Remedial Investigation Work Plan

Former Mill No. 2
Norampac Industries
4001 Packard Road
Niagara Falls, New York

Site No C932150

Prepared by

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FORMER MILL NO. 2
REMEDIAL INVESTIGATION WORK PLAN

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SECTION 1 INTRODUCTION

1.1 General

This work plan, prepared by C&S Engineers, Inc., (C&S) was revised in August 2010 to be consistent with comments received from NYSDEC Region 9 Conditional Approval letter dated June 30, 2010 and, identifies activities and tasks associated with a Brownfield Remedial Investigation (RI) to be conducted at the former Mill No. 2 located at 4001 Packard Road, Niagara Falls, New York. The project is being conducted consistent with the New York State Brownfield Cleanup Program (BCP). Figure 1 shows the location of the facility. This work plan addresses elements, as appropriate, established within the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Program Policy draft guidance manual *Technical Guidance for Site Investigation and Remediation* (DER-10, May 2010). Development of this work plan is based on previously completed assessment and investigation work at the site as documented in *Brownfield Application Former Mill No. 2 Section VII Property Environmental History*, submitted to NYSDEC on January 28, 2010.

Appendices to this work plan include the following:

- Appendix A - Sampling and Analysis Plan
- Appendix B - Health and Safety Plan
- Appendix C - Investigation Personnel and Qualifications
- Appendix D - Project Schedule
- Appendix E - Citizens' Participation Plan

1.2 Site Description and History

Site Description

The project site referred to as former Mill No. 2 (as shown on Figures 1, 2, and 3) is located on approximately 10.3 acres of land and has a street address of 4001 Packard Road. The site is within a highly industrialized urban area of Niagara Falls, Niagara County, New York. Adjoining properties include an active paper mill (Mill No. 1) operated by Norampac Industries, Inc. to the north; Franks Vacuum Service and the former Frontier Chemical Site to the south and west; and a National Grid (Niagara Mohawk) and New York Power Authority right-of-way to the east. Further to the northeast of the site are other commercial properties and a little league baseball diamond.

Site History

This former mill, encompassing approximately 661,980 square feet, historically housed paper manufacturing, finishing, and packaging operations of completed goods. The former mill consists of several interconnected two story or five story concrete and masonry buildings which were constructed during various time frames, with the earliest being 1923 and the latest reported date of 1974. The former mill was taken out service several years ago and has fallen into

disrepair to the extent that certain portions of structures have collapsed and others exhibit evidence of structural distress.

Based on existing reports and accounts, asbestos containing building materials are present in and on the building. Also, given the age of the facility PCBs may be present in those areas where electrical equipment had been located including the active transformer yard located near the northwest corner of the former mill.

Relative to historical operations, the use of chemical and petroleum products would have been common. The types of products apparently used at the site included solvents for de-inking (which reportedly occurred on the first floor of Buildings 13 and14), bleaches, caustics, petroleum based de-foamers, low pH "Felt Cleaner", aluminum sulfate (50%) solution, Kymene (polyamide-polyamine epichlorohydrin resin), and mineral spirits. Review of historic plant drawings revealed the following areas of environmental interest:

- Hydraulic power packs in Buildings 1 an 4 to drive equipment;
- An "Electricians Shop";
- A"Machine Shop";
- Oil storage areas; and
- Oil circulating pumps and color mixing tanks.

The locations of these buildings are indicated on Figure 3, which is an aerial photograph with an overlay of the former mill floor plan.

The eastern end of former Mill No. 2 (Building No.11) is where a tire fire previously occurred. That event reportedly consumed hundred of tires and resulted in obvious structural damage such as cracking and heaving of the concrete floor and ceiling.

Based upon the information gathered during the preparation of the BCP Application, and included in that document, other contaminants which could potentially be present in soil or ground water at the site include volatile organic compounds, semivolatile organic compounds, metals, and pesticides.

Site Geology and Geographical Features

The site is located within the Ontario Lowland physiographic province which was affected by the retreat of the last Pleistocene ice sheet approximately 10,000 to 12,000 years ago.

The bedrock geology in the area is the Lockport Group which is dominated by Lockport Dolomite. Lockport Dolomite forms the bedrock surface in the northern part of the province (including the City of Niagara Falls) and consists mainly of fine to coarse grained dolomite. Gypsum is present as nodules along some bedding plane surfaces. The maximum thickness of the Lockport Dolomite is about 150 feet. Near the base of the Lockport Dolomite, the formation is divided into the Decew Dolomite Member and the overlying Gasport Limestone Member.The surficial geology includes deposits of lacustrine silt and clay and till.

The land, surrounding the former Mill No. 2 is topographically level. The areas of the site not occupied by the building are generally covered with asphalt that is typically in poor condition. However, the transformer yard (northwest corner of former Mill No. 2) and, the northern, eastern, and southern perimeter of the property are unpaved.

Information from previous soil borings made at the location of former Mill No. 2 in 2008 and 2009 (as documented in Section VII Property Environmental History of the January 2010 BCP Application), indicates that soil below asphalt paved areas consists of fill material characterized by crushed stone or gravel, concrete, slag, and brick fragments intermixed with coarse to fine sand to a depth of approximately three feet. Underlying the veneer of fill material are apparent native soils which consist of tan to brown sandy silt. Below that strata and extending to depths of approximately 10.0 feet to 13.5 feet (where top of rock is encountered) is a reddish brown and sometimes pink silt with an appreciable percentage of clay; in some locations, trace to some sand was found intermixed with the clay.

In the subsurface explorations previously made on exterior grounds, wet conditions were documented within the overburden at depths ranging from approximately 4 feet to 10 feet below ground surface. Top of ground water, in the one-inch diameter monitoring wells at the site, ranges from 4.5 feet to 6.5 feet below ground surface. Overburden groundwater is expected to migrate in a southerly direction. However, the presence of storm and sanitary sewers that served the No. 2 site may have some local affect on shallow groundwater migration.

SECTION 2 SCOPE OF WORK

2.1 Introduction

Consistent with the NYSDEC requirements for BCP RI projects, this work plan was developed to meet the following goals:

- Define the nature and extent of contamination.
- Identify contaminant source areas.
- Produce data of sufficient quantity and quality to support the development of an acceptable Remedial Work Plan.

2.2 Grid Layout and Monitoring Wells

Figure 2 is an aerial photo of the site with labels identifying specific surface features, previously made soil borings, and monitoring wells, as well as the location of sewers that were documented on historical site plans of the former mill. This figure is complemented by Table 1, which is a summary of sample locations, sampling rationale, and laboratory analysis to be performed. The Sampling and Analysis Plan for this investigation is provided in Appendix A.

Shown on Figure 2 is a 100-foot by 100-foot grid overlay. The nodes of that overlay on the BCP site (outside of the existing building footprint) are the proposed locations where direct push soil explorations will be placed, unless underground utilities or other site features dictate otherwise. Also shown on Figure 2 are the locations of additional explorations requested by NYSDEC in

the Department's June 30, 2010 correspondence providing conditional approval of the draft work plan.

The intent of the exploration grid and additional explorations requested by NYSDEC is to assess the presence of absence of contaminants in the surficial fill material and, if evidence of contaminants is present in the fill, have the underlying native soils been affected. To accomplish this assessment, it is expected that samples of fill material and underlying native soil from the same boring location will be submitted for laboratory analysis consistent with Table 2.

In addition to the grid node locations and explorations requested by NYSDEC, direct push explorations are proposed along the alignment of the north-south trending 30-inch and 36-inch diameter sewers. That series of explorations will be made to assess if there is evidence of contaminants that may have migrated along the exterior of the sewer lines. It should be noted that historical drawings from 1920 indicate the crown (top) of the 36 inch diameter sewer is approximately 16 feet below ground surface and is shown to be in bedrock. The depth to the crown (top) of the 30 inch sewer has been measured to be approximately 11 feet below ground surface. Depending on actual line and grade of that sewer, it may be in bedrock as well.

Figure 2 also shows the proposed location of eight groundwater monitoring wells, that will be constructed of two-inch diameter PVC pipe and installed using conventional hollow stem augers. Based on previous subsurface investigation work, as documented in the BCP Application dated January 2010 and as described earlier in this work plan, those proposed monitoring wells will extend to the top of local bedrock, which is anticipated to be approximately 10 feet to 13.5 feet below ground surface. During the making of the boring to accommodate the installation of the monitoring well, soil samples will be assessed in the field using the same procedures implemented at 100 ft x 100ft grid nodes. Additionally, more than one soil sample from each borehole may be submitted to the analytical laboratory to assess physical evidence of contaminants in fill material and its affect on the underlying native soil.

Investigation Schedule -100 x 100 ft Grid,NYSDEC requested explorations and Monitoring Wells

It is anticipated that a majority of direct push explorations shown on Figure 2 will be made prior to and possibly concurrent with demolition of former Mill No. 2. Due to the nature of demolition work, the eight groundwater monitoring wells will be installed after demolition is complete. However, changes to this expected number of soil borings that can be made prior to demolition may be required once the schedule for demolition activities is established. Prior to performing these soil borings, Dig Safely New York will be notified and requested to mark-out public utilities. Additionally, Norampac personnel at Mill No. 1 will be requested to identify underground utilities associated with plant operations. An independent underground utility locating service may be required to further "clear" the proposed borehole locations prior to commencement of exploration work.

Supplemental Explorations - Frank's Vacuum Service

Figure 2 also shows the proposed locations of direct push explorations, including those additional boreholes and groundwater monitoring wells requested by NYSDEC, that may be made on land occupied by Frank's Vacuum Service. Those supplemental explorations and

groundwater monitoring wells may be made in the event that the land occupied by Frank's Vacuum Service is added to the current BCP property. However, no decision has been made with respect to expanding the limits of BCP property. If the current BCP property is expanded to include the Frank's Vacuum Service Property, identification of underground utilities and implementation of the subsurface investigation will employ the same procedures identified above.

2.3 Other Areas of Investigation

Figure 3 is an aerial photo of the site with an overlay of an image of the 1964 plant layout, along with sewer locations (from historic plant drawings) and labels identifying various features. Also shown on this figure is a summary of historic functions which are of interest and will be a part of the site investigation. This figure illustrates the approximate location of explorations to be made as identified on Table 2 of this work plan, which is a summary of sample locations and sampling rationale as well as the laboratory analysis to be performed.

Ground Floor Slab Visual Assessment

The demolition of former Mill No. 2 will be phased to allow visual assessment of the intact ground floor slab. The objective of this visual assessment will be to identify areas such as pits, sumps, and drains that may contain fluids or solids that will be physically examined in the field. That examination may consist of conventional field screening for volatile organic vapors utilizing a photoinization detector (PID) equipped with a 10.0 eV lamp, visual analysis (color, appearance) or a sheen test (i.e., placing a representative sample into a zip seal bag and adding water to see if a petroleum-like sheen is created). Depending on the outcome of the field assessment, selected samples will be collected for laboratory analysis identified on Table 2. Additionally, the location of other features of interest will be recorded using GPS so that those locations can be recovered for subsequent subsurface investigation efforts.

