REMEDIAL INVESTIGATION WORK PLAN
BROWNFIELD CLEANUP PROGRAM SITE NO, C902019
FORMER ALLEGANY BITUMENS BELMONT ASPHALT PLANT
5392 STATE ROUTE 19
TOWN OF AMITY, ALLEGANY COUNTY, NEW YORK

JULY 2010

Prepared for:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
270 MICHIGAN AVENUE
BUFFALO, NEW YORK 14203

Prepared on Behalf of:

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July 16, 2010
File: 190500593

New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, NY 14203-2999

Attention: **Mr. William P. Murray, P.E.**

Dear Bill:

Reference: **Remedial Investigation Work Plan**
Brownfield Cleanup Program Site No. C902019
Former Allegany Bitumens Belmont Asphalt Plant
5392 State Route 19
Town of Amity, Allegany County, New York

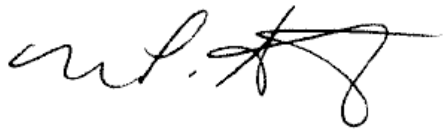
On behalf of Blades Holding Company, Inc., please find enclosed the Remedial Investigation (RI) Work Plan for the Former Allegany Bitumens Belmont Asphalt Plant located at 5392 State Route 19 in the Town of Amity, Allegany County, New York (Site).

This RI Work Plan has been prepared by Stantec Consulting Services Inc. in connection with a BCP Application for the site that is being submitted to the Department by Blades Holding Co., Inc. The scope of the RI proposed in the Work Plan covers the issues and concerns identified during our recent discussions and correspondence with your office.

Please do not hesitate to call should you have any questions or require further information.

Sincerely,

STANTEC CONSULTING SERVICES INC.



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Attachment: RI Work Plan

c: M. Doster (NYSDEC DER, Region 9)
S. Heigel (NYSDEC DER, Site Control Section)
R. Blades (Blades Holding Company)
T. Tuori (Harter Secrest & Emery, LLP)

CERTIFICATION

I, Michael E. Hopkins, certify that I am currently a NYS registered professional engineer and that this Remedial Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Signature

7/16/2010

Date

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1.0 Introduction

This Remedial Investigation (RI) Work Plan (Work Plan) is being submitted to the New York State Department of Environmental Conservation (NYSDEC) in combination with a Brownfield Cleanup Program (BCP) Application for the Former Allegany Bitumens Belmont Asphalt Plant located at 5392 State Route 19 in the Town of Amity, Allegany County, New York (Site) (Figure 1). As part of the BCP, Blades Holding Company, Inc. (Blades) proposes to implement this RI Work Plan. This Work Plan identifies the remedial investigation tasks to be completed in accordance with the BCP and with NYSDEC's DER-10 Technical Guidance for Site Investigation and Remediation (May 3, 2010) (DER-10).

1.1 Purpose

The purposes of the RI are to determine surface and subsurface characteristics of the site, assess the source(s) and determine the nature and extent of contamination on or migrating from the Site, and identify migration pathways and potential receptors. The information to be developed by the RI is needed to allow for the selection of the remedial measures that will attain conditions at the Site which are protective of commercial or industrial use of the Site and are protective of public health, the environment, and fish and wildlife resources in on- and off-site areas affected by contamination and its migration.

1.2 Site Background

1.2.1 Location and Description

The Site is a 4.9$^{\pm}$ acre parcel located at 5392 State Route 19 in the Town of Amity, Allegany County, New York (see Figure 1). The property (Tax Parcel No. 171-1-60) is currently occupied by a non-operational asphalt plant. Operations at this asphalt plant ceased in 2005. Redevelopment of the site is anticipated to involve a commercial or industrial use.

1.2.2 Physical Setting

According to the United States Geological Survey (USGS) Belmont Quadrangle 7.5 Minute topographic map of the area, the subject property elevation ranges from approximately 1,385 feet above mean sea level (amsl) along Route 19 to approximately 1365 ft amsl on the eastern property line along the Tucker's Creek embankment. Surface water drainage from the asphalt manufacturing area is towards a basin adjacent to the feeder hoppers for the asphalt plant aggregate conveyor, and this basin acts as a detention pond. An embankment several to 15 feet high along the northern and eastern property lines limits runoff to the creek from the remaining, gravel-surfaced areas of the site.

Based on the topographic gradient at the site and the presence of the northeast-flowing segment of Tuckers Creek along the eastern site boundary, the direction of groundwater flow at the subject property is expected to be to the east or northeast.

According to mapping prepared by the United States Department of Agriculture (USDA) Soil Conservation Service, as reported by Environmental

Data Resources (EDR), the majority of the native soils on the subject property are identified as Chenango gravelly loam. This soil is described as deep, well drained to excessively drained sands and gravels. The Surficial Geologic Map of New York - Niagara Sheet (Cadwell, and others, 1986) maps the overburden deposits beneath the subject property as fluvial sand and/or gravel along the western property line and recent alluvial deposits of the Genesee River floodplain beneath the eastern two thirds of the property. A significant thickness of fill is likely present above the native soils and sand and gravel overburden deposits at the site, since the ground surface at the site is elevated by several feet or more relative to the ground surface along the valley floor on the east side of Tucker's Creek.

According to the Geologic Map of New York (Rickard and Fisher, 1970), bedrock underlying the subject property is identified as shale and siltstone of the Canadaway group.

The site is located in the Genesee River valley approximately 1200 feet west of the river. The site is elevated approximately 15 feet above the valley floor, and is separated from the current flood plain of the river by a levee and railroad embankment located approximately 750 feet east of the property. The FEMA flood zone designation for the property indicates that the property is outside the 500 year flood zone and is protected from 100 year floods by levee. The channelized segment of Tucker's Creek that is located adjacent to the eastern boundary of the property is designated as being subject to a 1% annual chance of flooding within the stream channel. Surface water bodies in the area of the site are shown on Figure 4.

No significant natural resources, federal or state wetlands, or critical wildlife habitats of threatened or endangered species are known to be present within ½ mile of the property.

1.2.3 Current Site and Surrounding Land Uses

The subject property is improved with a non-operational asphalt plant, control tower, truck scale, scale house, office and laboratory building, oil storage house, and maintenance garage. A gravel-surfaced aggregate stockpile area is located south of the asphalt manufacturing plant structures. Paved parking and staging areas are provided adjacent to the asphalt plant and the laboratory and maintenance garage buildings. These features are shown on Figure 2 – Site Plan.

The site is accessible from and to existing local and regional infrastructure including highways and gas and electric service. Public water supply and municipal sewer services are not currently available in the immediate area of the property. However, the 2008 Allegany County Comprehensive Plan shows the corridor along Route 19 north of Belmont which includes the property as a proposed future water service area and proposed future sewer service area.

The site has a water well that supplied water for site operations and on-site domestic uses until plant operations ceased in 2005. The well is located in the approximate center of the north half of the site adjacent to the northeast

corner of the asphalt plant structure. It is presumed that surrounding properties rely on private wells for their water supply. Additional information on water supply wells located in the vicinity of the Site is presented below in Section 1.2.5.

Land use in the surrounding area is dominated by agricultural uses. Agricultural fields occupy the adjacent property to the east. Agricultural farm houses and barns and single family non-farm residences are located along Route 19 to the north and southeast of the property and along Friendship Hill Road (Tuckers Corner Road) to the west of the property. The property located immediately opposite form the site on the west side of Route 19 is also owned by Blades, and is the site of a vehicle and equipment maintenance shop and small office building which are both currently not in use.

The northern limits of the Village of Belmont are located approximately one-half mile southeast of the property. Undeveloped wooded property is located to the southwest of the property along Tucker's Creek and its small tributaries. These land uses are all visible on the aerial photographic image presented in Figure 3.

No schools or federal, state, county, municipal or community parks or recreational areas are known to be present in the immediate vicinity of the property.

1.2.4 Past Uses of the Site and Adjoining Properties

Detailed information on and documentation of past site and property uses can be found in Stantec's December 2009 Phase I Environmental Site Assessment (ESA) report presented as an attachment to the BCP Application for the site.

The site was used for agricultural purposes or was undeveloped prior to 1960. In March 1960, Blades acquired the property then conveyed the property to its affiliate Allegany Bitumens, Inc.

An asphalt plant was constructed at the site by Allegany Bitumens, Inc. circa 1960 and was operated by Allegany Bitumens, Inc. and, after a 1995 merger, by Blades until Blades discontinued the asphalt plant operations in 2005. Since 2005, the facility has been vacant.

