01|SHD–BUILDING, *|HIST_SB, *GRAYX01|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVD
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C22.DWG

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - FORMER BUILDINGS 04, 08, 16, 40, AND 44 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
4-22



SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- FORMER RIVER GAUGE LOCATION
- CURRENT RIVER GAUGE LOCATION
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:
  - IDC – INDUSTRIAL DIRECT CONTACT
  - IPSIC – INDUSTRIAL PARTICULATE SOIL INHALATION

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE-SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY-WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ALL DEPTH IN FEET.
7. ND (0.039)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
8. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
9. NS–NOT ANALYZED FOR THIS CONSTITUENT.
10. J–ESTIMATED CONCENTRATION.
11. D–CONCENTRATION BASED ON A DILUTED SAMPLE ANALYSIS.
12. R–RESULT REJECTED DURING DATA VALIDATION.
13. RDC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DIRECT CONTRACT CRITERIA
14. RPSIC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA.
15. RSVIA – EXCEEDS MICHIGAN PART 201 RESIDENTIAL SOIL VOLATILIZATION TO INDOOR AIR CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

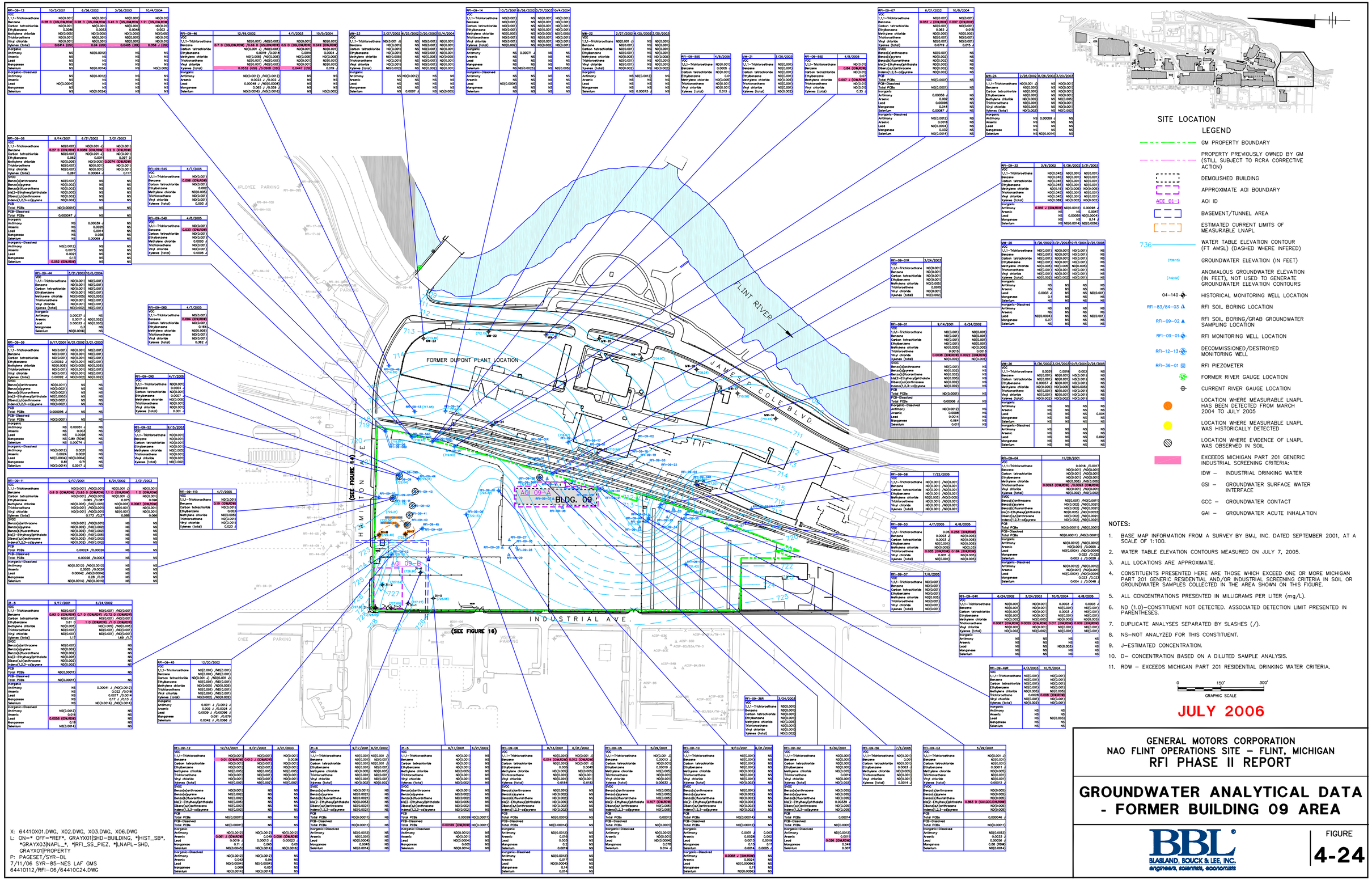
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

SOIL ANALYTICAL DATA - FORMER BUILDING 09 AREA

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

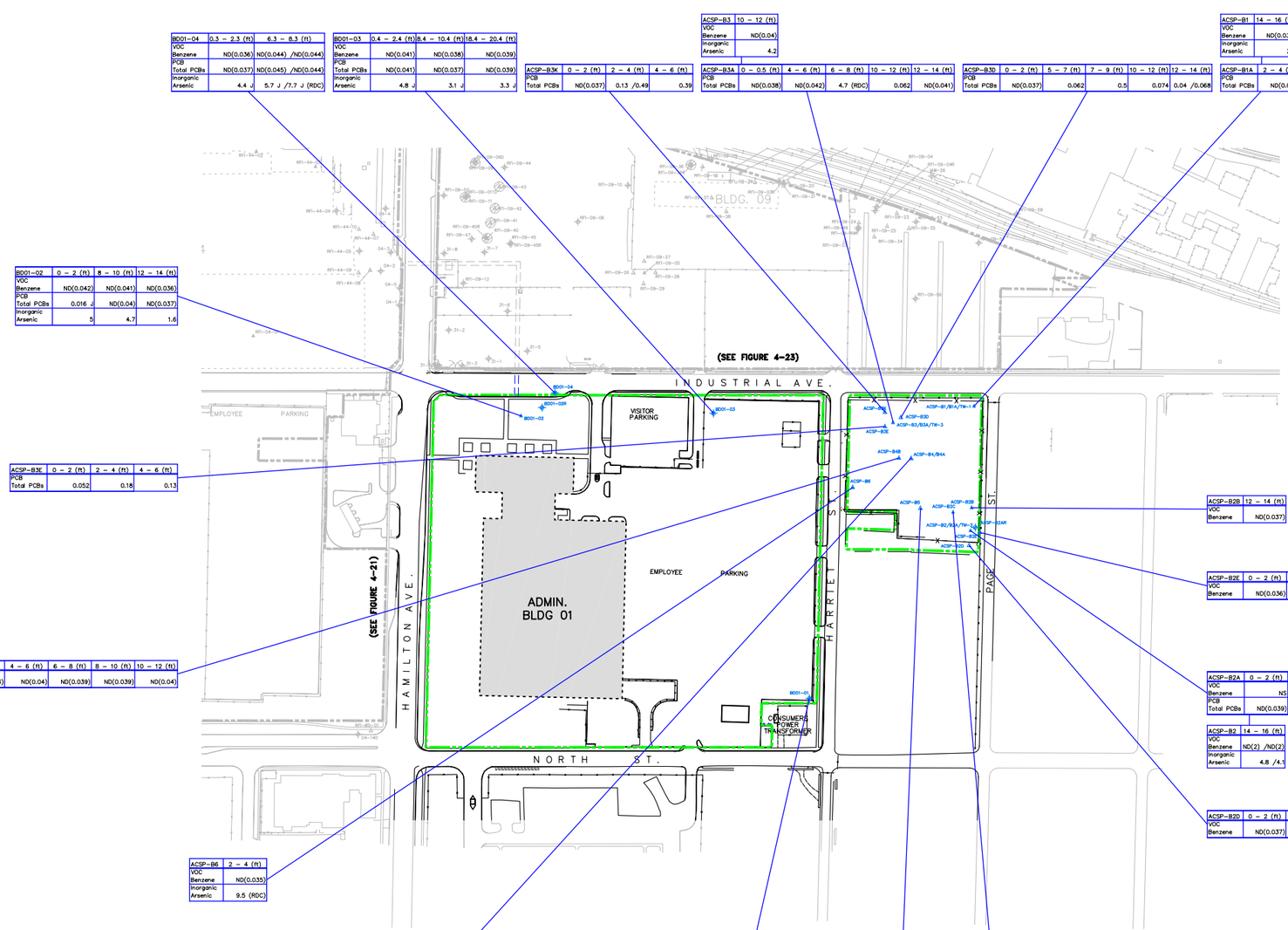
FIGURE 4-23

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF* , GRAYX01|SHD–BUILDING, *|HIST_SB* *GRAYX03|NAPL–*, *|RFI_SS_PIEZ, *|LNAPL–SHD, GRAYX01|PROPERTY
P: PAGESET/SYR–DL
7/11/06 SYR–85–NES LAF GMS
64410112/RFI–06/64410C23.DWG


