CONESTOGA-ROVERS & ASSOCIATES

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February 27, 2015 Reference No. 058502

Transmitted via E-mail

Mr. Nate Nemani
U.S. Environmental Protection Agency, Region 5
Waste Management Division
77 West Jackson Blvd., LU-9J
Chicago, IL 60604-3590
Dear Mr. Nemani

Re: Additional Delineation of PCB and Manganese Impacts
Saginaw Nodular Iron, 2100 Veterans Memorial Parkway, Saginaw, MI
U.S. EPA ID No. MID 041 793 340

The following letter has been prepared by Conestoga-Rovers & Associates (CRA) on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust to request authorization from the United States Environmental Protection Agency (U.S. EPA) to conduct additional delineation of polychlorinated biphenyls (PCBS) in soil and concrete as well as additional delineation of manganese in soil at a portion of the Saginaw Nodular Iron Industrial Land (Site). The additional delineation of PCBs in soil will be used to assist in developing and evaluating TSCA compliant remediation alternatives, including the limits of a possible PCB notice and restriction area, and the additional delineation of manganese in soil will be used to define an area for a proposed deed restriction to maintain a 2-foot cover to protect against particulate inhalation exposures. Figure 1 presents an overall Site Plan with the area where additional delineation of PCBs and manganese is proposed.

The following figures, table, and attachment are included for your reference:

Figure 1 – Site Plan
Figure 13.2a – Proposed Additional Delineation Locations

Background

As part of the RCRA Facility Investigation (RFI), multiple phases of investigation were completed between 1998 and 2005 to identify impacts at the Site and where impacts were found to delineate or obtain sufficient data to support the preparation of a Human Health Risk Assessment (HHRA) and an Ecological Risk Assessment (ERA). Figure 13.2a of the RFI report originally submitted in March 2007 and re-submitted in September 2012 presents soil analytical results for samples collected within a portion of Investigative Unit G that exhibited PCB impacts above 1 parts per million (ppm) and manganese impacts above MDEQ non-residential particulate soil inhalation criteria (1,500 milligram per kilogram [mg/kg]). The samples

collected as part of the RFI provided sufficient data to support preparation of the HHRA and ERA, however, the samples collected did not delineate PCBs in soil to 1 ppm in accordance with TSCA regulations or delineate sufficiently for purposes of proposing deed restrictions. There were no unacceptable risks identified in the HHRA or ERA for this area.

The area exhibiting PCB impacts was likely associated with the Oil House Storage Unit which reportedly was in operation from 1969 until the Nodular Iron Plant was closed in 1987. The Oil House Storage Unit consisted of two units approximately 11 feet (ft) by 19 ft by 15 ft high rooms complete with concrete and steel walls, a concrete floor, a ceiling and metal fire doors. The Oil House Storage Unit was utilized to store hazardous waste materials staged in 55-gallon barrels until proper disposal. One of the wastes stored in this area was oils containing PCBs. Closure for this area was completed in 1998, which involved scrubbing walls and floors with a 5 percent alkaline caustic solution and as a final step steam cleaning. The Oil House Building was demolished in the spring of 1999 after completing decontamination and cleaning activities.

Manganese is a common constituent in soil at the Site and is likely a result of the fill that was used to bring the Site up to grade for development.

Proposed Delineation

Proposed boring locations to delineate PCBs to 1 ppm to assist in developing TSCA compliant remediation alternatives are overlain on Figure 13.2a. There are four locations (TMW-04332, SB-04333B, SB-04534B, and SB-04533-C) that require additional delineation of PCBs to 1 ppm. Proposed step-out borings are spaced at approximately 10-ft with samples to be collected at a depth of 0-2 ft below ground surface (ft BGS), with the exception of SB-04333B where samples will be collected at a depth of 2-4 ft BGS and 4-6 ft BGS. Samples collected from the following proposed boring locations will be submitted to an accredited laboratory on a 1-week turn:

