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Transmitted Via E-Mail & U.S. Mail

April 26, 2005

Ms. Alicia Barraza
New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Solid Waste and Corrective Action
625 Broadway
Albany, New York 12233-7258

Re: Bayer MaterialScience LLC
125 New South Road – Hicksville, New York
ICM Work Plan Modification
USEPA ID#: NYD002920312
BBL Project #: 2302.32303 #5

Dear Ms. Barraza:

On behalf of Bayer MaterialScience LLC (Bayer), this letter modifies the *Interim Corrective Measure Work Plan* (the ICM Work Plan) prepared by Blasland, Bouck & Lee, Inc. (BBL, June 2004) for the Bayer site located in Hicksville, New York. The modification is being submitted in response to the New York State Department of Environmental Conservation's (NYSDEC's) comments included with your e-mail correspondence dated April 25, 2005. For ease of presentation, each NYSDEC comment is presented below, followed by Bayer's response.

Comments on Subsection 2.2.2 – Underground Storage Tank Removal

Comment 1

If known, clarify if the tank was placed on any type of bedding (such as gravel), or placed directly on the soil.

Response 1

Available facility design/construction drawings do not indicate the type of bedding material (gravel, soil, etc.) beneath the underground storage tank (UST).

♦ ♦ ♦

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Comment 2

The work plan states that soils will be staged for potential reuse as backfill material. Explain the process that will be implemented to determine if soils can be reused.

Response 2

The soils removed to expose the top of the UST and associated piping, ancillary equipment, and related utilities (if any) will be assessed for the potential presence of visible staining and obvious odors. The soils will also be field-screened using a photoionization detector (PID) to evaluate the potential presence of volatile organic vapors. If no visible staining, obvious odors, or elevated PID screening results are encountered, the soils will be re-used onsite as backfill material.

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Comment 3

The work plan proposes one sample each from the sidewall and bottom of the excavation for headspace screening using a PID. This number seems insufficient to the Department, considering the dimensions of the tank and the depth of the excavation.

Response 3

Based on the reported tank dimensions and cover material depth, it is currently anticipated that the tank excavation will be at least 6 feet wide, 14 feet long, and 7 feet deep, which corresponds to an excavation volume of approximately 22 cubic yards (CY). Although the sampling frequency proposed in the ICM Work Plan is consistent with the frequency presented in the NYSDEC document titled "Spill Technology and Remediation Series, Petroleum-Contaminated Soil Guidance Policy (STARS Memo #1)," dated August 1992, a revised sampling frequency is proposed to address the NYSDEC's concern that a total of five field screening samples may be insufficient. The proposed new sampling frequency is generally consistent with provisions in the NYSDEC's "Draft" DER-10 document titled, "Technical Guidance for Site Investigation and Remediation" [Section 5.5(b)4.ii.(2)] and will require the collection of:

- one grab sidewall sample per every 5 feet around the excavation perimeter (with a minimum of one sample per sidewall); and

- one discrete grab bottom sample per every 5 feet across the excavation floor (taking the larger dimension across the floor).

Sampling locations will be biased toward areas with a greater potential for impacts, such as discolored soils, near a corrosion hole, opposite a manway, or opposite a tank opening. Based on the proposed new sampling frequency and the currently anticipated excavation size, a total of 8 sidewall samples and 3 bottom samples will be collected for field screening.

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Comment 4

The Department should be consulted prior to determining the number and locations of verification soil samples.

Response 4

After the UST has been removed and soil samples from the excavation limits have undergone headspace screening using a PID, the NYSDEC will be contacted to discuss the need (if any) to collect verification soil samples from the UST excavation for laboratory analysis.

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Comment on Subsection 2.2.3 – Subsurface Structure Cleaning

Comment 5

According to the work plan, a visual inspection of the interior surfaces of each selected subsurface structure will be conducted after water and debris removal. The structure cleaning will be considered completed based on visual inspection by an onsite BBL representative. Explain specifically what the visual inspection will look for, other than any remaining debris in the structures. Also clarify if the results of the visual inspection will be documented.

Response 5

Besides being performed to look for any debris remaining in the subsurface structures, the visual inspection of each structure will also be performed to look for any heavy staining or large cracks in the walls/bottom that might suggest potential impacts to underlying soils. If heavy staining and cracks are observed in a structure, the NYSDEC will be contacted to discuss any further actions that may be needed.

Photographs will be taken to document the condition of each structure following cleaning. Results of the visual inspections (including photograph number) will be documented in the field notebook.

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Comments on Subsection 2.2.4 – Pre-Excavation Delineation/Verification Soil Sampling

Comment 6

Clarify if Bayer plans to do any field screening of soil samples for PCBs.

Response 6

Bayer reserves the option to perform field screening of delineation/verification soil samples. The field screening would be in accordance with United States Environmental Protection Agency (USEPA) SW-846 Method 4020 and with a detection limit of 50 parts per million (ppm). However, based on the high rate of false positives generated by the screening method at the 50 ppm detection limit, any screening results above 50 ppm would be suspect, and follow-up laboratory analysis would be needed to determine

the actual PCB concentration (to avoid subsequent excavation of more soils than needed). Field screening results less than 50 ppm could become the final results, subject to laboratory confirmation of the actual PCB concentration in a subset of the samples and NYSDEC approval.

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Comment 7

The Department should be consulted prior to determining any additional soil boring and sampling activities.

Response 7

Acknowledged. The NYSDEC will be contacted to discuss the need for (if any) and scope of any soil boring and sampling activities beyond those already outlined in the ICM Work Plan.

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Comments on Subsection 2.2.5 – Soil Excavation

Comment 8

During the visual inspection of soil, if heavy staining is observed then the verification samples should also be analyzed for VOCs. Samples to be analyzed for VOC's should not be composited.

Response 8

The former electrical transformer area was selected as an area of concern (AOC 39) based on the former presence of PCB-containing oil within the transformers. Volatile organic compounds (VOCs) were not identified as a constituent of interest for AOC 39. Accordingly, Bayer does not propose to submit post-excavation verification soil samples collected from AOC 39 (if any) for laboratory analysis for VOCs.

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Comment 9

It is not clear why the sidewall samples will be discrete and the bottom samples will be composited. Also explain the logic for collecting a sidewall sample from the 0-2 inch depth interval. This interval seems insufficient for a deep excavation. [See comments above for section 2.2.2.]

Response 9

Each post-excavation verification soil sample from AOC 39 (if any) will be a discrete sample collected from soils encountered beyond any "heavy staining". Based on the laboratory analytical results obtained for the RCRA Facility Investigation (RFI) soil samples, the excavation within AOC 39 is anticipated to be shallow, extending approximately 2 feet below the ground surface. The sidewall samples will be collected from the same depth where the staining was encountered (the 0 to 2-inch if the staining were to be found at, or immediately below the ground surface, or an appropriate 1-foot depth interval if the

staining were to be found below a depth of 2-inches). The bottom sample(s) will be collected over a 1-foot increment from the soils remaining below the staining.

The same approach would be used for AOC 45 (Sump at the Northwest Corner of the Pilot Plant) if it is determined that soil removal will be performed in this AOC. The NYSDEC will be contacted to discuss sampling intervals in the event that heavy staining is encountered in either AOC 39 or AOC 45.

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Comments on Subsection 2.2.7 – Air Monitoring

Comment 10

Dust monitoring equipment should be moved daily, and as needed, depending on the wind direction.

Response 10

Acknowledged. Upwind and downwind monitoring locations will be determined through visual observation (wind vane, windsock, or similar technique). Monitoring equipment/monitoring locations will be moved at any time during the work day, as needed, if a significant shift in wind direction is noted (e.g., +/-60 degrees from original upwind).

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Comment 11

A copy of the project-specific health and safety plan (HASP) should be included with the final ICM work plan.

Response 11

A HASP will be developed covering both the activities outlined in the ICM Work Plan and activities to be outlined in the Demolition Work Plan, which is currently being developed and will be submitted for NYSDEC review and approval. The HASP will be submitted to the NYSDEC under separate cover prior to initiation of ICM field activities.

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Comments on Subsection 2.2.9 – Site Restoration

Comment 12

The work plan states that sampling will be performed, as appropriate, to verify that the fill material does not exhibit unacceptable physical or chemical characteristics. Specify what sampling and analytical methods will be used to show that the material does not exhibit hazardous characteristics and/or unacceptable physical characteristics.

Response 12

The approach for site restoration under Subsection 2.2.9 is hereby revised by:

- removing the second bullet on Page 2-9 that begins as follows: "placing non-impacted crushed brick and mortar wall materials generated by previous building demolition activities in the excavated areas"; and

- adding a new sentence at the end of the subsection that reads, "Final site restoration, including characterization followed by subsequent backfilling using crushed brick and mortar materials (if appropriate), would be performed as an element of proposed demolition activities in accordance with a Demolition Work Plan to be submitted to the NYSDEC under separate cover.

♦ ♦ ♦

Comment 13

Any excavated areas that are backfilled with demolition debris should be covered with a layer of clean fill material.

Response 13

As indicated in Response 12, the excavated areas will not be backfilled with any demolition debris as part of the ICM. The need to import and place clean fill material will be discussed in the Demolition Work Plan and will be based on existing concrete analytical data, results of further characterization sampling, and anticipated future Site use (taking into consideration possible exposure pathways).

♦ ♦ ♦

Comments on Subsection 2.3 – ICM Summary Report

Comment 14

The final report should include the signature and stamp of a PE licensed in New York State.

Response 14

The ICM Summary Report will include a certification statement sealed and signed by a Professional Engineer registered in the State of New York.

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Comment 15

It should also include a summary of the air monitoring results.

Response 15

The ICM Summary Report will include a summary of the air monitoring activities and corresponding results. Air monitoring logs summarizing hourly particulate level and PID readings will be included as an appendix to the report.

♦ ♦ ♦

We trust that the above responses will be acceptable to the NYSDEC and we are prepared to implement the proposed ICM activities shortly following NYSDEC approval. I will contact you later this week to discuss any comments on the ICM Work Plan Modification above. In the meantime, please do not hesitate to contact Mr. Joel E. Robinson of Bayer at (412) 777-4871 [joel.robinson@ bayermaterialscience.com] or the undersigned at (315) 446-2570 (ext. 441) [JCB@ BBL-inc.com] if you have any questions or require additional information.

Sincerely,

BLASLAND, BOUCK & LEE, INC.

John C. Brussel

John C. Brussel, P.E.
Sr. Engineer I

JCB/mbg
Enclosures

cc: Ms. Katy Murphy, New York State Department of Environmental Conservation – Region 1
Mr. Joel E. Robinson, Bayer MaterialScience LLC

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Transmitted Via Email/U.S. Mail

April 4, 2005

Ms. Alicia Barraza
New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Solid Waste and Corrective Action
625 Broadway
Albany, New York 12233-7258

Re: Bayer MaterialScience LLC
125 New South Road – Hicksville, New York
USEPA ID#: NYD002920312
BBL Project #: 2302.32303 #5

Dear Ms. Barraza:

On behalf of Bayer MaterialScience LLC (Bayer), enclosed are two copies of the *Interim Corrective Measure Work Plan* for the Bayer facility located in Hicksville, New York. The work plan describes the removal of a former gasoline underground storage tank, removal of accumulated debris and standing water from selected subsurface structures (manholes, catch basins, sumps, and floor trenches), excavation of soils within a former electrical transformer area that exhibit polychlorinated biphenyls (PCBs) at concentrations greater than 50 parts per million (ppm), and delineation (followed by excavation, as appropriate) of PCB-impacted soils beneath a sump associated with the former Pilot Plant. The ICM activities will be implemented to support a timely transfer of the property for economic redevelopment.