FORMER DUPONT PLANT LOCATION
JAMES P. COLE BLVD.
FLINT RIVER
INDUSTRIAL AVE.
THOMSON AVE.
BLDG. 09
AOI 09-A
AOI 09-B
(SEE FIGURE 16)
(SEE FIGURE 16)
EMPLOYEE PARKING
VISITOR PARKING
RFI-09-13
10/3/2001 | 6/26/2002 | 3/26/2003 | 10/4/2004
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001) | ND(0.001) | ND(0.01)
Benzene 0.28 D (GSI,DW,RDW) | 0.28 D (GSI,DW,RDW) | 0.45 D (GSI,DW,RDW) | 1.21 (GSI,DW,RDW)
Carbon tetrachloride ND(0.001) | ND(0.001) | ND(0.001) | ND(0.01)
Ethylbenzene 0.0046 | 0.0053 | 0.0048 | 0.003 J
Methylene chloride ND(0.005) | ND(0.005) | ND(0.005) | ND(0.05)
Trichloroethene ND(0.001) | ND(0.001) | ND(0.001) | ND(0.01)
Vinyl chloride ND(0.001) | ND(0.001) | ND(0.001) | ND(0.01)
Xylenes (total) 0.0414 (GSI) | 0.04 (GSI) | 0.0408 (GSI) | 0.058 J (GSI)
Inorganic
Antimony NS | NS | NS | NS
Arsenic NS | NS | NS | NS
Lead NS | NS | NS | NS
Manganese NS | NS | NS | NS
Selenium NS | ND(0.005) | NS | ND(0.005)
Inorganic-Dissolved
Antimony NS | ND(0.0012) | NS | NS
Arsenic NS | NS | NS | NS
Lead ND(0.0004) | NS | NS | NS
Manganese NS | NS | NS | NS
Selenium NS | ND(0.0024) | NS | NS
RFI-09-46
12/19/2002 | 4/1/2003 | 10/5/2004
VOC
1,1,1-Trichloroethane ND(0.001) /ND(0.001) | ND(0.001) | ND(0.001)
Benzene 0.7 D (GSI,DW,RDW) /0.68 D (GSI,DW,RDW) | 0.5 D (GSI,DW,RDW) | 0.049 (DW,RDW)
Carbon tetrachloride ND(0.001 J) /ND(0.001) | ND(0.001) | ND(0.001)
Ethylbenzene 0.0098 /0.0018 | 0.0016 | 0.0004 J
Methylene chloride ND(0.005) /ND(0.005) | ND(0.005) | ND(0.005)
Trichloroethene ND(0.001) /ND(0.001) | ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) /ND(0.001) | ND(0.001) | ND(0.001)
Xylenes (total) 0.0532 (GSI) /0.0058 (GSI) | 0.0447 (GSI) | 0.019 J
Inorganic
Antimony ND(0.0012 J) /ND(0.0012) | NS | NS
Arsenic 0.0022 J /0.002 J | NS | NS
Lead 0.00048 J /ND(0.0004) | NS | NS
Manganese 0.065 J /0.059 J | NS | NS
Selenium ND(0.0024) /ND(0.0018) | NS | ND(0.005)
MW-23
2/27/2002 | 8/28/2002 | 3/20/2003 | 10/4/2004
VOC
1,1,1-Trichloroethane ND(0.001 J) | NS | ND(0.001) | ND(0.001)
Benzene ND(0.001) | NS | ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | NS | ND(0.001) | ND(0.001)
Ethylbenzene ND(0.001) | NS | ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | NS | ND(0.005) | ND(0.005)
Trichloroethene ND(0.001) | NS | ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) | NS | ND(0.001) | ND(0.001)
Xylenes (total) ND(0.002) | NS | ND(0.002) | ND(0.001)
Inorganic
Antimony NS | ND(0.0012) | NS | NS
Arsenic NS | NS | NS | NS
Lead NS | NS | NS | NS
Manganese NS | NS | NS | NS
Selenium NS | 0.0007 J | NS | ND(0.005)
MW-22
2/27/2002 | 8/28/2002 | 3/20/2003
VOC
1,1,1-Trichloroethane ND(0.001 J) | NS | ND(0.001)
Benzene ND(0.001) | NS | ND(0.001)
Carbon tetrachloride ND(0.001) | NS | ND(0.001)
Ethylbenzene ND(0.001) | NS | ND(0.001)
Methylene chloride ND(0.005) | NS | ND(0.005)
Trichloroethene ND(0.001) | NS | ND(0.001)
Vinyl chloride ND(0.001) | NS | ND(0.001)
Xylenes (total) ND(0.002) | NS | ND(0.002)
Inorganic
Antimony ND(0.001 J) | NS | NS
Arsenic ND(0.001) | NS | NS
Lead ND(0.001) | NS | NS
Manganese ND(0.001) | NS | NS
Selenium NS | 0.00073 J | NS
RFI-09-555
4/8/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene 0.0005 J
Carbon tetrachloride ND(0.001)
Ethylbenzene 0.0
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) 0.013 J
MW-21
3/20/2003
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.002)
RFI-09-550
4/8/2005
VOC
1,1,1-Trichloroethane ND(0.01)
Benzene 0.84 (DW,RDW)
Carbon tetrachloride ND(0.01)
Ethylbenzene 0.07
Methylene chloride 0.007 J (DW,RDW)
Trichloroethene ND(0.01)
Vinyl chloride ND(0.01)
Xylenes (total) 0.35 J
RFI-09-07
8/21/2002 | 10/5/2004
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001)
Benzene 0.052 J (DW,RDW) | 0.007 (DW,RDW)
Carbon tetrachloride ND(0.001) | ND(0.001)
Ethylbenzene 0.062 J | 0.018
Methylene chloride ND(0.005) | ND(0.005)
Trichloroethene ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) | ND(0.001)
Xylenes (total) 0.0719 J | 0.015 J
SVOC
Benzo(a)anthracene ND(0.001) | NS
Benzo(a)pyrene ND(0.002) | NS
Benzo(b)fluoranthene ND(0.002) | NS
bis(2-Ethylhexyl)phthalate ND(0.003) | NS
Dibenz(a,h)anthracene ND(0.002) | NS
Indeno(1,2,3-cd)pyrene ND(0.002) | NS
PCB
Total PCBs ND(0.0001) | NS
PCB-Dissolved
Total PCBs ND(0.0001) | NS
Inorganic
Antimony 0.000058 J | NS
Arsenic 0.002 | NS
Lead 0.00086 | NS
Manganese 0.044 | NS
Selenium 0.00087 J | NS
Inorganic-Dissolved
Antimony ND(0.0012) | NS
Arsenic 0.0016 | NS
Lead ND(0.0004) | NS
Manganese 0.032 | NS
Selenium ND(0.0014) | NS
MW-24
2/28/2002 | 8/28/2002 | 3/20/2003
VOC
1,1,1-Trichloroethane ND(0.001 J) | NS | ND(0.001)
Benzene ND(0.001) | NS | ND(0.001)
Carbon tetrachloride ND(0.001) | NS | ND(0.001)
Ethylbenzene ND(0.001) | NS | ND(0.001)
Methylene chloride ND(0.005) | NS | ND(0.005)
Trichloroethene ND(0.001) | NS | ND(0.001)
Vinyl chloride ND(0.001) | NS | ND(0.001)
Xylenes (total) ND(0.002) | NS | ND(0.002)
Inorganic
Antimony ND(0.0009) J | NS | NS
Arsenic NS | NS | NS
Lead NS | NS | NS
Manganese NS | NS | NS
Selenium NS | ND(0.0014) | NS
RFI-09-08
8/14/2001 | 6/21/2002 | 3/21/2003
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001 J) | ND(0.001)
Benzene 0.27 D (DW,RDW) | 0.0088 (DW,RDW) | 0.2 D (DW,RDW)
Carbon tetrachloride ND(0.001) | ND(0.001 J) | ND(0.001)
Ethylbenzene 0.062 | 0.001 | 0.097 D
Methylene chloride ND(0.005) | ND(0.005) | 0.0074 (DW,RDW)
Trichloroethene ND(0.001) | ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) | ND(0.001) | ND(0.001)
Xylenes (total) 0.287 | 0.00064 J | 0.117
SVOC
Benzo(a)anthracene ND(0.001) | NS | NS
Benzo(a)pyrene ND(0.002) | NS | NS
Benzo(b)fluoranthene ND(0.002) | NS | NS
bis(2-Ethylhexyl)phthalate ND(0.005) | NS | NS
Dibenz(a,h)anthracene ND(0.002) | NS | NS