1.2.5 Water Supply in the Surrounding Area

There is no public water supply service for the immediate area of the site. The property is just north of the service area for the Village of Belmont public water supply service. It is therefore presumed that surrounding properties rely on private wells for their water supply.

Based on the information available at this time, it appears unlikely that private wells that are likely to be present on adjacent properties would be impacted by the groundwater contamination identified at the site (see Section 1.2.6 for a description of the groundwater contamination). The

direction of groundwater flow at the subject property is expected to be to the east or northeast towards areas that are undeveloped meadows and agricultural fields. It is therefore likely that the area of groundwater contamination identified on the property is downgradient or cross-gradient from private wells on adjacent properties.

No designated wellhead protection or groundwater recharge areas are known to be located in proximity to the Site. However, the Site and surrounding area is within the footprint of a "principal aquifer" identified by NYSDEC. Available information on mapping of primary and principal aquifers in the area by NYSDEC and the USGS indicate that the aquifer is a confined aquifer in deep gravel deposits that occur in the Genesee River valley. Nevertheless, as described below, currently available information indicates that there are no off-site water supply wells located in areas likely to be downgradient of the area of contamination identified at the site.

A map showing the location of water supply wells listed in government databases and located within one-half mile of the Site is presented on Figure 4. As shown on that map, the wells are located either to the east of the site on the far side of the Genesee River or at locations to the northwest or southeast that are likely to be upgradient of the Site.

Available database information indicates that the Village of Belmont public water supply service operates several other water supply wells at locations to the east and southeast of the site. The available information appears to indicate that the closest wells to the east (the closest well is located on the opposite side of the Genesee River approximately 1600 feet east of the northeast corner of the site) are screened to depths of up to 24 feet in a shallow unconfined aquifer. Based on topographic information it appears that this aquifer would be recharged from upslope areas to the east of the wells. The other water supply wells located east and southeast of the site appear to be deeper wells (90 to 202 feet deep) screened in the confined aquifer that underlies the site. However, the topography of the area suggests that the recharge areas for these wells would also be located to the east or southeast, and therefore these wells appear to be located upgradient of the Belmont Asphalt Plant site.

A search of NYSDEC's online database of water well information was also made. (The search was performed using a search radius of 2 minutes of latitude and longitude.) The search identified three wells, all located ¼ mile or more west of the site along Tuckers Corner Road. These wells are 36 to 161 ft deep wells screened in overburden sand and gravel. Topographic information indicates that each of these wells is located upgradient of the site.

Currently available information and the sampling data collected to date therefore indicate that it is unlikely that the contamination detected on the property would impact the documented water supply wells present in the area surrounding the site.

1.2.6 Previous Investigations and Activities

A Phase I ESA was completed by Stantec in December 2009 in connection with real estate due diligence activities. The Phase I ESA identified one recognized environmental condition associated with the subject property:

- A former on-site laboratory is located in the northwest corner of the Site The laboratory was used for testing of aggregate and asphalt materials manufactured on site to determine whether the materials complied with NYSDOT or customer specifications. Trichloroethylene (TCE) was reportedly used as a solvent in the testing operations. Regular use of TCE at the site was reported to have been discontinued approximately 10 years ago; however, a drum containing approximately 10 gallons of fresh (unused) TCE was present in the laboratory at the time of the Phase I ESA site visit.

  The laboratory building has its own septic system, which reportedly received waste from the sinks and toilet in the laboratory. At the time of the site visit, several empty small- to medium-sized containers were present on an outdoor asphalt-paved pad attached to the east end of the laboratory building. Plant personnel indicated that the pad had not been used for outdoor storage of solvent or waste containers.

  No records or knowledge of releases were identified during the Phase I ESA. However, given the potential for historic releases of TCE, it was recommended that a soil boring program be conducted in the area of the septic system.

Stantec conducted a Phase II ESA in December 2009. Four soil test borings and four temporary monitoring wells were installed for the purposes of collecting soil and groundwater samples adjacent to and downgradient from the former laboratory building and its septic system. The Phase II ESA test boring and monitoring locations are shown on Figure 2. Results indicated the presence of TCE and related volatile organic compounds (VOCs) in an area northeast of the laboratory building. These VOCs were detected in shallow soil and groundwater at levels above NYSDEC's soil cleanup objectives and groundwater standards. Indications of soil contamination were encountered at depths of 5 to 10 feet below ground surface (bgs) in test borings BS-2 and BS-4, and TCE was detected in soil samples from these borings at concentrations of up to 37.5 parts per million (ppm). The water table at the site was encountered at depths of 9 to 10 feet below ground surface, and TCE was detected in BS-2 and BS-4 groundwater samples at concentrations of 0.6 to 2.1 ppm, respectively. Traces of TCE (0.001 to 0.008 ppm) were detected in the groundwater samples from the BS-1 and BS-3 locations.

1.3 Objectives of the Remedial Investigation

The objectives of this Remedial Investigation are:

- to determine the nature and extent of contamination of soil and shallow groundwater in and migration from the area where VOC contamination was identified in the Phase II ESA in the vicinity of the laboratory building.
- to investigate potential soil and/or groundwater impacts in areas not previously sampled, including:
  - deep groundwater at the existing on-site water supply well;
  - soil near electrical transformers;
  - soil and shallow groundwater near the oil house and maintenance garage;
  - soil and shallow groundwater near the asphalt tanks;
  - soil and shallow groundwater near the asphalt plant;
  - soil in the basin below the aggregate hoppers;
  - soil in the berm along the north and east property boundary;
  - surface and subsurface soil across the site; and
  - shallow groundwater around the perimeter of the site.
- to investigate the following areas and concerns with a second phase of field work, the scope of which will be determined based on the results of the activities listed above:
  - deep groundwater impacts;
  - impacts to the surface water pond to the northeast of the laboratory building; and
  - impacts to the surface water, sediment and surface soil in and along Tucker's Creek.
- to investigate the potential for soil vapor intrusion and contamination of indoor air and sub-slab air in and beneath the laboratory building if and when the building is reoccupied.

1.4 Additional Plans

Additional complimentary plans, including a Quality Assurance Project Plan (QAPP), Health and Safety Plan (HASP), Citizen Participation Plan (CPP), and Community Air Monitoring Plan (CAMP), have been prepared to supplement this RI Work Plan. All work to be performed for this investigation will be performed in accordance with this work plan and each of the complimentary plans. Appendices A through D of this Work Plan present these additional plans:

- **QAPP:** Outlines the procedures to be used to assure that analytical results obtained from the investigation meet data quality objectives (Appendix A).
- **HASP:** Describes personal safety protection standards and procedures to be followed by Stantec personnel during the planned investigation activities at

the Site (Appendix B). Material Safety Data Sheets (MSDS) for the chemicals suspected to be encountered at the Site are provided as an appendix to the HASP.

- **CPP:** Describes the procedure for informing and involving the public during the remedial investigation. The Citizen Participation Plan (CPP) provides summary information regarding the history of the Site, a chronology of environmental investigations conducted to date, the primary contacts for various state and local agencies, as well as private entities involved in environmental investigation and investigation activities being conducted at the Site. The CPP is included as Appendix C.

- **CAMP:** Describes procedures for monitoring and controlling VOC and particulate air quality issues that may arise during intrusive drilling, excavating, and sampling activities planned at the Site (Appendix D).

2.0 Field Investigation

The RI will involve the following field activities:

- Passive soil gas surveys
- Test borings with soil sampling
- Shallow overburden monitoring well installations with well development and groundwater sampling
- Groundwater level measurement
- Inspection of and deep groundwater sampling from the existing site water supply well
- Surface soil sampling
- Test pit excavations with subsurface soil sampling
- Design and implementation of a deep groundwater monitoring well installation program
- Aquifer testing
- Sampling of surface water, sediment, and surface soil in and along surface water bodies
- Sampling point location and elevation survey

Sampling locations will include sampling points at and downgradient from the laboratory building, underneath the electrical transformers, near the oil house and maintenance garage, near the asphalt tanks, near the asphalt plant, in the basin adjacent to the aggregate hoppers, from the berm along the north and east site boundary, and points for characterizing sitewide soil and site perimeter groundwater conditions.

The proposed sampling activities in each area are summarized in Table 1. Proposed sampling locations are depicted on Figure 5.