- Two boring locations between SB-04333B and SB-04432
- Two boring locations between SB-04434 and SB-04433A
- One boring location at TMW-04332 and the four 10-foot step-outs
- One boring location at SB-04534B and the four 10-foot step-outs (Note that one of the 10-foot step outs is located on a concrete floor slab for which a shallow concrete sample as well as a soil sample immediately below the concrete slab will be collected)

- Two additional borings will be completed on the concrete floor slab for which a shallow concrete sample as well as a soil sample immediately below the concrete slab will be collected
- Step-out boring locations 10-ft from SB-04333B and SB-04533-C

Samples collected from proposed step-out borings located 20-ft from TMW-04332, SB-04333B, SB-04534B, and SB-04533-C will be submitted to an accredited laboratory and placed on hold pending the results of the samples submitted on a 1-week turn. Held samples that are required to be analyzed will be completed on a standard turnaround time.

Proposed step-out boring locations to delineate manganese impacts in soil at TMW-04127 are overlain on Figure 13.2a. Proposed step-out borings are spaced at 25-ft with samples to be collected at a depth of 0-2 ft BGS. Samples collected at proposed boring location TMW-04127 and at proposed step-out boring locations 25-ft in all directions from TMW-04127 will be submitted to an accredited laboratory on a standard turnaround time. Samples collected from proposed step-out borings located 50-ft in all directions from TMW-04127 will be submitted to an accredited laboratory and placed on hold pending the results of the previous samples collected. Held samples that are required to be analyzed will be completed on a standard turnaround time.

Following receipt of the analytical results a short summary of the investigation will be provided for your review. The summary of the investigation will be followed by a proposed TSCA compliant remediation plan.

Schedule

The proposed delineation work will be scheduled within two weeks of approval, weather permitting, and is expected to be completed in 2 days. Results of the additional delineation are expected within three weeks of completing the field work and a short summary of the investigation will be provided approximately 2 weeks following receipt of the laboratory results, with the proposed remediation plan submitted approximately 4 weeks after receipt of the laboratory results.

CONESTOGA-ROVERS & ASSOCIATES

February 27, 2015 Reference No. 58502

Should you have any questions, please do not hesitate to contact us.