Indeno(1,2,3-cd)pyrene ND(0.002) | NS | NS
PCB
Total PCBs ND(0.00016) | NS | NS
PCB-Dissolved
Total PCBs 0.000047 J | NS | NS
Inorganic
Antimony NS | 0.00039 J | NS
Arsenic NS | 0.0025 | NS
Lead NS | 0.0014 | NS
Manganese NS | 0.052 | NS
Selenium NS | 0.00068 J | NS
Inorganic-Dissolved
Antimony ND(0.0012) | NS | NS
Arsenic 0.0075 | NS | NS
Lead 0.0021 | NS | NS
Manganese 0.13 | NS | NS
Selenium 0.052 (DW,RDW) | NS | NS
RFI-09-545
4/7/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene 0.006 (DW,RDW)
Carbon tetrachloride ND(0.001)
Ethylbenzene 0.002
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) 0.003 J
RFI-09-540
4/8/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene 0.033 (DW,RDW)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride 0.0003 J
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) 0.0008 J
RFI-09-44
3/21/2003 | 10/5/2004
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001)
Benzene ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | ND(0.001)
Ethylbenzene ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005)
Trichloroethene ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) | ND(0.001)
Xylenes (total) ND(0.002) | ND(0.001)
Inorganic
Antimony 0.00037 J | NS
Arsenic 0.0017 | ND(0.002)
Lead 0.00033 J | ND(0.0003)
Manganese 0.3 | NS
Selenium ND(0.0018) | NS
RFI-09-580
4/7/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene 0.004 J
Carbon tetrachloride ND(0.001)
Ethylbenzene 0.0007 J
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) 0.009 J
RFI-09-09
9/17/2001 | 6/21/2002 | 3/21/2003
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001) | ND(0.001)
Benzene ND(0.001) | ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | ND(0.001) | ND(0.001)
Ethylbenzene 0.00052 J | ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005) | ND(0.005)
Trichloroethene ND(0.001) | ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) | ND(0.001) | ND(0.001)
Xylenes (total) 0.00092 J | ND(0.002) | ND(0.002)
SVOC
Benzo(a)anthracene ND(0.0011) | NS | NS
Benzo(a)pyrene ND(0.0021) | NS | NS
Benzo(b)fluoranthene ND(0.0033) | NS | NS
bis(2-Ethylhexyl)phthalate ND(0.0053) | NS | NS
Dibenz(a,h)anthracene ND(0.0021) | NS | NS
Indeno(1,2,3-cd)pyrene ND(0.0021) | NS | NS
PCB
Total PCBs 0.000096 J | NS | NS
PCB-Dissolved
Total PCBs ND(0.00001) | NS | NS
Inorganic
Antimony NS | 0.00051 J | NS
Arsenic NS | 0.003 | NS
Lead NS | 0.0028 | NS
Manganese NS | 0.89 (RDW) | NS
Selenium NS | 0.00074 J | NS
Inorganic-Dissolved
Antimony ND(0.0012) | 0.0021 | NS
Arsenic 0.0024 | 0.0021 | NS
Lead ND(0.0004) | ND(0.0004) | NS
Manganese 0.81 | 0.71 | NS
Selenium ND(0.0014) | 0.0017 J | NS
RFI-09-52
9/15/2003
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.002)
RFI-09-11
9/17/2001 | 6/21/2002 | 3/21/2003
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001) | ND(0.001)
Benzene 0.8 D (DW,RDW) | 0.83 D (DW,RDW) | 1.1 D (DW,RDW) | 1 D (DW,RDW)
Carbon tetrachloride ND(0.001) | ND(0.001) | ND(0.001)
Ethylbenzene 0.065 /0.087 | 0.075 | 0.026
Methylene chloride ND(0.005) /ND(0.005) | ND(0.005) | 0.0067 (DW,RDW)
Trichloroethene ND(0.001) /ND(0.001) | ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) /ND(0.001) | ND(0.001) | ND(0.001)
Xylenes (total) 0.173 /0.27 | 0.088 | 0.066
SVOC
Benzo(a)anthracene ND(0.001) /ND(0.001) | NS | NS
Benzo(a)pyrene ND(0.002) /ND(0.002) | NS | NS
Benzo(b)fluoranthene ND(0.002) /ND(0.002) | NS | NS
bis(2-Ethylhexyl)phthalate ND(0.005) /ND(0.005) | NS | NS
Dibenz(a,h)anthracene ND(0.002) /ND(0.002) | NS | NS
Indeno(1,2,3-cd)pyrene ND(0.002) /ND(0.002) | NS | NS
PCB
Total PCBs 0.00024 /0.00026 | NS | NS
PCB-Dissolved
Total PCBs 0.00028 /0.00033 | NS | NS
Inorganic-Dissolved
Antimony ND(0.0012) /ND(0.0012) | NS | NS
Arsenic 0.0035 /0.0028 | NS | NS
Lead 0.00042 J /ND(0.0004) | NS | NS
Manganese 0.28 /0.21 | NS | NS
Selenium ND(0.0014) /ND(0.0014) | NS | NS
RFI-09-110
4/7/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene 0.18 (DW,RDW)
Carbon tetrachloride ND(0.001)
Ethylbenzene 0.003
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) 0.023
RFI-09-45
12/20/2002
VOC
1,1,1-Trichloroethane ND(0.001) /ND(0.001)
Benzene ND(0.001) /ND(0.001)
Carbon tetrachloride ND(0.001 J) /ND(0.001)
Ethylbenzene ND(0.001) /ND(0.001)
Methylene chloride ND(0.005) /ND(0.005)
Trichloroethene ND(0.001) /ND(0.001)
Vinyl chloride ND(0.001) /ND(0.001)
Xylenes (total) ND(0.002) /ND(0.002)
Inorganic
Antimony 0.0011 J /0.0012 J
Arsenic 0.002 J /0.0024 J
Lead 0.0009 J /0.00096 J
Manganese 0.091 /0.079
Selenium 0.0042 J /0.0066 J
RFI-09-580
4/7/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene 0.004 (DW,RDW)
Carbon tetrachloride ND(0.001)
Ethylbenzene 0.164
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) 0.362
RFI-09-10
8/14/2001 | 6/24/2002
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001)
Benzene ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | ND(0.001)
Ethylbenzene ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005)
Trichloroethene 0.0015 | 0.0013
Vinyl chloride ND(0.001) | ND(0.001)
Xylenes (total) ND(0.002) | ND(0.002)
SVOC
Benzo(a)anthracene ND(0.001) | NS
Benzo(a)pyrene ND(0.002) | NS
Benzo(b)fluoranthene ND(0.002) | NS
bis(2-Ethylhexyl)phthalate 0.0038 (DW,RDW) | 0.0022 (DW,RDW)
Dibenz(a,h)anthracene ND(0.002) | NS
Indeno(1,2,3-cd)pyrene ND(0.002) | NS
PCB
Total PCBs ND(0.0001) | NS
PCB-Dissolved
Total PCBs 0.00006 J | NS
Inorganic-Dissolved
Antimony ND(0.0012) | NS
Arsenic 0.0098 | NS
Lead 0.0014 | NS
Manganese 0.064 | NS
Selenium 0.015 | NS
RFI-09-52
5/30/2001
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride ND(0.005)
Trichloroethene 0.0018
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.002)
SVOC
Benzo(a)anthracene ND(0.005)
Benzo(a)pyrene ND(0.005)
Benzo(b)fluoranthene ND(0.005)