The RI will be conducted using a phased approach such that initial work will help to determine the details or specific locations of the later work. During Phase 1, passive soil gas (PSG) surveys will be performed. With the concurrence of NYSDEC, PSG results will be used to finalize locations for soil boring and shallow monitoring well locations. Soil borings and shallow monitoring wells will be installed, and surface soil sampling and test pit excavation with subsurface soil sampling will be conducted. (Surface soil sampling will be conducted before other field activities as necessary to avoid disturbance of surface soils prior to sampling.) Monitoring wells will be developed and sampled. The on-site water supply well will be inspected and sampled. A location and elevation survey will be performed, and water levels in existing wells and wells installed during Phase 1 will be measured.

Phase 2 of the RI will be developed based on the Phase 1 data. It is currently anticipated that Phase 2 may include:

- The installation of a deep groundwater well beyond the downgradient limit of the shallow groundwater source area to the depth of the on-site water supply well.

- An off-site sampling program for surface water from the pond located northeast of the laboratory building and from Tuckers Creek and for sediment and surface soils in and along Tuckers Creek.
- Aquifer testing and a second groundwater sampling and water-level measurement event that will include existing, Phase 1 and Phase 2 shallow and deep wells.

2.1 Mobilization

This task includes all preparation and pre-field work activities including obtaining access to neighboring properties, subcontract preparation, equipment rental, acquisition of necessary supplies, and underground utility notification.

2.2 General Sampling Considerations

Sampling will be performed during several investigative activities described in the following sections (Section 2.3, for example). Soil borings will be installed with continuous soil sampling to the top of native soil or the water table, whichever is deeper. Soil borings for monitoring well installations will be installed with continuous soil sampling to approximately eight feet below the water table. Where possible using a backhoe, test pits will also be advanced to native soil and/or the water table.

Soil samples will be screened with a calibrated photoionization detector (PID), such as the miniRAE 2000, for the presence of volatile organic vapors. Soil samples will also be visually observed for indications of staining, oils, fill, etc. PID readings, odors, visual observations and lithologic information will be logged for each location.

Except where noted below, at each boring and test pit a minimum of one soil sample will be selected for laboratory analysis. Intervals exhibiting the strongest evidence of contamination or non-native fill deposits will be selected for analysis. Sample selection will be based on field observation and field screening results. If no impacts or fill are observed, soil samples will be collected at the water table, if it is reached. If it is not reached, a sample will be collected from the deepest interval attained. If significant impacts are observed in soil borings or test pits, a second soil sample may be collected at those locations to assist in delineating the vertical extent of impacts.

Samples will be submitted to an environmental laboratory for the analysis of various chemical parameters specified below. Among all the soil (including surface soils [see Section 2.3], subsurface soils from test pits [see Section 2.4], and subsurface soils from borings [see Section 2.6]) and groundwater samples to be collected during the RI, 20% to 30% of the samples of both media will be analyzed for a full suite of parameters, including:

- Target Compound List (TCL) VOCs by EPA SW846 Method 8260;
- TCL Semivolatile Organic Compounds (SVOCs) by EPA Method 8270;

- TCL Pesticides/Polychlorinated biphenyls (PCBs) by EPA Methods 8081/8082; and
- Target Analyte List (TAL) Metals by EPA Methods 6010 or 7000-series.

2.3 Surface Soil Sampling

Five surface soil samples will be collected from locations distributed across the site (SS-1 through SS-5) and one surface soil sample will be collected from the basin adjacent to the aggregate hoppers (SS-6). Surface soil samples will be collected from 0 to 2 inches below the vegetative cover.

Two surface soil samples will be analyzed for the full suite of TCL/TAL parameters minus VOCs, unless VOCs or odors are noted during sampling. Each of the remaining samples will be analyzed for polycyclic aromatic hydrocarbons (PAHs) by United States Environmental Protection Agency (EPA) Method 8270. If staining or odors are observed or if field screening indicates contamination, additional parameters will be added, as appropriate.

2.4 Test Pit Investigation and Subsurface Soil Sampling

Five test pits (TP-1 through TP-5) will be excavated from locations distributed across the site (at the locations of the surface soil samples SS-1 though SS-5 described above) and seven test pits (TP-6 through TP-12) will be excavated from the berms along the north and east boundary of the site.

As indicated in Section 2.2, where possible test pits will be advanced to native soil and/or the water table. The test pits in the perimeter berms will be excavated at least to the base of the berm and, if possible, through underlying fill material. Test pit dimensions, orientation, and a lithologic description will be recorded and photographs will be taken at each test pit location.

One subsurface soil sample will be collected from each test pit locations distributed across the site (TP1 to TP-5) and a mimimum of three soil samples will be collected from the test pit locations along the berms (TP-6 through TP-12) . If significant impacts are observed in the test pits in the field, a second soil sample may be collected per location to assist in delineating the vertical extent of impacts at those locations.

Three of the test pit samples will be submitted for analysis of the full suite of TCL/TAL parameters. Each of the remaining samples will be analyzed for PAHs by EPA Method 8270. If staining or odors are observed or if field screening indicates contamination, additional parameters will be added, as appropriate.

2.5 Soil Gas Surveys

PSG surveys will be conducted in three areas, including two areas surrounding and downgradient from the laboratory building and one surrounding the oil house and maintenance garage. The PSG surveys will be performed to map the distribution of VOCs in shallow soil gas. The results will provide indirect information on: 1) the

location of potential sources for the TCE impacts at the lab building, 2) the extent of the contamination in shallow groundwater around and downgradient from the lab building, and 3) the presence or absence and extent, if present, of contamination in the vicinity of the oil house and maintenance garage.

The first PSG survey near the laboratory building will consist of eight PSG modules placed in a grid pattern. It will focus on the area immediately surrounding the laboratory building and the container storage pad at the east end of the building to map the soil contamination source area. The second PSG survey will include 12 PSG modules in a grid pattern that will extend beyond the likely source area to the areas north, east and south of the BS-2 and BS-4 test borings to attempt to determine the downgradient extent of contamination in shallow groundwater.

The third PSG survey area will cover the area of the oil storage house and maintenance garage. It will consist of eight PSG modules in a grid pattern.

It is anticipated that the surveys will be performed using PSG sampling modules provided by Beacon Environmental Services Inc. of Bel Air, Maryland (Beacon) or a similar PSG sampling methodology. Modules will be installed and retrieved per the manufacturer's instructions. The modules are typically placed and allowed to passively absorb compounds for approximately two weeks prior to retrieval. For the laboratory building area survey, chlorinated VOCs will be targeted and for the oil house/maintenance garage area, chlorinated and petroleum VOCs will be targeted. The samplers will be analyzed using EPA Method 8260.

Portions of the PSG survey areas near the laboratory building are on a neighboring property. Once the Remedial Investigation Work Plan has been approved by the State, access from the neighboring landowner will be sought to allow for installation of the PSG samplers and later test borings and monitoring wells. If permission for access cannot be obtained, Blades will approach NYSDEC and request assistance with this effort.

2.6 Monitoring Well Installations and Subsurface Soil Sampling

Once the results of the PSG survey have been evaluated, a drilling program will be performed to collect soil samples and install shallow groundwater monitoring wells. Groundwater sampling and groundwater elevation monitoring will be performed to assess the extent of contamination and direction of groundwater flow at the water table.

Soil borings and monitoring wells will be installed in the areas listed below. The approximate locations are depicted on Figure 5; however, these are subject to change based on the results of the PSG surveys. The soil sampling in the lab building and oil house/maintenance garage areas will focus on potential source areas identified by the PSG survey results. Shallow monitoring wells will be installed both within and beyond the apparent plume area(s) identified by the PSG results.

- Eight borings will be installed in the vicinity of the laboratory building to define the source area (B/MW-5 through B/MW-8 and B-15 through B-18). Shallow monitoring wells will be installed at four of these locations (B/MW-5 through B/MW-8). The locations of these borings and wells will be finalized

after the evaluation of the PSG survey in this area. Some of these locations will be off-site and access permission will need to be obtained from the neighboring property owner.

- One boring will be installed near the pole-mounted electrical transformers located east of the laboratory building (B-17).
- Four borings will be installed in the vicinity of the oil house and maintenance garage (B/MW-9 and B-19 through B-21). A shallow monitoring well will be installed in one of these locations in the expected downgradient direction (B/MW-9). As discussed above in Section 2.4, the locations of these borings and wells will be finalized after the evaluation of the PSG survey in this area.
- One boring will be installed near the asphalt tanks with a shallow monitoring well installed in this boring (B/MW-10).
- One boring will be installed near the asphalt plant with a shallow monitoring well installed in this boring (B/MW-11).
- Three shallow wells will be installed around the perimeter of the site, including near the center of the western boundary (B/MW-12), at the south end (B/MW-13), and in the northeast corner (B/MW-14).