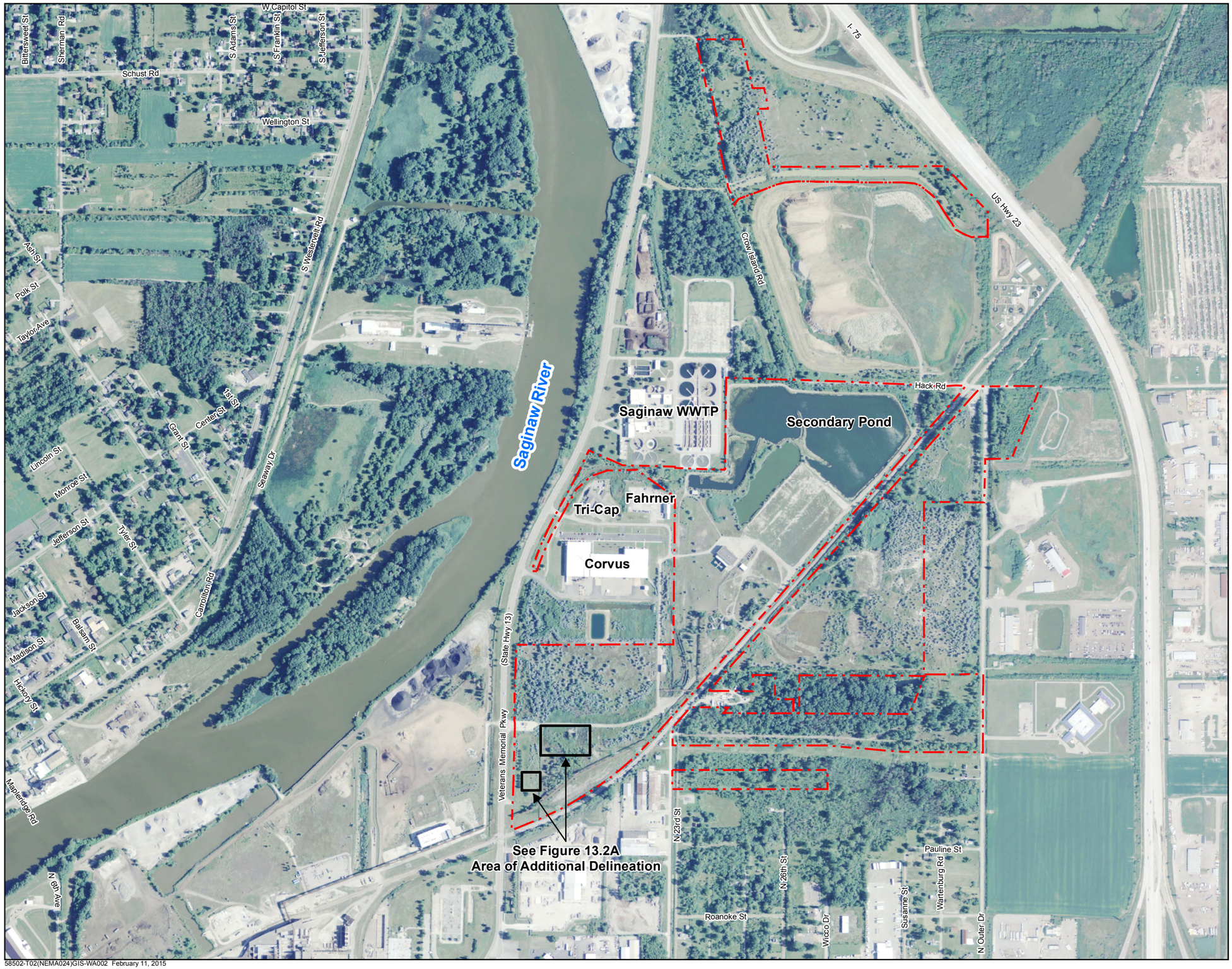
Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Michael R. Tomka, P.E.

JEP/kf/24

cc: David Favero, RACER (via e-mail)



LEGEND

APPROXIMATE LIMITS OF RACER PROPERTY

Coordinate System
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NAVD 88

REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER) SAGINAW NODULAR INDUSTRIAL LAND