bis(2-Ethylhexyl)phthalate 0.00359 J
Dibenz(a,h)anthracene ND(0.005)
Indeno(1,2,3-cd)pyrene ND(0.005)
PCB
Total PCBs 0.00014
PCB-Dissolved
Total PCBs ND(0.0001)
Inorganic-Dissolved
Antimony ND(0.0012)
Arsenic 0.0018
Lead 0.026 (DW,RDW)
Manganese 0.049
Selenium 0.007
RFI-09-56
7/8/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene 0.001
Carbon tetrachloride ND(0.001)
Ethylbenzene 0.0003 J
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Xylenes (total) 0.0014 J
RFI-09-03
5/29/2001
VOC
1,1,1-Trichloroethane ND(0.001 J)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene 0.0011 J
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) 0.0012 J
SVOC
Benzo(a)anthracene ND(0.005)
Benzo(a)pyrene ND(0.005)
Benzo(b)fluoranthene 0.863 D (DALCO,GSI,DW,RDW)
bis(2-Ethylhexyl)phthalate ND(0.005)
Dibenz(a,h)anthracene ND(0.005)
Indeno(1,2,3-cd)pyrene ND(0.005)
PCB
Total PCBs 0.000046 J
PCB-Dissolved
Total PCBs ND(0.00001)
Inorganic-Dissolved
Antimony ND(0.0012)
Arsenic 0.0033 J
Lead 0.00056 J
Manganese 0.88 (RDW)
Selenium ND(0.0014)
RFI-09-12
12/13/2001 | 6/21/2002 | 3/21/2003
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001) | ND(0.001)
Benzene 0.01 (DW,RDW) | 0.013 J (DW,RDW) | 0.0036
Carbon tetrachloride ND(0.001) | ND(0.001) | ND(0.001)
Ethylbenzene ND(0.001) | ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005) | ND(0.005)
Trichloroethene ND(0.001) | ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) | ND(0.001) | ND(0.001)
Xylenes (total) ND(0.002) | ND(0.002) | ND(0.002)
SVOC
Benzo(a)anthracene ND(0.001) | NS | NS
Benzo(a)pyrene ND(0.002) | NS | NS
Benzo(b)fluoranthene ND(0.002) | NS | NS
bis(2-Ethylhexyl)phthalate ND(0.005) | NS | NS
Dibenz(a,h)anthracene ND(0.002) | NS | NS
Indeno(1,2,3-cd)pyrene ND(0.002) | NS | NS
PCB
Total PCBs ND(0.00001) | NS | NS
PCB-Dissolved
Total PCBs ND(0.00001) | NS | NS
Inorganic
Antimony ND(0.0012) | ND(0.0012) | ND(0.0012)
Arsenic ND(0.002) | 0.049 (DW,RDW) | 0.004 (DW,RDW)
Lead 0.0019 J | 0.00013 J | 0.00023 J
Manganese 0.11 J | 0.065 | 0.05
Selenium ND(0.0045) | ND(0.0014) | ND(0.0016)
Inorganic-Dissolved
Antimony ND(0.0012) | ND(0.0012) | NS
Arsenic 0.0043 | 0.04 | NS
Lead ND(0.0004) | ND(0.0004) | NS
Manganese 0.069 | 0.055 | NS
Selenium ND(0.0014) | ND(0.0014) | NS
31-6
9/17/2001 | 6/21/2002
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001 J)
Benzene ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | ND(0.001)
Ethylbenzene ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005)
Trichloroethene ND(0.001) | ND(0.001)
Vinyl chloride ND(0.001) | ND(0.001)
Xylenes (total) ND(0.002) | ND(0.002)
SVOC
Benzo(a)anthracene ND(0.0021) | NS
Benzo(a)pyrene ND(0.0021) | NS
Benzo(b)fluoranthene ND(0.0033) | NS
bis(2-Ethylhexyl)phthalate ND(0.0053) | NS
Dibenz(a,h)anthracene ND(0.0021) | NS
Indeno(1,2,3-cd)pyrene ND(0.0021) | NS
PCB
Total PCBs ND(0.00011) | NS
PCB-Dissolved
Total PCBs ND(0.00011) | NS
Inorganic
Antimony ND(0.0012) | NS
Arsenic ND(0.001) | NS
Lead ND(0.0004) | NS
Manganese 0.005 | NS
Selenium ND(0.0014) | NS
31-5
9/17/2001 | 6/21/2002
VOC
1,1,1-Trichloroethane ND(0.001) | NS
Benzene ND(0.001) | NS
Carbon tetrachloride ND(0.001) | NS
Ethylbenzene ND(0.001) | NS
Methylene chloride ND(0.005) | NS
Trichloroethene ND(0.001) | NS
Vinyl chloride ND(0.001) | NS
Xylenes (total) ND(0.002) | NS
SVOC
Benzo(a)anthracene ND(0.002) | NS
Benzo(a)pyrene ND(0.002) | NS
Benzo(b)fluoranthene ND(0.002) | NS
bis(2-Ethylhexyl)phthalate ND(0.005) | NS
Dibenz(a,h)anthracene ND(0.002) | NS
Indeno(1,2,3-cd)pyrene ND(0.002) | NS
PCB
Total PCBs 0.00039 ND(0.00011)
PCB-Dissolved
Total PCBs 0.00169 (DW,RDW) ND(0.00011)
Inorganic-Dissolved
Antimony ND(0.0012) | NS
Arsenic ND(0.001) | NS
Lead ND(0.0004) | NS
Manganese 0.005 | NS
Selenium ND(0.0014) | NS
MW-19
2/27/2002 | 8/28/2002 | 3/20/2003
VOC
1,1,1-Trichloroethane ND(0.001 J) | NS | ND(0.001)
Benzene ND(0.001) | NS | ND(0.001)
Carbon tetrachloride ND(0.001) | NS | ND(0.001)
Ethylbenzene ND(0.001) | NS | ND(0.001)
Methylene chloride ND(0.005) | NS | ND(0.005)
Trichloroethene ND(0.001) | NS | ND(0.001)
Vinyl chloride ND(0.001) | NS | ND(0.001)
Xylenes (total) ND(0.002) | NS | ND(0.002)
Inorganic
Antimony ND(0.001 J) | NS | NS
Arsenic ND(0.001) | NS | NS
Lead ND(0.001) | NS | NS
Manganese ND(0.001) | NS | NS
Selenium NS | 0.00073 J | NS
RFI-09-MR
3/24/2003
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.002)
RFI-09-218
3/24/2003
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride ND(0.005)
Trichloroethene 0.0015
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.002)
RFI-09-01
9/14/2001 | 6/24/2002
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001)
Benzene ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | ND(0.001)
Ethylbenzene ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005)
Trichloroethene 0.005 | 0.0031
Vinyl chloride 0.0038 (DW,RDW) | 0.0022 (DW,RDW)
Xylenes (total) ND(0.002) | ND(0.002)
SVOC
Benzo(a)anthracene ND(0.001) | NS
Benzo(a)pyrene ND(0.002) | NS
Benzo(b)fluoranthene ND(0.002) | NS
bis(2-Ethylhexyl)phthalate 0.107 (DW,RDW) | NS
Dibenz(a,h)anthracene ND(0.002) | NS
Indeno(1,2,3-cd)pyrene ND(0.002) | NS
PCB
Total PCBs 0.00021 | NS
PCB-Dissolved
Total PCBs ND(0.00001) | NS
Inorganic
Antimony ND(0.0012) | NS
Arsenic 0.0076 | NS
Lead 0.0014 | NS
Manganese 0.078 | NS
Selenium 0.014 J | NS
RFI-09-02
5/30/2001
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride 0.0018
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.002)
SVOC
Benzo(a)anthracene ND(0.005)
Benzo(a)pyrene ND(0.005)
Benzo(b)fluoranthene ND(0.005)
bis(2-Ethylhexyl)phthalate 0.00359 J
Dibenz(a,h)anthracene ND(0.005)
Indeno(1,2,3-cd)pyrene ND(0.005)
PCB
Total PCBs 0.00014
PCB-Dissolved
Total PCBs ND(0.00001)
Inorganic-Dissolved
Antimony ND(0.0012)