The borings will be installed with either a direct push rig and Macrocore® samplers or a rotary drill rig using either Macrocore® samplers or split spoon samplers. All monitoring wells will be installed with a rotary drill rig using 4¼-inch hollow stem augers. The shallow monitoring wells will be screened across the water table, which is estimated to be nine to ten feet below ground surface (ft bgs).

Soil samples from one of the lab area borings, one of the oil house/maintenance garage borings, the transformer boring, the asphalt tanks boring, and one of perimeter well borings will be analyzed for the full suite of TCL/TAL parameters. The remaining soil samples collected in the vicinity of the laboratory building will be analyzed for TCL VOCs by EPA Method 8260. The other soil samples from the borings will be analyzed for PAHs by EPA Method 8270. If staining or odors are observed or if field screening indicates contamination, additional parameters will be added, as appropriate. Tables 1 and 2 summarize the analytical parameters and methods.

At the completion of the boring for each groundwater monitoring well, a well will be constructed using 2-inch diameter, schedule-40 PVC with 10-ft. of 0.010-inch slot well screen. Sand packs will consist of fine sand extending up to 24 inches above the well screens. The sand packs will be capped with bentonite seals and the remaining annulus will be grouted to the surface. A protective casing held in place with a Portland cement concrete mix will be installed at the surface grade. An inner cap will be installed on the well riser.

2.7 Groundwater Monitoring Well Development

After allowing the bentonite seals to expand for a minimum of 48 hours, the monitoring wells will be developed in an effort to cleanse them of suspended

sediments so that turbidities are reduced to the maximum extent practicable. Turbidity will be monitored during well development.

2.8 Upgrade of Phase II ESA Monitoring Wells

Protective casings will be installed on Phase II ESA monitoring wells BS-2 though BS-4.

2.9 Groundwater Elevation Measurement

Prior to purging and sampling during both rounds of ground water sampling (see Section 2.8), the static water level will be measured in each well previously installed and those newly installed under this program. The water level measurements will be used to develop a groundwater table contour map and provide groundwater flow directions. Water levels will be measured from surveyed PVC well risers using an audible water level indicator.

2.10 Groundwater Sampling

Two rounds of groundwater sampling will be performed. During the first round of sampling, groundwater sampling will occur a minimum of two weeks after the completion of well development to ensure that the groundwater conditions have stabilized sufficiently. In this first round of sampling, the three previously installed wells (wells BS-2 though BS-4) and all newly installed monitoring wells (MW-5 through MW-14) will be purged and sampled utilizing EPA Region 2 low stress/low flow methods and a flow through cell, provided there is enough water in the wells to carry out these procedures. General water quality field parameters (i.e., pH, temperature, specific conductance, oxidation reduction potential, dissolved oxygen and turbidity) will be monitored during purging. If there is not sufficient water in a well for low flow sampling procedures, the well will be purged and sampled with a dedicated polyethylene bailer. The well will be purged until three well volumes are removed, or until the well goes dry. Specific conductance, temperature and pH will be monitored and stabilized (10% over three well volumes) prior to sampling. Turbidity need not be stable, but a value of 50 NTU or less will be attempted prior to collection of metals samples. Should this prove unobtainable, Stantec will discuss methods of reducing sample turbidity with the NYSDEC (e.g., field filtering) that are consistent with DER-10.

It is currently anticipated that samples from one lab building area well, the oil house/maintenance garage well, and the asphalt plant area well will be analyzed for the full suite of TCL/TAL parameters. Each remaining groundwater sample will be analyzed for TCL VOCs using EPA Method 8260 and, with the exception of the remaining wells in the laboratory building area, for PAHs by EPA Method 8270.

During the second round of sampling, which will occur during Phase 2 of the RI, the same procedures will be employed; however, the results of the first round of sampling will be used to determine the wells to be sampled and parameters to be analyzed during Round 2.

2.11 Water Supply Well Inspection and Sampling

The Site has a water supply well that has been out of use since operations at the Site were discontinued in 2005. As shown on Figure 5, the well is located approximately 200 feet east-southeast of the laboratory. No information on well construction is available. A video inspection of the well will be conducted to determine its depth and construction. The groundwater from the well will also be sampled. If possible, the existing pumping system in the well will be used to purge at least three well volumes. Purge water will be discharged to the ground surface near the well. Specific conductance, temperature and pH will be monitored and stabilized (10% over three well volumes) prior to sampling. Turbidity need not be stable, but a value of 50 NTU or less will be attempted prior to collection of metals samples. Should this prove unobtainable, Stantec will discuss methods of reducing sample turbidity with the NYSDEC (e.g., field filtering) that are consistent with DER-10. The groundwater sample will be analyzed for the full suite of parameters described in Section 2.2.

The data obtained from the inspection and sampling will be used in concert with the Round 1 shallow monitoring well sampling results to determine a deep groundwater investigation program (see Section 2.10).

2.12 Phase 2 Groundwater Investigation

After the above activities described in Sections 2.1 through 2.11 have been completed, as part of Phase 2 of the RI, a test boring and well installation program will be designed and implemented to evaluate the vertical extent of deeper groundwater impacts below the shallow (water table) horizon. The Phase 2 groundwater activities may also include, if appropriate, an evaluation of the potential viability of monitored natural attenuation (MNA) as a remedial approach. NYSDEC will be provided with the data from Phase 1 and will be asked to approve the proposed Phase 2 plan prior to its implementation.

At present, it is anticipated that a deep test boring will be drilled in the area east or northeast of the laboratory building at a location beyond the apparent downgradient limits of the source area identified by the soil and shallow groundwater water sampling program described above. The test boring will be performed with continuous soil sampling and field screening for VOCs to evaluate the stratigraphy of the sand and gravel deposits at the Site and determine whether and at what depths confining or low-permeability layers (aquitards) may be present that would affect the potential distribution and vertical migration of contamination. The boring will be used to install a deep monitoring well in the horizon that would be most likely to be impacted by downward vertical migration of contaminants. The depth of the boring and well will be determined by the conditions encountered; however, it is anticipated the boring will be drilled and the well may be installed to the same depth as the on-site water supply well. Soil and groundwater samples will be collected with analyses to be determined based on shallow groundwater monitoring well and water supply well analytical results. Monitoring well installation, development, and sampling procedures will be as described in Sections 2.5, 2.6, and 2.8. Roto-sonic drilling methods may be used for the test boring and monitoring well installations.

2.13 Aquifer Testing

Hydraulic conductivity tests (slug tests) will be performed on approximately six newly installed wells at locations across the site and in various depth intervals. The tests will consist of the addition and/or removal of a slug in order to determine the hydraulic conductivity of the aquifer in the immediate vicinity of each well. The test will be accomplished by recording water level changes with a pressure transducer (e.g., LevelTROLL 700) following the insertion (falling head test) and/or withdrawal (rising head test) of a solid slug. After field tests are completed, the slug test data will be analyzed with commercially available software (i.e. AQTESOLV) in order to determine approximate hydraulic conductivity values.

If the results of the deep groundwater investigation indicate the presence of contamination in deeper groundwater, a pumping test using the existing water supply well may be necessary to characterize the impacted aquifer. The need for and methods of pump testing will be reviewed with NYSDEC at the appropriate time.

2.14 Surface Water Investigation

Based on Phase 1 shallow groundwater monitoring results, a surface water investigation may be conducted during Phase 2 of the investigation. As shown on Figure 5, surface water bodies are located off-site on adjacent properties to the north and east of the site. A pond is located approximately 200 feet northeast of the laboratory building, and Tuckers Creek flows northeast along the eastern Site boundary. The results of the shallow groundwater sampling program described above will be evaluated to determine whether discharge of contaminated groundwater to either of the surface water bodies is likely. If a potential for discharge of contaminated groundwater to either surface water body is identified, sampling of surface water from the pond and Tucker's Creek will be performed. The number of samples and analytical parameters will be determined based on the shallow groundwater sampling results. NYSDEC will be provided with the data from Phase 1 and will be asked to approve the proposed Phase 2 plan.

