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ENVIRONMENT

Ms. Alicia Barraza
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B
625 Broadway, 12th Floor
Albany, New York 12233-7016

Subject:
Bayer MaterialScience LLC
125 New South Road
Hicksville, New York
USEPA ID#: NYD002920312
Metals Soil Delineation Work Plan

Date:
May 27, 2011

Contact:
John C. Brussel, P.E.

Phone:
315.671.9441

Email:
John.Brussel@arcadis-us.com

Our ref:
B0032305.0004 #5

Dear Ms. Barraza:

On behalf of Bayer MaterialScience LLC (Bayer), ARCADIS has prepared this letter presenting a work plan for delineating metals in soil at the above-referenced site where data from sampling performed by Impact Environmental (Impact) suggests the presence of arsenic and cadmium at concentrations exceeding the commercial use soil cleanup objectives (SCOs) as set forth in Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) Part 375-6.8(b). This work plan has been prepared to address the New York State Department of Environmental Conservation (NYSDEC) request for additional soil sampling for arsenic and cadmium in the vicinity of certain Impact sampling locations due to the slightly elevated concentrations in Impact's samples, the wide intervals represented by the samples (e.g., 0 to 5 feet or 0 to 20 feet below ground surface [bgs]), and questions about data quality (Impact's analytical data was unvalidated). The NYSDEC requested the sampling in a March 30, 2011 letter to Bayer that provided comments on the "draft" Corrective Measures Study (CMS) Report. The NYSDEC also requested sampling along the fence line in the northeast corner of the site and at select Impact and ARCADIS sampling locations in the southeastern portion of the site. This follow-up request was presented in May 5, 2011 e-mail correspondence to ARCADIS.

The metals soil delineation sampling will consist of collecting soil samples from the northeast corner and select locations in the southeastern portion of the site for laboratory analysis to evaluate the nature and extent of arsenic and cadmium in soils in the area and appropriate remedial measures, where needed. The proposed soil

sampling activities include drilling soil borings at 26 locations and collecting soil samples from these borings for laboratory analysis for arsenic and cadmium. This includes the following:

- 21 sampling locations in the northeast corner of the site along the fence line and in the general proximity of Impact sampling locations.
- 4 sampling locations in the general proximity of Impact sampling locations R003, DW066, F034, and F042.
- 1 sampling location in the general proximity of ARCADIS sampling location AOC1-2.

Relevant background information is presented below, followed by a discussion of the proposed soil sampling activities.

Background

A detailed description of the Site and historical information is presented in the NYSDEC-approved *RCRA Facility Investigation Report* (BBL, June 2004) [the "RFI Report"]. A site location map is included as Figure 1.

Metals concentrations in soil at the Site have been evaluated by: (1) sampling and analysis performed in connection with the Phase I and Phase II Resource Conservation and Recovery Act (RCRA) Facility Investigations (RFI) completed in 2004 by ARCADIS; and (2) the Phase II Environmental Site Assessment (ESA) completed in 2006 by Impact Environmental. Sampling locations from the Phase I and Phase II RFIs and sample locations with arsenic or cadmium exceedances from the Phase II ESA are shown on Figure 2.

Summary of Phase I and Phase II RFI Findings:

The Phase I and Phase II RFI sampling activities were conducted by ARCADIS on behalf of Bayer to evaluate conditions within areas of concern (AOCs) at the Site that were identified in the RCRA Facility Assessment (RFA) and to provide data to evaluate potential corrective measures, where appropriate, in a CMS. AOC locations were identified by Bayer and the NYSDEC based on review of former facility operations and are mostly located in the center of the site around the former footprint of Plants 1, 2, and 3.

Soil samples collected from 55 locations during the Phase I and Phase II RFI were analyzed for Target Analyte List (TAL) inorganic constituents using United States Environmental Protection Agency (USEPA) SW-846 Method 6010. Soil at sampling location AOC 1-2 (0-1') was found to contain arsenic at a concentration of 17.7 parts per million (ppm). This was the only RFI sampling location were arsenic was identified in soil at a concentration exceeding the commercial use SCO of 16 ppm. Sampling location AOC 1-2 is located near the southwest corner of Plant 1 and has been proposed for removal as part of the recommended corrective measures for the site. Cadmium was detected at a concentration above laboratory detection limits in soil at only one of the 55 sampling locations [AOC37-3(0-1')]. The 1.0 ppm cadmium concentration at sampling location AOC37-3 (0-1') did not exceed the 9.3 ppm commercial use SCO. The analytical results for arsenic and cadmium at each of RFI sampling locations are summarized in Table 1.

Summary of the Phase II ESA Findings:

The Phase II ESA was performed by Impact on behalf of New South Road Realty, LLC (NSRR) (the anticipated future property owner) as part of due diligence sampling to further evaluate the presence and extent of potential constituents throughout the site prior to redevelopment. The Phase II ESA sample locations were primarily selected to evaluate soil conditions in areas that would be affected by construction of a proposed new building.

As part of the Phase II ESA, composite soil samples were collected from approximately 205 locations at the site and analyzed for a variety of constituents including metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs). The laboratory analytical results for metals indicated that concentrations of arsenic and cadmium at certain locations exceeded commercial use SCOs. Arsenic was identified at concentrations exceeding the 16 ppm commercial use SCO at sampling locations DW066 and R003 with concentrations of 19 ppm and 17.2 ppm, respectively. Cadmium was identified at concentrations exceeding the 9.3 ppm commercial use SCO at 13 sampling locations with concentrations ranging from 9.7 ppm to 11.9 ppm. These arsenic and cadmium samples were collected as composite samples over a soil depth interval of 0 to 5 feet bgs, except for the sample at sampling location DW066 which was collected as a composite sample over a soil depth interval of 0 to 20 feet bgs. Laboratory analytical results for locations where arsenic and cadmium exceed the commercial use SCOs are summarized in Table 2.

The majority of the Phase II ESA sampling locations with metals exceeding commercial use SCOs are located near the northeastern corner of the site, approximately 50 feet from either the northern or eastern fence line (except for sampling locations F034 and F042 which are located near the southeastern corner of the site). Soil in this southeastern portion of the site is proposed for removal under the recommended corrective measure.

Review of former facility operations indicates that industrial processes were not performed in the northeast corner of the site. Historical aerial photographs (refer to the photograph in Attachment A) show the following conditions in the northeast portion of the site in the area where arsenic and cadmium were identified in the Phase II ESA soil samples at concentrations exceeding the commercial use SCOs:

- The area inside the fence line parallel to Commerce Place consisted of mowed lawn.