Arsenic 0.0018
Lead 0.026 (DW,RDW)
Manganese 0.049
Selenium 0.007
RFI-09-58
7/22/2005
VOC
1,1,1-Trichloroethane ND(0.001) /ND(0.001)
Benzene ND(0.001) /ND(0.001)
Carbon tetrachloride ND(0.001) /ND(0.001)
Ethylbenzene ND(0.001) /ND(0.001)
Methylene chloride ND(0.005) /ND(0.005)
Trichloroethene ND(0.001) /ND(0.001)
Vinyl chloride ND(0.001) /ND(0.001)
RFI-09-53
4/7/2005 | 6/8/2005
VOC
1,1,1-Trichloroethane 0.006 | 0.256 (DW,RDW)
Benzene 0.0003 J | ND(0.005)
Carbon tetrachloride 0.0003 J | ND(0.005)
Ethylbenzene 0.0003 J | ND(0.005)
Methylene chloride ND(0.005) | ND(0.01)
Trichloroethene 0.035 (DW,RDW) | 0.184 (DW,RDW)
Vinyl chloride 0.001 J | ND(0.005)
Xylenes (total) ND(0.001) | ND(0.005)
RFI-09-57
7/8/2005
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.001)
RFI-09-04
11/28/2001
VOC
1,1,1-Trichloroethane 0.0016 /0.0017
Benzene ND(0.001) /ND(0.001)
Carbon tetrachloride ND(0.001) /ND(0.001)
Ethylbenzene ND(0.001) /ND(0.001)
Methylene chloride ND(0.005) /ND(0.005)
Trichloroethene 0.0093 (DW,RDW) /0.0093 (DW,RDW)
Vinyl chloride ND(0.001) /ND(0.001)
Xylenes (total) ND(0.002) /ND(0.002)
SVOC
Benzo(a)anthracene ND(0.001) /ND(0.001)
Benzo(a)pyrene ND(0.002) /ND(0.002)
Benzo(b)fluoranthene ND(0.002) /ND(0.002)
bis(2-Ethylhexyl)phthalate ND(0.003) /ND(0.003)
Dibenz(a,h)anthracene ND(0.002) /ND(0.002)
Indeno(1,2,3-cd)pyrene ND(0.002) /ND(0.002)
PCB
Total PCBs ND(0.00011) /ND(0.00011)
PCB-Dissolved
Total PCBs ND(0.00011) /ND(0.00011)
Inorganic
Antimony ND(0.0012) /ND(0.0012)
Arsenic ND(0.001) /0.0005 J
Lead ND(0.0004) /ND(0.0004)
Manganese 0.022 /0.022
Selenium 0.002 J /0.0028 J
Inorganic-Dissolved
Antimony ND(0.0012) /ND(0.0012)
Arsenic ND(0.001) /ND(0.001)
Lead ND(0.0004) /ND(0.0004)
Manganese 0.023 /0.023
Selenium 0.004 J /0.0048 J
RFI-09-32
3/6/2002 | 8/28/2002 | 3/21/2003
VOC
1,1,1-Trichloroethane ND(0.045) | ND(0.001) | ND(0.001)
Benzene ND(0.045) | ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.045) | ND(0.001) | ND(0.001)
Ethylbenzene ND(0.045) | ND(0.001) | ND(0.001)
Methylene chloride ND(0.19) | ND(0.005) | ND(0.005)
Trichloroethene ND(0.045) | ND(0.001) | ND(0.001)
Vinyl chloride ND(0.045) | ND(0.001) | ND(0.001)
Xylenes (total) ND(0.089) | ND(0.002) | ND(0.002)
Inorganic
Antimony 0.016 J (DW,RDW) | ND(0.0012) | 0.00098 J
Arsenic NS | NS | 0.0047
Lead NS | 0.00055 | ND(0.0004)
Manganese NS | NS | 0.14
Selenium NS | ND(0.0014) | ND(0.0016)
RFI-09-25
6/26/2002 | 3/21/2003 | 10/5/2004 | 2/25/2005
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001) | ND(0.001) | NS
Benzene ND(0.001) | ND(0.001) | ND(0.001) | NS
Carbon tetrachloride ND(0.001) | ND(0.001) | ND(0.001) | NS
Ethylbenzene ND(0.001) | ND(0.001) | ND(0.001) | NS
Methylene chloride ND(0.005) | ND(0.005) | ND(0.005) | NS
Trichloroethene ND(0.001) | ND(0.001) | ND(0.001) | NS
Vinyl chloride ND(0.001) | ND(0.001) | ND(0.001) | NS
Xylenes (total) ND(0.002) | ND(0.002) | ND(0.001) | NS
Inorganic
Antimony NS | NS | NS | NS
Arsenic NS | NS | NS | NS
Lead 0.0053 J | NS | NS | ND(0.001)
Manganese 0.1 | NS | NS | NS
Selenium NS | NS | NS | NS
Inorganic-Dissolved
Antimony NS | NS | NS | NS
Arsenic NS | NS | NS | NS
Lead ND(0.0004) | NS | NS | ND(0.001)
Manganese 0.07 | NS | NS | NS
Selenium NS | NS | NS | NS
MW-26
6/26/2002 | 3/24/2003 | 10/5/2004 | 2/28/2005
VOC
1,1,1-Trichloroethane 0.0031 | 0.0016 | 0.003 | NS
Benzene ND(0.001) | ND(0.001) | ND(0.001) | NS
Carbon tetrachloride ND(0.001) | ND(0.001) | ND(0.001) | NS
Ethylbenzene 0.00057 J | ND(0.001) | ND(0.001) | NS
Methylene chloride ND(0.005) | ND(0.005) | ND(0.005) | NS
Trichloroethene ND(0.001) | ND(0.001) | ND(0.001) | NS
Vinyl chloride ND(0.001) | ND(0.001) | ND(0.001) | NS
Xylenes (total) ND(0.002) | ND(0.002) | ND(0.001) | NS
Inorganic
Antimony NS | NS | NS | NS
Arsenic NS | NS | NS | NS
Lead NS | NS | NS | 0.004
Manganese NS | NS | NS | NS
Selenium NS | NS | NS | NS
Inorganic-Dissolved
Antimony NS | NS | NS | NS
Arsenic NS | NS | NS | NS
Lead NS | NS | NS | 0.002
Manganese NS | NS | NS | NS
Selenium NS | NS | NS | NS
RFI-09-49R
4/3/2003 | 10/5/2004
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001)
Benzene ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | ND(0.001)
Ethylbenzene ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005)
Trichloroethene 0.0024 | 0.0018 (DW,RDW)
Vinyl chloride ND(0.001) | ND(0.001)
Xylenes (total) ND(0.002) | ND(0.001)
Inorganic
Antimony NS | NS
Arsenic NS | NS
Lead ND(0.003) | NS
Manganese NS | NS
Selenium NS | NS
RFI-09-041
6/24/2002 | 3/24/2003 | 10/5/2004 | 6/8/2006
VOC
1,1,1-Trichloroethane ND(0.001) | ND(0.001) | 0.0003 J | 0.0003 J
Benzene ND(0.001) | ND(0.001) | ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.001) | ND(0.001) | 0.0002 J | ND(0.001)
Ethylbenzene ND(0.001) | ND(0.001) | ND(0.001) | ND(0.001)
Methylene chloride ND(0.005) | ND(0.005) | ND(0.005) | ND(0.005)
Trichloroethene 0.0067 (DW,RDW) | 0.0055 (DW,RDW) | 0.021 (DW,RDW) | 0.009 (DW,RDW)
Vinyl chloride ND(0.001) | ND(0.001) | ND(0.001) | ND(0.001)
Xylenes (total) ND(0.002) | ND(0.002) | ND(0.001) | ND(0.001)
Inorganic
Antimony NS | NS | NS | NS
Arsenic NS | NS | NS | NS
Lead NS | NS | ND(0.003) | NS
Manganese NS | NS | NS | NS
Selenium NS | NS | NS | NS
RFI-09-MW
3/24/2003
VOC
1,1,1-Trichloroethane ND(0.001)
Benzene ND(0.001)
Carbon tetrachloride ND(0.001)
Ethylbenzene ND(0.001)
Methylene chloride ND(0.005)
Trichloroethene ND(0.001)
Vinyl chloride ND(0.001)
Xylenes (total) ND(0.002)
RFI-09-49
3/6/2002 | 8/28/2002 | 3/21/2003
VOC
1,1,1-Trichloroethane ND(0.045) | ND(0.001) | ND(0.001)
Benzene ND(0.045) | ND(0.001) | ND(0.001)
Carbon tetrachloride ND(0.045) | ND(0.001) | ND(0.001)
Ethylbenzene ND(0.045) | ND(0.001) | ND(0.001)
Methylene chloride ND(0.19) | ND(0.005) | ND(0.005)
Trichloroethene