Buildings 1, 2, 4, 13, and 14

Concurrent with the visual assessment of the ground floor slab, a series of locations will be marked on the slab for the demolition contractor to break up to facilitate the making of direct push boreholes. Those explorations will be on a 75 foot grid, with adjustments made depending on observed field conditions and underground utilities. The terminal depth of these explorations will be adjusted to assess subslab materials and underlying native soils. Soil samples will be evaluated in the field and selected samples (depending on field assessment) will be submitted to a laboratory for analysis consistent with Table 2. If evidence of contamination of subslab materials is present, then additional samples may be required to assess the effect on underlying native soils.

Building 11- Tire Fire Area

Similar to the procedures summarized above, the area of the tire fire will be visually assessed to identify evidence that may warrant further investigation. Concurrent with the visual assessment, four locations will be marked on the slab for the demolition contractor to break up to facilitate the excavation of test pit trenches. These trenches will be terminated once native soils are

encountered, unless field conditions indicate otherwise. Soil samples will be evaluated in the field and selected samples (depending on field assessment) will be submitted to a laboratory for analysis consistent with Table 2.

Yard Drain

As noted on Table 2, features identified as "Yard Drain" are shown on Figure 3. These "Yard Drains" appear to have captured storm water from the northwest loading dock area and the transformer yard. Visual and, to the extent practicable, geophysical means will be implemented to identify these apparent surface drainage structures. If they can be found and opened and, if sediment is present, samples will be obtained for the suite of laboratory analyses shown on Table 2.

Transformer Yard

The active transformer yard located at the northwest corner of former Mill No. 2 also provides power to active Mill No. 1, which is situated to the north of the BCP property. Given the active status of the transformer yard, the ability of obtain soil samples (below crushed stone) may be limited or not possible due to safety concerns. Sampling within and at the perimeter of the transformer yard will focus on those areas where staining is evident. If staining is found, the depth interval of those samples and laboratory analysis will be consistent with Table 2.

Rubbish House and Northwest Loading Dock

These areas will be investigated as part of the 100 foot grid spacing described in Section 2.2 of this work plan. Field evaluation of soil samples and laboratory analysis will be consistent with Table 1.

Former Caustic Unloading Area and Sump Discharge Line

During the walkover of the site in March 2010, signage posted on the western exterior wall of Building 14 indicated that off-loading of caustic occurred in this location. Additionally, the historic plant drawing that is the overlay on Figure 3 labels a line, apparently originating from Building 14, as "Sump Discharge". Investigation of these areas will be via test pit explorations terminated once native soil is encountered, unless field conditions indicate otherwise. Soil samples will be evaluated in the field and selected samples (depending on field assessment) will be submitted to an analytical laboratory for analysis consistent with Table 2.

Former Garage

The historic fire insurance map made a part of the BCP Application indicates that this garage structure had an earthen floor. During a site visit in March 2010, the location of that former garage is where a concrete slab was found. Investigation of the soil beneath this concrete slab will be accomplished by excavating a test trench after the slab is fractured by the demolition contractor. The terminal depth of this test trench will be upon encountering native soil, unless field conditions indicate otherwise. Soil samples will be evaluated in the field and selected samples (depending on field assessment) will be submitted to an analytical laboratory for

analysis consistent with Table 2.

Southeast Corner Building 11, Borehole B-6 area

During a preliminary subsurface investigation monitored by C&S and documented in a December 2009 report evidence of aromatic volatile organic vapors was detected at approximately 10 feet below ground surface. However, at the time of the investigation the field PID failed to operate correctly. Additionally, laboratory analysis of the composite soil sample (which encompassed the entire depth of the borehole) did not detect volatile organic compounds above Part 375-6 Soil Clean-up Objectives for Protection of Public Health, Industrial Use. Further investigation of this area will be performed to confirm the previous findings via direct push sampling as summarized on Table 2.

Former Boreholes SB-11/SB-12

These boreholes were made in 2008 as part of a Phase II Environmental Site Assessment. The boreholes were located adjacent to sewer manholes reputedly used for waste disposal by former employees of Frontier Chemical. The Frontier Chemical site is located to the east of these manholes. In borehole SB-11 mercury was detected in the 16 foot to 20 foot interval at a concentration that exceeded Part 375-6 Soil Clean-up Objectives for the Protection of Groundwater and Protection of Public Health-Industrial Use. Given the previous data, two supplemental direct push explorations will be made in this area. Samples will be obtained from the 16 foot to 20 foot interval and other intervals depending on field conditions as summarized in Table 2.

Eastside Building 11

Access doors (identified on Figure 3 as D-10 and Double Doors) were observed at the exterior eastside of Building 11 at the time of the site walkover in March 2010. The strip of land between the exterior side of the building and the western fence line of the former Frontier Chemical site is grass covered, with no evidence of pavement. Given the timeframe that former Mill No. 2 operated, the presence of secluded doors may have invited unauthorized waste disposal. These areas will be investigated via test pit explorations which will be terminated once native soil is encountered unless field conditions indicate otherwise. Soil samples will be evaluated in the field and selected samples (depending on field assessment) will be submitted to a laboratory for analysis consistent with Table 2.

Schedule - Investigation of Other Areas

It is anticipated that a majority of the investigation work described in Section 2.3 and shown on Figure 3 will be made after the demolition of former Mill No. 2. However, depending on the demolition schedule, it may be possible to implement the investigation of the *"Former Caustic Unloading Area,"* "Former Garage," and "*Former Boreholes SB-11/SB-12."* prior to deconstruction activities. Prior to performing these subsurface explorations, Dig Safely New York will be notified and requested to mark-out public utilities. Additionally, Norampac personnel at Mill No. 1 will be requested to identify underground utilities associated with plant operations. Additionally, an independent underground utility locating service may be required to further "clear" the proposed borehole locations prior to commencement of exploration work.

2.4 Subsurface Soil Investigations

It is expected that each borehole will be advanced using direct push methods unless field conditions indicate that rotary drilling techniques and hollow stem augers are required. However, the installation of the 2-inch diameter PVC groundwater monitoring wells will be via conventional hollow stem augers. Air or drilling fluids will not be used. Depending on site accessibility and location of a particular boring, the drilling equipment may be mounted on a truck, an all-terrain vehicle.

Consistent with DER-10, investigation derived wastes will be disposed within the borehole of origin unless free product, NAPL or gross contamination is present. If those conditions are evident or the borehole will be completed as a groundwater monitoring well, then excess spoils will be containerized in 55-gallon drums for future characterization and disposal. Those containers will be then moved into another protected structure on the Norampac property until characterized and disposed. Note that disposal may be accomplished by emptying the drums on-site subsequent to the receipt of analytical results for the borings. If off-site disposal is needed, it will be accomplished within 90 days of the accumulation date.

During the field effort, each borehole for the contaminant investigation will be sampled continuously using GeoProbe™ Macro Core tool, standard split spoon sampler, or equivalent device, with or without the aid of hollow stem augers, depending on field conditions. Retrieved soil samples will be visually examined to assess subsurface conditions and physical properties of the strata. These properties include: color, moisture content, and visual evidence of discoloration or sheens. Additionally, all soil samples will be field screened for evidence of volatile organic vapors via conventional headspace analysis techniques using a photoionization detector equipped with a 10.0 eV lamp. Since the volume of soil retrieved in a Macro Core tool may not be sufficient for the suite of analysis required, companion explorations will be made in close proximity to the original sample location to obtain sufficient sample volume from selected depth intervals. These field observations will be documented on logs that will be appended to the Remedial Investigation Report.

As indicated earlier, eight boreholes will be completed as groundwater monitoring wells. Presently, it is anticipated that these monitoring wells will be completed once refusal (anticipated top of bedrock) is encountered, which is anticipated to be approximately 10 feet to 13.5 feet below ground surface. However, the actual depth of the well screen will be determined in the field, depending on subsurface conditions. Each well will be constructed using 2-inch diameter PVC flush joint screen and riser. Given the anticipated fine grained soils, 10 slot screen and '0' quartz sand will be used. Depending on the location of a particular well, the protective casing will either be terminated flush with the ground surface or will stick up above the ground surface. Regardless, each well will have a cover and locking caps or J-plugs. Construction of the monitoring wells will be documented on logs that will be appended to the Remedial Investigation Report.

Upon completion of the drilling program, each borehole and completed well will be surveyed to establish horizontal locations. Additionally, the measuring point of each completed groundwater monitoring well will be surveyed. This information will be used to identify local

groundwater flow direction and to create a groundwater contour map.

2.5 Groundwater Sampling

To assess the existence of potential shallow groundwater quality impacts at the site, eight monitoring wells will be installed in the borings discussed above. When it is determined that a boring has reached an appropriate depth for well screening that will straddle the water table within the shallow aquifer, the well will be constructed. Subsequent to well construction, at least 24 hours will be allowed to elapse prior to development of each well. Given the shallow depth of the wells, it is expected that well development will be performed via manual bailing or pumping. The objective of well development will be to remove gross fines from the well and surrounding sand pack. All development water will be containerized. Those containers will be then moved into another protected structure on the Norampac property until characterized and disposed. Note that disposal may be accomplished by emptying the drums on-site subsequent to the receipt of analytical results for the borings. If off-site disposal is needed, it will be accomplished within 90 days of the accumulation date.

In the event more than 24 hours elapse between well development and sampling, three to five well volumes will be purged prior to sampling, unless the well is bailed dry. Purged water generated from the monitoring wells will be containerized as noted above. Groundwater samples will be collected from the wells once the water level reaches 95% of pre-purge levels. Analysis of the groundwater samples will be consistent with those shown on Table 1.

2.6 Soil Vapor Investigation

If the VOCs results for the RI subsurface soil and groundwater sampling indicate the potential for the migration of volatile soil vapors into future site indoor environments, this potential will need to be fully characterized to select the appropriate remedial alternative for the site. Since this analysis depends on both the levels of volatile contaminants and the locations of the future indoor environments, a work plan for these investigations will be developed when the summary site data and site physical condition (i.e., removal of present structures) have been developed. NYSDEC and NYSDOH will be consulted regarding the appropriate timing for initiating these plans and activities.

2.7 Sample Analyses

The analysis of samples will be performed by a New York State approved laboratory via Analytical Services Protocol. Reports will include ASP Category B deliverables to allow for a third-party data usability review.

2.8 Data Usability

A Data Usability Summary Report (DUSR) will be prepared by Alpha Geoscience (679 Plank Road, Clifton Park, NY 12065). The DUSR will be prepared consistent with the NYSDEC's *Guidance for the Development of Quality Assurance Plans and Data Usability Summary Reports* as given in Appendix 2B of DER-10.

2.9 Qualitative Exposure Assessment

To assess potential site impacts on human health, a qualitative human health exposure assessment will be completed consistent with the NYSDOH guidance in Appendix 3B of DER-10. This assessment consists of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying exposure pathways, and evaluating contaminant fate and transport. Site contaminants will be selected for further evaluation based on consideration of the following factors:

- Concentrations of contaminants in environmental media both on-site and off-site;
- Field data quality, laboratory data quality, and sampling design; and
- Comparison of on-site and off-site contaminant concentrations in environmental media with typical background levels.