We await the New York State Department of Environmental Conservation's comments on/approval of the attached work plan and are prepared to begin implementation of the proposed activities shortly following plan approval. Mr. Joel Robinson of Bayer and I will contact you next week to discuss any comments on these activities. In the meantime, please do not hesitate to contact Joel at (412) 777-4871 or myself at (315) 446-2570 (ext. 441) if you have any questions or require additional information.

Sincerely,

BLASLAND, BOUCK & LEE, INC.

John C. Brussel

John C. Brussel, P.E.
Sr. Engineer I

JCB/jlc
Enclosures

P:\JLC\2005\16450146_coverletter.doc

cc: Ms. Katy Murphy, New York State Department of Environmental Conservation – Region 1 (1 copy)
Mr. Syed Quadri, United States Environmental Protection Agency – Region II (1 copy)
Mr. Joel E. Robinson, Bayer MaterialScience LLC (5 copies)
Mr. Joseph J. Hochreiter, Jr., CGWP, Blasland, Bouck & Lee, Inc. (1 copy)

REPORT

Interim Corrective Measure Work Plan

Bayer MaterialScience LLC
125 New South Road
Hicksville, New York

April 2005

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Table of Contents

Section 1. Introduction 1-1

1.1 General 1-1
1.2 Organization of Work Plan 1-1
1.3 Background Information 1-2
1.3.1 Site Description 1-2
1.3.2 Relevant Site History 1-2
1.3.3 Topography and Drainage 1-3
1.3.4 Geologic Setting 1-3
1.3.5 Hydrogeologic Setting 1-4
1.3.6 CERCLA Investigations/Remedial Activities 1-4
1.3.7 RCRA Facility Investigation 1-5
1.3.7.1 Geophysical Survey Results 1-6
1.3.7.2 Debris Analytical Results 1-6
1.3.7.3 Soil Analytical Results 1-7
1.4 ICM Objectives 1-7

Section 2. Interim Corrective Measure Activities 2-1

2.1 General 2-1
2.2 Description of ICM Activities 2-1
2.2.1 Pre-Construction Activities 2-1
2.2.2 Underground Storage Tank Removal 2-2
2.2.3 Subsurface Structure Cleaning 2-4
2.2.4 Pre-Excavation Delineation/Verification Soil Sampling 2-4
2.2.5 Soil Excavation 2-5
2.2.6 Waste Handling/Offsite Disposal 2-7
2.2.7 Air Monitoring 2-8
2.2.8 Erosion and Sedimentation Control 2-9
2.2.9 Site Restoration 2-9
2.3 ICM Summary Report 2-10

Section 3. Project Schedule 3-1

Table

1 Project Schedule

Figures

1 Site Location Map
2 Site Layout Plan
3 Proposed Subsurface Structure Cleaning Locations
4 Proposed Soil Removal & Verification Soil Sampling Locations

1. Introduction

1.1 General

This work plan presents a description of Interim Corrective Measure (ICM) activities to be implemented at the Bayer MaterialScience LLC (Bayer) facility located at 125 New South Road in Hicksville, New York (the "Site"). The ICMs discussed in this work plan were proposed in the *Resource Conservation and Recovery Act Facility Investigation Report* prepared by Blasland, Bouck & Lee, Inc. (BBL, June 2004) [hereinafter "the RFI Report"] and the Phase II RFI Report contained in a letter from BBL to the New York State Department of Environmental Conservation (NYSDEC) dated January 5, 2005. NYSDEC conditional approval of the Phase II RFI Report was provided in a letter to Bayer dated February 18, 2005. The proposed ICM activities include:

- removing a former gasoline underground storage tank (UST) located northeast of the former Plant 1 building in Area of Concern (AOC) 50;
- removing standing water in the foundation sump at the southeast end of Plant 1 (AOC 44);
- removing accumulated debris from the manholes/catch basins, sumps, floor trenches at the Site that are associated with the following AOCs: 11, 21B, 38, 40, 42 through 46 and 49;
- excavating soils within the former Plant 1 Electrical Transformer Area (AOC 39) that exhibit polychlorinated biphenyls (PCBs) at concentrations above 50 parts per million (ppm); and
- delineating the extent of soils beneath the sump in the northeast corner of the Pilot Plant (AOC 45) that exhibit PCBs at concentrations above 50 ppm, followed by excavation, as appropriate.

These ICM activities are proposed in order to support a timely transfer of the property for economic redevelopment. The ICM activities described herein will be implemented by a qualified remedial Contractor. Changes in the ICM activities may be needed due to field conditions. Any needed changes will be discussed with the NYSDEC prior to implementation.

The organization of this ICM Work Plan is presented below, followed by a summary of relevant background information related to the ICM subsurface structure debris removal and soil removal activities.

1.2 Organization of Work Plan

The ICM Work Plan has been organized into the following sections:

Section	Purpose
Section 1 – Introduction	Provides a brief overview of the ICM activities, site background information, and ICM objectives.
Section 2 – Interim Corrective Measure Activities	Presents a detailed description of the ICM UST removal, subsurface structure cleaning, and soil excavation activities to be implemented at the Site.
Section 3 – Project Schedule	Presents the anticipated schedule for implementing ICM activities.

1.3 Background Information

This section presents background information used to develop the strategy for the ICM activities. A description of the Site is presented below, followed by a summary of historical Site information, topography and drainage in the vicinity of the Site, the geologic/hydrogeologic setting of the Site, and previous investigation and remedial activities performed at the Site.

1.3.1 Site Description

The Site consists of a 14-acre triangular-shaped parcel located just southeast of the intersection of New South Road and Commerce Road in the City of Hicksville, New York. The Site is bordered to the north by industrial properties, to the south and west by the Long Island Railroad and commercial/industrial properties, and to the east by warehouses and the Northrop Grumman Corporation (Northrop Grumman) complex. A Site location map is included on Figure 1. Aside from the Administration Building located in the northern portion of the Site, all other buildings and aboveground structures formerly used in connection with Site operations were demolished down to their floor slabs in 2003.

The location of the Administration Building and the concrete slabs from former buildings are shown on the site layout plan included on Figure 2. As shown on Figure 2, a large asphalt-paved parking area is located in the western portion of the Site, and a series of rainwater runoff sumps/recharge basins are located along the eastern property boundary. Additionally, a railroad spur enters the northwestern portion of the Site and splits into two separate lines, including one that continues southward between a former building (Plant 1) and warehouse and a second that extends eastward toward another former building (Plant 2). Access to the Site is limited by a chain-link fence and locking gates.

Non-masonry building materials generated by the demolition activities were transported for offsite reclamation/ disposal. Brick and mortar wall materials generated by demolition activities were crushed and remain stockpiled onsite for future use as hard fill material.

The building floor slabs remaining onsite are constructed of concrete and are generally elevated approximately 2 to 4 feet above the surrounding grade. The ground surface in the vicinity of the floor slabs is generally covered with asphalt or concrete. Varying amounts of construction and demolition debris are scattered on the ground surface in the vicinity of the slabs. Remaining areas of the Site are covered with crushed stone/gravel or vegetation (grass or brush).

1.3.2 Relevant Site History

The Site was formerly used as a production facility for polyester resin, polyurethane dispersions, and polyvinyl chloride (PVC). The facility was originally constructed in 1945 and operations were expanded in subsequent years. The facility was previously owned/operated by the Hooker Chemical and Plastic Corporation/Occidental Chemical Corporation (HCPC/OCC) from 1966 to 1982. The facility was designated as a Superfund site and placed on the National Priorities List (NPL) established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in the early 1980s. Various soil and groundwater investigation/ remedial activities have been implemented since that time.

Ruco Polymer Corporation (Ruco) purchased the facility from HCPC/OCC in 1982. The purchase agreement indemnified Ruco for environmental liabilities associated with facility operations conducted prior to the sale.

Ruco operated an onsite RCRA interim status drum storage facility in the early 1980s, which formed the basis for the RFI activities and proposed ICM described herein. Ruco was acquired by Sybron Chemical Corporation (Sybron) in 1988. Sybron was, in turn, acquired by Bayer Corporation in 2000. Facility ownership was transferred from Bayer Corporation to Bayer Polymers LLC in 2003 as part of a corporate restructuring. As part of further restructuring, Bayer Polymers LLC became Bayer MaterialScience LLC in 2004. As the successor to Ruco, Bayer received the HCPC/OCC indemnification for environmental liabilities associated with former facility operations.

Based on economic evaluation, manufacturing operations were discontinued during 2002 and transferred to existing Bayer facilities in Georgia and West Virginia. In an effort to prepare the Site for future sale and economic redevelopment, all raw materials, products, and hazardous chemicals were removed from the Site. In addition, facility equipment was decommissioned and tanks/piping were closed pursuant to applicable regulations. Asbestos-containing materials were removed and the onsite buildings and aboveground structures were demolished in 2003.

1.3.3 Topography and Drainage

The Site is located on relatively level land at an elevation of approximately 129 to 134 feet above mean sea level. The northwestern portion of the Site (the vicinity of Plant 3 and the parking lot) slopes gently to the west, and the southern portion of the Site (vicinity of Plant 1) slopes gently to the south. Depending on location, stormwater at the Site either flows to the recharge basins/rainwater runoff sumps (via overland flow and storm sewer piping) or is conveyed offsite via overland flow.

Sanitary wastewater from the facility was formerly conveyed via underground piping to several septic tanks and cesspools/leachate pits (refer to Figure 2 for septic tank and leachate pit locations). The leachate pits were eventually abandoned in-place when sanitary sewer piping was installed to convey the sanitary wastewater to the municipal sewer system beneath Commerce Place.

1.3.4 Geologic Setting

The Site is located in northeastern Nassau County, which is underlain by unconsolidated coastal plain deposits of Cretaceous (60 to 140 million years ago [mya]), Tertiary (2 to 60 mya), and Quaternary age (thousands to 2 mya), overlying metamorphic rocks of Precambrian age (570 mya and greater). The City of Hicksville is located on a generally featureless glacial outwash plain of well-sorted and stratified sand and gravel that slopes gently to the south.

The upper aquifer in the area is identified as the Harbor Drift Quaternary glacial unit, which is composed of sand, gravel, and till deposited by two advances of ice during the Wisconsin Glaciation (Isbister, 1966). Two formations lie below the Harbor Drift Unit, including the Magothy Formation and the underlying Raritan Formation. The Magothy Formation is composed of sand inter-bedded with silt and clay. The Raritan Formation includes the upper clay member and lower Lloyd Sand Member, which lies unconformably on bedrock. The upper clay member is composed primarily of clay and silty clay and lenses of sand and gravel. The Lloyd Sand Member is a stratified deposit, comprising discontinuous layers of sand, gravel, sandy clay, silt, and clay.

The bedrock of the region is Precambrian biotite schist, which is a metamorphic rock of igneous origin. The bedrock surface is relatively smooth and dips to the southeast. The bedrock forms the virtually impermeable base of the groundwater reservoir (Isbister, 1966).