- The area inside the fence line along the eastern property boundary consisted primarily of a gravel driveway/parking area, a sump (Sump 5 that was later backfilled), and a cooling water tower.

This information suggests that the metals in this portion of the site, if their presence is confirmed by the sampling activities described below, may be related to historic fill.

Laboratory analytical results for the sampling locations where arsenic and cadmium exceed the commercial use SCOs are shown on Figures 3a and 3b (for the northern and southern portions of the site, respectively).

Description of Proposed Sampling Activities

Soil samples will be collected from 14 new sampling locations approximately 100 feet apart in the northeast corner of the site in the vicinity of Impact sampling locations with arsenic and cadmium exceedances. Additional soil samples will be collected from 9 locations along the fence line in the northeast corner of the site and at 4 select Impact and ARCADIS sampling locations in the southeastern portion of the site. Each sampling location will be designated by the prefix ”M” followed by a unique number for each location.

Soil samples will be collected from the following proposed sampling locations and analyzed for arsenic and cadmium:

- M-S1 through M-S14, which are approximately 100 feet apart in the northeast corner of the site in the general proximity to Impact sampling locations.

- M-S15 through M-S23, which are located along the fence line in the northeast corner of the site.

- M-S24 and M-S25, which are in the general proximity of Impact's sampling locations F042 and F034 respectively.

- M-S26 which is in general proximity to ARCADIS sampling location AOC1-2.

Note that proposed sampling locations MS-4 and MS-6 are located in general proximity to Impact's sampling locations DW066 and R003 respectively.

Before sampling begins, the proposed sampling locations will be field-identified using coordinates obtained from the sampling locations map. Each proposed sampling location will be marked using either a flagged metal pin or wooden stake. A direct-push probe (i.e., Geoprobe® rig) will be used to collect soil samples continuously to a depth of approximately 8 feet deep. Soils removed from each boring will be characterized for color, texture, moisture, density, cohesion, plasticity and indication (if any) of staining or obvious odor. Digital photos will be taken to document soil conditions. The soil borings will be backfilled with bentonite grout.

Soil samples collected from depth intervals of 0 to 0.5 feet, 0.5 to 2 feet, and 2 to 4 feet at proposed new sampling locations M-S1 through M-S25 will be submitted for laboratory analysis for arsenic and cadmium. At proposed sampling location M-S26, a sample will be collected from the same 3 depth intervals and from the 4.0 to 6.0-foot depth interval (which corresponds to the anticipated final excavation depth proposed for the final remedy for the site) for laboratory analysis for arsenic and cadmium. Soil samples from the remaining depth intervals will be submitted to the laboratory and archived for possible future analysis, if needed. A summary of the proposed sampling locations and sampling intervals is presented on Table 3.

Laboratory Analytical and Field Equipment Decontamination

Quality assurance/quality control (QA/QC) samples (including blind duplicate, matrix spike, and matrix spike duplicate samples) will be collected in support of the sampling activities at a frequency of one per 20 field soil samples. Laboratory analysis of soil samples will be performed by TestAmerica Laboratories, Inc.

(TestAmerica) of Shelton, Connecticut. Final laboratory results for arsenic and cadmium analyses will be reported approximately three weeks following sample collection using NYSDEC 2000 Analytical Services Protocol (ASP) Category B deliverables.

Prior to moving to the next sampling location, all down-hole equipment will be decontaminated with Alconox and water and then rinsed with water. Following completion of the sampling activities, the boreholes will be backfilled with bentonite grout. Soil sample liners, remaining recovered soil, and decontamination water will be placed in 55-gallon drums for offsite transportation and disposal.

Reporting

A summary letter report will be prepared following receipt of the laboratory analytical results. The letter report will include:

- A summary of work activities performed and analytical results obtained for the soil sampling activities.
- An evaluation of the soil analytical results, including comparison to the commercial use SCOs.
- Data tables presenting validated laboratory analytical results.
- Figures showing the soil sampling locations and corresponding laboratory analytical results.
- A copy of the data validation report.
- A CD containing the full laboratory analytical data reports.
- Recommendations for follow-up arsenic and cadmium soil sampling or no further action related to arsenic and cadmium impacts, as appropriate.
- Boring logs for each sampling location.

The summary letter report will be provided to the NYSDEC.

Schedule

ARCADIS is prepared to implement the proposed additional sampling activities shortly following receipt of NYSDEC approval of this work plan. The proposed field activities will take up to five days to complete. Preliminary laboratory analytical results for the soil sampling activities will be available approximately two to three weeks following sampling. The results of the sampling activities and proposed follow-up actions will be presented in the letter report to the NYSDEC within approximately one month following receipt of the final analytical results.

Please do not hesitate to contact Ramon Simon of Bayer at 281.383.6149 or the undersigned at 315.671.9441 if you have any questions or require additional information.

Sincerely,

ARCADIS

John C. Brussel

John C. Brussel, P.E.
Principal Engineer

Copies:
Mr. Thomas Taccone, United States Environmental Protection Agency
Ms. Sally Dewes, PE, New York State Department of Environmental Conservation
Ms. Katy Murphy, New York State Department of Environmental Conservation
Ms. Renata Ockerby, New York State Department of Health
Mr. Ramon Simon, Bayer MaterialScience NAFTA
Mr. Wayne Baldwin, Bayer MaterialScience LLC
Mr. Andrew Enigk, ARCADIS

ARCADIS

Tables

TABLE 1
SUMMARY OF THE RFI PHASE I AND PHASE II SOIL ANALYTICAL RESULTS FOR ARSENIC AND CADMIUM (ppm)