A Fish and Wildlife exposure assessment will not be conducted because the site is an intensively developed industrial/urban area with little or no fish or wildlife habitat.

2.10 Site Survey

A New York State licensed surveyor will be retained to complete an ALTA property survey of the project site. This will include a metes and bounds description and location and elevation of key site landmarks. Sample locations and monitoring well location / elevations will be included. The final survey will be provided in AutoCAD compatible format.

2.11 Additional Sampling and Analysis

The specific type and number of samples to be collected as part of a follow-up investigation, if needed, to complete the characterization of primary areas of environmental concern will be detailed after completion of the site characterization efforts covered by this scope of work.

2.12 Report Preparation

Upon completion of the previously mentioned tasks, C&S will prepare a Draft RI Report that will be consistent with the general requirements for RI reports set forth in Section 3.14 of DER *Technical Guidance for Site Investigation and Remediation* dated May 2010. The report will include information to address the following:

- Identify and characterize the sources of contamination
- Describe the amount, concentration, environmental fate and transport (as necessary), location, and other significant characteristics of the substances present
- Define hydrogeological factors as needed
- Identify routes of exposure and human populations at risk

Upon completion of the Draft RI Report, a meeting with NYSDEC and NYSDOH personnel can be held to discuss the results of the RI as well as recommended preliminary remedial action measures.

SECTION 3 INTERIM REMEDIAL MEASURE

3.1 Planning and Design

If deemed appropriate or expedient following the initial phase of site investigation, a plan and design for implementation of Interim Remedial Measures (IRM) will be prepared for this site. For the purpose of developing this work plan, it has been assumed that IRMs could consist of the following:

- Possible removal and off-site disposal of petroleum-contaminated soils.
- Removal of other contaminated waste or soil.
- Removal of oily water and/or sediments in on-site manholes and sewer systems.

SECTION 4 ADDITIONAL INFORMATION

4.1 Health and Safety Plan

The site-specific Specific Health and Safety Plan for this project is provided in Appendix B.

4.2 Investigation Personnel and Qualifications

Individuals assigned to the execution of the RI Work Plan include:

- Steven M. Vinci, CPG- Project Manager
- Thomas A. Barba- Technical Manager

Field Investigation Personnel:

- Rory Woodmansee
- Thomas Wirickx
- Wayne Randall
- Amanda Atwell

Resumes for these individuals are provided in Appendix C.

4.2 Citizen Participation Plan

The Citizen Participation (CP) Plan for Norampac Industries, Former Mill No. 2 is provided in Appendix D and was revised to satisfy the June 14, 2010 Conditional Approval of the *Interim Remedial Measure Work Plan for Demolition of Former Mill No. 2*. The CP Plan is consistent with the requirements of 6 NYCRR Part 375 and the applicable guidance set forth in the May 2004 draft version of the *Brownfield Cleanup Program Guide*.

4.3 Project Schedule

The planned project schedule is provided in Appendix E.

TABLE 1

SAMPLING AND ANALYSIS MATRIX FOR GRID LAYOUT AND MONITORING WELLS

TABLE 1
SAMPLING & ANALYSIS SUMMARY
SOIL BORING GRID, ADDITIONAL EXPLORATIONS REQUESTED BY NYSDEC AND MONITORING WELLS
REFER TO FIGURE 2

LOCATION BCP PARCEL	MEDIA	SAMPLING METHOD	FIELD ANALYSIS	SAMPLE DEPTH	LABORATORY ANALYSIS
100 ft. x 100 ft. Grid – Nodes and Fifteen (15) additional locations as requested by NYSDEC June 30,2010.	Soil	Continuous Sampling, Direct Push. Terminal depth will be field adjusted to identify native soil	PID/Visual	Based upon field characteristics.	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
North-South Alignment of 30-inch and 36-inch diameter sewer lines. Potential migration pathway assessment	Soil	Continuous Sampling, Direct Push or Hollow Stem Auger. Terminal depth will be determined, based on field conditions.	PID/Visual	Based upon field characteristics	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
Eight (8) Groundwater Monitoring Wells 2-inch PVC	Soil	Continuous Sampling Hollow stem Auger to refusal or first confining strata	PID/Visual	Top of saturated zone and bottom of boring	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
	Groundwater	Manual Bailing	ORP Temperature DO, pH, conductivity	Dependent on well screen position.	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
Supplemental Borings, including four (4) additional explorations requested by NYSDEC at Frank's Vacuum Service, if parcel is added to current BCP. Two (2) Groundwater Monitoring Wells 2-inch PVC, requested by NYSDEC	Soil	Continuous Sampling, Direct Push. Terminal depth will be field adjusted to identify native soil	PID/Visual	Based upon field characteristics	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
	Soil	Continuous Sampling Hollow stem Auger to refusal or first confining strata	PID/Visual	Top of saturated zone and bottom of boring	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
	Groundwater	Manual Bailing	ORP Temperature DO, pH, conductivity	Dependent on well screen position.	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs

TABLE 2

SAMPLING AND ANALYSIS MATRIX FOR OTHER AREAS OF INVESTIGATION

TABLE 2
SAMPLING & ANALYSIS SUMMARY - OTHER AREAS OF INVESTIGATION
REFER TO FIGURE 3

LOCATION BCP PARCEL	MEDIA	SAMPLING METHOD	FIELD ANALYSIS	SAMPLE DEPTH	LABORATORY ANALYSIS
Visual Assessment of Floor Slab after demolition to identify, pits, drains, including "sump discharge" at westside of Building 14.	Solids or Fluids	Manual	PID/Visual	Based on field characterization	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
Buildings 1, 2, 4, 13, 14. Approximately 20 Test trench or direct push exploration at approximately 75 ft. intervals unless physical features indicate otherwise.	Subgrade materials (soil) beneath slab.	Backhoe and/or Direct Push. Terminal depth will be field adjusted to identify native soils.	PID/Visual	Based on field characterization	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
Building 11 Tire Fire – Four Test Trench Excavations	Soil	Backhoe Test Trenches Terminal depth will be field adjusted to identify native soils.	PID/Visual	Based on field characterization	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
"Yard drain" as shown on historic drawing connected to storm sewer at west side of Building 13, north west loading dock. and transformer yard.	Sediment in drainage structures	Manual	PID/Visual	Based on field characterization	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
Transformer Yard Inside/Outside Fenced Perimeter. Visual assessment to identify evidence of staining, as access allows.	Soil	Manual or Direct Push	PID/Visual	0-6 inches 6-12 inches Below Bottom of Stone, at stained areas	PCBs
Rubbish House and Northwest Loading Dock – Waste Building 1	Soil	These areas to be sampled as part of 100 ft. x 100 ft. grid program. Sampling and laboratory analysis will be consistent with 100 ft. x 100 ft. grid sampling.			
Former Caustic Unloading Area and sump discharge line at westside Building 14	Soil	Backhoe Test Trench Terminal depth will be will be field adjusted to identify native soils.	PID/Visual	Based on field characterization	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs

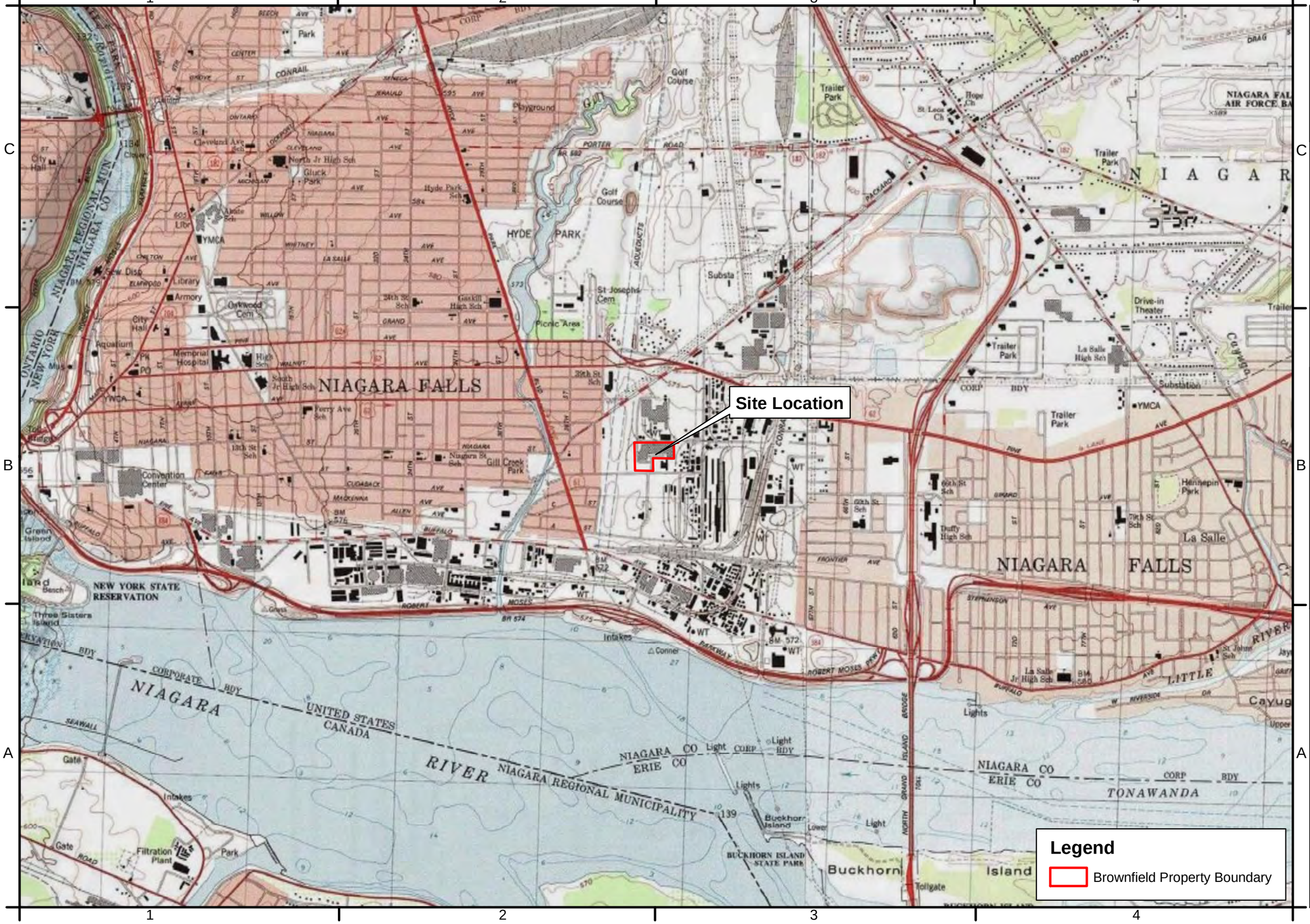
TABLE 2
SAMPLING & ANALYSIS SUMMARY - OTHER AREAS OF INVESTIGATION
REFER TO FIGURE 3