1.3.5 Hydrogeologic Setting

The Site sits on the Harbor Drift Unit, which is composed primarily of glacial outwash sand and gravel. The Magothy aquifer, immediately below the Harbor Drift Unit, is the principal aquifer in the region. It is bounded at the top by the water table and at the bottom by the relatively impermeable Clay Member of the Raritan Formation. The upper part of the Magothy aquifer, consisting of a range glacial outwash sand, gravel, and till, contains water under unconfined conditions. In areas underlain by till of relatively low permeability, the downward movement of water is retarded. Perched and semi-perched water occurs in many places (Isbister, 1966). The lower part of the Magothy aquifer, consisting of heterogeneous sands and gravels, becomes increasingly confined with depth due to numerous discontinuous lenses of silt and clay in the Magothy Formation. Individually, these units do not constitute a distinct confining unit. However, their combined influence through a considerable thickness of the formation acts to impede vertical movement of groundwater. The Magothy aquifer is the primary source of water for municipal and industrial use in the vicinity of the Site. The aquifer is recharged by infiltration of precipitation, industrial discharges, and stormwater runoff collected via recharge basins.

The deep confined aquifer is the lowermost aquifer in the area. It consists mainly of Lloyd Sand. The clay member of the Raritan Formation confines the Lloyd in most of the area. Bedrock forms the lower boundary of the deep confined aquifer.

Based on available information, groundwater at the Site is located at depths greater than 50 feet below ground surface (bgs). The general groundwater flow direction in the vicinity of the Site is north to south. Locally, the flow direction is influenced by the range in lithology of the Pleistocene deposits and by municipal and industrial pumping centers and recharge basins.

1.3.6 CERCLA Investigations/Remedial Activities

Investigation and remedial activities with United States Environmental Protection Agency (USEPA) and NYSDEC oversight have been performed at the Site since the mid-1980s. The primary environmental concerns addressed by these activities include:

- former discharge of plant wastewater containing volatile organic compounds (VOCs) and heavy metals into onsite sumps/recharge basins; and
- past release of heat transfer fluids containing polychlorinated biphenyls (PCBs).

Three operable units (OUs) were established in connection with the investigation and remedial activities, including:

- *OU1 – Onsite Soil and Groundwater:* This OU covers groundwater beneath the property and soil in four areas, including two sumps/recharge basin areas referred to as Sump Nos. 1 and 2 (which correspond to AOCs 28 and 29, as shown on Figure 2), a former drum storage area north of the sumps, and an area around a nearby groundwater monitoring well. Constituents of interest within the soil and groundwater included

PVC, styrene/butadiene, vinyl chloride, vinyl acetate copolymer, polyurethane, trichloroethene, barium, cadmium, and organic acids. A Record of Decision (ROD) for this OU was signed by USEPA in 1994 (ROD R01-94/235). The ROD called for additional investigation in certain areas, operation/ maintenance/monitoring (OM&M) of a groundwater extraction and treatment system, soil flushing within the two sumps (via discharge of treated groundwater and recapture by extraction wells), treatability studies, excavation/offsite disposal of soils within the drum storage area and near the existing monitoring well, and institutional controls. Evaluations performed as part of the offsite groundwater operable unit (OU3) showed that the remedy to address the vinyl chloride monomer (VCM) sub-plume within the regional groundwater VOC plume had the added benefit of addressing the groundwater underlying the Hooker/Ruco Site (a component of OU1). Thus, the OU1 groundwater component is being addressed by the OU3 remedy. Remedial activities within OU1 are being carried out by HCPC/OCC;

- *OU2 – PCB Soil Removal:* This OU covers soil/debris within four areas, including a "direct-spill area" in the vicinity of the Pilot Plant where heat transfer fluid was released through a relief valve, the area surrounding the Pilot Plant where fluid was spread by onsite truck traffic, a sump/recharge basin that received surface water runoff from the vicinity of the Pilot Plant (Sump No. 3, which is also referred to as AOC 30 and shown on Figure 2), and former soil stockpile areas east and south of the Pilot Plant. PCBs and organic constituents were the primary constituents of interest for this OU. A ROD for this OU was signed by the USEPA in 1990 (ROD R02-90/121). The ROD called for the excavation and offsite treatment/ disposal of PCB-impacted soils. Remedial activities within OU2 were completed in 1992 and 2001 by HCPC/OCC; and

- *OU3 – Offsite Groundwater:* This OU addresses the chemicals in the groundwater underlying the Hooker/ Ruco Site and the VCM sub-plume downgradient of the Hooker/Ruco Site. Investigation and remediation of this OU is actively being carried out by HCPC/OCC.

1.3.7 RCRA Facility Investigation

In addition to the above OUs, a total of 65 solid waste management units (SWMUs)/AOCs have been identified based on review of former facility operations. SWMUs/AOCs were first identified in the *Comprehensive Site Closure Plan for the Hicksville Facility* prepared by Bayer and submitted to the NYSDEC in October 2002. Additional SWMUs/AOCs were identified during site visits by the NYDEC conducted in December 2002 and May 2003. Based on an evaluation of existing information and the potential for environmental releases, 58 AOCs were designated for additional evaluation as part of the RFI and 7 AOCs were eliminated from further consideration. The location of each AOC is shown on Figure 2. An approach for evaluating conditions within the SWMUs/AOCs retained for further evaluation was developed and presented in the *RCRA Facility Assessment/RCRA Facility Investigation Work Plan* prepared by ENSR Corporation (ENSR, December 2003) [the "RFA/RFI Work Plan"]. NYSDEC approval of the RFA/RFI Work Plan was provided in December 2003.

BBL implemented the RFI field investigation in two phases, the first in February 2004 and the second in October 2004. The first phase was conducted in accordance with the RFA/RFI Work Plan and e-mail correspondence from BBL to the NYSDEC dated February 18, 2004 and February 23, 2004. Phase II RFI activities were performed in accordance with the Phase II RFI Work Plan developed in a September 7, 2004 letter from BBL that responds to NYSDEC comments on the RFI Report and e-mail correspondence from BBL to the NYSDEC dated September 30, 2004 and October 1, 2004. In general, the RFI included the following efforts:

- geophysical survey activities to identify the location of underground structures within the septic tank/ leachate pit AOCs at the Site (AOCs 35A through 35G during Phase I, and AOCs 35F and 35H through 35M during Phase II) and to identify the location of the suspected gasoline UST in AOC 50;
- debris sampling at 19 locations during Phase I and at one location during Phase II;
- concrete sampling at 19 locations during Phase I and at six locations during Phase II;
- soil sampling at 96 locations within 48 designated AOCs during Phase I and at 17 locations within 13 designated AOCs during Phase II; and
- water sampling at one location (a foundation sump located at the southeast end of Plant 1) during Phase I.

Details of the Phase I RFI field investigation activities and results are presented in the RFI Report. Details of the Phase II RFI field investigation activities and results are presented in the Phase II RFI Report. Relevant findings of the Phase I and Phase II RFI are summarized in the subsections below.

1.3.7.1 Geophysical Survey Results

A suspected UST was identified in AOC 50 (northeast of the former Plant 1 building) by electromagnetic (EM) survey activities during the Phase II RFI. The location of the suspected UST was confirmed by ground-penetrating radar (GPR) survey activities (refer to Figure 2 for the UST location).

1.3.7.2 Debris Analytical Results

RFI debris analytical results relevant to this ICM are summarized below.

- PCBs were detected at debris sampling location 11-1A (within a catch basin located in the Plant 1 Boiler Condensate Runoff Area) at a concentration of 20 ppm. PCBs were detected at the remaining debris sampling locations at concentrations between an estimated 1.6 ppm and 4.3 ppm.
- One or more semi-volatile organic compounds (SVOCs) were detected at each debris sampling location. The SVOC concentrations detected at several debris sampling locations, particularly locations AOC 21B-1, AOC 38-1, AOC 40-1, AOC 40-2, AOC 40-3, AOC 42-1, AOC 42-2, AOC 43-1, AOC 44-1, AOC 45-1, AOC 45-2, AOC 46-2, AOC 49-1, and AOC 49-2, appear to be elevated.
- Excluding typical mineral constituents, concentrations of selected inorganic constituents, including barium, cadmium, chromium, copper, lead, mercury, nickel, and zinc, detected in the Phase I debris samples exceed typical background values. Concentrations of inorganic constituents identified at several debris sampling locations, particularly locations AOC 40-1, AOC 42-1, AOC 42-2, AOC 44-1, AOC 45-1, AOC 45-2, and AOC 49-2, appear to be elevated.

No directly-applicable NYSDEC cleanup standards/guidance values were identified for accumulated debris identified within the manholes/catch basins, sumps, floor trenches, and onsite rainwater runoff sump. However, as summarized above, debris encountered at several sampling locations exhibit PCBs, SVOCs, and/or select inorganic constituents at concentrations that appear to be elevated.

1.3.7.3 Soil Analytical Results

RFI soil analytical results relevant to this ICM are summarized below.

- PCBs were identified in soils within two areas of the site, including the Former Plant 1 Electrical Transformer Area (AOC 39) and the sump in the northeast corner of the Pilot Plant (AOC 45), at concentrations exceeding the 50 ppm threshold for a Toxic Substances Control Act- (TSCA-) regulated/New York State hazardous waste, as detailed below:

  - Soil samples collected from the 0- to 1-foot and 1- to 2-foot depth intervals at sampling location AOC 39-2/AOC 39-5 (in the western portion of AOC 39) exhibited PCBs at concentrations of 160 ppm and 190 ppm, respectively. Soil samples collected more than 2 feet bgs at sampling location AOC 39-2/AOC 39-5 and soil samples collected at adjacent sampling locations AOC 39-3/AOC 39-6 and AOC 39-12 (east and south of AOC 39-2/AOC 39-5, respectively) exhibited PCBs at concentrations well-below 50 ppm. Based on the RFI results and the configuration of the former outdoor electrical transformer area, the extent of soil within AOC 39 that exhibits PCBs at concentrations above 50 ppm has been delineated for purposes of proposed ICM soil removal activities; and

  - Soil samples collected from the 0- to 0.2-foot and 0.5- to 1.5-foot depth intervals below the bottom of the concrete-lined sump at sampling location AOC 45-4 exhibited PCBs at concentrations of 2,300 ppm and 1,700 ppm, respectively. Samples were not collected greater than 1.5-feet beneath the bottom of the sump due to refusal of the macro-core sampler, which was advanced via a jack-hammer instead of a direct-push (PowerProbe™) sampling device due to access considerations. Based on conversations with the individuals who performed the sampling and based on review of available photographs, the bottom of the sump is estimated to be approximately 3 to 4 feet below the surrounding grade (approximately 6 to 7 feet below the top of the floor slab for the former Pilot Building). The extent of soil beneath and around the bottom of the sump that exhibits PCBs at concentrations above 50 ppm has not been delineated.

- VOCs were not identified in soil samples collected from the 10- to 12-foot depth interval of sampling locations AOC 50-1 and 50-2 (which were immediately adjacent to the suspected former gasoline UST location as identified using EM/GPR survey techniques) at concentrations exceeding the soil guidance values presented in the NYSDEC Technical and Administrative Guidance Memorandum titled "Determination of Soil Cleanup Levels and Cleanup Objectives," HWR-94-4046, dated January 24, 1994 (TAGM 4046). Aside from benzo(a)pyrene, which was identified at an estimated concentration of 0.063 ppm at sampling location AOC 50-2 (10-12'), no SVOCs were identified in the soil samples collected from AOC 50 at concentrations above the TAGM 4046 soil guidance values. The estimated 0.063 ppm benzo(a)pyrene concentration identified at sampling location AOC 50-2 (10-12') only slightly exceeds the 0.060 ppm TAGM 4046 soil guidance value. Headspace screening results for all soil samples collected continuously from grade to the bottom of the soil borings at sampling locations AOC 50-1 and 50-2 (which extended 12 feet bgs) were 0.0 ppm. No visible staining or obvious odors were encountered in any of the soil samples recovered from the AOC 50 soil borings.