SITE LOCATION



BD01-04	0.3 – 2.3 (ft)	6.3 – 8.3 (ft)
VOC		
Benzene	ND(0.036)	ND(0.044) /ND(0.044)
PCB		
Total PCBs	ND(0.037)	ND(0.045) /ND(0.044)
Inorganic		
Arsenic	4.4 J	5.7 J /7.7 J (RDC)

BD01-03	0.4 – 2.4 (ft)	8.4 – 10.4 (ft)	18.4 – 20.4 (ft)
VOC			
Benzene	ND(0.041)	ND(0.038)	ND(0.039)
PCB			
Total PCBs	ND(0.041)	ND(0.037)	ND(0.039)
Inorganic			
Arsenic	4.8 J	3.1 J	3.3 J

ACSP-B3K	0 – 2 (ft)	2 – 4 (ft)	4 – 6 (ft)
PCB			
Total PCBs	ND(0.037)	0.13 /0.49	0.39

ACSP-B3	10 – 12 (ft)
VOC	
Benzene	ND(0.04)
Inorganic	
Arsenic	4.2

ACSP-B3A	0 – 0.5 (ft)	4 – 6 (ft)	6 – 8 (ft)	10 – 12 (ft)	12 – 14 (ft)
PCB					
Total PCBs	ND(0.038)	ND(0.042)	4.7 (RDC)	0.062	ND(0.041)

ACSP-B3D	0 – 2 (ft)	5 – 7 (ft)	7 – 9 (ft)	10 – 12 (ft)	12 – 14 (ft)
PCB					
Total PCBs	ND(0.037)	0.062	0.5	0.074	0.04 /0.068

ACSP-B1	14 – 16 (ft)
VOC	
Benzene	ND(0.033)
Inorganic	
Arsenic	2.8

ACSP-B1A	2 – 4 (ft)
PCB	
Total PCBs	ND(0.039)

BD01-02	0 – 2 (ft)	8 – 10 (ft)	12 – 14 (ft)
VOC			
Benzene	ND(0.042)	ND(0.041)	ND(0.036)
PCB			
Total PCBs	0.016 J	ND(0.04)	ND(0.037)
Inorganic			
Arsenic	5	4.7	1.6

ACSP-B3E	0 – 2 (ft)	2 – 4 (ft)	4 – 6 (ft)
PCB			
Total PCBs	0.052	0.18	0.13

ACSP-B2B	12 – 14 (ft)
VOC	
Benzene	ND(0.037)

ACSP-B2E	0 – 2 (ft)	6 – 8 (ft)	8 – 10 (ft)	14 – 16 (ft)	22 – 24 (ft)
VOC					
Benzene	ND(0.036)	ND(0.039)	ND(0.04)	ND(0.038)	0.12

ACSP-B4B	0 – 2 (ft)	2 – 4 (ft)	4 – 6 (ft)	6 – 8 (ft)	8 – 10 (ft)	10 – 12 (ft)
PCB						
Total PCBs	ND(0.038)	ND(0.039) /ND(0.04)	ND(0.04)	ND(0.039)	ND(0.039)	ND(0.04)

ACSP-B2A	0 – 2 (ft)	2 – 4 (ft)	4 – 6 (ft)	6 – 8 (ft)	8 – 10 (ft)	10 – 12 (ft)
VOC						
Benzene	NS	NS	NS	NS	NS	ND(0.83) /NS
PCB						
Total PCBs	ND(0.039)	ND(0.04)	ND(0.041)	ND(0.041)	ND(0.043)	ND(0.044)

ACSP-B2	14 – 16 (ft)
VOC	
Benzene	ND(2) /ND(2)
Inorganic	
Arsenic	4.8 /4.1

ACSP-B2D	0 – 2 (ft)	2 – 4 (ft)	4 – 6 (ft)	14 – 16 (ft)	24 – 26 (ft)
VOC					
Benzene	ND(0.037)	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.037)

ACSP-B6	2 – 4 (ft)
VOC	
Benzene	ND(0.035)
Inorganic	
Arsenic	9.5 (RDC)

ACSP-B4A	0 – 2 (ft)	2 – 4 (ft)	4 – 6 (ft)	6 – 8 (ft)	8 – 10 (ft)	10 – 12 (ft)	12 – 14 (ft)
PCB							
Total PCBs	ND(0.039)	ND(0.038)	ND(0.04)	ND(0.038)	ND(0.036)	ND(0.038)	ND(0.042)

ACSP-B4	8 – 10 (ft)
VOC	
Benzene	ND(0.043)
Inorganic	
Arsenic	4.8

BD01-01	0.4 – 2.4 (ft)	8.4 – 10.4 (ft)	22.4 – 24.4 (ft)
VOC			
Benzene	ND(0.039)	ND(0.043)	ND(0.038) /ND(0.038)
PCB			
Total PCBs	ND(0.039)	ND(0.044)	ND(0.038) /ND(0.038)
Inorganic			
Arsenic	6.3 J	7.2 J	2.8 J /2.8 J

ACSP-B5	12 – 14 (ft)
VOC	
Benzene	ND(0.04)
Inorganic	
Arsenic	3.2

ACSP-B2C	8 – 10 (ft)
VOC	
Benzene	ND(0.039)

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDIND CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE-SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY-WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ND (0.039)-CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS-NOT ANALYZED FOR THIS CONSTITUENT.
9. J-ESTIMATED CONCENTRATION.
10. RDC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DIRECT CONTRACT CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