2.15 Sediment and Surface Soil Sampling Along Tucker's Creek

Based on Phase 1 soil and groundwater sampling results, a sediment and surface soil sampling program for Tuckers Creek may be conducted during Phase 2 of the investigation. Sediment and surface soil sampling will be performed in and along Tuckers Creek if the Phase I results indicate that a potential exists either for discharge of contaminated groundwater to the creek or for erosion of contaminated soil towards the creek from higher-elevation on-site areas above the west bank of the creek. NYSDEC will be provided with a sampling plan for approval prior to implementation.

2.16 Soil Vapor Sampling

The Site is currently unoccupied. There is a chance that the existing laboratory building will not be reused and would be torn down in connection with remediation and/or redevelopment of the Site. However, if a plan to reoccupy the laboratory building develops in the future, indoor air and sub-slab vapor sampling will be performed in advance of its being used to determine whether there would be a potential for intrusion of soil vapor with VOCs at the laboratory building. Sampling

and analysis would be performed in accordance with applicable NYSDEC and NYSDOH guidance.

2.17 Decontamination

Sampling methods and equipment have been chosen to minimize the need for decontamination. All non-dedicated equipment will be decontaminated prior to and following each use. Decontamination of drilling and test pit excavation equipment will be accomplished with high pressure washer. Decontamination of smaller equipment (such as Macrocore® samplers, split spoons and dredges) will consist of a wash with Alconox (or equivalent) solution and a water rinse. Following decontamination, direct contact between sampling equipment and the ground surface will not be permitted.

2.18 Investigation Derived Waste (IDW)

IDW will be handled and disposed of in accordance with DER-10. Where permitted by DER-10, IDW from uncontaminated areas may be discharged or replaced on site.

2.19 Sampling Location Survey

Subsequent to field work, each newly installed monitoring well will be surveyed for horizontal and vertical control by a licensed surveyor. Other sampling locations will be surveyed for horizontal control by a licensed surveyor or with a handheld GPS unit, such as the GeoXT, with sub-meter accuracy.

2.20 Field Quality Control Samples

Table 2 summarizes the field quality control (QC) samples to be collected during the field investigation. Field QC samples to be collected include field duplicates, trip blanks, rinsate blanks, and matrix spike/matrix spike duplicate analyses. As per Table 2, field duplicates and matrix spike/matrix spike duplicates will be collected at a rate of one per 20 field samples. Trip blanks will be used for aqueous matrices only and will consist of deionized water. A trip blank will accompany each shipment of VOCs. One rinsate blank will be collected for each piece of non-dedicated sampling equipment used. It will be collected by pouring deionized water over decontaminated equipment. The non-dedicated equipment planned for this project may include split spoon samplers, a backhoe or excavator bucket, and a sediment sampling device, such as a dredge or dipper.

3.0 Analytical Program

Sampling and analytical activities will be conducted in accordance with standard environmental sampling and analytical guidelines and protocols contained in the Quality Assurance Project Plan (QAPP) as presented in Appendix A.

Laboratory analyses will be performed by a laboratory accredited pursuant to the New York State Department of Health Environmental Laboratory Accreditation Program (ELAP). Table 2 summarizes the proposed sampling and analysis for each medium. Analytical reports will be prepared in accordance with the NYSDEC Analytical Services Protocol (ASP) Category B requirements.

All analytical data will undergo a data usability evaluation (DUSR). The data usability evaluation will be performed in accordance with the NYSDEC's "Guidance for the Development of Data Usability Summary Reports," revised 1997 and DER-10. Analytical summary tables will be prepared which summarize the data and compare them to New York State Standards, Objectives and Guidance. This will include, as applicable: NYSDEC Class C Water Quality Standards and Guidance Values for surface water; NYSDEC 6 NYCRR Part 375 Commercial Restricted Use Soil Cleanup Objectives for subsurface soil and sediment; NYSDEC Class GA Water Quality Standards and Guidance Values for groundwater; and the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006).

4.0 Qualitative Exposure Assessment

A qualitative exposure assessment addressing potential impacts to human health and fish and wildlife resources will be performed in accordance with DER-10 as part of the RI. At this time, based on available information, the need for a Fish and Wildlife Resource Impact Analysis (FWRIA) has not yet been determined. The need for an FWRIA will be determined by NYSDEC.

5.0 Documentation and Reporting

Detailed documentation of site activities will be maintained during the field work. Reporting will include submission of a final written report to NYSDEC. The written report will be provided to the DEC in both hard copy and electronically on compact disk.

5.1 Field Documentation

Documentation of the field activities and environmental sampling will include the following:

Field Notebook - Field personnel will maintain a bound field notebook which will document dates, times and duration of pertinent field occurrences. Notebook entries will be made on consecutive pages.

Project Photographs - Photographs will be taken of field activities.

Calibration Records - Calibration records for field instrumentation will be maintained in the field notebook.

Geologic Logs - Observations pertaining to site geology and hydrogeology made during subsurface drilling will be recorded in the field notebook or on field data sheets. Construction logs of monitoring well installations will also be recorded.

Safety Forms - Sign-in forms, air monitoring results, and other safety related documentation will be maintained.

Chain-of-Custody Forms - Sample handling will be recorded on chain-of-custody forms with associated labels and custody seals.

5.2 Remedial Investigation Report

Upon receipt and review of the full set of analytical data generated by the RI, a report will be prepared which summarizes the methods, field findings, lab results, interpretations, conclusions and recommendations. The RI report will be prepared in accordance with the requirements of DER-10.

6.0 Project Organization

A multi-disciplined team is proposed to perform the activities described in this document. The project team will include experienced Stantec staff and qualified subcontractors that are appropriately trained for their assigned duties and are acceptable to the NYSDEC.

6.1 Project Personnel

The Stantec personnel selected to perform the activities included in this document are presented below along with a brief description of their duties. Qualifications of principal personnel who will participate in the RI are presented in Appendix E.

Michael Storonsky - Project Manager

- Provides overall project management;
- Provides managerial guidance to technical group;
- Serves as liaison between technical group and client;
- Serves as liaison with NYSDEC; and
- Prepares and reviews reports.

Michael Hopkins, P.E. – Professional Engineer

- Provides managerial guidance to technical group; and
- Prepares remediation plans.

Thomas Wells - Project Geologist

- Provides management of technical aspects of project;
- Provides technical guidance;
- Serves as liaison with NYSDEC; and
- Prepares and reviews reports.

Stephanie Reynolds-Smith/Dorothy Bauch-Barker - Hydrogeologists

- Investigation task leaders;
- Site Safety Officers
- Review and interpret hydrogeological data and contaminant plume geometry;
- Provide the geological and hydrogeological description of the site;
- Provide immediate supervision of on-site activities, including site preparation, borehole and monitoring well installations, sample collection, aquifer testing and health and safety;
- Ensure that samples are properly collected, stored and subjected to the appropriate chain-of-custody protocols;
- Maintain field equipment;
- Prepare field logs;
- Provide technical representation at meetings; and
- Prepare reports.

Third Party Data Validator (to be determined)

- Project QA director;

- Assists in review of data;
- Prepares DUSR report;

Erin McCormick

- Health and Safety Coordinator;
- Coordinates project Health and Safety; and
- Coordinates the Community Air Monitoring Plan.

Barbara Wagner, Travis Money, and Luann Meyer – Environmental Scientists/Engineers

- Performs community air monitoring; and
- Provides field and office support as needed.