1.4 ICM Objectives

Based on the findings of RFI activities, this ICM Work Plan has been prepared to address PCBs, SVOCs, and metals in debris within selected subsurface structures at the Site and PCBs in soil within two AOCs. In general, findings of the RFI activities will be addressed by means of:

- removing the former gasoline UST located northeast of the former Plant 1 building in AOC 50;
- removing standing water and accumulated debris from the subsurface structures at the Site that are associated with the following AOCs: 11, 21B, 38, 40, 42 through 46 and 49;
- excavating soils within the former Plant 1 Electrical Transformer Area (AOC 39) that exhibit PCBs at concentrations above 50 ppm; and
- delineating the extent of soil beneath the sump in the northeast corner of the Pilot Plant (AOC No. 45) that exhibits PCBs at concentrations above 50 ppm, followed by excavation, as appropriate.

2. Interim Corrective Measure Activities

2.1 General

This section presents an overview of the proposed ICM activities. The ICM activities will consist of the following:

- removing the former gasoline UST in AOC 50 and any associated impacted soils, if encountered;
- removing standing water and accumulated debris from subsurface structures using a vacuum truck;
- conducting pre-excavation soil sampling activities in AOC 39 and AOC 45 for purposes of delineation and verification;
- excavating and temporarily staging PCB-impacted soil, as necessary;
- placing clean backfill within the soil excavations and grading the soils remaining around the excavated areas to remove deep depressions and generally match existing contours; and
- transporting the water, debris, and soil generated by the ICM activities for proper offsite treatment/disposal.

ICM activities are described in greater detail below.

2.2 Description of ICM Activities

The ICM UST removal, subsurface structure cleaning, and soil removal activities will be implemented by a qualified remedial Contractor. Details of the ICM activities are discussed under the following subsections:

- 2.3.1 – Pre-Construction Activities;
- 2.3.2 – Underground Storage Tank Removal;
- 2.3.3 – Subsurface Structure Cleaning;
- 2.3.4 – Pre-Excavation Verification Soil Sampling;
- 2.3.5 – Soil Excavation;
- 2.3.6 – Waste Handling/Offsite Disposal;
- 2.3.7 – Air Monitoring;
- 2.3.8 – Erosion and Sedimentation Control; and
- 2.3.9 – Site Restoration.

Work activities to be performed as part of the ICM are discussed below.

2.2.1 Pre-Construction Activities

Work activities to be conducted by the selected remedial Contractor in preparation for implementing the ICM activities include the following:

- using flagged wooden stakes, flagged metal pins, and/or spray paint, as appropriate, to mark the locations of the suspected former gasoline UST, the locations of the subsurface structures to be cleaned, and the limits of the proposed excavation areas;

- contacting the New York City – Long Island One Call Center to initiate a utility clearance request a minimum of three working days prior to the start of the ICM field activities;

- installing erosion and sedimentation control measures in accordance with the provisions of the Erosion and Sedimentation Control Plan presented herein (Subsection 2.2.8);

- constructing material staging areas, as needed, for temporary staging of excavated soil prior to offsite transportation and disposal. Each material staging area will be bermed and lined with a low-permeability liner that will slope to a lined collection sump. Soil placed within the material staging areas will be covered using low-permeability material (to minimize potential siltation/migration of soil beyond the staging areas). The low-permeability liner and cover will be secured to resist potential wind forces;

- constructing an equipment decontamination pad outside the proposed excavation limits. The decontamination pad will be bermed and lined with a low-permeability material (rubber, polyethylene, polyvinyl chloride, etc.) that will slope to a lined collection sump;

- mobilizing a storage tank(s) for temporary storage of water generated by the ICM removal activities, including perched water/rainfall that accumulates within the excavation areas (if any) and washwaters generated by decontamination of personnel and equipment;

- mobilizing all labor, equipment, materials, supplies, and all things necessary and incidental for implementing the ICM activities; and

- Calibrating dust control and air monitoring equipment and obtaining background measurements.

2.2.2 Underground Storage Tank Removal

As part of Phase II RFI field activities, BBL performed geophysical survey activities to identify the location of the suspected gasoline UST in AOC 50 (northeast of the former Plant building). As discussed in Section 1, the location of the tank was confirmed by EM and GPR survey activities. Based on a facility design drawing titled "Site Plan" prepared by Rubber Corporation of America (Job No. 5309, Drawing 1), dated December 2, 1953, the tank apparently has a 4-foot diameter and is 11 feet long. The top of the tank is reported to be approximately 2.5 feet bgs. Using dimensions shown on the design drawing, the tank capacity is calculated to be 1,000 gallons.

Based on review of historic facility operations records, no documentation of previous tank closure has been identified. Accordingly, the UST will be closed via removal in accordance with Article XI Nassau County Public Health Ordinance, Section 12.2. These closure activities will include the following, as appropriate:

- identifying the location of the UST and all associated piping, ancillary equipment, and utilities (both above- and below-ground) in the vicinity of the UST;

- excavating soil (by hand as necessary) to expose the top of the UST and associated piping, ancillary equipment, and utilities (if any) in the vicinity of the UST. The soils will be staged for potential reuse as

backfill material. Airborne particulate monitoring (dust monitoring) will be performed during excavation activities as described below under Subsection 2.3.7;

- removing residual liquid and solid materials from the tank (if encountered) and staging, separating, containerizing, and characterizing the materials for offsite disposal, as appropriate;

- flushing and collecting residual product (if any) from the piping that connects to the tank;

- purging the tank and appurtenances, as necessary, with dry ice or an inert gas such as nitrogen (N_2) or carbon dioxide (CO_2);

- testing the atmosphere inside and outside the tank (for percent oxygen, combustible gas levels, etc.) to determine if a potentially hazardous atmosphere exists;

- temporarily plugging or capping all openings in the tank after the tank has been purged of vapors (provided that the tank does not have noticeable corrosion holes). One plug or cap should have a $^1/_8$-inch vent hole to prevent the tank from being subjected to excessive differential pressure that may result from temperature changes while removing the tank from the ground;

- excavating and removing the tank and associated piping in accordance with applicable rules and regulations. The tank will be transferred to the lined material staging area to assess the tank condition (i.e., identify corrosion holes, if any). The tank will be cut and rendered unfit for liquid storage prior to transportation for offsite recycling or disposal, as appropriate. Cutting methods will be non-heat generating;

- excavating impacted soils, if encountered, at the limits of the UST excavation following the tank removal. However, based on the RFI soil sampling performed in the vicinity of the tank (as discussed in Subsection 1.3.7.3, there is no evidence of potential historic releases from the tank);

- collecting verification soil samples from the limits of the UST excavation, one from each sidewall and the excavation bottom, for headspace screening using a photoionization detector (PID) [to identify the presence/absence of volatile organic vapors] and jar testing [to identify the presence/absence of a petroleum-type sheen or droplets of separate-phase materials]. Jar testing would involve filling a jar approximately 90% full with equal parts of soil and tap water, capping and shaking the jar, and visually determining whether any sheens or oil droplets are present on the surface of the soil/water mixture in the jar. If elevated PID headspace screening results are obtained or a petroleum sheen/separate phase liquids are encountered via jar testing, then additional soils would be removed from the excavation (and additional samples would be collected for headspace screening and jar testing);

- collecting verification soil samples from the limits of the UST excavation for laboratory analysis, only if field screening suggests that there was a potential past release(s) from the tank. Verification soil samples for laboratory analysis would be collected following receipt of acceptable field screening results. The samples would be collected in accordance with the sampling protocols presented in the NYSDEC document titled "Spill Technology and Remediation Series, Petroleum-Contaminated Soil Guidance Policy (STARS Memo #1)," dated August 1992;

- covering stockpiled soils in the material staging area(s) and in the roll-off waste containers (if used) with a low permeability liner to minimize potential migration/siltation of soils to areas beyond the limits of the staging area(s); and

- backfilling the excavation following receipt of acceptable verification analytical results, as described below under Subsection 2.3.9.

2.2.3 Subsurface Structure Cleaning

As part of this ICM, standing water and accumulated debris will be removed from subsurface structures (manholes/catch basins, sumps, floor trenches, etc.) associated with AOCs 11, 21B, 38, 40, 42 through 46, and 49 (as shown on Figure 3). The water and debris removal will be performed using a vacuum truck and other equipment (e.g., pumps, hose, etc.), as appropriate. Following water and debris removal, a visual inspection of the interior surfaces of each selected subsurface structure will be conducted. Additional subsurface cleaning may be required (using high-pressure water spray, scrubbers, shovels, etc.) if debris remains following the removal using the vacuum truck. The subsurface structure cleaning will be considered completed based on visual inspection by an onsite BBL representative.

Liquids and debris removed from the subsurface structures will be separated (via gravity settling) in a vacuum truck, lined material staging area, and/or or roll-off waste container(s). The liquids will be transferred into an onsite storage tank or steel 55-gallon drums for characterization prior to proper offsite transportation and disposal. The debris will be stabilized (as necessary) in the material staging area or roll-off waste container(s) and characterized prior to proper offsite transportation and disposal. Handling of solids and liquids generated by the subsurface structure cleaning activities is discussed in Subsection 2.2.6.

2.2.4 Pre-Excavation Delineation/Verification Soil Sampling

Soil sampling will be performed in AOC 39 and AOC 45 to further delineate and verify the horizontal and vertical extent of soils exhibiting PCBs at concentrations above 50 ppm. Soil borings will be completed at four locations in AOC 39 (locations VS-39-1 through VS-39-4) and ten locations in AOC 45 (locations VS-45-1 through VS-45-10), as shown on Figure 4. The soil borings will be advanced using a direct-push sampling rig to depths ranging from approximately 1.5 to 7.5 feet bgs. Soil samples will be continuously collected from each boring using a 4-foot long macro-core sampling device. Samples collected from one or more depth intervals at each boring location will be submitted for laboratory analysis for PCBs or laboratory archive (with future analysis for PCBs, if needed), as summarized in the table below.

Location	Boring Depth (feet bgs)	Depth Interval (feet bgs)	Analysis or Archive
VS-39-1 through VS-39-3	1.5	0.0 – 0.2 0.5 – 1.5	Analysis Analysis
VS-39-4	3.5	2.5 – 3.5	Analysis
VS-45-1 through VS-45-10	7.5 (estimated)	The 0.5-foot-long interval immediately below the sump bottom and 1-foot-long interval beginning 2 feet below the sump bottom. The sump is believed to extend to a depth of 4 feet bgs and have an approximately 0.5-foot concrete floor. Therefore, it is anticipated that samples will be collected from 4.5- to 5.0-feet bgs and 6.5- to 7.5-feet bgs.	Analysis for the samples from locations VS-45-1 through VS-45-4. Archive for the samples from locations VS-45-5 through VS-45-10.

Actual target depths for each boring in AOC 45 will be determined based on field measurement of the sump depth to be made prior to sampling. Each boring in AOC 45 will extend approximately 3 feet below the bottom of the sump. All sampling intervals will be referenced relative to the surrounding ground surface (in feet bgs).