SOIL DELINEATION WORKPLAN
BAYER MATERIAL SCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID	Sample Depth (Feet)	Date Collected	Arsenic	Cadmium
Restricted Use SCOs Commercial (Exceedances Shaded)			**16**	**9.3**
AOC1-2	0 - 1	02/12/04	**17.6**	<4.20
AOC3-3	0 - 1	02/12/04	**13.9**	<4.40
AOC3-4	0 - 1	02/12/04	**7.10 B**	<4.10
AOC4-2	0 - 1	02/12/04	**2.80 B [2.80 B]**	<3.90 [<3.70]
AOC7-1	0 - 1	02/12/04	**3.50 B**	<3.70
AOC7-2	0 - 1	02/12/04	**3.50 B**	<3.90
AOC12-1	1 - 2	02/16/04	**9.20 B**	<3.80
AOC13-1	0 - 1	02/16/04	**7.50 B**	<4.10
AOC15-3	0 - 1	02/16/04	<10.1	<3.80
AOC16-2	0 - 1	02/16/04	**2.00 B**	<3.60
AOC20-2	0 - 1	02/16/04	**10.2 B**	<3.80
AOC23-3	0 - 1	02/17/04	**2.00 BJ [1.00 BJ]**	<3.00 [<3.00]
AOC23-4	0 - 1	02/17/04	**8.00 BJ**	<3.00
AOC35A-1	12 - 14	02/23/04	<9.00	<3.40
AOC35A-2	12 - 14	02/23/04	<9.10	<3.40
AOC35B-1	12 - 14	02/23/04	<9.40 [<9.90]	<3.50 [<3.70]
AOC35B-2	12 - 14	02/23/04	<9.50	<3.60
AOC35C-1	12 - 14	02/23/04	<9.50	<3.60
AOC35C-2	12 - 14	02/23/04	<9.70	<3.70
AOC35C-3	12 - 14	02/23/04	<8.90	<3.30
AOC35D-1	6 - 8	02/23/04	<9.30	<3.50
AOC35D-2	12 - 14	02/23/04	<10.3	<3.80
AOC35E-1	6 - 8	02/24/04	<9.50	<3.60
AOC35E-2	12 - 14	02/24/04	<9.90	<3.70
AOC35F-1	6 - 8	02/24/04	<9.80	<3.70
AOC35F-2	12 - 14	02/24/04	<9.50	<3.60
AOC35F-3S	6 - 8	10/20/04	<9.50	<3.60
AOC35G-1	6 - 8	02/24/04	<10.0	<3.70
AOC35G-2	12 - 14	02/24/04	<9.00	<3.40
AOC35H-1S	12 - 14	10/19/04	<5.40	<1.30
AOC35I-1S	12 - 14	10/19/04	<4.50	<1.10
AOC35I-2S	12 - 14	10/19/04	<5.60	<1.40
AOC35J-1S	12 - 14	10/19/04	**1.80 B**	<1.00
AOC35K-1S	12 - 14	10/19/04	<4.30	<1.10
AOC35L-1S	12 - 14	10/20/04	<9.90	<3.70
AOC35M-1S	12 - 14	10/19/04	<4.70	<1.10
AOC35N-1S	12 - 14	10/20/04	<9.20 [<4.70]	<3.40 [<1.20]
AOC35-0	12 - 14	05/04/06	<4.50 N	<1.10
AOC37-3	0 - 1	02/18/04	**10.0 J**	**1.00 B**
AOC41-4	0 - 1	02/19/04	**7.10 BJ**	<4.00
AOC41-5	0 - 1	02/19/04	**8.90 BJ**	<4.50
AOC41-6	0 - 1	02/19/04	**14.9 J**	<4.00
AOC41-7	0 - 1	02/19/04	**7.70 BJ**	<3.90
AOC41-8	0 - 1	02/19/04	**6.40 BJ**	<3.60
AOC45-4	0 - 1	02/19/04	<9.40	<3.50
AOC46-4	0 - 1	02/19/04	**2.70 BJ**	<3.70
AOC48-1	0 - 1	02/19/04	**9.50 BJ**	<3.80
AOC48-2	0 - 1	02/19/04	**4.70 BJ**	<3.90
AOC49-4	0 - 1	02/19/04	<10.4	<3.90
AOC52-1	1.5 - 2	08/22/06	**4.70 BN**	<1.30
	2 - 3	08/22/06	<4.00 N	<0.970
AOC52-2	1 - 1.5	08/22/06	**6.00 N**	<1.10
AOC52-2	1.5 - 2.5	08/22/06	<4.10 N	<1.00
AOC52-3	1.5 - 2.5	08/22/06	**5.70 BN**	<1.50
	2.5 - 3.5	08/22/06	**2.70 BN [3.60 BN]**	<1.00 [<1.30]

TABLE 1
SUMMARY OF THE RFI PHASE I AND PHASE II SOIL ANALYTICAL RESULTS FOR ARSENIC AND CADMIUM (ppm)

SOIL DELINEATION WORKPLAN
BAYER MATERIAL SCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Notes:

1. Samples were collected by ARCADIS as part of the RCRA Corrective Action Program between February 2004 and February 2009.
2. Samples were analyzed by TestAmerica Laboratories, Inc. (formerly Severn Trent Laboratories, Inc) located in Shelton, Connecticut for inorganics using United States Environmental Protection Agency (USEPA) SW-846 Method 6010.
3. All concentrations reported in dry weight parts per million (ppm), which is equivalent to milligrams per kilogram (mg/kg).
4. Field duplicate sample results are presented in brackets.
5. Data qualifiers are defined as follows:
   < - Constituent not detected at a concentration above the reported detection limit.
   B - Constituent was found in the sample as well as its associated blank.
   J - Indicates that the associated numerical value is an estimated concentration.
   N - The spike recovery exceeded the upper or lower control limits.
6. 6 NYCRR Part 375 Commercial Use Soil Cleanup Objectives (SCOs) are from Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) Part 375-6.8(b).
7. Shading indicates that the result exceeds the 6 NYCRR Part 375 Commercial Use SCO.
8. Bolding indicates that the constituent was detected.

TABLE 2
SUMMARY OF THE PHASE II ESA SOIL ANALYTICAL RESULTS FOR EXCEEDANCES IN ARSENIC AND CADMIUM (ppm)

SOIL DELINEATION WORKPLAN
BAYER MATERIAL SCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Location ID	Sample Depth (Feet)	Date Collected	Arsenic	Cadmium
Restricted Use SCOs Commercial (Exceedances Shaded)			16	9.3
DW066	0 - 20	02/23/04	19	3.05
F034	0 - 5	02/12/04	2.99	9.88
F042	0 - 5	02/12/04	1.8	9.78
F045	0 - 5	02/12/04	15	9.75
F047	0 - 5	02/12/04	9.3	11
F053	0 - 5	02/12/04	1.63	10.9
F055	0 - 5	02/12/04	6.85	11.9
F057	0 - 5	02/16/04	2.06	11.5
F059	0 - 5	02/16/04	2.65	11.8
F061	0 - 5	02/16/04	1.76	9.73
F063	0 - 5	02/16/04	2.71	11
F067	0 - 5	02/16/04	1.02	9.52
F069	0 - 5	02/17/04	1.82	11
R003	0 - 5	02/17/04	17.2	7.53
T008	0 - 5	02/23/04	2.09	10.3

Notes:
1. Samples were collected by Impact Environmental as part of the Phase II Environmental Site Assessment performed in February 2006.
2. Samples were analyzed for inorganics using United States Environmental Protection Agency (USEPA) SW-846 Method 6010.
3. All concentrations reported in dry weight parts per million (ppm), which is equivalent to milligrams per kilogram (mg/kg).
4. All samples are a composite sample collected between the indicated depths.
5. Only locations with either an arsenic or cadmium exceedance are reported.
6. 6 NYCRR Part 375 Commercial Use Soil Cleanup Objectives (SCOs) are from Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) Part 375-6.8(b).
7. Shading indicates that the result exceeds the 6 NYCRR Part 375 Commercial Use SCO.