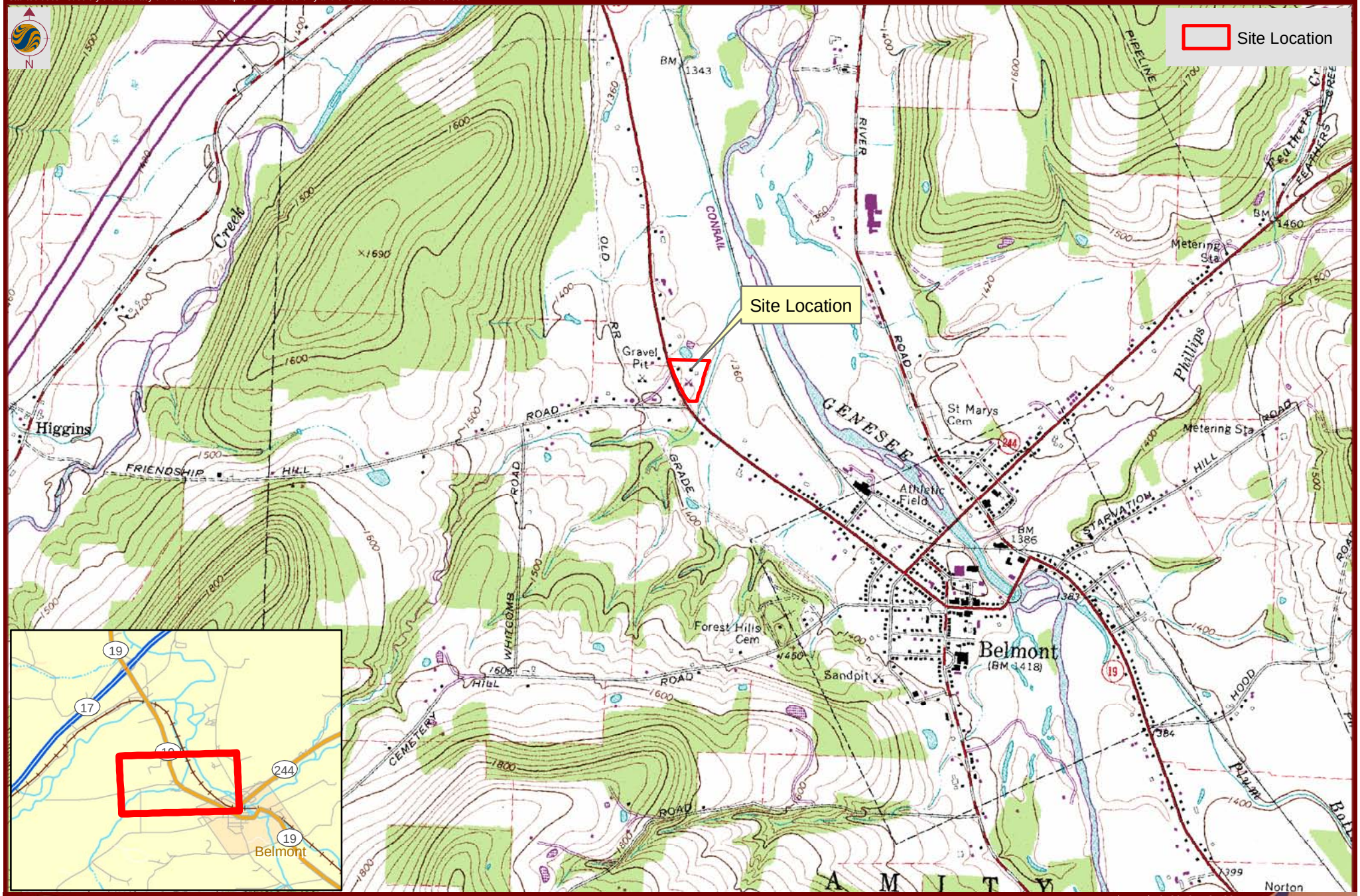
6.2 Subcontractors

Qualified, experienced, and licensed or certified subcontractors will be retained to perform monitoring well installations and sample analyses. All subcontractors are subject to the approval of the NYSDEC.

7.0 Project Schedule

The investigation activities proposed in this Work Plan will be initiated upon approval to proceed from the NYSDEC. A proposed task summary and associated schedule is presented in Table 3.

Figures



Geographic Information Systems

Map Source : NYSGIS Clearinghouse Web Site

Cartographic Design By: Andrew Less

Tuesday, July 6, 2010 1:21:32 PM
U:\190500593\drawing\Work Plan Figures\Figure 1_Site Location Map.mxd

Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

1 inch = 2,000 feet

0 1,000 2,000 4,000 Feet

Allegany Bitumens Belmont Asphalt Plant Site

FIGURE 1 : Site Location Map Showing USGS Topographic Information

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2250 Brighton-Henrietta Townline Rd.
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Stantec

Consultants

Legend

- ● PREVIOUS TEST BORING / SHALLOW WELL
- Ⓦ EXISTING WATER SUPPLY WELL

Notes

1. MAP REFERENCE : INFORMATION ON THIS MAP IS REFERENCED FROM MAP ENTITLED "PLAN OF LANDS OWNED BY: ALLEGANY BITUMENS, INC , SITUATE IN THE TOWN OF AMITY, COUNTY OF ALLEGANY, STATE OF NEW YORK, AND BEING A PORTION OF GREAT LOT # 18, TOWNSHIP #3, RANGE #2 OF THE ROBERT MORRIS RESERVE.

2. AERIAL MAPPING OBTAINED FROM THE NEW YORK STATE CLEARINGHOUSE GIS WEB SITE. PHOTO DATED 2007.

Issued	By	Appd.	YY.MM.DD

File Name: Figure 2- Site Plan - Previous 07_06_2010.dwg	DWN	CHKD	DSGN	DATE
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

Project/ Client

ALLEGANY BITUMENS
BELMONT ASPHALT PLANT

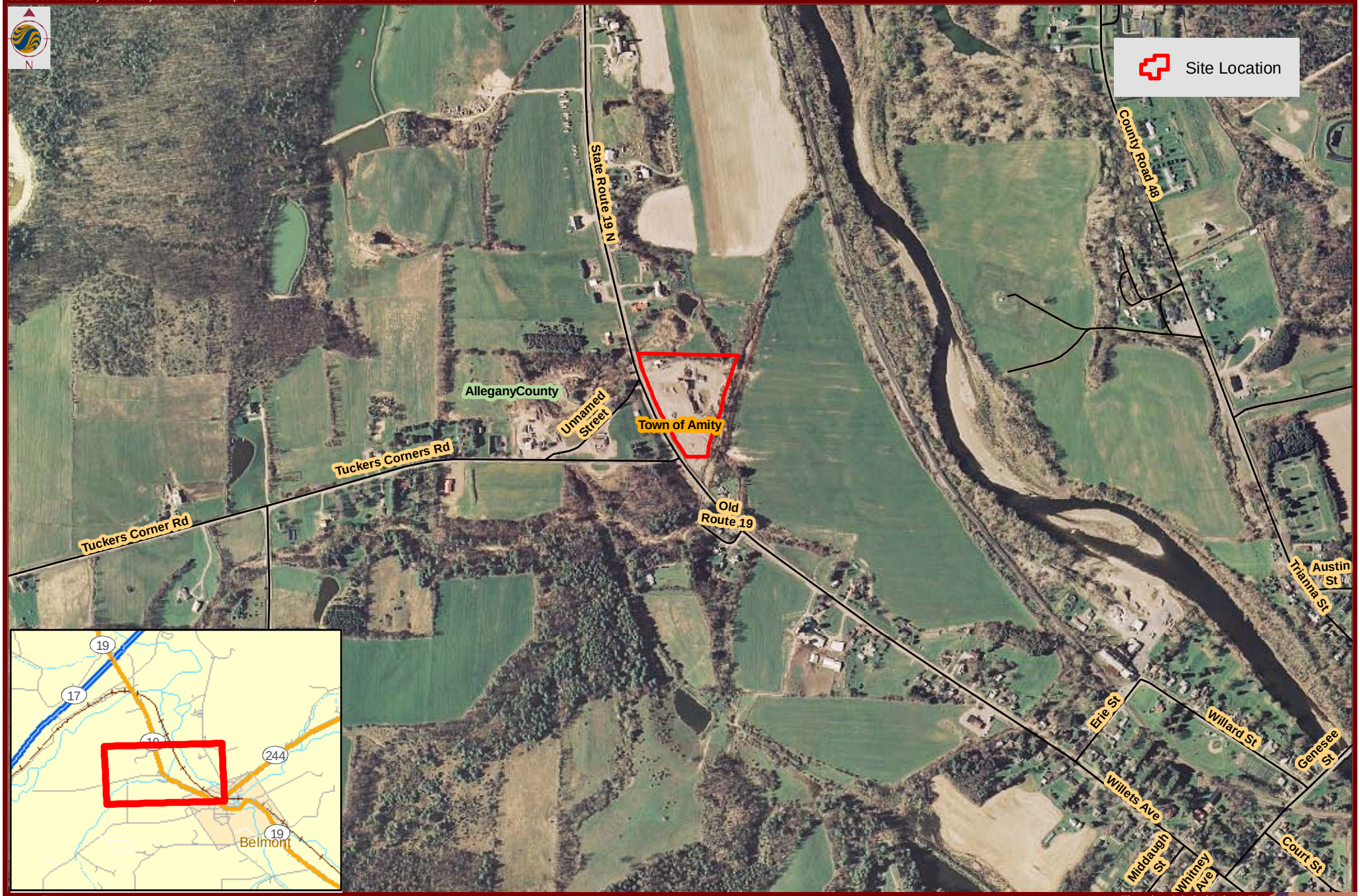
BLADES HOLDING COMPANY, INC.