Samples selected for laboratory analysis will be analyzed in accordance with USEPA SW-846 Method 8082 on an expedited turnaround (i.e., 2 to 3 days) for reporting of preliminary results. The archived samples will be analyzed, if needed, based on the results for samples collected at adjacent sampling locations and from overlying intervals (i.e., results greater than 50 ppm). Analysis of the archived samples would be performed within allowable holding limits, which include 10 days from sample collection until extraction, and then 40 days from sample extraction until analysis.

Quality assurance/quality control (QA/QC) samples, including field duplicate, matrix spike, and matrix spike duplicate samples, will be collected and analyzed in accordance with the Quality Assurance Project Plan included in the RFA/RFI Work Plan. Final laboratory results will be reported using NYSDEC ASP Category B deliverables.

Additional soil boring and sampling activities will be performed, as needed. Results of the pre-excavation sampling will be used to determine appropriate excavation limits. Analytical results for verification soil samples collected from the final excavation limits will be validated by BBL at a Tier II and Tier III level in accordance with the RFA/RFI Work Plan.

2.2.5 Soil Excavation

Based on the results of the RFI and the pre-excavation delineation/verification soil sampling, soil excavation activities will be performed in AOC 39 to address soils exhibiting PCBs at concentrations above 50 ppm. It is currently anticipated that soil will be removed to a depth of 2 feet from an 18 foot by 18 foot area in AOC 39. It is currently estimated that approximately 25 cubic yards (CY) of soil will be removed from AOC 39 as part of the ICM. Soil removal limits, as currently envisioned, are shown on Figure 3. Additionally, based on the results of the pre-excavation delineation sampling to be performed in AOC 45 (as discussed above) soil removal may be performed in this AOC as part of the ICM. Possible actions to address the soils in AOC 45 will be discussed with OxyChem and the NYSDEC following receipt of the pre-excavation delineation soil sampling results.

The horizontal and vertical limits of the proposed soil removal activities will be adjusted, if necessary, based on the results obtained during the pre-excavation sampling activities described in Subsection 2.2.4. Prior to excavating soils in AOC 39, the concrete pad in this area will be demolished and removed using a backhoe or excavator. Based on the previous detection of PCBs at concentrations greater than 50 ppm in soils around the pad (suspected to have originated from electrical equipment formerly on the pad), the resulting concrete debris will be assumed to exhibit PCBs at concentrations greater than 50 ppm. The debris will be handled as described in Subsection 2.2.6 below. Following the concrete removal, soil excavation activities in AOC 39 will be conducted. If it is determined that soil excavation will be performed in AOC 45, then the concrete-lined sump in AOC 45 will be similarly demolished and handled prior to excavation activities within the AOC.

The proposed soil excavation activities will be conducted using a backhoe, excavator, loader, etc. Soil removed from the excavation areas will either be direct-loaded for offsite transportation and disposal, or transported to a lined material staging area for temporary storage prior to offsite transportation and disposal. Soil will be transported to the material staging area(s) using a loader, dump truck, or other appropriate equipment.

Upon reaching the anticipated limits of the soil removal activities (as defined by the pre-excavation delineation/ verification soil sampling), BBL's onsite representative will observe the excavation sidewalls and floor for the presence of heavy visual staining (e.g., visible oil that could become mobile). If heavy staining is observed, additional soil will be removed from the excavation area, and an additional observation of the excavation will be performed. If additional soil removal is conducted (beyond the limits defined by pre-excavation delineation/ verification sampling), BBL's onsite representative will collect post-excavation verification soil samples for laboratory analysis from the new limits of the excavation. Post-excavation verification soil samples will be submitted for laboratory analysis for PCBs in accordance with USEPA SW-846 Method 8082 on an expedited turnaround (i.e., 2 to 3 days) for reporting of results. Post-excavation verification soil samples collected from the sidewalls (if any) will be individual (discrete) grab samples from the 0- to 2-inch depth interval at each location. Post-excavation verification soil samples collected from the excavation bottom (if any) will be composites formed from 6 to 8 individual grab samples collected within an approximately one-square foot sampling area.

Additional activities to be conducted in connection with the ICM soil removal include:

- creating a small berm around the excavation area to divert surface water runoff (if any) away from the area. The berm would be created by temporarily re-grading soils outside the limits of the excavation area;

- allowing rainwater (if any) to infiltrate, to the extent practical, into the excavation area. However, if water accumulates within the excavation areas, it will be pumped (as appropriate) to a storage tank(s) that will be located in a lined secondary containment area. Sampling will be conducted to characterize the water for offsite transportation and disposal;

- sloping/benching the excavation sidewalls in accordance with the Occupational Safety and Health Administration (OSHA) requirements for excavations as outlined in 29 CFR Part 1926 Subpart P (as necessary). A detailed design for the sloping/benching system will be prepared by the selected Contractor in accordance with applicable OSHA regulations;

- performing airborne particulate monitoring (dust monitoring) as described below under Subsection 2.3.7;

- maintaining the excavation until removal has been performed to the final verification soil sampling locations (where PCB concentrations in remaining soils are less than 50 ppm). While the excavations are left "open", daily inspections will be completed to evaluate situations that could result in possible cave-ins or failure of protective systems. Based on inspection results, corrective actions will be implemented, as needed;

- covering soil/debris stockpiled in the material staging areas with a low-permeability material to minimize contact with precipitation and potential migration/siltation of soil beyond the staging areas. The low-permeability liner will be secured to resist potential wind forces; and

- decontaminating project equipment (including excavation equipment, trucks, hand-tools, etc.) and materials that come in contact with impacted site media prior to demobilizing from the Site and prior to re-grading clean soil around the excavation areas. The decontamination activities will be conducted within the lined equipment decontamination area. Decontamination activities will be performed until no visible soil or debris are present on the equipment surfaces (as determined by BBL's onsite representative). Washwaters generated by the equipment decontamination activities will be containerized for offsite treatment/disposal. Solid wastes generated by the equipment decontamination activities will be containerized for offsite disposal with the excavated PCB-impacted soils.

2.2.6 Waste Handling/Offsite Disposal

The approach for handling the waste streams to be generated by the ICM activities is summarized below.

- The UST removed from AOC 50, which is assumed to be constructed of steel, will be cut and rendered unfit for future liquid storage. After the tank is cut, it will be transported for offsite recycling of the steel (smelting) or offsite disposal, in accordance with applicable rules and regulations. Wipe sampling for PCBs may be needed if the tank steel is to be recycled.

- Silt, sand, and gravel debris generated by cleaning the subsurface structures in the designated AOCs will be stabilized, as needed, within a lined material staging area or roll-off waste container(s). The debris will be staged separately from the soils exhibiting PCBs at concentrations above 50 ppm. It is estimated that the volume of debris to be generated will not exceed 15 CY. One or more composite samples (one sample per roll-off container or up to one sample from the staging area) will be collected to characterize the debris for disposal purposes. Each characterization sample will be submitted for laboratory analysis for PCBs, Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs, TCLP metals, ignitability, corrosivity, and reactivity. The characterization sampling approach will be modified based on specific requirements for the disposal facility(ies) selected to receive the debris. Upon receipt of the characterization sample results, the debris will be transported for offsite disposal in accordance with applicable rules and regulations.

- Concrete debris generated by demolition of the former concrete transformer pad within the excavation limits in AOC 39 and concrete debris to be generated if the sump within AOC 45 is demolished. The concrete will be crushed to a size acceptable to the anticipated disposal facility and managed with the PCB-impacted soils removed as part of the ICM, as described below;

- PCB-impacted soils excavated from AOC 39 and potentially from the vicinity of the sump in AOC 45 (if excavation is to be performed in AOC 45) will likely be transported for offsite disposal as a TSCA-regulated/New York State hazardous waste (Waste Code B007) given the PCB concentrations of greater than 50 ppm in the RFI soil samples collected from these AOCs. In-situ or post-excavation characterization sampling will be performed to evaluate whether the soils designated for offsite disposal as a TSCA-regulated waste also exhibit any characteristics of a RCRA hazardous waste (and whether treatment prior to disposal would be needed). One composite characterization sample will be submitted for laboratory analysis for TCLP VOCs, TCLP SVOCs, TCLP metals, ignitability, corrosivity, and reactivity. Given the estimated volume of soils to be excavated by the ICM (less than 100 CY), the sampling frequency would be well-within the one sample per 500 CY minimum typically required by disposal facilities. The characterization sampling approach will be modified based on specific requirements for the disposal facility(ies) selected to receive the soils; and

- Standing water removed during the subsurface structure cleaning activities, rainwater that accumulates within the excavation areas, and washwaters generated by equipment decontamination activities will be containerized within an onsite storage tank or steel 55-gallon drums. One composite waste characterization sample will be collected for laboratory analysis for PCBs, TCLP VOCs, TCLP SVOCs, TCLP metals, ignitability, corrosivity, and reactivity. Given the estimated volume of liquids to be generated by the ICM (less than 2,500 gallons), the sampling frequency would be well-within the one sample per 20,000 gallon minimum typically required by industrial wastewater treatment facilities or a publicly-owned treatment works (POTW). The characterization sampling approach will be modified based on specific requirements for the disposal facility(ies) selected to receive the liquids. Upon receipt of the characterization sample

results, the liquids will be transported for offsite disposal in accordance with applicable rules and regulations.

Laboratory analysis of the characterization samples may be performed on an expedited turnaround basis for reporting of preliminary analytical results. QA/QC samples will not be collected as part of the characterization sampling approach. In addition, laboratory analytical results for the characterization samples will not be validated.

Following receipt of the characterization sample results, the excavated solids and liquid wastes will be loaded for offsite transportation and treatment/disposal in accordance with applicable rules and regulations. As discussed in Subsection 2.2.5, soils within AOC 39 and AOC 45 may be direct-loaded for offsite treatment/ disposal, as appropriate. All dump trailers, dump truck boxes, and roll-off waste containers used to transport non-hazardous soil/debris from the Site will be lined with one layer of polyethylene sheeting. In addition, all dump trailers and roll-off waste containers used to transport material that is designated as a TSCA-regulated/ New York State hazardous waste will be lined with two layers of polyethylene sheeting. All loaded dump trailers, dump truck boxes, and roll-off waste containers will be covered with a tarp prior to departing the Site.

Waste transporters will have a valid 6NYCRR Part 364 transporter permit for waste streams generated by the ICM activities. Wastes will be transported for offsite treatment/disposal under a bill-of-lading, nonhazardous waste manifest, or hazardous waste manifest, as appropriate.

2.2.7 Air Monitoring

Airborne monitoring for particulate (dust) and volatile organic vapors will be conducted during the ICM removal activities in accordance with the New York State Department of Health's (NYSDOH's) Community Air Monitoring Program, dated June 2000. Dust monitoring will be conducted using a Real-Time Aerosol Monitor (mini-RAM) and volatile organic vapor monitoring will be conducted using a PID. The air monitoring equipment will be calibrated at least once daily, prior to the start of work activities.

The results of airborne particulate monitoring will be recorded by the onsite health and safety supervisor (or designated alternate) at a minimum frequency of once per hour, unless site conditions and work activities being conducted do not cause the generation of dust. If particulate monitoring indicates that ambient dust levels in the worker breathing zone exceed the action level of 100 micrograms per cubic meter ($\mu g/m^3$) above background, the level of particulates will be manually recorded at the downwind perimeter of the work area at 15 minute intervals.