LOCATION BCP PARCEL	MEDIA	SAMPLING METHOD	FIELD ANALYSIS	SAMPLE DEPTH	LABORATORY ANALYSIS
Former Garage – Structure was located south of Building 5. Historical plant drawings show garage had earthen floor.	Soil	Backhoe Test Pit below bottom of concrete slab Terminal depth will be field adjusted to identify native soils.	PID/Visual	Based on field characterization	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
Southeast Corner Building 11 C&S Borehole B-6 - December 2009 investigation documented evidence of volatile aromatic odor	Soil	Direct Push Continuous Sampling to Refusal	PID/Visual	Based on field characterization. Minimally one sample will be obtained from 8 ft. to 10 ft. interval.	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
LaBella Boreholes SB-11/SB-12 2008 investigation detected mercury in B-11 at 16 to 20 ft. below ground surface	Soil	Two Explorations Direct Push Continuous Sampling to 25 ft. Unless Refusal is Met	PID/Visual	Based on field characterization. Minimally one sample will be obtained from 16 to 20 ft. interval.	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs
Eastside Building 11 - Double Doors and Door D-10. Assessment of “Out the Door” Disposal	Soil	Backhoe Test Trenches. Terminal depth will be field adjusted to identify native soils.	PID/Visual	Based on field characterization.	TCL VOC + 10 TICS TCL SVOC + 20 TICS TAL Metals TCL Pesticide/Herbicides PCBs

FIGURES

FIGURE 1

SITE LOCATION MAP



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0 2,000 Feet

Remedial Investigation Work Plan
Former Mill No. 2 Site ID # C932150
Norampac Industries
4001 Packard Road
Niagara Falls, New York

PROJECT NO:	I11.005.001
DATE:	April 1, 2010
SCALE:	AS SHOWN
DRAWN BY:	WNR
DESIGNED BY:	WNR
CHECKED BY:	SMV

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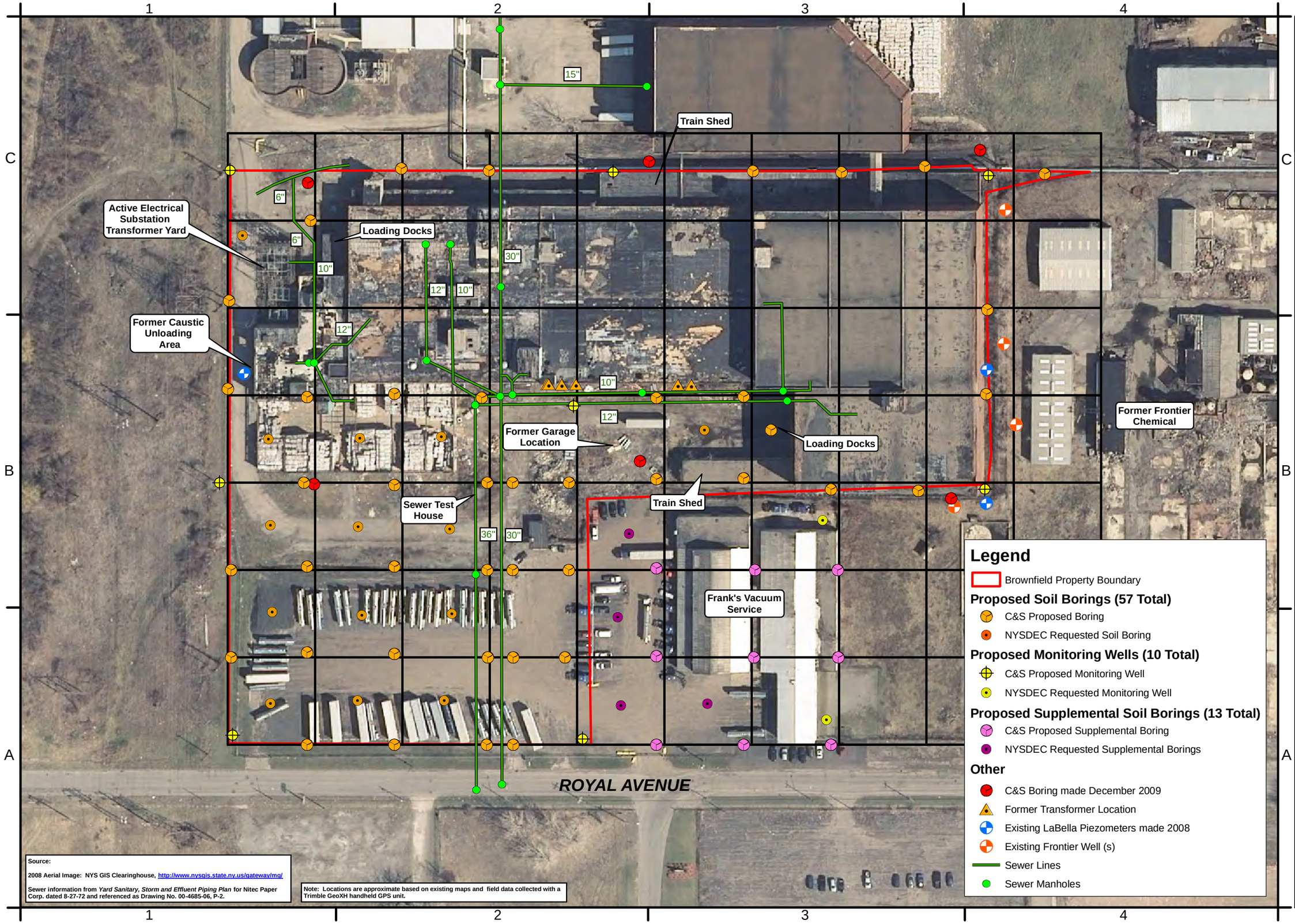
Site Location Map

FIGURE 1

FIGURE 2

SOIL BORING GRID LAYOUT AND MONITORING WELL LOCATIONS



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N

0 100 Feet

Remedial Investigation Work Plan
Former Mill No. 2 Site ID # C932150
Norampac Industries
4001 Packard Road
Niagara Falls, New York

PROJECT NO:	I11.005.001
DATE:	August 9, 2010
SCALE:	AS SHOWN
DRAWN BY:	WNR
DESIGNED BY:	WNR
CHECKED BY:	SMV

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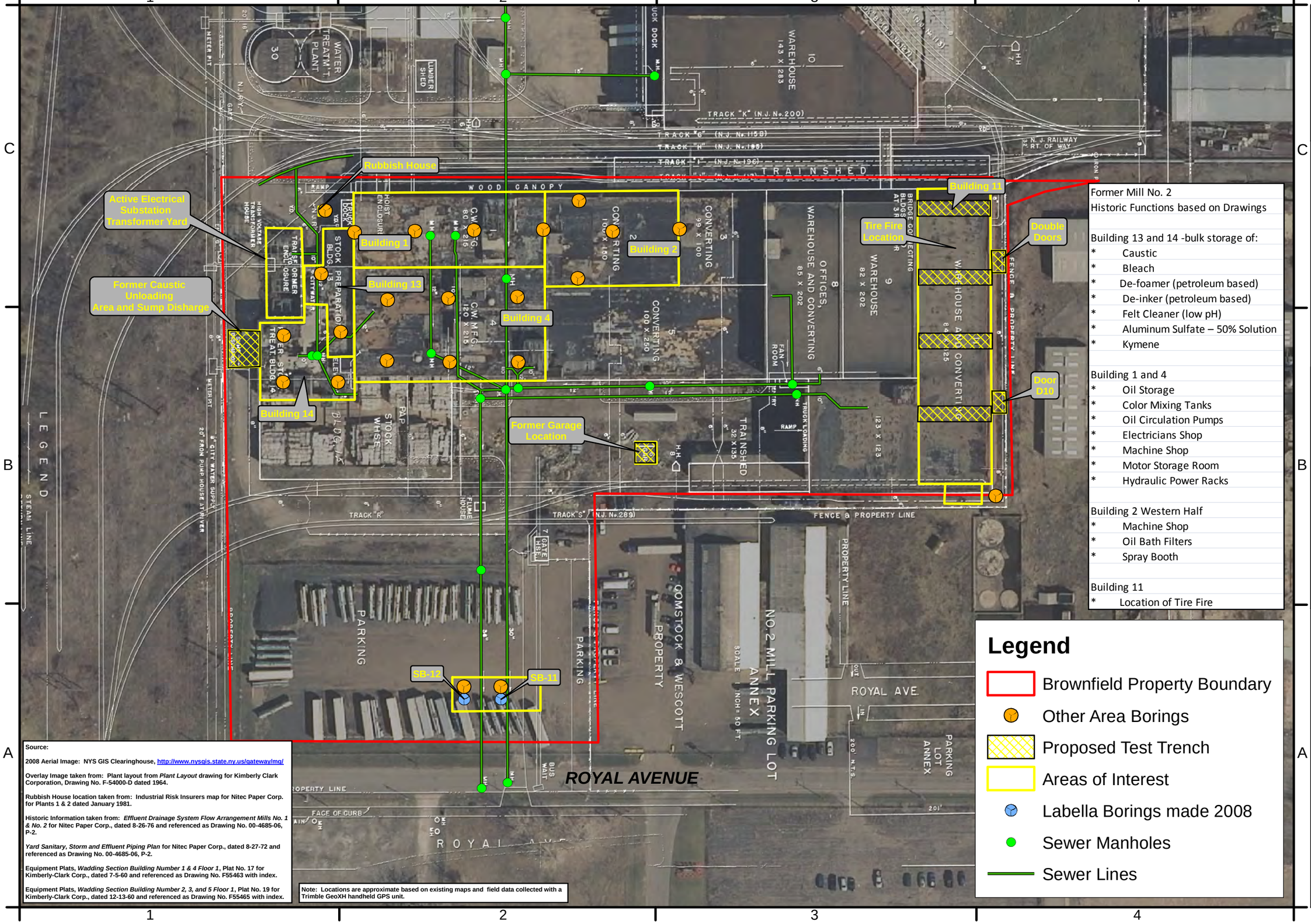
Proposed Soil Boring and Monitoring Well Location Plan with 100 ft x 100 ft Grid

FIGURE 2

FIGURE 3

OTHER AREAS OF INVESTIGATION



Former Mill No. 2
Historic Functions based on Drawings

Building 13 and 14 -bulk storage of:
* Caustic
* Bleach
* De-foamer (petroleum based)
* De-inker (petroleum based)
* Felt Cleaner (low pH)
* Aluminum Sulfate – 50% Solution
* Kymene

Building 1 and 4
* Oil Storage
* Color Mixing Tanks
* Oil Circulation Pumps
* Electricians Shop
* Machine Shop
* Motor Storage Room
* Hydraulic Power Racks

Building 2 Western Half
* Machine Shop
* Oil Bath Filters
* Spray Booth

Building 11
* Location of Tire Fire

Legend

- Brownfield Property Boundary
- Other Area Borings
- Proposed Test Trench
- Areas of Interest
- Labella Borings made 2008
- Sewer Manholes
- Sewer Lines

Source:

2008 Aerial Image: NYS GIS Clearinghouse, http://www.nysgis.state.ny.us/gateway/mg/

Overlay Image taken from: Plant layout from *Plant Layout* drawing for Kimberly Clark Corporation, Drawing No. F-54000-D dated 1964.