Title

SITE PLAN AND PREVIOUS SAMPLING LOCATION PLAN

Project No.	Scale	
190500593	AS SHOWN	
Drawing No.	Sheet	Revision
FIG. 2	of	

ORIGINAL SHEET - 22 X 34



Geographic Information Systems

Aerial Photo Map Source : NYSGIS Clearinghouse Web Site Dated 2007

Cartographic Design By: Travis Money

Thursday, July 8, 2010 11:50:10 AM
U:\190500593\drawing\Work Plan Figures\Figure 3-Aerial Photo Showing Site

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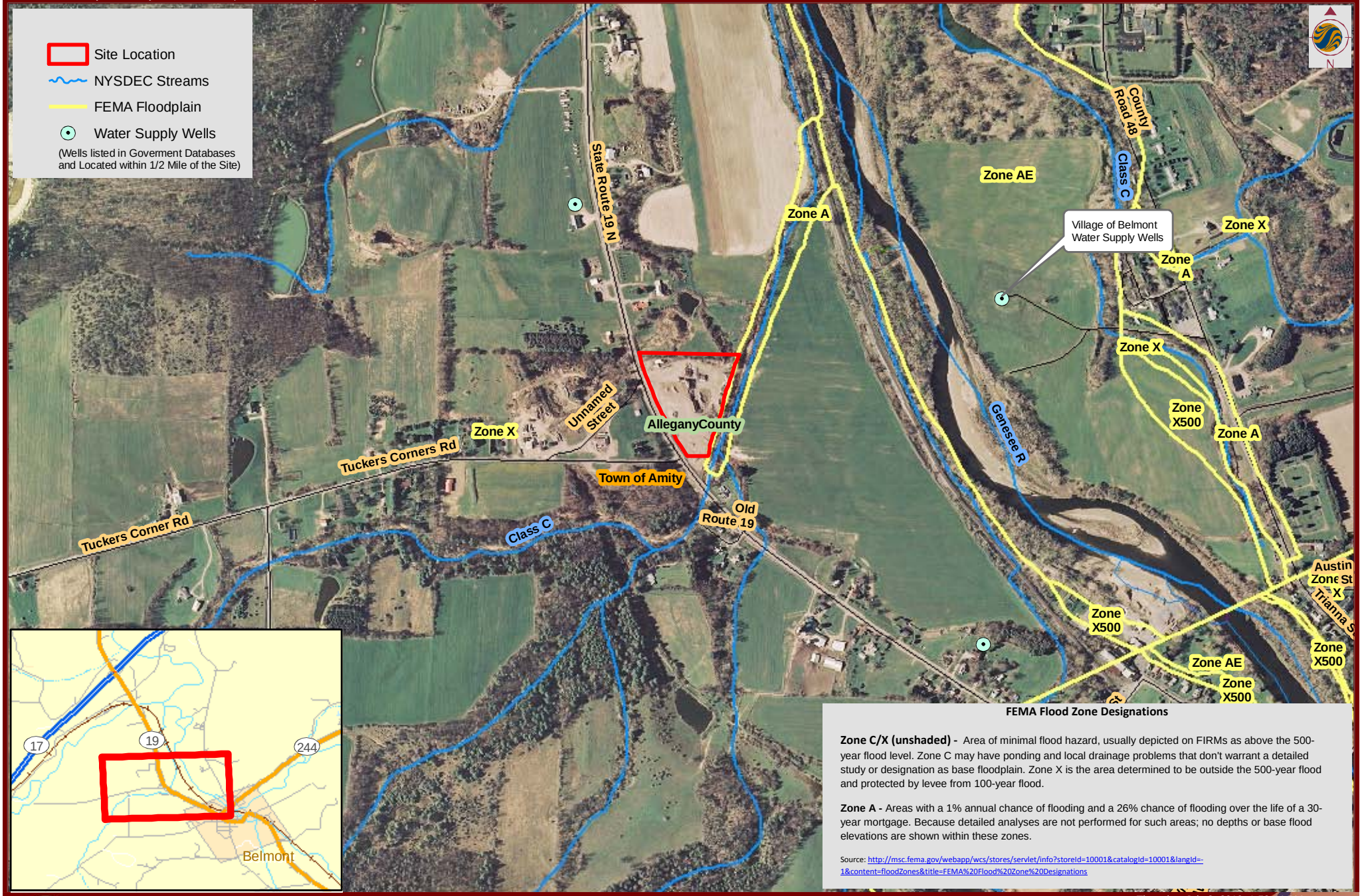
1 inch = 800 feet

0 400 800 1,600 Feet

Allegany Bitumens Belmont Asphalt Plant Site

FIGURE 3: Aerial Photo showing Site Location



FEMA Flood Zone Designations

Zone C/X (unshaded) - Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

Zone A - Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.

Source: http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations

Geographic Information Systems

Cartographic Design By: Andrew Less

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U:\190500593\drawing\Work Plan Figures\Figure 4 Watercourses and Wa

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1 inch = 800 feet

0 400 800 1,600 Feet

Former Allegany Bitumens Belmont Asphalt Plant Site

FIGURE 4: Location of Watercourses and Waterwells in Area

(\\Alb\190500593 (empty) Work Plan Figures\Figure 5 Proposed Sampling Locaion - 07_06_2010.dwg 2010-07-06 13:32 PM ByLaw, Andy

ORIGINAL SHEET - 22 X 34

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Consultants

Legend

- PREVIOUS TEST BORING / SHALLOW WELL
- (W) EXISTING WATER SUPPLY WELL
- PROPOSED TEST BORING
- PROPOSED TEST BORING / SHALLOW MONITORING WELL
- PROPOED SURFACE SOIL SAMPLE
- PROPOSED SURFACE SOIL SAMPLE AND TEST PIT
- PROPOSED TEST PIT
- PSG PASSIVE SOIL GAS

Notes

1. MAP REFERENCE : INFORMATION ON THIS MAP IS REFERENCED FROM MAP ENTITLED "PLAN OF LANDS OWNED BY: ALLEGANY BITUMENS, INC , SITUATE IN THE TOWN OF AMITY, COUNTY OF ALLEGANY, STATE OF NEW YORK, AND BEING A PORTION OF GREAT LOT # 18, TOWNSHIP #3, RANGE #2 OF THE ROBERT MORRIS RESERVE.

2. AERIAL MAPPING OBTAINED FROM THE NEW YORK STATE CLEARINGHOUSE GIS WEB SITE. PHOTO DATED 2007.

Issued	By	Appd.	YY.MM.DD

File Name: Figure 5 Proposed Sampling Location - 07_06_2010.dwg

DWN	CHKD	DSGN	DATE
Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

Project/ Client

ALLEGANY BITUMENS
BELMONT ASPHALT PLANT

BLADES HOLDING COMPANY, INC.

Title

PROPOSED SAMPLE LOCATION PLAN

Project No.	Scale
190500593	AS SHOWN

Drawing No.	Sheet	Revision
FIG. 5	of	

Tables

TABLE 1
SUMMARY OF PROPOSED SAMPLING PLAN
Remedial Investigation
Former Allegany Bitumens Belmont Asphalt Plant
Amity, New York