TABLE 3
PROPOSED SOIL SAMPLING INTERVALS AND ANALYSIS

SOIL DELINEATION WORKPLAN
BAYER MATERIAL SCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

Sampling Location	Sampling Interval (feet bgs)				
	(0-0.5)	(0.5-2.0)	(2.0-4.0)	(4.0-6.0)	(6.0-8.0)
	As and Cd Analysis	As and Cd Analysis	As and Cd Analysis	As and Cd Analysis	As and Cd Analysis
M-S1	✓	✓	✓	Hold	Hold
M-S2	✓	✓	✓	Hold	Hold
M-S3	✓	✓	✓	Hold	Hold
M-S4	✓	✓	✓	Hold	Hold
M-S5	✓	✓	✓	Hold	Hold
M-S6	✓	✓	✓	Hold	Hold
M-S7	✓	✓	✓	Hold	Hold
M-S8	✓	✓	✓	Hold	Hold
M-S9	✓	✓	✓	Hold	Hold
M-S10	✓	✓	✓	Hold	Hold
M-S11	✓	✓	✓	Hold	Hold
M-S12	✓	✓	✓	Hold	Hold
M-S13	✓	✓	✓	Hold	Hold
M-S14	✓	✓	✓	Hold	Hold
M-S15	✓	✓	✓	Hold	Hold
M-S16	✓	✓	✓	Hold	Hold
M-S17	✓	✓	✓	Hold	Hold
M-S18	✓	✓	✓	Hold	Hold
M-S19	✓	✓	✓	Hold	Hold
M-S20	✓	✓	✓	Hold	Hold
M-S21	✓	✓	✓	Hold	Hold
M-S22	✓	✓	✓	Hold	Hold
M-S23	✓	✓	✓	Hold	Hold
M-S24	✓	✓	✓	✓	Hold
M-S25	✓	✓	✓	Hold	Hold
M-S26	✓	✓	✓	Hold	Hold

Notes:

1. ✓ = Sample will be submitted to TestAmerica Laboratories, Inc. of Shelton, Connecticut for the indicated constituent using United States Environmental Protection Agency (USEPA) SW-846 Methods 6010.
2. Hold = Sample will be submitted to TestAmerica Laboratories, Inc. of Shelton Connecticut for extraction. The sample extract will then be archived for potential future analysis, if needed, within the allowable holding times.
3. As = Arsenic.
4. Cd = Cadmium.
5. bgs = below ground surface

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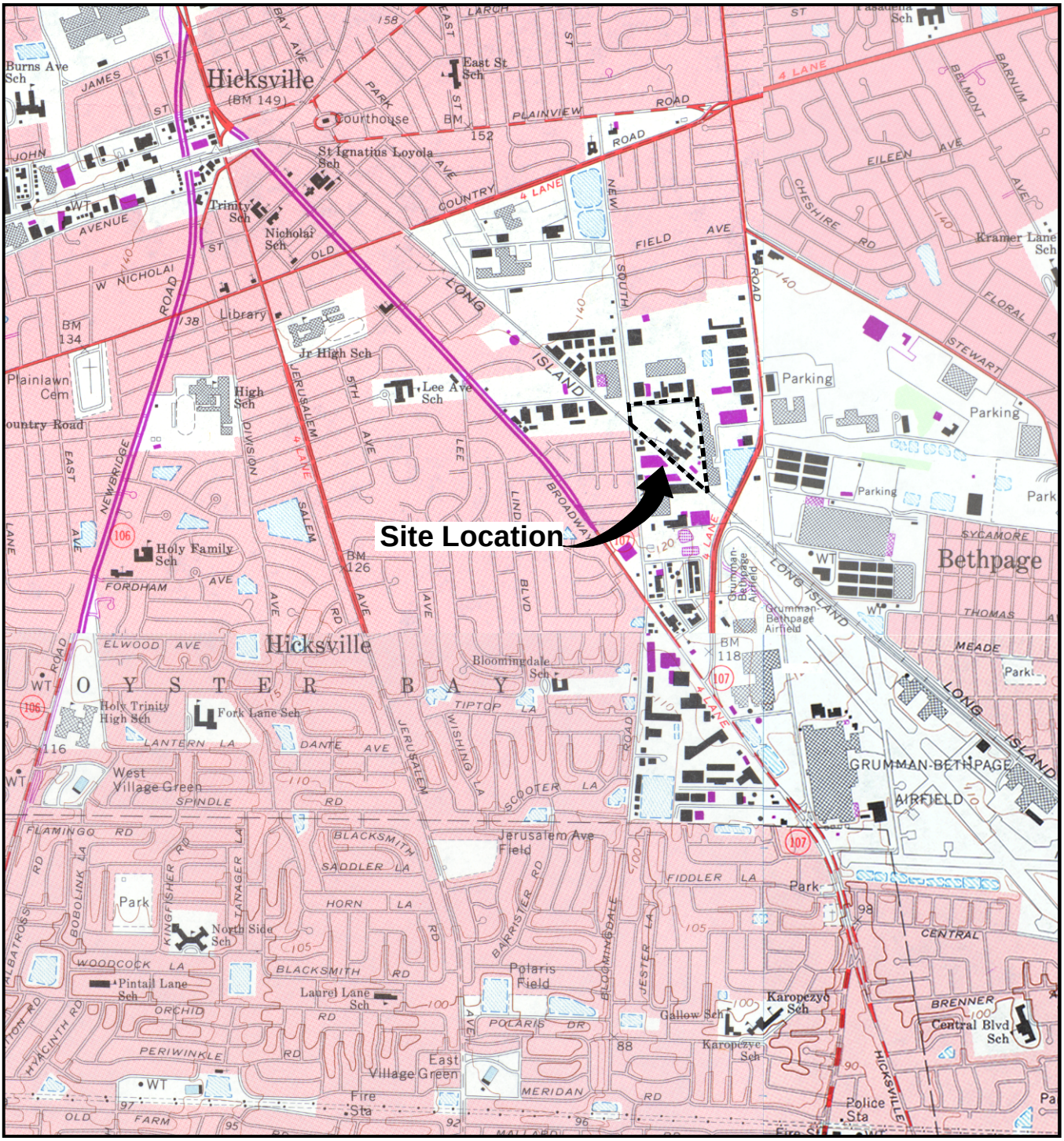
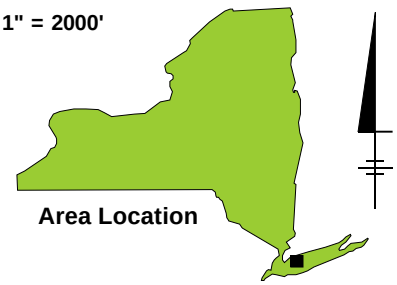
Figures