Rubbish House location taken from: Industrial Risk Insurers map for Nitec Paper Corp. for Plants 1 & 2 dated January 1981.

Historic Information taken from: *Effluent Drainage System Flow Arrangement Mills No. 1 & No. 2* for Nitec Paper Corp., dated 8-26-76 and referenced as Drawing No. 00-4685-06, P-2.

Yard Sanitary, Storm and Effluent Piping Plan for Nitec Paper Corp., dated 8-27-72 and referenced as Drawing No. 00-4685-06, P-2.

Equipment Plats, *Wadding Section Building Number 1 & 4 Floor 1*, Plat No. 17 for Kimberly-Clark Corp., dated 7-5-60 and referenced as Drawing No. F55463 with index.

Equipment Plats, *Wadding Section Building Number 2, 3, and 5 Floor 1*, Plat No. 19 for Kimberly-Clark Corp., dated 12-13-60 and referenced as Drawing No. F55465 with index.

Note: Locations are approximate based on existing maps and field data collected with a Trimble GeoXH handheld GPS unit.

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0 100 Feet

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Map of Other Areas of Investigation

FIGURE 3

APPENDIX A

Sampling and Analysis Plan

Sampling and Analysis Plan

for

Brownfield Remedial Investigation

Former Mill No.2
Norampac
4001 Packard Road
Niagara Falls, New York

Site ID # C932150

Prepared by

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April 2010

Revised August 2010

SAMPLING AND ANALYSIS PLAN

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SECTION 1 INTRODUCTION

This Sampling and Analysis Plan is for the Norampac Brownfield Project in the City of Niagara Falls, Niagara County, New York. The project involves a Remedial Investigation (RI) to further define contamination at the Site and an Alternatives Analysis to determine if further actions are need to reduce the risk that the site contamination poses.

Note that this plan describes procedures for a variety of sampling situations. Not all of these situations may exist at the Norampac site. The Work Plan for the RI details the specific sampling and analyses for the Norampac Brownfield project.

SECTION 2 QUALITY ASSURANCE PROJECT PLAN (QAPP)

2.1 Project Description

This Sampling and Analysis Plan includes identification of sampling locations and media; methods for collection, handling, and preservation; and the protocols to be used for sample analysis. Environmental media to be sampled include soils, groundwater, and miscellaneous materials (e.g., sewer sediments). The data will be utilized to form conclusions as to the presence, transport, and fate of site specific contaminants.

2.2 Project Organization and Responsibilities

The sampling and analysis plan will utilize the following project organization and the associated responsibilities:

Project Manager	Steven M. Vinci
Technical Manager	Thomas Barba
Quality Assurance/Quality Control (QA/QC)	Thomas Barba
Laboratory Coordinator	Rory Woodmansee
Field Investigations	Rory Woodmansee

2.3 Data Quality Objectives

Data Quality Objectives (DQOs) are statements which describe the desired quality of data necessary to meet the objectives of the sampling program. The DQOs for the Norampac Brownfield site sampling program were formulated during the scoping effort and developed as part of this Sample and Analysis Plan. The general steps followed in preparation of the DQOs were as follows:

- *Identification of the media to be sampled* - Identifies the media being investigated (e.g., ground water, surface soil).
- *Identification of the data uses* - Identifies the intended use of the data according to the following:
  - Site Characterization - Data are used to determine the composition, nature, and extent of contamination.
  - Risk Assessment - Data are used to evaluate the actual or potential risks posed by contaminants determined to be present on-site. Particular attention is given to sampling at locations where human exposure is possible.
  - Health and Safety Plan (HSP) - Data are used to establish the level of protection needed for on-site workers during site characterization activities.
  - Monitoring - Data are used during the monitoring of a remedial action to access the effectiveness of such action.
  - Evaluation of Alternatives - Data are used to evaluate various proposed remedial technologies and assist in proper design of alternatives.
- *Identification of the data types* - Identifies what types of analyses are to be performed.
- *Sample Collected* - Describes the sample types to be collected.
  - Environmental - Refers to a specific media sampled such as water, soil, air, or biological.
  - Source - Refers to sampling an actual contamination source.
  - Grab - A discrete sample representative of a specific location.
  - Composite - A sample that represents a mixture of a number of grab samples that represents the average properties over the extent of areas sampled.

- Biased - Sampling that focuses on a specific area of expected contamination or uncontaminated area (background).

► *Identification of the data quality needs* - Identifies the analytical options available to support data collection activities and are identified as follows:

- Level I: *Field Screening* - portable type instruments which provide real-time data.
- Level II: *Field Analysis* - portable analytical instruments in an on-site lab or transported to the site.
- Level III: *Standard Analytical Protocols* - standard analytical protocols or without the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) (2005) deliverables/reportables documentation.
- Level IV: *NYSDEC ASP Reportables/Deliverables* - rigorous QA/QC protocols and reportables/deliverables documentation; NYSDEC ASP (2005) Category B deliverables.
- Level V: *Non-Standard* - methods which have been modified to meet specific site study or remediation needs or by use of some other specialized analytical methods that cannot be obtained through standard or typical avenues of analytical support.

► *Identification of Data Quality Factors* - Describes factors which influence the quality or quantity of data to be collected. Primary contaminants and associated levels of concern are identified concerning Applicable or Relevant and Appropriate Requirements (ARARs) or potential risks. Required detection limits are also given or referenced.

► *Identification of QA/QC Samples* - Specifies additional samples to be collected to support QA/QC procedures. Additional samples to be collected could include:

- *Matrix Spike/Matrix Spike Duplicates* - Matrix spike and matrix spike duplicate samples are collected as a duplicate sample to which the analytical laboratory will add known amounts of target analytes. These QA/QC samples are intended to assess the extraction procedure used by the laboratory.
- *Field Blanks* - Field (equipment) blanks are samples which are obtained by running analyte-free water through the sample collection equipment in a way that is identical to the sample collection procedures. Field blanks may be used during QA/QC

procedures to evaluate if sampling equipment has contributed contaminants to the samples.

- *Trip Blanks* - Trip blanks are samples which are prepared prior to the sampling event in the same type of sample container and are kept with the collected samples throughout the sampling event unit analysis. Trip blank vials are not opened in the field and are analyzed for volatile organics only.

2.4 Sampling Procedures

All sampling objectives, locations, and procedures have been included as the Field Sampling Plan and described in Section 3.0 of this Sampling and Analysis Plan. Items including Field Measurement Techniques, General Field Decontamination, and Sample Management have also been included within the Field Sampling Plan.

2.5 Laboratory Certification and Coordination

All chemical analyses for samples from the site will be completed by a CLP laboratory capable of performing project specific analyses as indicated in this QA/QC plan. The project QA/QC Officer will also be responsible for all project related laboratory coordination.

2.6 Analytical Methodologies

Analysis of samples collected during the RI will be consistent with the NYSDEC ASP 2005, Category B requirements. Sampling and analysis will be performed for the Superfund Target Compound List (TCL) parameters including volatiles, semivolatiles, PCBs/pesticides, and inorganics. The specific analyses will be conducted according to the following methodologies:

Parameter Group	Analysis Method
Volatiles	USEPA 8260
Semivolatiles	USEPA 8270
PCBs/Pesticides	USEPA 8081/8082
Metals	CLP-M-Series/USEPA 6010B (TAL List)
Mercury	CLP M-245.1/USEPA 7470
Cyanide	CLP M-335.2/USEPA 9012

Trip blanks will accompany each shipment of aqueous samples for volatile organic compounds (VOC) analysis. Trip blanks are not necessary for soil samples. If several samples are collected for VOC analysis on any one day, all VOC samples will be packed in the same cooler with the trip blank. All trip blanks will be analyzed according to NYSDEC ASP (2005) protocol for volatile organics. All data will be presented in Category B reportables/deliverables format.

Duplicate samples will be obtained from surface water or groundwater (aqueous) and soil samples (solids). One matrix spike (MS) and one matrix spike duplicate (MSD) sample will be collected and analyzed for each twenty field samples collected for each matrix. MS and MSD samples must be referenced to a specific field sample. The ASP provides the following definitions for MS and MSD samples:

- Matrix spike - An aliquot of a sample (water or soil) spiked with known quantities of specific compounds (target analytes) and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery. The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.
- Matrix spike duplicate - A second aliquot of the same matrix as the Matrix Spike that is spiked with identical concentrations of target analytes as the Matrix Spike, in order to document the precision and bias of the method in a given sample matrix.

With the present sampling schedule and sample quantities, one set of MS/MSD samples will be collected from a water sampling location and two sets of MS/MSD samples will be collected from soil sampling locations.

2.7 Analytical Quality Control

Analytical quality control for this Project will be consistent with the methodology and quality assurance/quality control requirements in the NYSDEC ASP 2005. The following holding times calculated from the verified time of sample receipt (VTSR) at the laboratory will be required from the contracted analytical laboratory, regardless of sample matrix:

Parameter	Task	Holding Time
Volatiles	Analysis	7 days from VTSR
Semivolatiles	Extraction	5 days from VTSR
	Sample clean-up	5 days from VTSR
	Analysis	40 days from VTSR
Pesticides/PCBs	Extraction	5 days from VTSR
	Sample clean-up	5 days from VTSR
	Analysis	40 days from VTSR
Mercury	Analysis	26 days from VTSR
Cyanide	Analysis	12 days from VTSR
Metals	Analysis	180 days from VTSR

2.8 Reportables and Deliverables Documentation

The Remedial Investigation analytical data which will be subjected to data usability review will be presented in NYSDEC ASP (2005) Category B reportables/deliverables format. The RI report will be a stand-alone document that will include the results and an interpretation of the RI sampling, as well as the summary data from previous sampling activities.

2.9 Data Usability Summary Report

A Data Usability Summary Report (DUSR) will be prepared by a certified data validator. The DUSR will be prepared in a manner consistent with the NYSDEC's *Guidance for Data Deliverables and Development of Data Usability Summary Reports* as given in Appendix 2B of the draft DER-10. The main objective of the DUSR is to determine whether the data presented meets the project-specific needs for data quality and data use.

SECTION 3 FIELD SAMPLING PLAN

3.1 Sampling Objectives

Field sampling at the former Mill No. 2 site has been designed to obtain representative samples of environmental media to assess the impact that the site may have upon human health and the environment. The field sampling plan includes media sampling for groundwater, subsurface soils, and sediments.