SAGINAW, MICHIGAN

SITE PLAN

CONESTOGA-ROVERS & ASSOCIATES

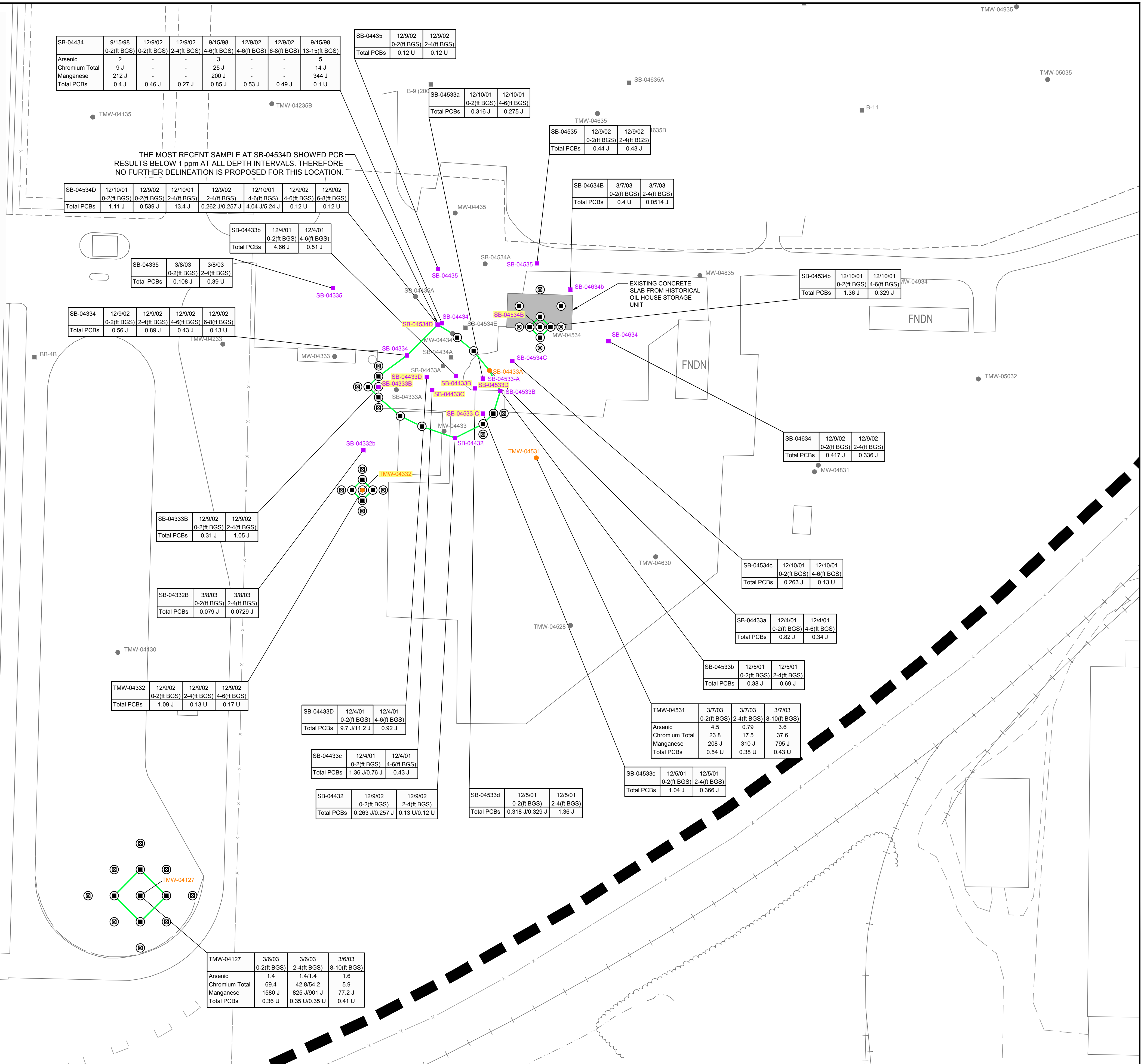
Source Reference
IMAGERY - 2014 SAGINAW COUNTY NAIP PROVIDED BY USDA
STREETS - PROCESSED TIGER 2010 STREETS, U.S. CENSUS BUREAU

Project Manager	Reviewed By	Date	
M.T.	J.E.P.	FEBRUARY 2015	
Scale	Project No.	Memo No.	Drawing No.
1:10,000	58502-T02	010	1