Investigation area Investigation activity/target media	**Scope**	**Locations (see Figure 5)**	**Number of samples (see note 3)**	**Analytical Parameters (See Table 2 for Methods)**	**Sampling rationale and/or additional explanation**	**On- or Off-Site**
PHASE 1						
TCE contamination at Laboratory Building						
Passive soil gas (PSG) survey	8 PSG modules	Grid surrounding lab building	8 PSG samplers	VOCs	Map source area	On and off
	12 PSG modules	Grid in suspected plume area	12 PSG samplers	VOCs	Map shallow GW plume	On and off
Soil	8 test borings	B/MW-5 to B/MW-8 and B-15 to B-18	8 soil	1 Full Suite, 7 TCL VOCs	Define source area	On and off
Shallow groundwater	4 new wells	B/MW-5 to B/MW-8	4 groundwater	1 Full Suite, 6 TCL VOCs	Install in 4 of the 8 Lab area test borings	On and off
	Resample 3 existing wells	BS-2 to BS-4	3 groundwater			On-site
Deep groundwater	Assess existing well	Existing water supply well	1 groundwater	Full Suite	Sound well, perform video inspection and sample	On-site
Electrical transformers						
Soil	1 test boring	B-17	1 soil	Full Suite	(Doubles as Lab building area boring)	On-site
Oil House and Maintenance Garage						
PSG survey	8 PSG modules	Grid in area surrounding buildings	8 PSG samplers	VOCs	Identify hot spots if any	On-site
Soil	4 borings	B/MW-9 and B-19 thought B-21	3 to 4 soil	1 Full Suite, 2 to 3 PAHs	Minimum of 3 borings to be sampled	On-site
Shallow groundwater	1 shallow well	B/MW-9	1 groundwater	Full Suite	In 1 of the 4 garage area borings, downgradient	On-site
Asphalt Tanks						
Soil	1 boring	B/MW-10	1 soil	Full Suite		On-site
Shallow groundwater	1 well	B/MW-10	1 groundwater	TCL VOCs, PAHs	(install in Asphalt Tanks test boring)	On-site
Asphalt Plant						
Soil	1 boring	B/MW-11	1 soil	PAHs		On-site
Shallow groundwater	1 well	B/MW-11	1 groundwater	Full Suite	(install in Asphalt Plant test boring)	On-site
Basin below aggregate hoppers						
Surface Soil	1 surface soil sample	SS-6	1 surface soil	Full Suite minus VOCs	VOCs are not expected in 0-2" bgs interval	On-site
Berm along north and east boundary						
Soil	7 test pits	TP-6 to TP-12	3 to 7 soil	2 Full Suite, 1 to 5 PAHs	Minimum of 3 test pits to be sampled	On-site
Sitewide soil						
Surface soil	5 surface soil samples	SS-1 to SS-5	5 surface soil	1 Full Suite minus VOCs, 4 PAHs	VOCs are not expected in 0-2" bgs interval	On-site
Subsurface soil and fill	5 test pits	TP-1 to TP-5	5 soil	1 Full Suite, 4 PAHs	Same locations as surface soil	On-site
Perimeter Groundwater						
Soil	3 borings	B/MW-12 to B/MW-14	3 soil	1 Full Suite, 2 PAHs	In NE corner, S end, and center of W boundary	
Shallow groundwater	3 shallow wells	B/MW-12 to B/MW-14	3 groundwater	TCL VOCs, PAHs	In NE corner, S end, and center of W boundary	On-site
PHASE 2						
The scope of additional Phase 2 investigations of deep groundwater and surface water in the Lab building area, and surface water, sediment and surface soil in and along Tucker's Creek will be determined following completion of the Phase 1 investigations described above. Phase 2 activities will also include a second groundwater sampling event, with analytical parameters to be determined on the basis of Phase 1 groundwater analysis results.						

Notes:
1. All soil gas samples (PSG samplers) will be analyzed for VOCs only.
2. Approximately 20% to 30% of Phase 1 samples of each medium except soil gas will be analyzed for the full suite of EPA's TCL/TAL parameters (VOCs, SVOCs, pesticides, PCBs, and metals). Locations have been specified, but are subject to change based on field screening and observations.
   - All remaining Lab Building area soil and groundwater samples will be analyzed for VOCs only.
   - The balance of soil samples will be analyzed for PAHs only unless VOCs, odors or staining are indicated by field screening, in which case VOCs and/or other appropriate parameters will be added.
   - The balance of groundwater samples will be analyzed for VOCs and PAHs only.

3. Except where noted above, at each boring and test pit a minimum of one soil sample will be selected for laboratory analysis. All locations exhibiting evidence of contamination or non-native fill deposits will be sampled. Sample selection will be based on field observation and field screening results. If significant impacts are observed in soil borings or test pits, a second soil sample may be collected at those locations to assist in delineating the vertical extent of impacts.

Key:

Full Suite = TCL VOCs, TCL SVOCs, TCL Pesticides/PCBs, TAL Metals
PAHs = Poly-cyclic aromatic hydrocarbons.
PCBs = Polychlorinated biphenyls.
SVOCs = Semivolatile organic compounds.
TAL =Target analyte list.
TCL = Target compound list.
VOCs = Volatile organic compounds.

Table 2 - Sampling and Analytical Summary

Remedial Investigation
Former Allegany Bitumens Belmont Asphalt Plant
Amity, New York

Analysis	Method (USEPA SW846 method number)	Estimated Number of Site Samples	QA/QC Samples			
			Field Duplicates	Trip Blanks	Rinsate Blanks	MS/MSD
PHASE 1						
Passive Soil Gas - 28 Sampling Locations						
VOCs	8260	28	0	1	0	0
Soil Sampling - 31 Sampling Locations						
TCL VOCs	8260	15	1	0	up to 4	1/1
PAHs	8270	14-19	1	0	up to 4	
TCL SVOCs	8270	10	1	0	up to 4	1/1
TCL Pesticides/PCBs	8081/8082	10	1	0	up to 4	1/1
TAL Metals	6010/7000-series	10	1	0	up to 4	1/1
Groundwater Sampling (1st event) - 14 Sampling Locations						
TCL VOCs	8260	14	1	3	0	1/1
PAHs	8270	4	0-1	0	0	1/1
TCL SVOCs	8270	4	1	0	0	1/1
TCL Pesticides/PCBs	8081/8082	4	1	0	0	1/1
TAL Metals	6010/7000-series	4	1	0	0	1/1
PHASE 2 - Sampling locations, sample numbers and analytical parameters to be determined based on Phase 1 results						
Groundwater Sampling (2nd event) - Sampling locations to include both shallow and deep wells						
Surface water sampling - Locations in pond north of Lab building and along Tuckers Creek						
Sediment and surface soil sampling - Locations along Tuckers Creek						

Key:

MS/MSD = Matrix spike/matrix spike duplicate.
PAHs = Poly-cyclic aromatic hydrocarbons.
PCBs = Polychlorinated biphenyls.
QA/QC =Quality assurance/quality control.
SVOCs = Semivolatile organic compounds.
TAL =Target analyte list.
TCL = Target compound list.
VOCs = Volatile organic compounds.

Notes:

1. Refer to Table 1 for additional information.

TABLE 3
PROPOSED SCHEDULE
Remedial Investigation
Former Allegany Bitumens Belmont Asphalt Plant
Amity, New York

Event/Task	Notes	Estimated Start
Work Plan Review:		
Brownfield Cleanup Program (BCP) Application and RI Work Plan submitted to NYSDEC		July 2010
NYSDEC determines that application is complete	Within 10 Day of Receipt of Application	July 2010
Application and Draft RI Work Plan Placed in Document Repository, notice published in ENB and local newspaper, notice and RI Work Plan Fact Sheet mailed to site contact list, 30-day public comment period on complete Application and draft RI Work Plan begin	After determination that Application is complete	July 2010
30-Day Public comment period ends		August 2010
NYSDEC comments on application and RI Work Plan	Within 60 days of receipt, after end of public comment period	September 2010
Response to NYSDEC comments submitted		October 2010
NYSDEC approves RI Work Plan		October 2010
Phase 1 Activities:		
Install passive soil gas modules		October 2010
Retrieve PSG modules	Approximately 2 weeks after installation	October 2010
Obtain PSG analytical data, analyze data to finalize boring and shallow monitoring well plan, submit plan and obtain approval of plan from NYSDEC		November 2010
Shallow Boring and Monitoring Well Installations	After NYSDEC approval of plan	November 2010
Monitoring Well Development	Two or more days after completion of new wells	November 2010
On-Site Water Supply Well Inspection		November 2010
Surface Soil Sampling		November 2010
Test Pit Investigation and subsurface soil sampling		November 2010
Location/elevation survey of Phase 2 locations		November 2010
Water Level Measurements	Just prior to groundwater sampling	December 2010
Groundwater sampling - 1st event	Including previously installed shallow wells, newly installed shallow wells and deep water supply well. A minimum of two weeks after completion of well development	December 2010
Validate and evaluate Phase 1 data and develop Phase 2 plan for additional investigation of deep groundwater, surface water, and sediment/surface soil. Submit plan and obtain approval from NYSDEC.		January, February 2011
Phase 2 Activities:		
Deep groundwater Investigation		March 2011
Groundwater sampling - 2nd event	Includes previously sampled wells and newly installed deep well(s)	March or April 2011
Surface water and sediment/surface soil investigation		March or April 2011
Aquifer Testing		March or April 2011
Location/elevation survey of Phase 2 locations		March or April 2011
Validation of Phase 2 data		April or May 2011
Reporting:		
Evaluate Phase 1 and 2 data, perform qualitative exposure assessment, prepare draft RI Report		May 2011
Submit Draft Report to NYSDEC		June 2011