If the level of particulates at the downwind perimeter of the work area is 150 $\mu g/m^3$ (above site background) or greater, or if visible airborne dust is observed leaving the work area, then work activities will cease and additional dust suppression techniques will be employed to maintain particulate levels below 150 $\mu g/m^3$ and prevent visible dust migration. Potential dust generating work activities may resume provided that dust levels at the downwind work area perimeter are less than 150 $\mu g/m^3$ and no dust is visible.

Dust control measures will be provided to mitigate dust generation during the project (as necessary) and may include one or more of the following techniques presented in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4031, entitled, "Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites," dated October 27, 1989:

1. Applying water on haul roads;

2. Limiting travel speed over the haul roads;
3. Wetting equipment and excavation surfaces;
4. Spraying water on buckets during excavation and dumping; and
5. Covering excavated areas and materials after the excavation activity ceases.

Adequate measures will also be taken to assure that total organic vapor (TOV) levels during the ICM removal activities do not exceed the levels presented in the project-specific health and safety plan (HASP). A PID will be used to monitor the worker breathing zone for TOV levels during the removal activities. PID monitoring will be performed continuously during the implementation of the work activities, and results will be recorded at a minimum frequency of once per hour. If the sustained level of TOV in the worker breathing zone exceeds 5 ppm above background, then the TOV levels will be manually recorded at the downwind perimeter of the work area (i.e., the exclusion zone) at 15 minute intervals. If the TOV levels at the downwind perimeter of the work area exceed 5 ppm above background, then work activities will be halted and additional downwind monitoring will be performed and additional measures will be employed to mitigate the source of the organic vapors.

2.2.8 Erosion and Sedimentation Control

Erosion and sedimentation control measures will be installed prior to the ICM excavation activities to reduce runoff flow velocity and minimize sediment movement into/within the excavation areas. The erosion and sedimentation control measures will consist of silt fencing installed around the perimeter of the excavation areas. The control measures will be constructed and maintained in accordance with the *New York State Standards and Specifications for Erosion and Sedimentation Control* (Empire State Chapter of the Soil and Water Conservation Society, latest edition). The control measures will be inspected daily to determine if the measures are functioning properly and to identify accumulations of silt/sediment. The Contractor will repair the control measures, as necessary, and remove silt/sediment that accumulates behind the measures. The control measures will be left in-place and maintained until the ICM activities are completed.

2.2.9 Site Restoration

Site restoration activities will be initiated following the receipt of laboratory analytical results indicating that the ICM soil removal objectives have been achieved. The site restoration activities will consist of the following:

- removing standing water (if any) that accumulates within the excavation areas after final limits are reached. The standing water will be pumped to a portable storage tank for characterization prior to disposal in accordance with applicable rules and regulations;

- placing non-impacted crushed brick and mortar wall materials generated by previous building demolition activities in the excavated areas. As an alternative (or in addition), excess clean fill material obtained from construction activities underway at nearby offsite locations may be placed in the excavated areas. Sampling will be performed, as appropriate, to verify that the materials do not exhibit unacceptable physical or chemical characteristics;

Delete

See "Demolition Plan"

- grading the clean soil remaining around the excavated areas to remove deep depressions and generally meet the surrounding lines and grades; and

- removing erosion and sedimentation control measures after the ICM activities are completed.

Prior to regrading clean soil around the excavated areas and prior to demobilization, the Contractor will decontaminate equipment that came in contact with impacted site soil.

2.3 ICM Summary Report

Following completion of the ICM activities, an ICM summary report will be prepared. It is anticipated that the summary report will include:

- a detailed description of work performed to complete the ICM activities, including a summary of any changes in the scope of the ICM activities based on field conditions encountered;
- laboratory analytical results for waste characterization, verification, and backfill samples in tabular format with comparisons to applicable criteria;
- figures showing excavation limits and locations where subsurface structure debris removal was performed;
- copies of daily field reports and manifests/certificates of disposal for wastes generated by the ICM activities; and
- copies of data validation reports (for delineation/verification soil samples and backfill samples) and Form 1 results (for waste characterization samples).

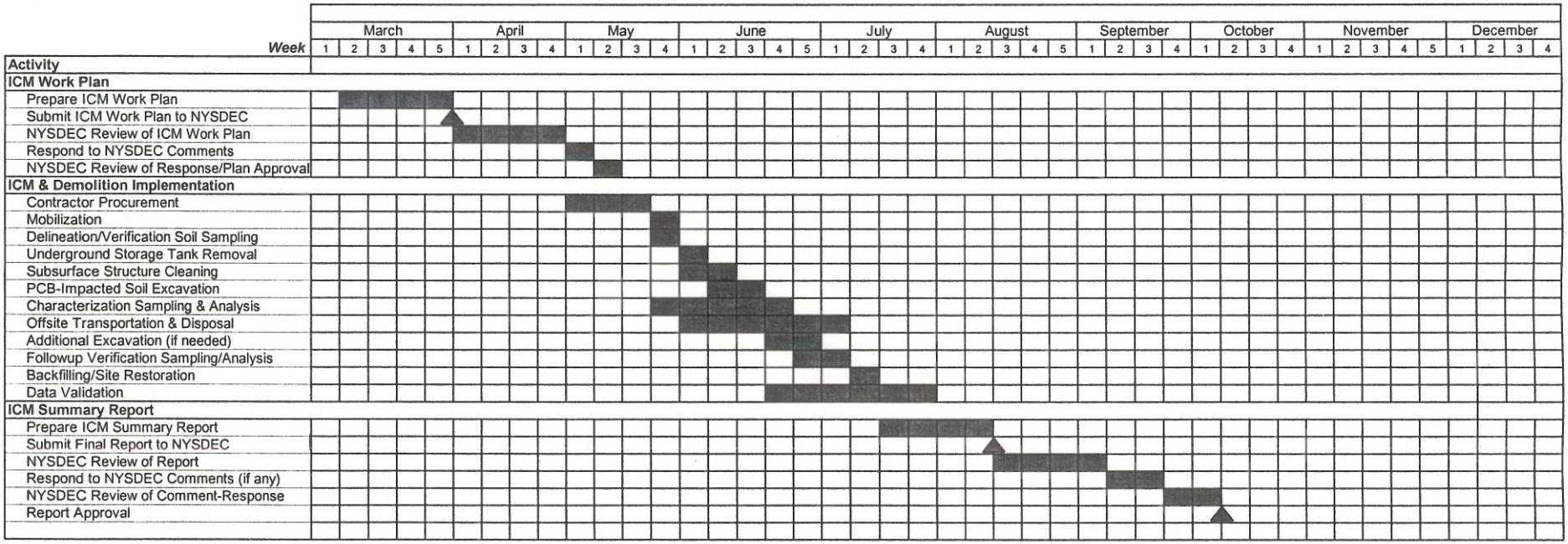
3. Project Schedule

This section presents the anticipated schedule for implementing the ICM activities, including the UST removal, subsurface structure cleaning, PCB-impacted soil excavation activities, and related sampling and waste handling activities. Following NYSDEC approval of this ICM Work Plan, mobilization and pre-excavation verification soil sampling in AOC 39 and delineation soil sampling in AOC 45 will begin within approximately two weeks. In-situ characterization sampling may be performed at that time, as appropriate. Subsurface structure cleaning activities will be performed concurrently with, or immediately following, the delineation/verification sampling activities. UST removal and PCB-impacted soil excavation activities will be performed after the subsurface structure cleaning is completed. Offsite transportation and disposal of wastes generated by the ICM activities will be performed following receipt of characterization sampling results.

The ICM activities are anticipated to take five weeks to complete. Additional soil removal activities (beyond what is currently envisioned) may be required based on delineation/verification sampling results and observations during removal activities. Additional soil removal activities (if needed) would be completed in an expeditious manner. Upon reaching the excavation limits as determined by the verification sampling, each excavation area will be backfilled. It is anticipated that site restoration activities will be conducted within approximately one week. A detailed schedule of ICM activities is included in Table 1.

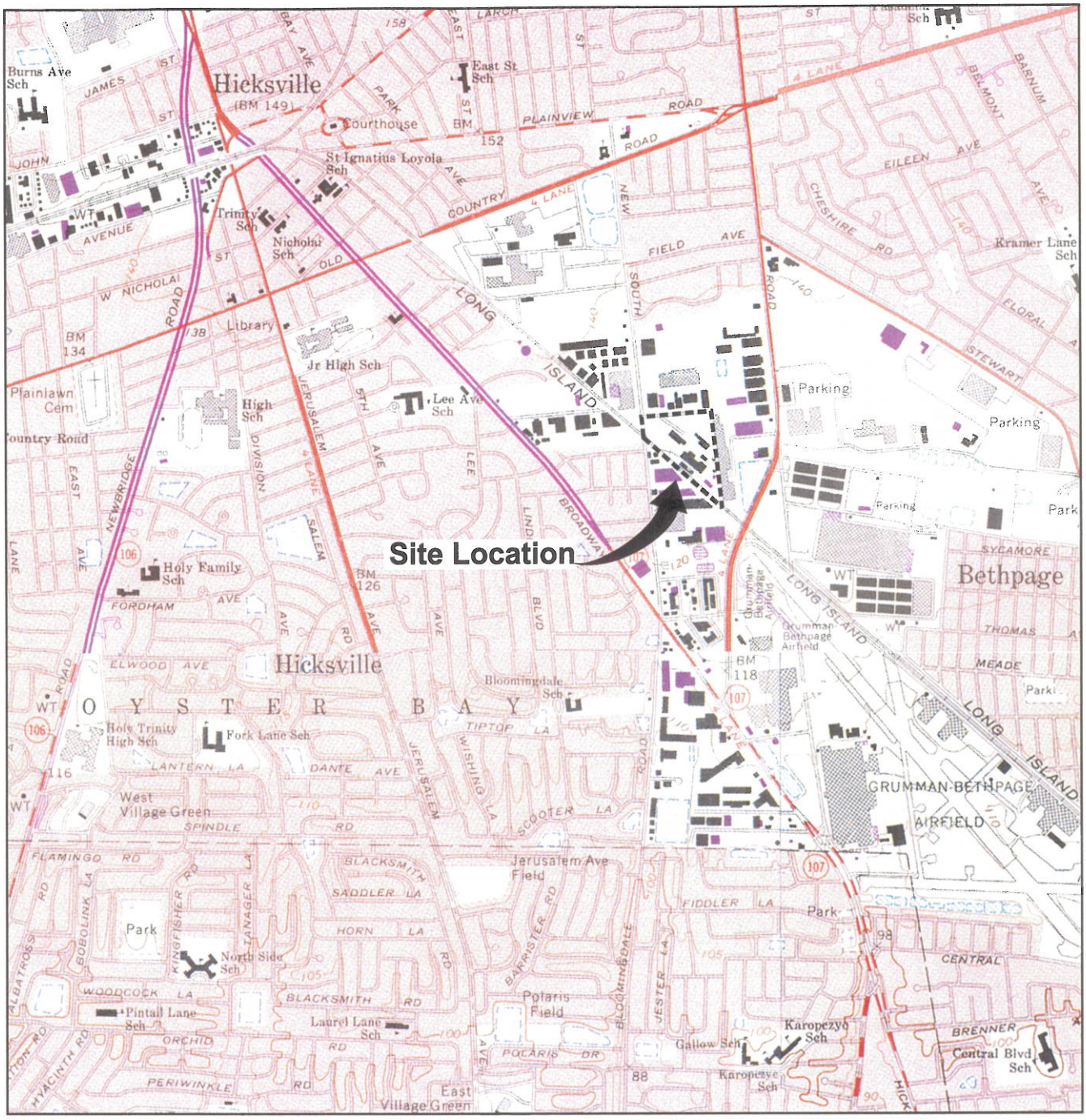
Table 1
Project Schedule

Bayer MaterialScience LLC
125 New South Road
Hicksville, New York



Notes:

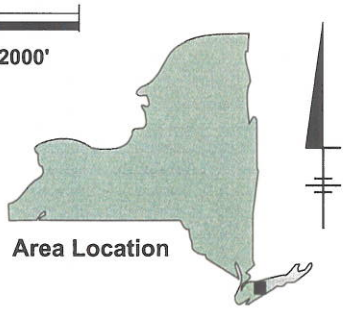
1. Schedule is dependent on timeframe for NYSDEC review/approval of ICM Work Plan and Summary Report.
2. Schedule assumes NYSDEC will provide timely responses concerning field decisions that require their input/approval.
3. Schedule assumes there will be no delays due to inclement weather or unforeseen field conditions.