REFERENCE: BASE MAP USGS 7.5 MIN. QUAD., HICKSVILLE, N.Y. 1967, PHOTOREVISED 1979.

2000' 0 2000'

Approximate Scale: 1" = 2000'



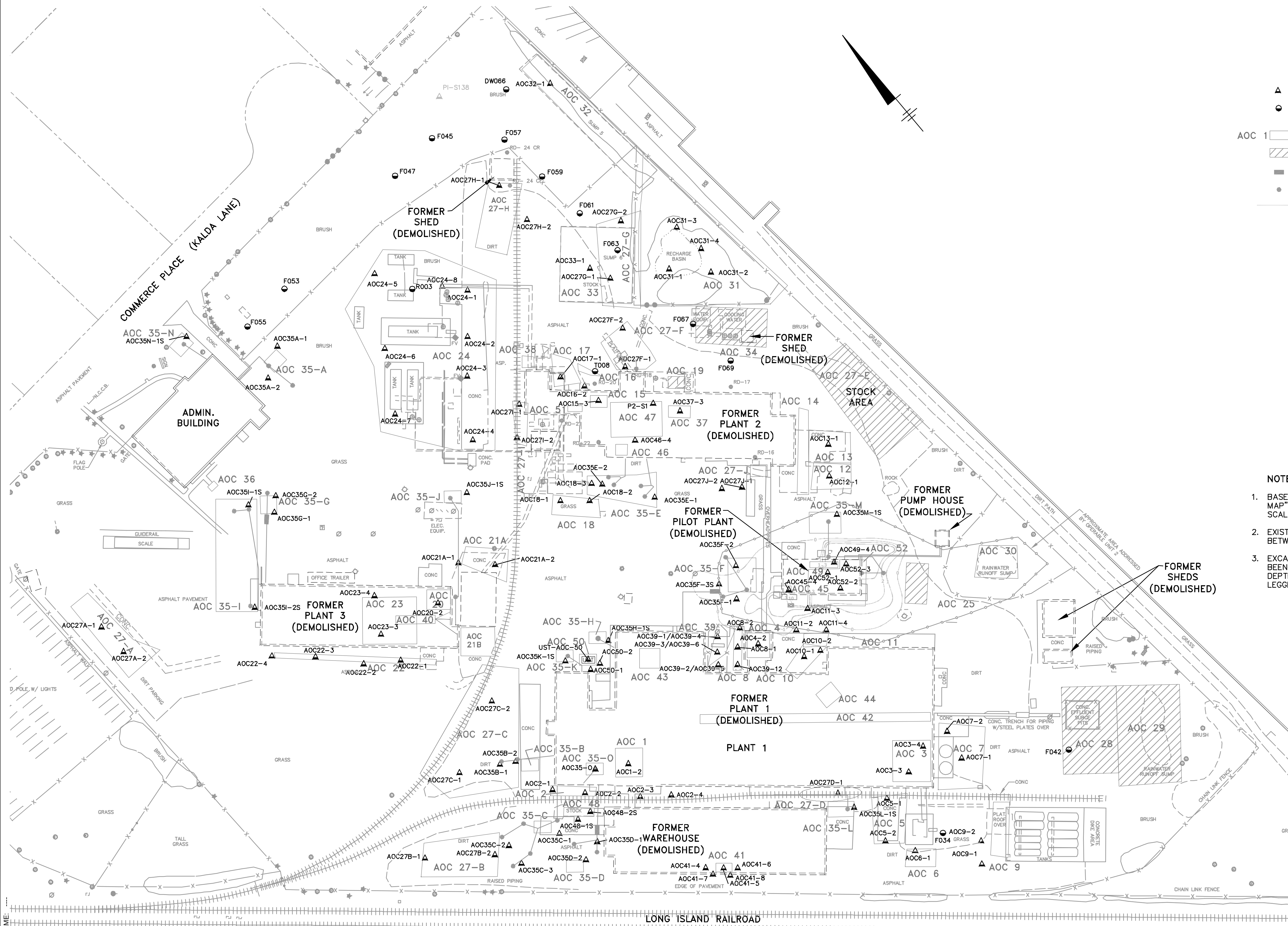
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

SITE LOCATION MAP

ARCADIS

FIGURE
1

01/27/09 SYRACUSE-NY-ENV141-DJH
B0032305/0001/00004/CDR/32305N01.cdr



LEGEND:

- △ RFI SOIL SAMPLING LOCATION
- ◓ COMPOSITE SOIL SAMPLING LOCATION (BY IMPACT ENVIRONMENTAL)
- AOC 1 ▭ AREA OF CONCERN
- ▨ HISTORIC AND CLOSED AOC
- ▬ SEPTIC TANK
- • LEACHATE PIT
- —— PROJECTED EXCAVATION CONTOUR FOR 1992 PCB SOIL REMOVAL; NUMBER CORRESPONDS TO DEPTH IN FEET BELOW GRADE (DASHED WHERE INFERRED)

NOTES:

1. BASE MAP ADAPTED FROM A DRAWING ENTITLED "AREA OF CONCERN MAP", FIGURE 1-2, BY ENSR CORPORATION. PISCATAWAY, NJ, AT A SCALE OF 1"=60', DATED 2/14/03.
2. EXISTING SAMPLING LOCATIONS WERE SURVEYED BY ARCADIS, INC. BETWEEN FEBRUARY 2004 AND JULY 2009.
3. EXCAVATION CONTOUR LINES FOR THE 1992 PCB SOIL REMOVAL HAVE BEEN ADAPTED FROM A DRAWING ENTITLED "PROJECTED EXCAVATION DEPTHS AND LOCATIONS OF ABOVE AND BELOW GROUND UTILITIES", BY LEGGETTE, BRASHEARS & GRAHM, INC., DATED 3/20/91.