3.2 Sampling Locations

Subsurface Soil

As discussed and illustrated on Figure 2 and Figure 3 in the RI Work Plan, soil borings will be located based on the following criteria:

- Approximately 42 soil borings will be located based on a 100 foot square grid covering the majority of the property;
- An additional 15 locations in between grid nodes as requested by NYSDEC in June 2010
- Eight borings will be placed at pre-determined monitoring well locations;
- Thirteen borings and two ground water monitoring wells on the "Frank's Vacuum Service Property" only in the event that parcel is added to the current limits of the BCP parcel.
- Additional borings and or test trenches will be placed to assess the areas shown on Figure 3 of the RI work plan. Those locations will be adjusted based on inspection of surface features (pipelines, sumps, etc.) or on research into past uses of the property, are determined to be of greater probability of exhibiting impacts.

Subsurface borings will be implemented using either direct push subsurface investigation techniques or conventional rotary drilling with continuous split spoon sampling in accordance with ASTM D-1586-99. Conventional borings will be advanced using hollow-stem auger without the use of air or drilling fluids. Drilling cuttings will be visually inspected and screened with a photoionization detector (PID) and will be managed consistent with DER-10 May 3, 2010 as described in Section 2.4 of the RI Work Plan. Direct push or continuous split-spoon sampling will be conducted to define the unconsolidated geology. During the continuous sampling process, all soil samples will be field screened for the presence of volatile organic compounds using a PID. Soil samples for laboratory analysis will be selected in the field based on visual/olfactory examination of the samples and the results of PID screening.

When conditions are encountered that indicate excavation would be a more effective way to investigate and sample the subsurface, the Work Plan allows for field decisions to be made to substitute test pitting for the soil borings discussed above.

Groundwater

Eight of the above described boring locations have been pre-selected to be completed as monitoring wells. Section 2.4 of the RI Work Plan describes the manner in which the groundwater monitoring wells will be constructed. One sample of groundwater, plus appropriate QA/QC samples, will be collected from each well. Section 2.4 of the RI Work Plan provides the groundwater monitoring well sampling protocol.

Miscellaneous Media

These samples include surface soil samples from the electrical transformer yard, as well as solid or liquid materials from sumps, pipelines, or catchbasins. These samples will be collected from where they are encountered; specific locations and physical descriptions of the materials will be documented so that any location can be identified via permanent landmarks, measurements, or GPS coordinates.

3.3 Sampling Procedures

The following sections provide procedures for collecting a variety of samples, not all of which will be needed at this site.

3.3.1 Preparation for Sampling

The sample collection technique is of prime importance to assure the integrity of the collected sample. The following techniques include provisions so that:

- A representative sample is obtained;
- Contamination of the sample is minimized;
- The sample is properly preserved; and
- An acceptable Chain-of-Custody record is maintained.

The QA/QC Sampling Component of the Plan includes:

- Incorporation of accepted sampling techniques referenced in the sampling plan;
- Procedures for documenting any field actions contrary to the QA/QC Plan;
- Documentation of all preliminary activities such as equipment check-out, calibrations, and container storage and preparation;

- Documentation of field measurement quality control data (quality control procedures for such measurements shall be equivalent to corresponding QC procedures);
- Documentation of field activities;
- Documentation of post-field activities including sample shipment and receipt, field team debriefing, and equipment check-in;
- Generation of quality control samples including duplicate samples, field blanks, equipment blanks, and trip blanks; and
- The use of these samples in the context of data evaluation with details of the methods employed (including statistical methods) and of the criteria upon which the information generated will be judged.

The personnel responsible for collection of groundwater, soil, and miscellaneous media samples will be familiar with standard sampling procedures and follow the appropriate protocol. Field records will be maintained in bound notebooks with numbered pages to document daily instrument calibration, locations sampled, field observations, and weather conditions. Each page will be dated and signed by the sampler. Each notebook will be numbered and a log of notebooks will be maintained by the project manager.

Prior to sampling, all equipment must be procured and accommodations for sample container delivery, and sample shipment must be made. The following is a list of general equipment that would be on hand for sampling events. Special equipment for each sampling event is presented in the section describing that specific sampling event.

General Field Sampling Equipment

- Field Data Sheets
- Chain-of-Custody forms
- Engineers tape and folding ruler with 0.01 foot intervals
- Field Record Sheets
- Nitrile gloves
- Face-safety shield
- Tyvek coveralls
- Respirators
- Photoionization detector
- Bio-degradable phosphate free detergent
- Coolers (with ice)
- 55 gallon drums
- Sample bottles
- Aluminum foil
- Duct and filament tape
- Tap water

- Distilled water
- Laboratory grade methanol and hexane
- 5 gallon wash buckets
- Decontamination cloths
- Large disposal containers
- Large plastic sheets

3.3.2 Groundwater Sample Collection

Groundwater samples will be collected using dedicated, disposable HDPE bailers following evacuation of three borehole volumes or complete purging of the well. All other related sampling equipment will be properly decontaminated in the field. The following equipment will be available for sampling of monitoring wells in addition to the general sampling equipment list:

- Well Data Sheets
- Bailers
- Electronic water level indicator
- pH meter
- Thermometer
- Photoionization detector (PID)
- ORP Meter
- DO Meter
- Conductivity Meter
- Sample preservatives
- Nitrile gloves

The following activities will be completed before going into the field every day before the start of sampling:

1. Fill out appropriate section on Well Data Sheet for the wells to be sampled;
2. Obtain the sampling schedule for each well to be sampled;
3. Calibrate the Photoionization Detector (PID) with the calibration gas;
4. Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;
5. Each well to be sampled will have designated coolers containing the pre-labeled, certified clean, sample bottles. The groundwater samples will be placed in the cooler labeled for the well from which they were taken. The bottle shall be labeled with large distinguishable letters, so that the groundwater samples will be placed in the proper cooler; and
6. Select the appropriate sample containers for the day's sampling. The containers shall be pre-marked with a sample parameter and preservatives. Reusable glass bottles will have been cleaned and prepared at the laboratory. The containers for the various parameters to be analyzed from each well location will then be placed in a cooler.

The following steps describe the sample collection of groundwater:

1. Unlock and remove the well cap;
2. Test the air at the wellhead with the calibrated PID. If the gases from the well have caused the air in the breathing zone to read greater than 5 ppm, stop work and refer to the Health and Safety Plan. Record the reading on the Well Data Sheet;
3. In order to obtain a representative sample of the formation water, the well must be purged of the static water within the well. Prior to purging, the static water level within the well must be measured and the measurement recorded on the Well Data Sheet. To determine the amount of water necessary to purge, find the liquid column height in the well to determine the total volume (three liquid column borehole volumes) of liquid to be purged;
4. Attach the polypropylene rope to the sample bailer. A different dedicated rope will be used for each well.
5. Purge the well; lower bailer slowly into the well until it is below the water surface. Consistent with NYSDEC Guidance, purge waters will be containerized.
6. Record the amount of water purged in the field logbook and on the Well Data Sheet.
9. If the well goes dry during bailing, allow for full recovery (measure the water level) and then sample. If recovery takes more than twenty minutes, proceed to next well but return to sample within 24 hours.
10. Fill the appropriate sample bottles according to the sampling schedule for each well. While filling the sample bottles, record the well number, type, volume of container, and the preservatives used on the Ground Water Sampling Analyses form.
11. Commence sample collection with the following sample collection order: volatiles, semi-volatiles, PCBs/pesticides, cyanide, mercury, and metals. If the well should go dry during sampling and the well needs to be re-sampled the next day, the second attempt to sample the well will proceed in the following order: volatiles, metals, semi-volatiles, PCBs/pesticides, cyanide, and mercury.

12. The preservatives for the various sampling parameters were previously added to the clean sample bottles by the laboratory. Some parameters may require additional special handling.
    - Volatile organics analyses samples must be free of air bubbles. When a bubble-free sample has been obtained, it must be immediately chilled.
    - All samples collected for metals analysis will be preserved with nitric acid to a pH less than 2.
13. Collect the matrix spike duplicates and trip blanks. Take samples according to sampling schedule presented in the Work Plan. Duplicate samples will include the field splitting of at least one groundwater sample for each sampling visit. This may require the extraction of twice the amount of water needed for duplication purposes. The creation of trip/field blanks and duplicates shall be performed at least once with each field batch with a minimum of once every twenty samples.
14. Record all pertinent information in field logbook and on the Well Data Sheet (include color, odor, sediment content of sample, etc.). Any situations at the site that have the potential to interfere with the analytical results should also be recorded here.
15. Lock well, inspect well site, and note any maintenance required.
16. Dispose of potentially contaminated materials in designated container for contaminated solids.

3.3.3 Soil Sampling

Soil samples from test pit locations will be collected using disposable or dedicated stainless steel spoons or hand trowels from those areas investigated via test pit excavations, or shallow sampling locations and sumps/drains as indicated in the sampling and analysis tables in the RI Work Plan. The use of disposable or dedicated sampling equipment will eliminate the need for collection of field (equipment) blanks. The retrieved soil sample will be placed directly into parameter specific glass containers. Each sample container will be appropriately labeled and transported to the contracted laboratory in appropriate coolers. The following equipment will be required for the sampling of soil samples, in addition to the general sampling equipment list:

- Dedicated or disposable stainless steel spoons or hand trowels; and
- PID instrument.

The following activities will be completed prior to field sampling everyday:

- Fill out appropriate section on Soil Sample Sheet for the sites/trenches to be sampled;
- Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;
- Select the appropriate sample bottles for the day's sampling. Soil samples will be collected within unpreserved glass, parameter specific, containers.

Sampling for matrix spike/matrix spike duplicates shall be performed at least once with each field batch with a minimum of one for each twenty samples.

3.3.4 Miscellaneous Media Samples

Drain, sump, and/or pit sludge/solid residue media samples will be collected using disposable or dedicated stainless steel spoons or hand trowels. The use of disposable or dedicated sampling equipment will eliminate the need for collection of field (equipment) blanks. The retrieved solid/sludge sample will be placed directly into parameter specific glass containers. Each sample container will be appropriately labeled and transported to the contracted laboratory in appropriate coolers. If applicable, liquid miscellaneous media samples will be sampled using an intermediate, disposable, certified clean, glass-pint sampling container. Parameter specific liquid media sample containers will then be filled. Upon filling parameter specific containers, each container will be capped, with a minimum amount of head-space, and placed within specific sample coolers for delivery to the laboratory. Upon completing miscellaneous media sampling, each parameter and location specific sample will be logged within the appropriate sampler's field book and chain-of-custody sheet. Prior to field sampling of miscellaneous media samples, the following activities will be completed:

- Locate each miscellaneous (sump, pit, and/or drain) location within the field using a facility site map and site markers;
- Flag and/or mark, with identification, each sampling location;
- Locate, identify and photograph each sampling location and record such information on field data sheets and field map;
- Plan sampling schedule;

- Calibrate PID instrument (if used for screening); and
- Collect, label, and organize appropriate disposable trowels, spoons, intermediate sample containers, and final laboratory containers.
- Fill out appropriate section on Miscellaneous Media Sample Sheet for the site area/location to be sampled;
- Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;
- Select the appropriate sample bottles for the day's sampling.