58502-T02(NEMA024)GIS-WA002 February 11, 2015

Chemical Name	A	B	C	D
1,1-Dichloroethene	5.70E+02	7.80E+04	1.50E+01	3.30E-01
1,2-Dichloropropane	5.50E+02	1.20E+05	5.10E+01	7.40E+00
2,4-Dimethylphenol	3.60E+04	2.10E+06	-	-
2-Butanone (Methyl Ethyl Ketone)	2.70E+04	2.90E+07	3.50E+04	2.70E+04
Aluminum	3.70E+05	-	-	-
Ammonia	-	2.90E+06	-	-
Antimony	6.70E+02	5.90E+03	-	-
Arsenic	3.70E+01	9.10E+02	-	-
Benzene	4.00E+02	4.70E+05	9.90E+01	8.40E+00
Benzo(a)anthracene	8.00E+01	-	-	-
Benzo(a)pyrene	8.00E+00	1.90E+03	-	-
Benzo(b)fluoranthene	8.00E+01	-	-	-
Benzo(g,h,i)perylene	7.00E+03	3.50E+05	-	-
Benzo(k)fluoranthene	8.00E+02	-	-	-
Beryllium	1.60E+03	5.90E+02	-	-
bis(2-Ethylhexyl)phthalate	1.00E+04	8.90E+05	-	-
Cadmium	2.10E+03	2.20E+03	-	-
Carbazole	2.40E+03	-	-	-
Chromium III (Trivalent)	1.00E+06	1.50E+05	-	-
Chromium Total	9.20E+03	2.40E+02	-	-
Chromium VI (Hexavalent)	9.20E+03	2.40E+02	-	-
Chrysene	8.00E+03	-	-	-
cis-1,2-Dichloroethene	6.40E+02	1.00E+06	4.30E+02	4.10E+01
Cobalt	9.00E+03	5.90E+03	-	-
Cyanide (total)	2.50E+02	2.50E+02	-	-
Dibenz(a,h)anthracene	8.00E+00	-	-	-
Ethylbenzene	1.40E+02	1.30E+07	3.10E+03	1.40E+02
Fluoranthene	1.30E+05	4.10E+06	8.80E+05	1.00E+06
Formaldehyde	6.00E+04	3.00E+05	6.90E+01	6.50E+01
Indeno(1,2,3-cd)pyrene	8.00E+01	-	-	-
Iron	5.80E+05	-	-	-
Lead	9.00E+02	4.40E+04	-	-
Manganese	9.00E+04	1.50E+03	-	-
Mercury	5.80E+02	8.80E+03	6.20E+01	8.90E+01
Methylphenol (Cresol)	3.60E+04	2.90E+06	-	-
Naphthalene	5.20E+04	8.80E+04	3.50E+02	4.70E+02
Nickel	1.50E+05	1.60E+04	-	-
Pentachlorophenol	3.20E+02	1.30E+05	-	-
pH Field	-	-	-	-
Phenanthrene	5.20E+03	2.90E+03	1.90E+02	5.10E+03
Phenol	1.20E+04	1.80E+07	-	-
Selenium	9.60E+03	5.90E+04	-	-
Total PCBs	1.60E+01	6.50E+03	2.80E+04	1.60E+04
Trichloroethene	5.00E+02	2.30E+06	4.40E+02	3.70E+01
Vanadium	5.50E+03	-	-	-
Vinyl chloride	3.40E+01	8.90E+05	1.70E+02	2.80E+00
Xylene (total)	1.50E+02	1.30E+08	6.50E+04	1.50E+02
Zinc	6.30E+05	-	-	-

A Michigan Part 201 Industrial and Commercial II Direct Contact Criteria
B Michigan Part 201 Soil Industrial commercial II, III and IV particulate inhalation criteria
C Michigan Part 201 Soil Industrial commercial II, III and IV 5M volatilization to ambient air criteria
D Michigan Part 201 Soil Industiral commercial II, III and IV volatilization to indoor air criteria



THE MOST RECENT SAMPLE AT SB-04534D SHOWED PCB RESULTS BELOW 1 ppm AT ALL DEPTH INTERVALS. THEREFORE NO FURTHER DELINEATION IS PROPOSED FOR THIS LOCATION.

SB-04434	9/15/98 0-2(ft BGS)	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)	9/15/98 4-6(ft BGS)	12/9/02 4-6(ft BGS)	12/9/02 6-8(ft BGS)	9/15/98 13-15(ft BGS)
Arsenic	2	-	-	3	-	-	5
Chromium Total	9 J	-	-	25 J	-	-	14 J
Manganese	212 J	-	-	200 J	-	-	344 J
Total PCBs	0.4 J	0.46 J	0.27 J	0.85 J	0.53 J	0.49 J	0.1 U

SB-04435	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)
Total PCBs	0.12 U	0.12 U