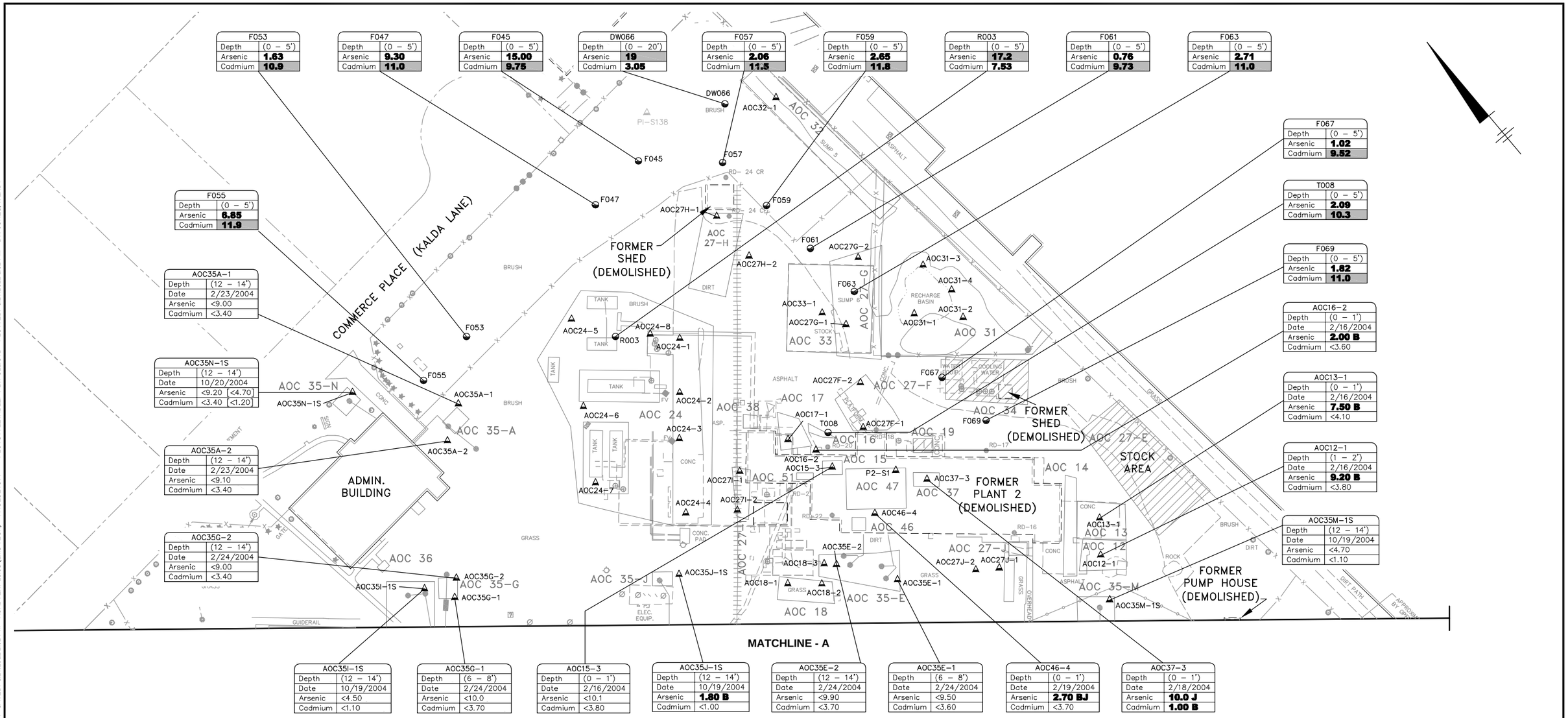
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

SAMPLING LOCATIONS

ARCADIS

FIGURE
2

CITY: SYR DIV/GROUP: 85/ENV DB: R. BASSETT, W. JONES LD:(Opt) PIC:(Opt) PM: JB TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0032305\0004\00002\DWG\32305B02.DWG LAYOUT: 2 SAVED: 5/27/2011 1:03 PM ACADVER: 18.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/27/2011 1:03 PM BY: JONES, WENDY
XREFS: 32305X01 IMAGES: PROJECTNAME: ----



LEGEND:

- RFI SOIL SAMPLING LOCATION
- COMPOSITE SOIL SAMPLING LOCATION (BY IMPACT ENVIRONMENTAL)
- AOC 1 — AREA OF CONCERN
- HISTORIC AND CLOSED AOC
- SEPTIC TANK
- LEACHATE PIT
- PROJECTED EXCAVATION CONTOUR FOR 1992 PCB SOIL REMOVAL; NUMBER CORRESPONDS TO DEPTH IN FEET BELOW GRADE (DASHED WHERE INFERRED)

Commercial Use SCOs	
Constituent	SCO (ppm)
Arsenic	16
Cadmium	9.3

NOTES:

1. BASE MAP ADAPTED FROM A DRAWING ENTITLED "AREA OF CONCERN MAP", FIGURE 1–2, BY ENSR CORPORATION. PISCATAWAY, NJ, AT A SCALE OF 1"=60', DATED 2/14/03.
2. EXISTING SAMPLING LOCATIONS WERE SURVEYED BY ARCADIS, INC. BETWEEN FEBRUARY 2004 AND JULY 2009. EXCEPT COMPOSITE SOIL SAMPLING LOCATIONS WHICH WERE SURVEYED BY IMPACT ENVIRONMENTAL.
3. EXCAVATION CONTOUR LINES FOR THE 1992 PCB SOIL REMOVAL HAVE BEEN ADAPTED FROM A DRAWING ENTITLED "PROJECTED EXCAVATION DEPTHS AND LOCATIONS OF ABOVE AND BELOW GROUND UTILITIES", BY LEGGETTE, BRASHEARS & GRAHM, INC., DATED 3/20/91.
4. 6 NYCRR PART 375 COMMERCIAL USE SOIL CLEANUP OBJECTIVES (SCOs) ARE FROM TITLE 6 OF THE OFFICIAL COMPILATION OF CODES, RULES, AND REGULATIONS OF THE STATE OF NEW YORK (6 NYCRR) PART 375–6.8(b).
5. SHADING INDICATES THAT THE RESULT EXCEEDS THE 6 NYCRR PART 375 COMMERCIAL USE SCO.
6. BOLDING INDICATES THAT THE CONSTITUENT WAS DETECTED.
7. ALL CONCENTRATIONS REPORTED IN DRY WEIGHT PARTS PER MILLION (ppm), WHICH IS EQUIVALENT TO MILLIGRAMS PER KILOGRAM (mg/kg).
8. FIELD DUPLICATE SAMPLE RESULTS ARE PRESENTED IN BRACKETS.
9. DATA QUALIFIERS ARE DEFINED AS FOLLOWS:
   - < – CONSTITUENT NOT DETECTED AT A CONCENTRATION ABOVE THE REPORTED DETECTION LIMIT.
   - B – CONSTITUENT WAS FOUND IN THE SAMPLE AS WELL AS ITS ASSOCIATED BLANK.
   - J – INDICATES THAT THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION.
10. FIGURE SHOWS ARSENIC AND CADMIUM ANALYTICAL RESULTS FOR ALL LOCATIONS SAMPLED BY ARCADIS FOR ARSENIC AND CADMIUM. FIGURE SHOWS ARSENIC AND CADMIUM ANALYTICAL RESULTS FOR LOCATIONS WHERE EITHER ARSENIC OR CADMIUM EXCEED SCOs FOR LOCATIONS SAMPLED BY IMPACT ENVIRONMENTAL.

0 40' 80'
GRAPHIC SCALE

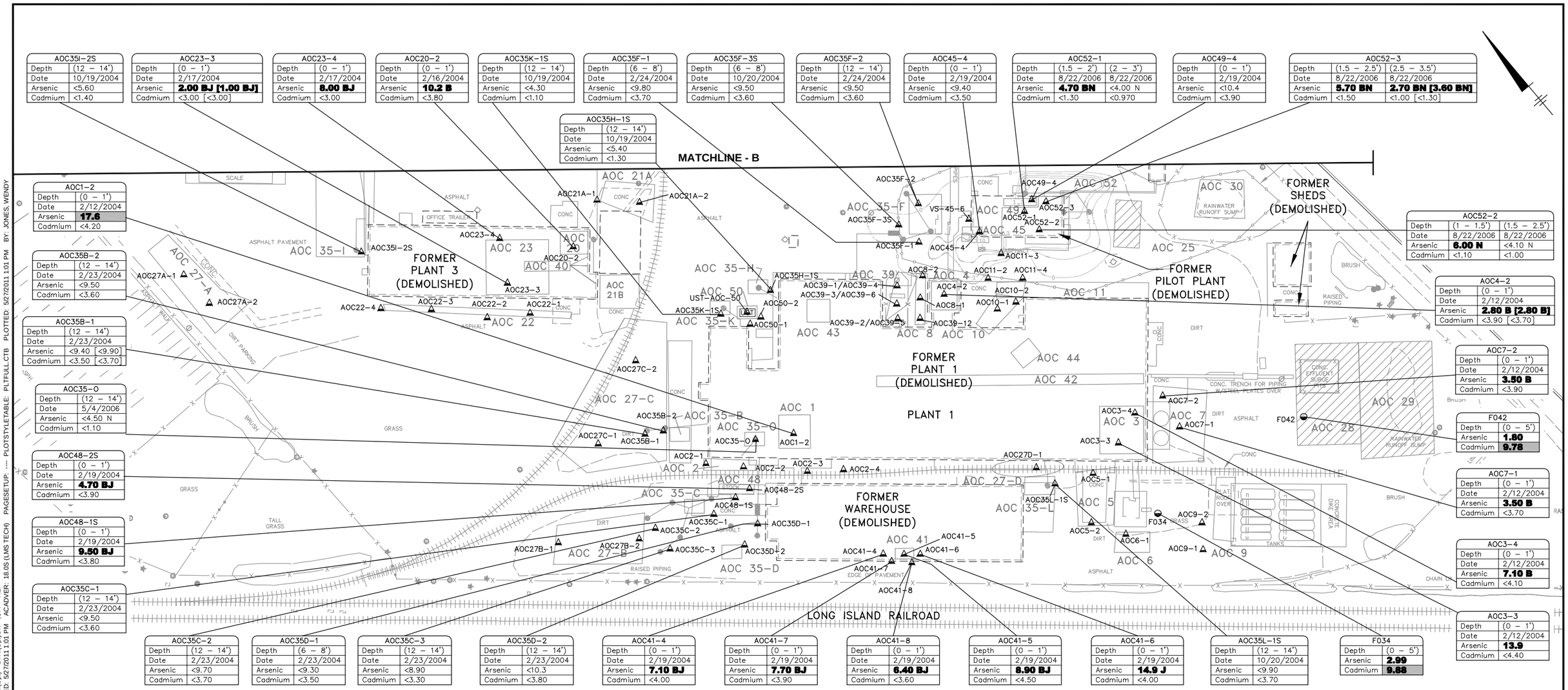
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

ARSENIC AND CADMIUM CONCENTRATIONS

ARCADIS

FIGURE 3a

CITY: SYR DIV/GROUP: 85/ENV DB: R. BASSETT, W. JONES LD:(Opt) PIC:(Opt) PM: JB TM:(Opt) LYR:(Opt)ON=*;OFF=*REF* PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/27/2011 1:02 PM BY: JONES, WENDY
G:\ENVCAD\SYRACUSE\ACT\B0032305\0004\0002\DWG\32305C01.DWG LAYOUT: 3A SAVED: 5/27/2011 1:02 PM ACADVER: 18.0S (LMS TECH)
XREFS: 32305X01 IMAGES: PROJECTNAME: ----



LEGEND:

- RFI SOIL SAMPLING LOCATION
- COMPOSITE SOIL SAMPLING LOCATION (BY IMPACT ENVIRONMENTAL)
- AOC 1 — AREA OF CONCERN
- HISTORIC AND CLOSED AOC
- SEPTIC TANK
- LEACHATE PIT
- PROJECTED EXCAVATION CONTOUR FOR 1992 PCB SOIL REMOVAL; NUMBER CORRESPONDS TO DEPTH IN FEET BELOW GRADE (DASHED WHERE INFERRED)

Commercial Use SCOs	
Constituent	SCO (ppm)
Arsenic	16
Cadmium	9.3

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8. FIELD DUPLICATE SAMPLE RESULTS ARE PRESENTED IN BRACKETS.
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   - B – CONSTITUENT WAS FOUND IN THE SAMPLE AS WELL AS ITS ASSOCIATED BLANK.
   - J – INDICATES THAT THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION.
   - N – THE SPIKE RECOVERY EXCEEDED THE UPPER OR LOWER CONTROL LIMITS.
10. FIGURE SHOWS ARSENIC AND CADMIUM ANALYTICAL RESULTS FOR ALL LOCATIONS SAMPLED BY ARCADIS FOR ARSENIC AND CADMIUM. FIGURE SHOWS ARSENIC AND CADMIUM ANALYTICAL RESULTS FOR LOCATIONS WHERE EITHER ARSENIC OR CADMIUM EXCEED SCOs FOR LOCATIONS SAMPLED BY IMPACT ENVIRONMENTAL.