The following activities will be completed during the Miscellaneous Media sampling process:

- Collect appropriate media sample from predesignated location at each sampling location using dedicated or disposable spoons/trowels (solids) or certified clean, intermediate sampling containers (liquids);
- For liquid media, transfer each sample to the appropriately labeled container noting observed characteristics on field data sheet;
- Where possible, analyze a subsample of each sample for organic vapors using a PID;
- Cap container and complete proper chain-of-custody sheets and field data sheet; and
- Transport containers and chain-of-custody sheets to laboratory.

3.3.5 IRM Confirmation Samples

If a soil IRM is deemed to be warranted and appropriate, IRM confirmation soil samples from remedial excavations will be collected using disposable or dedicated stainless steel spoons or hand trowels from excavation walls/floor where evidence of potential contaminants were previously removed. To minimize volatilization, confirmation samples will be collected from the soils located two to four inches inside the walls or floor of the excavation. The use of disposable or dedicated sampling equipment will eliminate the need for collection of field (equipment) blanks. The retrieved soil sample will be placed directly into parameter specific glass containers. Each sample container will be appropriately labeled and transported to the contracted laboratory in appropriate coolers. The following equipment will be required for the sampling of soil samples, in addition to the general sampling equipment list:

- dedicated or disposable stainless steel spoons or hand trowels; and
- PID instrument.

The following activities will be completed prior to field sampling everyday:

- Fill out appropriate section on Confirmation Soil Sample Sheet for the excavation wall or floor locations to be sampled;
- Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;
- Select the appropriate sample bottles for the day's sampling. Soil samples will be collected within unpreserved glass, parameter specific, containers.

Duplicate samples shall be collected at least once with each field batch with a minimum of one for each twenty samples. The on-site NYSDEC representative will be allowed the opportunity to split any sample taken.

3.3.6 Background Samples

Based on the industrial nature of the site environs, and on the complexity of on-site and off-site conditions that might affect groundwater and contaminant migration in the area, soil and groundwater samples have not been pre-designated as likely to characterize site background conditions. Instead, monitoring wells will be installed in all cardinal directions on the site perimeter, as well as within the interior of the site, and will be used to determine local groundwater flow directions and should indicate which specific samples might be indicative of background conditions.

3.3.7 QA/QC Samples

Matrix Spike/Matrix Spike Duplicates

Additional samples from each of the following environmental sampling media will be collected as matrix spike/matrix spike duplicates: groundwater, subsurface soils. Matrix spike and matrix spike duplicate samples will be collected at a frequency of one set per twenty samples of each media.

Trip Blanks

Separate trip blanks will be carried into the field on each of the sampling days. The trip blank vials will be prepared by the contracted laboratory and handled in the field similar to the other sampling containers with the exception that the vials will not be opened.

3.4 Field Measurement Techniques

Water Level Measurement - Water elevations will be taken on all wells prior to purging and sampling. All measurements will be taken within a 24-hour period to obtain consistent elevations and recorded on well data sheets. The procedure for measuring water levels in the monitoring wells is:

- Unlock and remove well cap;
- Test the atmosphere of the well with the calibrated PID instrument. If the gases from the well have caused the air in the breathing zone to read greater than 5 ppm, stop work and refer to the Health and Safety Plan
- Measure water level to nearest 0.01 foot with a water level indicator (electronic).
- Water level indicators will be decontaminated before moving to next well. The tape and cable are decontaminated by washing in a bucket of distilled water-biodegradable phosphate free-detergent solution, followed by a rinse with distilled water.

Specific Conductance Measurement - A specific conductance meter will be field calibrated daily, using a 1M KCl reference solution, to 1413 μmhos/cm at 25 degrees centigrade. Sample aliquots for specific conductance and temperature will be obtained directly from the sampling point in 100 ml disposable beakers.

Photoionization Detector (PID) - The PID will be calibrated daily (and more often as required by the manufacturer's data) prior to use in the field, using calibration test gases.

3.5 General Decontamination

The following procedures will be performed for the decontamination of exploration equipment, sampling equipment, and personnel after each drilling/sampling event:

Drill rig, backhoe, and excavator - The drill rig, direct-push rig, backhoe, and/or excavator will be cleaned prior to their entrance and exit of the site. Greases and oils will not be used on any down hole equipment during drilling or exploration activities.

Exploration equipment - To avoid cross contamination, use of a PID meter and cleaning between each sampling site will be employed on backhoe arms, buckets, hollow stem augers, casing drill rods, down-hole tools, and appurtenant equipment.

Split spoon and Direct Push samplers – Sampler tools will be scrubbed, cleaned, and put through a series of rinses between each sampling event. A number of split spoon samplers will be used so that one can be utilized for sampling while the others are being cleaned. Acetate sleeves are expected to be used in direct push samplers. Those sleeves are single use and will be containerized and disposed.

Reusable equipment - The following steps will be employed to decontaminate reusable equipment:

- Rinse equipment of soil or foreign material with potable water;
- Immerse and scrub equipment with bio-degradable phosphate-free detergent and potable water;
- Immerse and scrub in a potable water rinse without detergent;
- Immerse and scrub in deionized/distilled water;
- Air dry and wrap cleaned equipment in foil to carry to next monitoring site to prevent contamination of equipment during transfer; and
- The decontamination wash and rinse water will not be considered hazardous unless visual inspection or monitoring by the PID and other equipment indicate that contaminants may be present. The rinse waters can be discharged on-site if they are not contaminated. If contaminants are expected to be present, the rinsate waters should be placed in 55 gallon drums and stored on-site.

Sample containers - Upon filling and capping sample bottles, the outside of the bottle will be wiped off with a clean paper towel. These towels will be disposed of in a dedicated container for contaminated solids.

Personnel decontamination - The following procedures will be used to decontaminate sampling personnel.

- After each sampling event chemical resistant gloves will be disposed of in a dedicated container for contaminated solids;
- At the end of each sampling day, Tyvek™ coveralls will be disposed of in a dedicated container for contaminated solids;
- Boots will be rinsed off with water to remove mud, clay, or any other contaminants; and
- Personnel will be required to follow procedures outlined in the Health and Safety Plan.

3.6 Sample Management Plan

3.6.1 Sample Management

The Sample Management Plan provides procedures to document and track samples and results obtained during this work effort. A series of pre-printed forms with the appropriate information serves as a vehicle for documentation and tracking. In order to accomplish this task, the documentation materials will include sample labels, sample characterization and Chain-of-Custody sheets, daily field reports, and a sample log.

Sample Label - A sample label will be completed for each sample obtained and will be affixed to the sample container. The label is configured in a way to address various types of mediums. Information on the label includes, at a minimum, client name, location, sample description, sample number, date, time, grab sample, composite sample, notes, and sampler's name.

Sample Characterization & Chain-of-Custody Sheet - All pertinent field information will be entered onto the sample characterization and chain-of-custody sheets including client name, sample ID, sample description, location of sample, sampling method, number of containers, container type, analysis required, and preservation. The monitoring well form has space allotted

for entering information regarding the well including depth to water, well volume, sample pH, temperature, color, etc. The Chain-of-Custody section of the form will document the sample's pathway of sample shipment which will include names of persons delivering/receiving, dates, and times. The reverse side of this form will be used by the laboratory to document analysis performed on the sample. Copies of the completed forms will be retained by the Engineer and the analytical laboratory. The original sample characterization and Chain-of-Custody sheets will be submitted in the Remedial Investigation report along with the laboratory results.

Daily Field Reports - Daily activities will be recorded on the Inspection Report form. The purpose of this form will be to summarize the work performed on the site each day. The completed forms will be submitted to the Project Manager on a daily basis for short term site activity and on a weekly basis for site activities of a longer duration.

Sample Log - The sample log will be utilized to track each individual sample obtained at the site. The upper portion, "Field Identification" will be completed the day the sample is taken. The form will accompany the sample characterization and Chain-of-Custody form to the laboratory. Personnel at the laboratory will complete the middle section of this form and return it to the Engineer, who will use the document to track incoming results. The bottom of the sheet has space allocated to enter "Recommended Actions" based on laboratory results.

3.6.2 Sample Designation

Each sample will have a unique sample code that will include, where appropriate, the sample media, and the sample location. The following codes will be used in the sample designation:

Sample Media	Code	Sample Location	Example
Groundwater	MW	Monitoring well	MW-1, MW-2, etc.
Subsurface Soil	B or TP	Soil Borings or Test trenches	B-1; TP-1, B-2, etc.
Miscellaneous Media			
Liquid	IL	Pit/sump/drain	IL-1, IL-2, etc.
Solid/Residue	SL	Pit/sump/drain, residues, surface soils	SL-1, SL-2, etc.
Field Blank	FB	Any	FB1, FB2, etc.

Sample Media	Code	Sample Location	Example
Matrix Spike, and Matrix Spike Duplicate	MS MSD	Any	MW-1 MS, B-2 MSD, etc.
Trip Blanks	TB	-	TB-1, TB-2, etc.

As an example of a sample designation, sample MW-3 represents a groundwater sample obtained from monitoring well MW-3.

3.6.3 Sample Handling

Each collected sample will be dispensed into the appropriate sample containers for the type of analysis to be performed. Appropriate sample preservatives will be added to the sample containers by the contracted analytical laboratory prior to the delivery into the field, except in cases where the sample preservative must be added after sample collection. All samples that require cool storage will be immediately placed in coolers with appropriate packaging materials so as to protect the breakage of sample containers during shipment. The sample coolers will be filled with cubed ice (no "Blue Ice") prior to leaving the sample collection location. In the instance that a local analytical laboratory is contracted, the samples will be hand delivered to the laboratory each sampling day. The chain-of-custody forms will be signed by the laboratory personnel picking up the samples and placed within the coolers. In the instance that an analytical laboratory is contracted which is not based locally and a common carrier is used for sample shipment, the chain-of-custody forms will be signed by the sampler and the carrier personnel and placed inside of the coolers. Careful packaging techniques will be used to prevent sample containers from breakage during shipment. Materials such as cardboard, foam wrap, or Styrofoam may be used as packaging materials. All samples will be delivered to the contracted analytical laboratory on the day they were collected and will be received by the laboratory within 24 hours of sample collection. The samples will be collected with sufficient time allowed at the end of the day for the analytical laboratory to properly process the sample chain-of-custody form.

APPENDIX B

Health and Safety Plan

Health and Safety Plan for Brownfield Site Investigation

Former Mill No.2
Norampac Industries
4001 Packard Road
Niagara Falls, New York

Site ID # C932150

Prepared by

C&S Engineers, Inc.
499 Colonel Eileen Collins Blvd.
Syracuse, New York 13212

April 2010

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Figure 1 Site Location

ATTACHMENTS

Attachment A – Map and Directions to Hospital

APPENDICES

Appendix A – Historical Site Investigation Data Tables

Appendix B – MSDS Historical Products Used at Former Mill No. 2

Appendix C – MSDS Site Investigation Contaminants

Appendix D – Hearing Conservation Plan

Appendix E – Excavation/trenching Guideline

Appendix F – Guidance on Incident Investigation and Reporting

Appendix G – New York State Department of Health Generic Community Air Monitoring Plan

SECTION 1 – GENERAL INFORMATION

The Health and Safety Plan (HASP) described in this document will address health and safety considerations for all those activities that personnel employed by C&S Engineers, Inc., that may be engaged during site investigation work at the Former Mill No. 2 Brownfield Site located at 4001 Packard Road, Niagara Falls, Niagara County, New York. . The site is within a highly industrialized urban area. Figure 1 shows the approximate location of the site. This HASP will be implemented by the Health and Safety Officer (HSO) during site work.