REFERENCE: Base Map USGS 7.5 Min. Quad., Hicksville, N.Y. 1967, Photorevised 1979.

2000' 0 2000'

Approximate Scale: 1" = 2000'



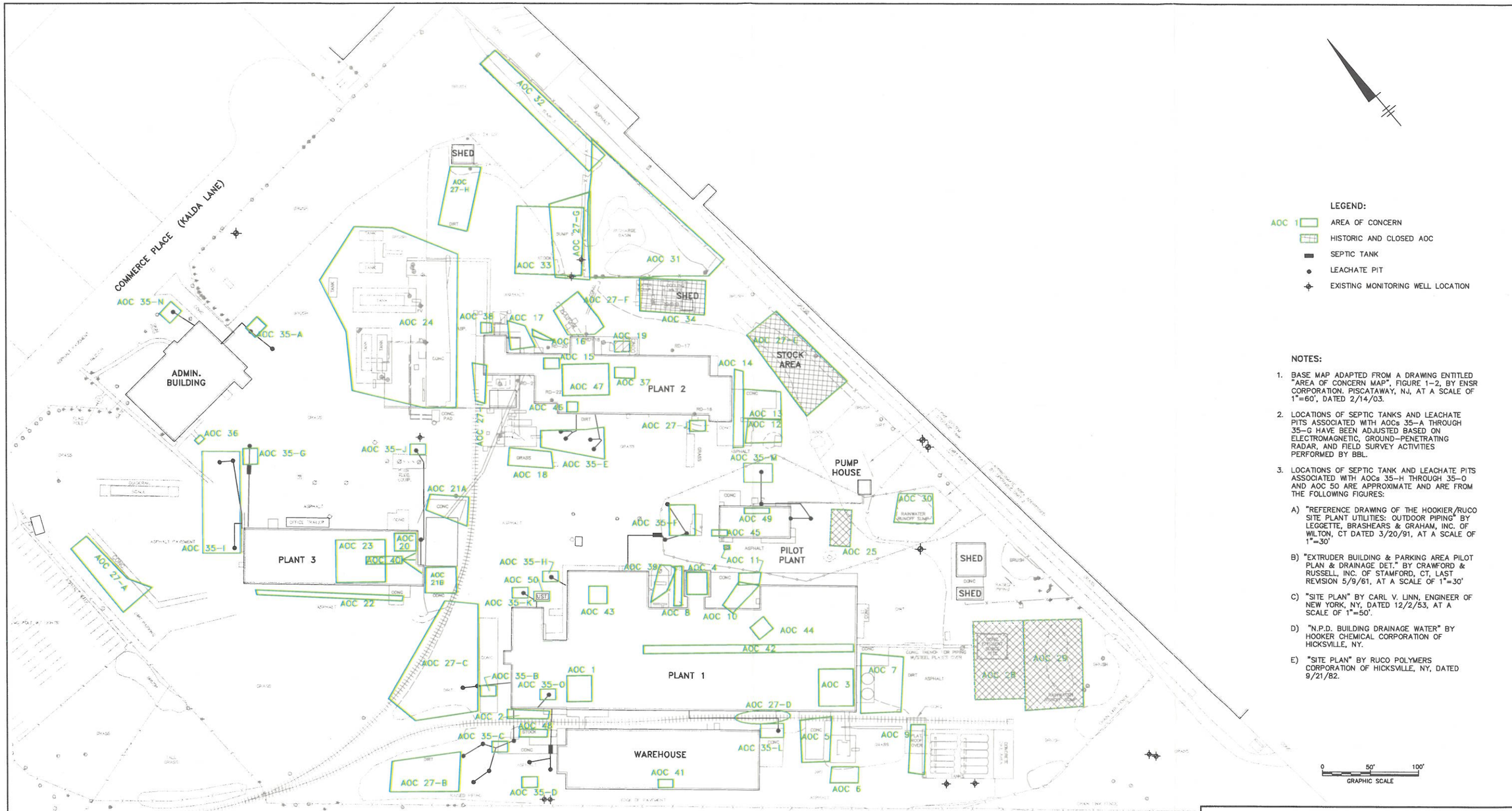
03/21/05 SYR-D85-DJH
32303001/32303n01.cdr

BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

SITE LOCATION MAP

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

FIGURE
1



LEGEND:

- AOC 1 — AREA OF CONCERN
- HISTORIC AND CLOSED AOC
- SEPTIC TANK
- LEACHATE PIT
- EXISTING MONITORING WELL LOCATION

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. LOCATIONS OF SEPTIC TANKS AND LEACHATE PITS ASSOCIATED WITH AOCs 35-A THROUGH 35-G HAVE BEEN ADJUSTED BASED ON ELECTROMAGNETIC, GROUND-PENETRATING RADAR, AND FIELD SURVEY ACTIVITIES PERFORMED BY BBL.
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   - A) "REFERENCE DRAWING OF THE HOOKIER/RUCO SITE PLANT UTILITIES: OUTDOOR PIPING" BY LEGGETTE, BRASHEARS & GRAHAM, INC. OF WILTON, CT DATED 3/20/91, AT A SCALE OF 1"=30'
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   - D) "N.P.D. BUILDING DRAINAGE WATER" BY HOOKER CHEMICAL CORPORATION OF HICKSVILLE, NY.
   - E) "SITE PLAN" BY RUCO POLYMERS CORPORATION OF HICKSVILLE, NY, DATED 9/21/82.

0 50' 100'
GRAPHIC SCALE

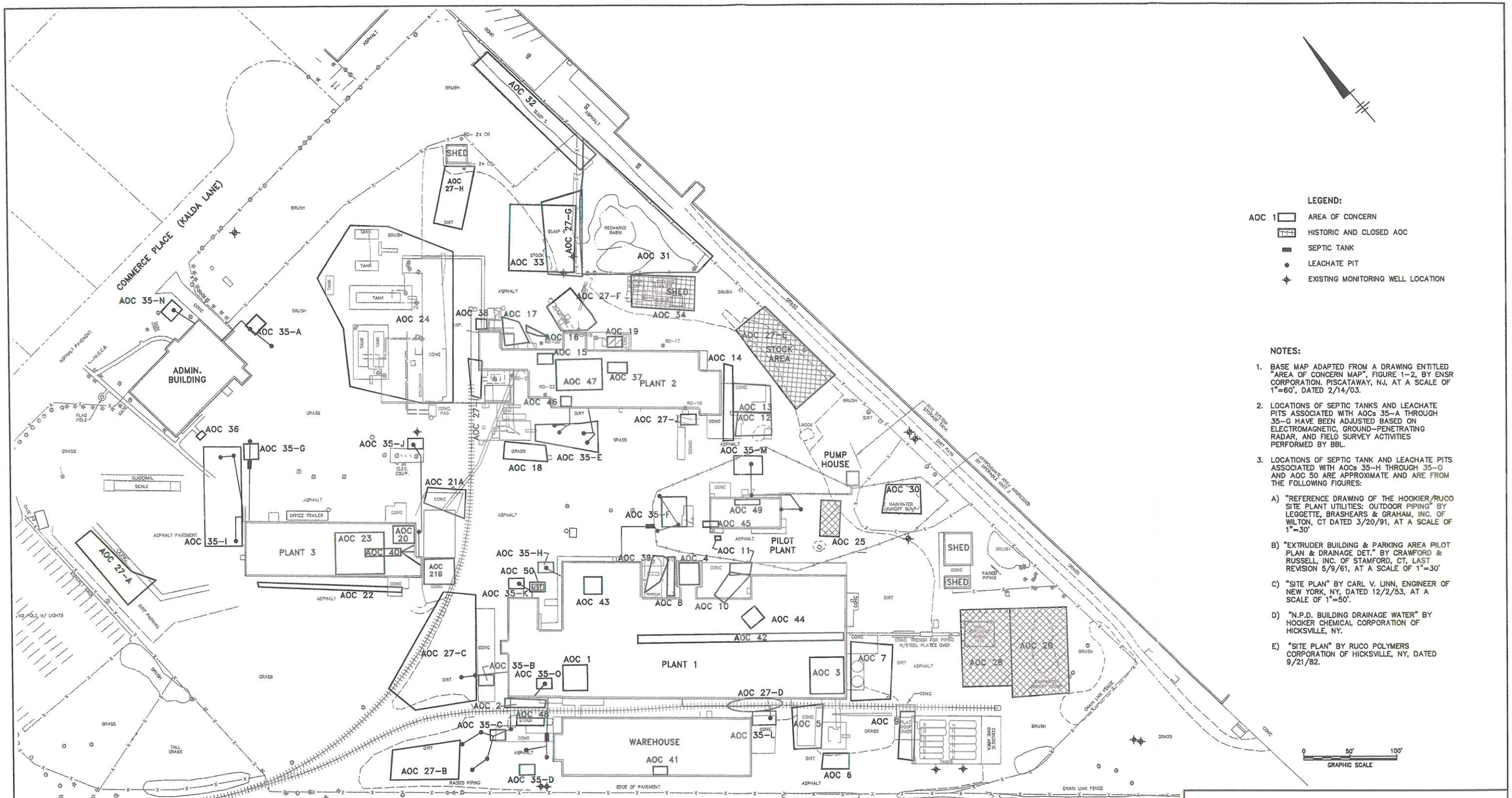
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