SB-04533a	12/10/01 0-2(ft BGS)	12/10/01 4-6(ft BGS)
Total PCBs	0.316 J	0.275 J

SB-04535	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)
Total PCBs	0.44 J	0.43 J

SB-04634B	3/7/03 0-2(ft BGS)	3/7/03 2-4(ft BGS)
Total PCBs	0.4 U	0.0514 J

SB-04534D	12/10/01 0-2(ft BGS)	12/9/02 0-2(ft BGS)	12/10/01 2-4(ft BGS)	12/9/02 2-4(ft BGS)	12/10/01 4-6(ft BGS)	12/9/02 4-6(ft BGS)	12/9/02 6-8(ft BGS)
Total PCBs	1.11 J	0.539 J	13.4 J	0.262 J/0.257 J	4.04 J/5.24 J	0.12 U	0.12 U

SB-04433b	12/4/01 0-2(ft BGS)	12/4/01 4-6(ft BGS)
Total PCBs	4.66 J	0.51 J

SB-04335	3/8/03 0-2(ft BGS)	3/8/03 2-4(ft BGS)
Total PCBs	0.108 J	0.39 U

SB-04534b	12/10/01 0-2(ft BGS)	12/10/01 4-6(ft BGS)
Total PCBs	1.36 J	0.329 J

SB-04334	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)	12/9/02 4-6(ft BGS)	12/9/02 6-8(ft BGS)
Total PCBs	0.56 J	0.89 J	0.43 J	0.13 U

SB-04634	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)
Total PCBs	0.417 J	0.336 J

SB-04333B	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)
Total PCBs	0.31 J	1.05 J

SB-04534c	12/10/01 0-2(ft BGS)	12/10/01 4-6(ft BGS)
Total PCBs	0.263 J	0.13 U

SB-04332B	3/8/03 0-2(ft BGS)	3/8/03 2-4(ft BGS)
Total PCBs	0.079 J	0.0729 J

SB-04433a	12/4/01 0-2(ft BGS)	12/4/01 4-6(ft BGS)
Total PCBs	0.82 J	0.34 J

SB-04533b	12/5/01 0-2(ft BGS)	12/5/01 2-4(ft BGS)
Total PCBs	0.38 J	0.69 J

TMW-04332	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)	12/9/02 4-6(ft BGS)
Total PCBs	1.09 J	0.13 U	0.17 U

SB-04433D	12/4/01 0-2(ft BGS)	12/4/01 4-6(ft BGS)
Total PCBs	9.7 J/11.2 J	0.92 J

TMW-04531	3/7/03 0-2(ft BGS)	3/7/03 2-4(ft BGS)	3/7/03 8-10(ft BGS)
Arsenic	4.5	0.79	3.6
Chromium Total	23.8	17.5	37.6
Manganese	208 J	310 J	795 J
Total PCBs	0.54 U	0.38 U	0.43 U

SB-04433c	12/4/01 0-2(ft BGS)	12/4/01 4-6(ft BGS)
Total PCBs	1.36 J/0.76 J	0.43 J

SB-04533c	12/5/01 0-2(ft BGS)	12/5/01 2-4(ft BGS)
Total PCBs	1.04 J	0.366 J

SB-04432	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)
Total PCBs	0.263 J/0.257 J	0.13 U/0.12 U

SB-04533d	12/5/01 0-2(ft BGS)	12/5/01 2-4(ft BGS)
Total PCBs	0.318 J/0.329 J	1.36 J

TMW-04127	3/6/03 0-2(ft BGS)	3/6/03 2-4(ft BGS)	3/6/03 8-10(ft BGS)
Arsenic	1.4	1.4/1.4	1.6
Chromium Total	69.4	42.8/54.2	5.9
Manganese	1580 J	825 J/901 J	77.2 J
Total PCBs	0.36 U	0.35 U/0.35 U	0.41 U