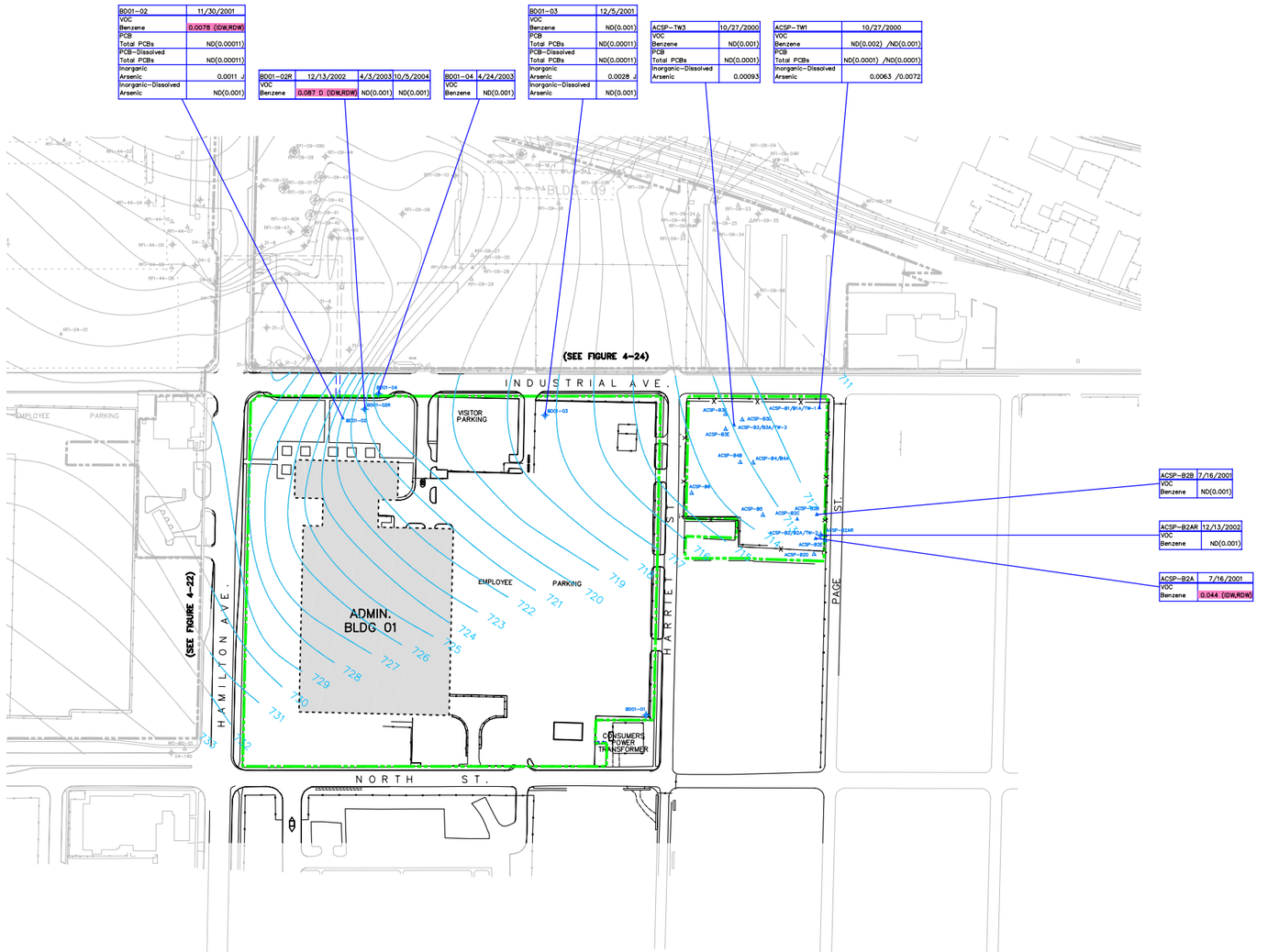
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L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES SDL GMS
64410112/RFI-06/64410C25.DWG

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

SOIL ANALYTICAL DATA - BUILDING 01 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
4-25



NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. WATER TABLE ELEVATION CONTOURS MEASURED IN DECEMBER 2004.
3. ALL LOCATIONS ARE APPROXIMATE.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN MILLIGRAMS PER LITER (mg/L).
6. ND (1.0)–CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS–NOT ANALYZED FOR THIS CONSTITUENT.
9. GSI CRITERIA COMPARED TO SAMPLES LOCATED WITHIN 500 FEET OF THE FLINT RIVER.
10. RDW – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DRINKING WATER CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - BUILDING 01 AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
4-26

X: 64410X01.DWG, X02.DWG, X03.DWG, X24.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES LAF GMS
64410112/RFI-06/64410C13.DWG

WL-B3	10 – 12 (ft)
Inorganic	
Arsenic	4.4

WL-B6	10 – 12 (ft)
Inorganic	
Arsenic	21 (RDC)

WL-B4	2 – 4 (ft)
Inorganic	
Arsenic	17 (RDC)

WL-B2	2 – 4 (ft)
Inorganic	
Arsenic	12 (RDC)

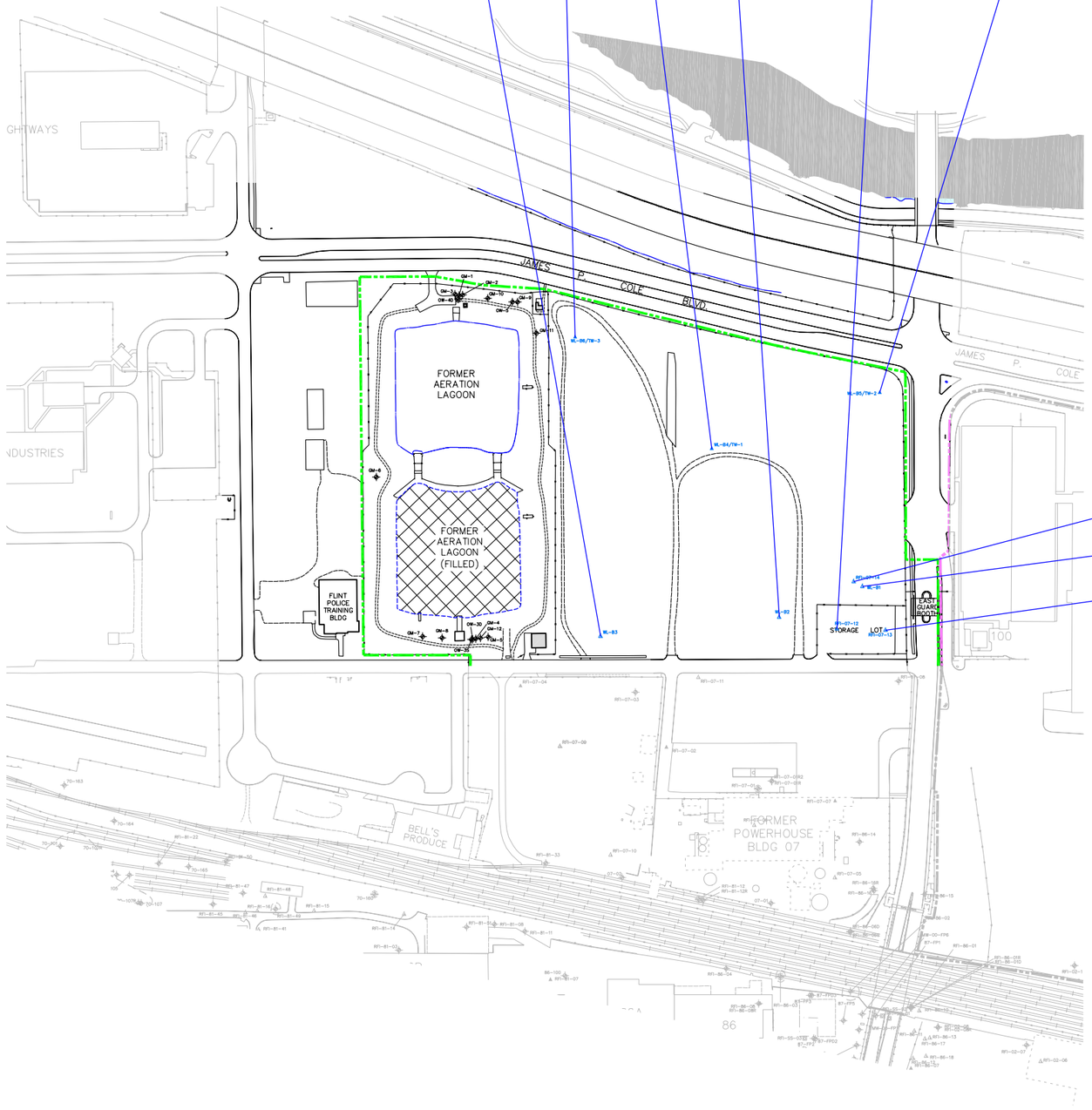
RFI-07-12	0.3 – 2.3 (ft)	8.3 – 10.3 (ft)	14.3 – 16.3 (ft)
Inorganic			
Arsenic	9.1 J (RDC)	5.3 /4.5	6.7

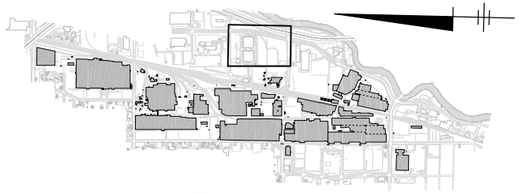
WL-B5	10 – 12 (ft)
Inorganic	
Arsenic	8.9 (RDC)

RFI-07-14	0 – 2 (ft)
Inorganic	
Arsenic	5.8

WL-B1	8 – 10 (ft)
Inorganic	
Arsenic	7.3

RFI-07-13	0.3 – 2.3 (ft)	8.3 – 10.3 (ft)	14.3 – 16.3 (ft)
Inorganic			
Arsenic	11 J (RDC)	5.9 J	6.8 J





SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI B1-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
- RFI-12-13 — DECOMMISSIONED/DESTROYED MONITORING WELL
- RFI-36-01 — RFI PIEZOMETER
- LOCATION WHERE MEASURABLE LNAPL HAS BEEN DETECTED FROM MARCH 2004 TO JULY 2005
- LOCATION WHERE MEASURABLE LNAPL WAS HISTORICALLY DETECTED
- LOCATION WHERE EVIDENCE OF LNAPL WAS OBSERVED IN SOIL
- EXCEEDS MICHIGAN PART 201 GENERIC INDUSTRIAL SCREENING CRITERIA:

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED SEPTEMBER 2001, AT A SCALE OF 1:100.
2. ALL LOCATIONS ARE APPROXIMATE.
3. FOR ALL METALS, SITE-SPECIFIC BACKGROUND CONCENTRATIONS ARE SUBTRACTED FROM THE MEASURED CONCENTRATIONS PRIOR TO COMPARING TO PART 201 CRITERIA.
4. CONSTITUENTS PRESENTED HERE ARE THOSE WHICH EXCEED ONE OR MORE MICHIGAN PART 201 GENERIC RESIDENTIAL AND/OR INDUSTRIAL SCREENING CRITERIA IN SOIL OR GROUNDWATER SAMPLES COLLECTED IN THE AREA SHOWN ON THIS FIGURE.
5. ALL CONCENTRATIONS PRESENTED IN DRY-WEIGHT MILLIGRAMS PER KILOGRAM (mg/kg).
6. ND (0.039)-CONSTITUENT NOT DETECTED. ASSOCIATED DETECTION LIMIT PRESENTED IN PARENTHESES.
7. DUPLICATE ANALYSES SEPARATED BY SLASHES (/).
8. NS-NOT ANALYZED FOR THIS CONSTITUENT.
9. J-ESTIMATED CONCENTRATION.
10. RDC – EXCEEDS MICHIGAN PART 201 RESIDENTIAL DIRECT CONTACT CRITERIA.

0 150' 300'
GRAPHIC SCALE

JULY 2006

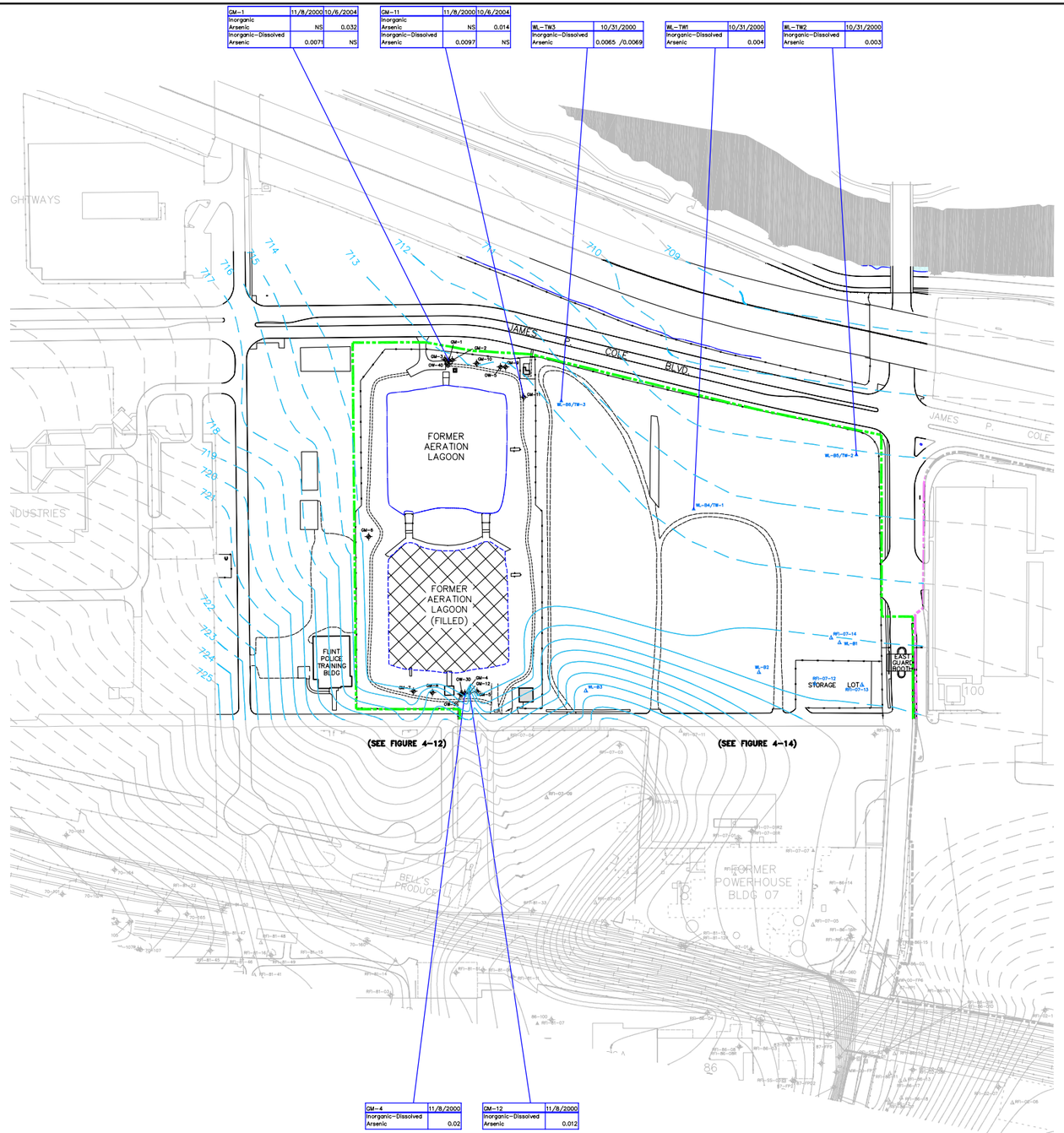
GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

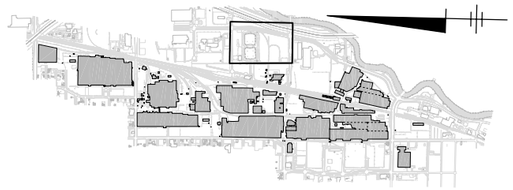
SOIL ANALYTICAL DATA - FORMER AERATION LAGOON AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
4-27

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES DJP GMS
64410112/RFI-06/64410C27.DWG





SITE LOCATION

LEGEND

- GM PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY GM (STILL SUBJECT TO RCRA CORRECTIVE ACTION)
- DEMOLISHED BUILDING
- BUILDING CURRENTLY IDLED
- APPROXIMATE AOI BOUNDARY
- AOI 81-1 — AOI ID
- BASEMENT/TUNNEL AREA
- ESTIMATED CURRENT LIMITS OF MEASURABLE LNAPL
- 736 — WATER TABLE ELEVATION CONTOUR (FT AMSL)
- 04-140 — HISTORICAL MONITORING WELL LOCATION
- RFI-83/84-03 — RFI SOIL BORING LOCATION
- RFI-09-02 — RFI SOIL BORING/GRAB GROUNDWATER SAMPLING LOCATION
- RFI-09-01 — RFI MONITORING WELL LOCATION
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0 150' 300'
GRAPHIC SCALE

JULY 2006

GENERAL MOTORS CORPORATION
NAO FLINT OPERATIONS SITE – FLINT, MICHIGAN
RFI PHASE II REPORT

GROUNDWATER ANALYTICAL DATA - FORMER AERATION LAGOON AREA

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
4-28

X: 64410X01.DWG, X02.DWG, X03.DWG, X06.DWG, X24.DWG
L: ON=* OFF=*REF*, GRAYX01|SHD-BUILDING, *|HIST_SB, *GRAYX03|NAPL_OBS, *|RFI_SS_PIEZ, *|LNAPL-SHD, GRAYX01|PROPERTY, GRAYX03|NAPL_EVID
P: PAGESET/SYR-DL
7/11/06 SYR-85-NES LAF GMS
64410112/RFI-06/64410C28.DWG