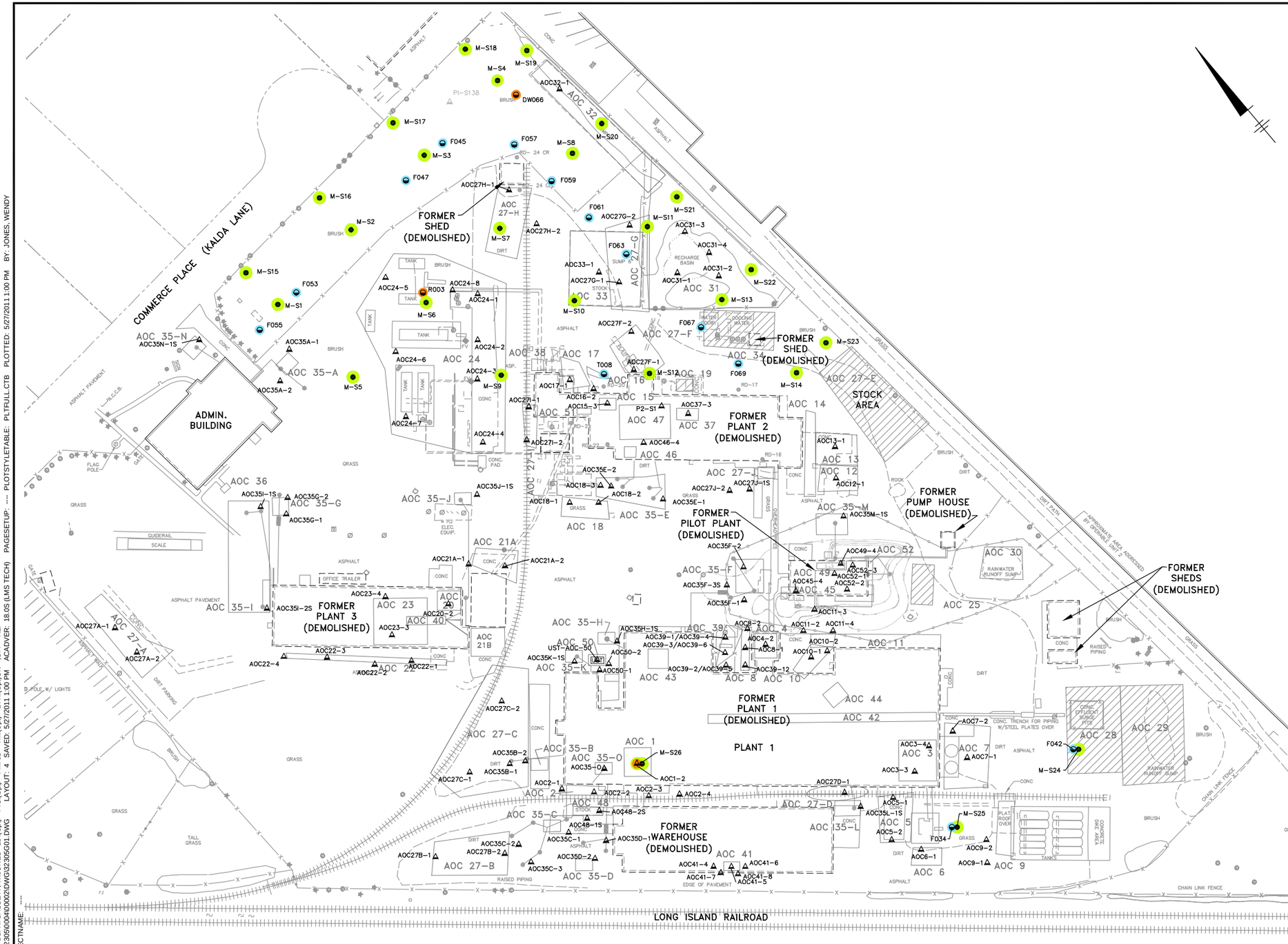
0 40' 80'
GRAPHIC SCALE

BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

ARSENIC AND CADMIUM CONCENTRATIONS

ARCADIS

FIGURE
3b



LEGEND:

- PROPOSED ARSENIC AND CADMIUM SAMPLING LOCATION
- RFI SOIL SAMPLING LOCATION
- COMPOSITE SOIL SAMPLING LOCATION (BY IMPACT ENVIRONMENTAL)
- AOC 1 — AREA OF CONCERN
- HISTORIC AND CLOSED AOC
- SEPTIC TANK
- LEACHATE PIT
- PROJECTED EXCAVATION CONTOUR FOR 1992 PCB SOIL REMOVAL; NUMBER CORRESPONDS TO DEPTH IN FEET BELOW GRADE (DASHED WHERE INFERRED)
- SOIL SAMPLING LOCATION WHERE ARSENIC CONCENTRATION EXCEEDS COMMERCIAL USE SCOs
- SOIL SAMPLING LOCATION WHERE CADMIUM CONCENTRATION EXCEEDS COMMERCIAL USE SCOs

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BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
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PROPOSED ARSENIC AND CADMIUM SAMPLING LOCATIONS

ARCADIS

FIGURE 4

CITY: SYR DIV/GROUP: 85/ENV DB: R. BASSETT, W.JONES LD:(Opt) PIC:(Opt) PM: JB TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENV\CAD\SYRACUSE\ACTIVITY\B0032305\00400002\DWG\32305G01.DWG LAYOUT: 4 SAVED: 5/27/2011 1:00 PM ACADVER: 18.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/27/2011 1:00 PM BY: JONES, WENDY
PROJECTNAME: ----
IMAGES:
XREFS: 32305X01