N

0 20 50ft

LEGEND

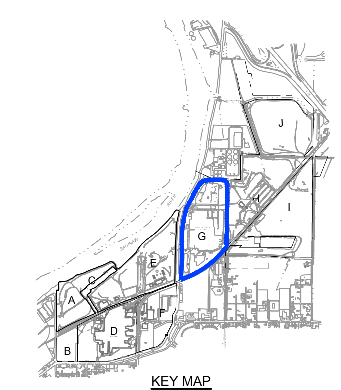
A — — INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
MONITORING WELL LOCATION - RFI
SOIL BORING LOCATION - RFI
SAMPLE LOCATION - NO REPORTED DATA
PCBs GREATER THAN 1ppm
PROPOSED BORING LOCATION
PROPOSED BORING LOCATION (HOLD SAMPLES PENDING RESULTS OF LOCATIONS SAMPLED FIRST)
DRAFT DELINEATION BOUNDARIES

SB-04634	12/9/02 0-2(ft BGS)	12/9/02 2-4(ft BGS)
Total PCBs	0.357 J	0.271 J

SAMPLE LOCATION; SAMPLE DATE; SAMPLE DEPTH; RESULT (mg/kg); PARAMETER

NOTES:

1. TOTAL PCBs WERE SUMMED BY ADDING THE POSITIVE DETECTIONS PLUS HALF THE QUANTITATION LIMITS FOR NON-DETECT RESULTS OF AROCLORS DETECTED ELSEWHERE AT THE SITE. IF QUANTITATION LIMITS ARE NOT AVAILABLE, HALF THE REPORTING LIMITS ARE USED FOR NON-DETECTED VALUES.
2. SCREENING CRITERIA AND SAMPLE RESULTS ARE COMPARED TO TWO SIGNIFICANT DIGITS. RESULTS EQUAL TO SCREENING CRITERIA ARE NOT HIGHLIGHTED AS EXCEEDANCES.
3. DATABOX ANALYTE LIST DEVELOPED BASED ON A MINIMUM OF ONE EXCEEDNACE OF SCREENING CRITERIA PER INVESTIGATIVE UNIT PER MATRIX (i.e. SOIL OR GROUNDWATER). TOTAL PCBs ARE PRESENTED FOR ALL LOCATIONS SAMPLED. IU SPECIFIC ANALYTES NOT ANALYZED FOR AT A GIVEN LOCATION ARE OMITTED FROM THE CORRESPONDING DATABOX.
4. SPEC INDICATES THAT THE TOTAL CHROMIUM CONCENTRATION HAS BEEN SPECIATED, USING THE HEXAVALENT CHROMIUM RESULTS TO CALCULATE THE TRIVALENT CHROMIUM CONCENTRATION.
5. ORIGINAL FIGURE FROM RFI (MARCH 2007) REPORT.
6. ALL DELINEATION LOCATIONS TO BE SAMPLED AT A DEPTH INTERVAL OF 0-2 FEET, EXCEPT SB-0433B, WHICH IS TO BE SAMPLED AT 2-4 AND 4-6 FEET AND THOSE SAMPLES PROPOSED ON THE EXISTING CONCRETE SLAB, FOR WHICH SHALLOW CONCRETE SAMPLES WILL BE COLLECTED AS WELL AS A SOIL SAMPLE IMMEDIATELY BELOW CONCRETE SLAB.



KEY MAP

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

RACER
SAGINAW NODULAR IRON INDUSTRIAL LAND
SAGINAW, MICHIGAN

INVESTIGATIVE UNIT G - SOUTH
RFI PHASE 1C - SOIL
PROPOSED ADDITIONAL DELINEATION

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88
TOPO - SANBORN, 1996

Project Manager: I.R.	Reviewed By: M.T.	Date: FEBRUARY 2015	
Scale: 1" = 50'	Project №: 58502-T09	Report №: NEMA024	Drawing №: figure 13.2a

58502-T09(NEMA024)GN-WA001 FEB 27/2015

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