SITE LAYOUT PLAN

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

FIGURE 2

X: 32303X01.DWG
L: ON=*, OFF=REF
P: PAGESET/SYR-DL
3/28/05 SYR-85-GMS RCB RCA RCB
32303003/32303B14.DWG



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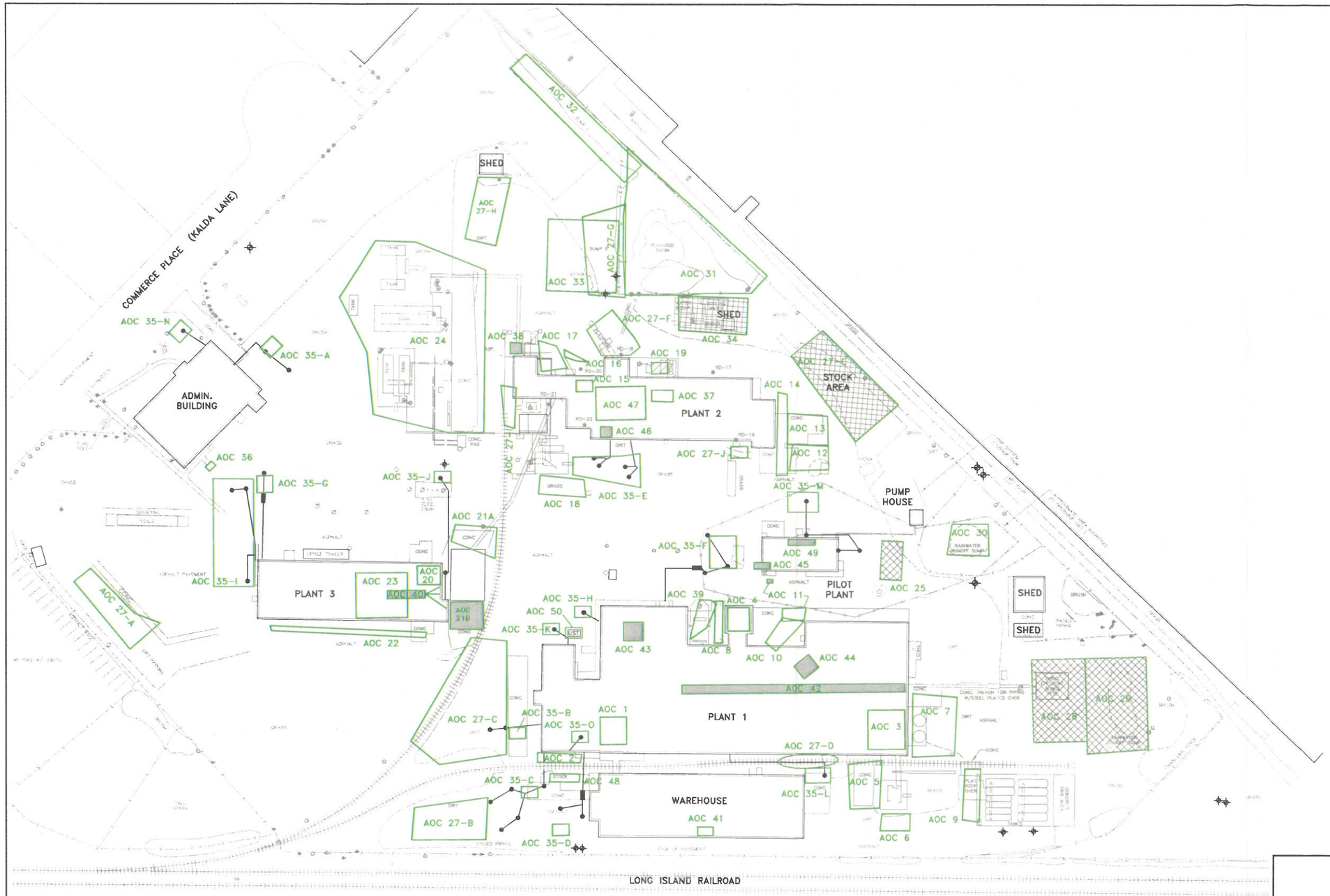

LEGEND:

- AOC 1 — AREA OF CONCERN
- HISTORIC AND CLOSED AOC
- SEPTIC TANK
- LEACHATE PIT
- EXISTING MONITORING WELL LOCATION
- SUBSURFACE STRUCTURE TO BE CLEANED

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0 50' 100'
GRAPHIC SCALE

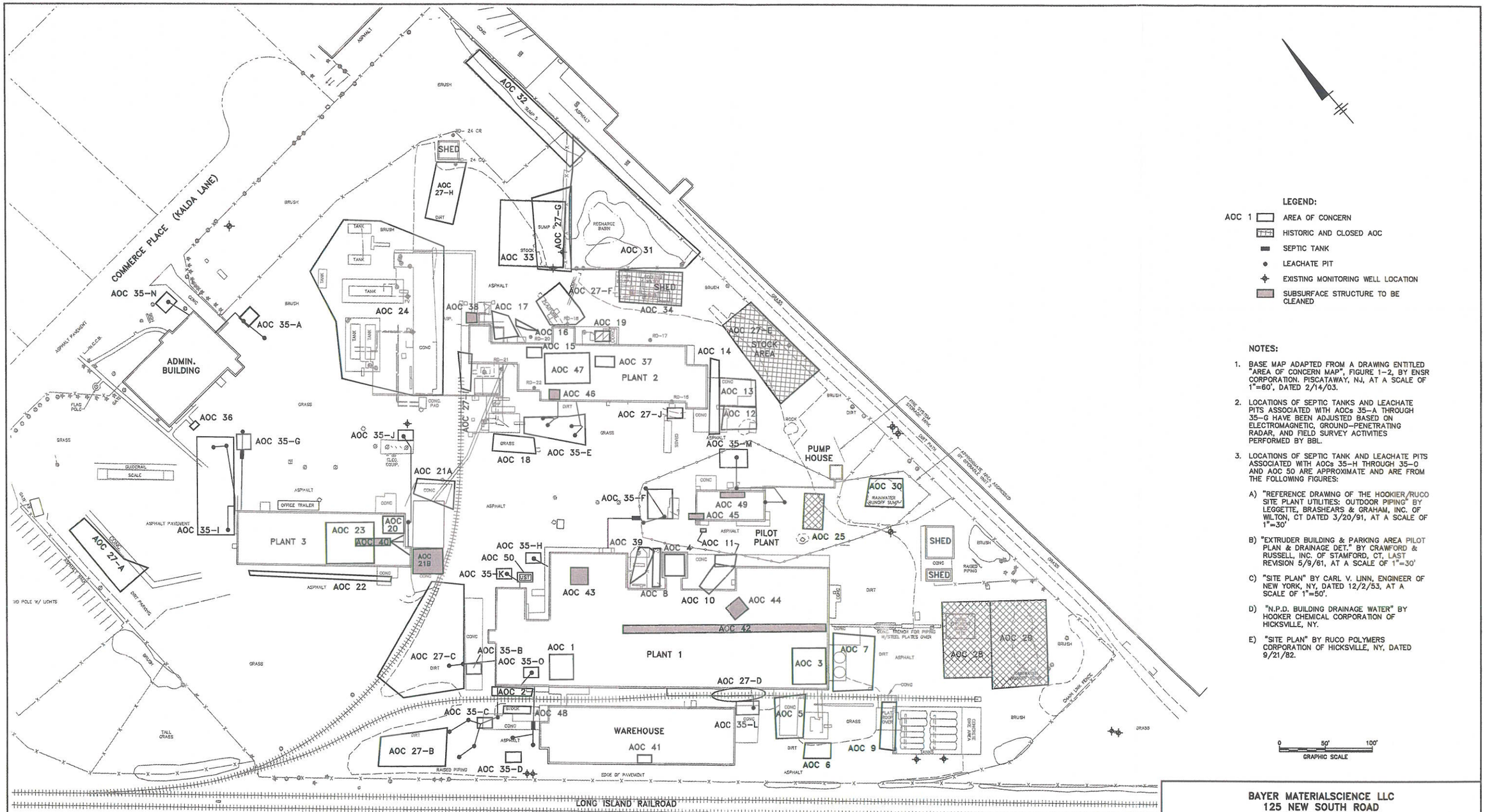
BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

PROPOSED SUBSURFACE STRUCTURE CLEANING LOCATIONS

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

FIGURE 3

X: 32303X01.DWG
L: ON=*, OFF=REF
P: PAGESET/SYR-DL
3/28/05 SYR-BS-GMS RCB RCA RCB
32303008/32303B01.DWG



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125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

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

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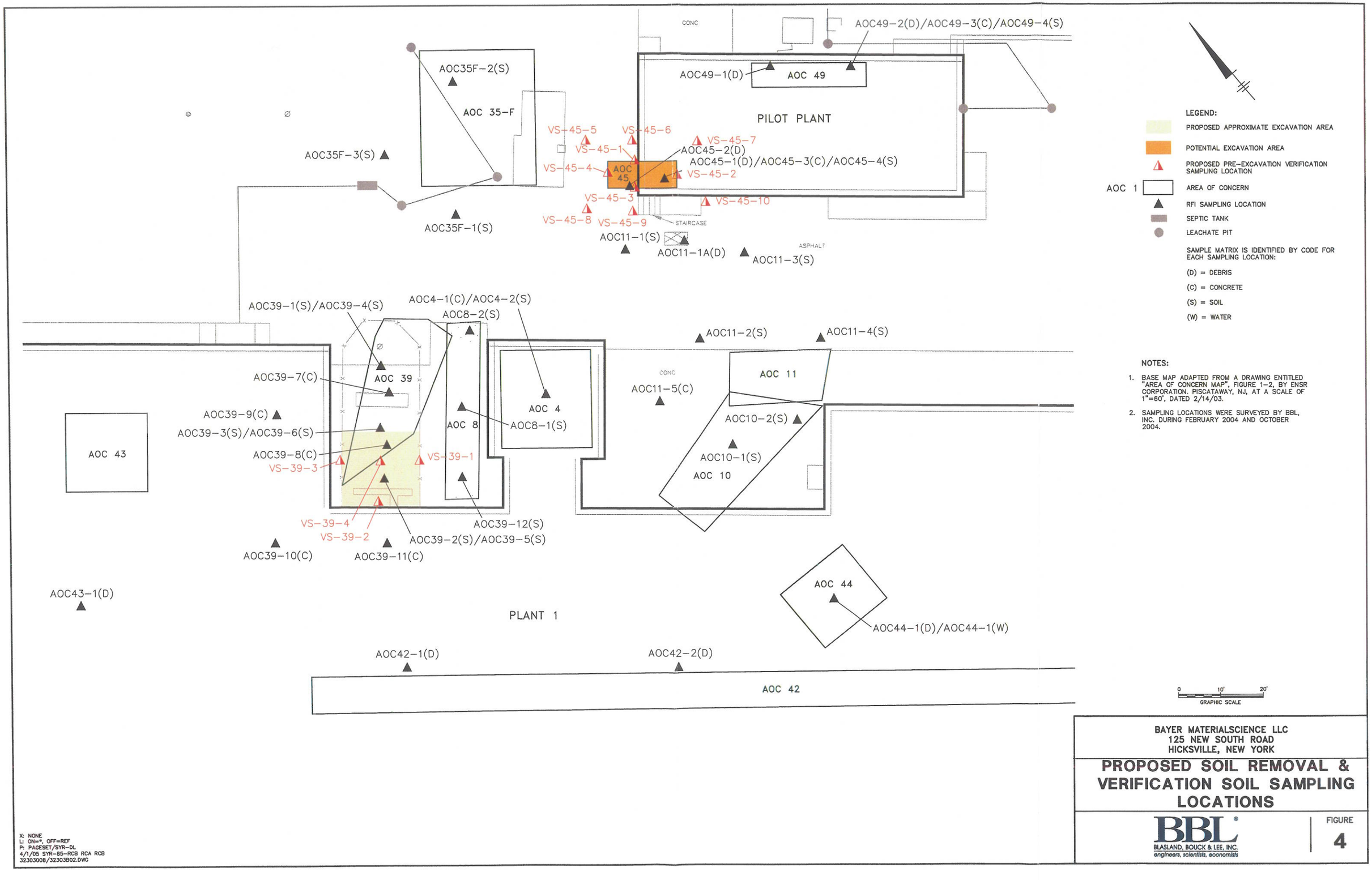

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4/1/05 SYR-85-RCB RCA RCB
32303008/32303B02.DWG

BAYER MATERIALSCIENCE LLC
125 NEW SOUTH ROAD
HICKSVILLE, NEW YORK

PROPOSED SOIL REMOVAL & VERIFICATION SOIL SAMPLING LOCATIONS

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

FIGURE
4