Compliance with this HASP is required of all C&S personnel who enter this site. The content of a HASP may change or undergo revision based upon additional information made available to health, safety, and training (H&S) committee, monitoring results or changes in the technical scope of work. Any changes proposed must be reviewed by the H&S committee. This HASP was written specifically for those employees of C&S Engineers, Inc., and is not intended for use by others.

Responsibilities

Project Manager:	Steven Vinci	Work Phone: (315) 455-2000
		Cell Phone: (315) 427-8364
Site Health and Safety Officer:	Rory Woodmansee	Work Phone: (315) 455-2000
Emergency Coordinator:	Steven Vinci	Work Phone: (315) 455-2000
Health & Safety Manager:	Mike Casler	Work Phone: (315) 455-2000
		Cell Phone: (315) 374-3623

Emergency Phone Numbers

Fire Department: 911

Ambulance: 911

Police: 911

Hospital: (Hospital Route Included as Attachment A)

Poison Control Center:.....800-252-5655

Oil Spills and Hazardous Material Spills:.....1-800-457-7362

1.0 Written Directions from the Site to Mount Saint Mary's Hospital of Niagara Falls

Head northeast on Packard Road – go 0.1 miles.
Take a slight right towards Niagara Falls Blvd., then a sharp left onto Niagara Falls Blvd. - go 0.3 miles.
Turn right onto Pine Avenue – go 1.3 miles
Turn right onto E Market Street – Hospital is on the left
The hospital is approximately 1.8 miles from the site.

Attachment A of this HASP contains a route map to the hospital that was obtained from Pictometry®.

SECTION 2 — HEALTH AND SAFETY PERSONNEL

2.0 Health and Safety Personnel Designations

The following information briefly describes the health and safety designations and general responsibilities which may be employed for this Project.

2.1 Project Manager (PM)

The PM is responsible for the overall project including the implementation of the HASP. Specifically, this includes allocating adequate manpower, equipment, and time resources to conduct site activities safely.

2.2 Health and Safety Officer (HSO)

The HSO is the person on-site responsible for assuring those personnel under direction comply with the requirements of the HASP and that personnel protective equipment needed for site work is available.

2.3 Emergency Coordinator

The Emergency Coordinator is responsible for implementation of the Emergency Response Procedures as presented in Section 13 of this HASP.

2.4 Health and Safety Manager

The Health and Safety Manager has overall responsibilities for implementing Health and Safety Programs for all C&S Companies.

SECTION 3 — PERTINENT SITE INFORMATION

3.1 Site Location and General History

The Former Mill No. 2 Brownfield Site is located on approximately 10.3 acres of land and has a street address of 4001 Packard Road. The site is within a highly industrialized urban area of Niagara Falls, Niagara County, New York. Adjoining properties include: the active paper mill (Mill No. 1) operated by Norampac Industries, Inc. to the north; "Franks Vacuum Service and the former Frontier Chemical Site to the south and west; National Grid (Niagara Mohawk) and New York Power Authority right- of- way to the east. Further to the northeast of the site are other commercial properties and a little league baseball diamond.

This former mill, encompassing approximately 661,980 square feet, historically housed paper manufacturing, finishing and packaging operations of completed goods. The former mill consists of several interconnected two story and five story concrete and masonry buildings which were constructed during various time frames, with the earliest being 1923 and the latest reported date of 1974. The former mill was taken out service several years ago and has fallen into disrepair to the point where certain areas have collapsed and while others exhibit evidence of structural distress.

Given the age of construction, asbestos containing building materials are present in and on the building. Also, PCBs may be present in those areas where electrical equipment had been located including the active transformer yard located in the vicinity of the northwest corner of the former mill.

Relative to historical operations, the use of hazardous substances and petroleum products would have been common. The types of products apparently used at the site included solvents for de-inking (which reportedly occurred on the first floor of Buildings 13 and14), bleaches, caustics, petroleum based de-foamers, low pH "Felt Cleaner", aluminum sulfate (50%) solution and Kymene (polyamide-polyamine epichlorohydrin resin) and mineral spirits. Review of historic plant drawings

show that Buildings 1 and 4 were the location of hydraulic power packs to drive equipment, "Electricians Shop", "Machine Shop", oil storage areas, oil circulating pumps and color mixing tanks.

Information obtained from laboratory analysis of groundwater and soil samples from subsurface investigations completed in 2008 and 2009 shown in Appendix A of this HASP, revealed a variety of contaminants ranging from pesticides to chlorinated solvents which were found in concentrations that did not exceed NYCRR Part 375 Soil Cleanup Objectives-Industrial Use.

SECTION 4 — HAZARD ASSESSMENT AND HAZARD COMMUNICATION

The most likely routes of exposure during Site Investigation tasks include skin adsorption and inhalation due to exposure to contaminated materials. During warm weather, contact with vectors such as bees or wasps are also a concern.

It is difficult to draw a correlation between the concentrations of contaminants found in one media and the potential for exposure to these contaminants to site workers. However, their presence may indicate that some potential for exposure to these compounds exist, and the requirements for protective measures and monitoring of exposure is based on this potential. Pertinent information, including Material Safety Data Sheets(MSDS), regarding chemicals known to have been used at the site or suspected to be potentially present at the site, are provided in Appendix B. Appendix C contains those MSDS of contaminants detected at the site as a result of investigation work completed in 2008 and 2009.

SECTION 5 — TRAINING

5.1 Basic Training Required

Completion of the 40-hour Health and Safety Training for Hazardous Waste Operations and three days on the job training under the supervision of a qualified person is required for C&S employees who will perform work in areas where the potential for a toxic exposure exists.

5.2 Advanced Training

Advanced training, as necessary, will be provided to any personnel who will be expected to perform site work utilizing Level A protection or other specialized operation to be undertaken at the site.

5.3 Site-Specific Training

Training will be provided that specifically addresses the activities, procedures, monitoring, and equipment for the site operations prior to going on site. Training will include familiarization with site and facility layout, known and potential hazards, and emergency services at the site, and details all provisions contained within this HASP. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity.

5.4 Safety Briefings

C&S project personnel will be given briefings by the HSO on a daily or as needed basis to further assist site personnel in conducting their activities safely. Pertinent information will be provided when new operations are to be conducted. Changes in work practices must be implemented due to new information made available, or if site or environmental conditions change. Briefings will also be given to facilitate conformance with prescribed safety practices. When conformance with these practices is not occurring or if deficiencies are identified during safety audits, the project manager will be notified.

5.5 First Aid and CPR

C&S employees performing field investigation efforts are trained in basic first aid and CPR by the American Red Cross as part of annual 8 hour refresher courses required under 29 CFR Part 1910.120.

SECTION 6 — ZONES

6.1 Site Zones

Three types of site activity zones are identified for the Brownfield investigation activities, including the Exclusion Zone, Contamination Reduction Zone, and the Support Zone. Prior to commencement of field work a further definition of where these zones will be set up will be established.

6.1.1 Exclusion Zone

The Exclusion Zone is the area where contamination is known to be or likely to be present or where activity is being conducted which has the potential to cause harm. The Exclusion Zone will be any area in the general vicinity of active site work or intrusive activities. It is anticipated that the location of the Exclusion Zone will change as various investigation activities change. No one may enter the Exclusion Zone without the necessary protective equipment and without permission from the HSO.

6.1.2 Contamination Reduction Zone

This is the transition area between the Exclusion Zone and the Support Zone. It is the area where the decontamination of equipment and personnel takes place. Its purpose is to keep the Support Zone free of contamination.

6.1.3 Support Zone

The Support Zone is considered the uncontaminated area. This area may include a field office, trailer, command post, or pre-work area/personnel vehicles which will provide for communications and emergency response. Appropriate safety and support equipment also will be located in this zone.

SECTION 7 — PERSONAL PROTECTIVE EQUIPMENT

7.1 General

The level of protection to be worn by field personnel will be defined and controlled by the HSO. Depending upon the type and levels of waste material present or anticipated at the site, varying degrees of protective equipment will be needed. If the possible hazards are unknown, a reasonable level of protection will be taken until sampling and monitoring results can ascertain potential risks. The levels of protection listed below are based on USEPA Guidelines. A list of the appropriate clothing for each level is also provided.

Level A protection must be worn when a reasonable determination has been made that the highest available level of respiratory, skin, eye, and mucous membrane protection is needed. It should be noted that while Level A provides maximum available protection, it does not protect against all possible hazards. Consideration of the heat stress that can arise from wearing Level A protection should also enter into the decision making process. Level A protection includes:

- Open circuit, pressure-demand self-contained breathing apparatus (SCBA)
- Totally encapsulated chemical resistant suit
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level B protection must be used when the highest level of respiratory protection is needed, but hazardous material exposure to the few unprotected areas of the body (e.g., the back of the neck) is unlikely. Level B protection includes:

- Open circuit, pressure-demand SCBA or pressure airline with escape air bottle
- Chemical protective clothing: Overalls and long sleeved jacket; disposal chemical resistant coveralls; coveralls; one or two piece chemical splash suit with hood
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level C must be used when the required level of respiratory protection is known, or reasonably assumed to be, not greater than the level of protection afforded by air purifying respirators; and hazardous materials exposure to the few unprotected areas of the body (e.g.., the back of the neck) is unlikely. Level C protection includes:

- Full or half face air-purifying respirator
- Chemical protective clothing: Overalls and long-sleeve jacket; disposable chemical resistant coveralls; coveralls; one or two piece chemical splash suit
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level D is the basic work uniform. It cannot be worn on any site where respiratory or skin hazards exist. Level D protection includes:

- Safety boots/shoes
- Safety glasses
- Hard hat with optional face shield

Note that the use of SCBA and airline equipment is contingent upon the user receiving special training in the proper use and maintenance of such equipment.

7.2 Personal Protective Equipment – Site Specific

Level D with some modification will be required when working in the work zone on this site. In addition to the basic work uniform specified by Level D protection, Nitrile gloves will be required when contact with soil or ground water is likely. Hearing protection, consistent with the Hearing Conservation Plan shown in Appendix D will be worn when power equipment is used to perform subsurface investigation work. In those areas where PCBs are suspected, protective outer boots and disposable coveralls will be worn. An upgrade to a higher level (Level C) of protection may occur if determined necessary by the HSO.

SECTION 8 — MONITORING PROCEDURES

8.1 Monitoring During Site Operations

All site environmental monitoring should be accompanied by periodic meteorological monitoring of appropriate climatic conditions.

8.1.1 Drilling Operations (Monitoring Well Installation and Subsurface Borings) and Test Pit Excavations

Monitoring will be performed by the HSO or drilling observer during the conduct of work. A photoionization detector (PID) equipped with a 10.0 eV lamp will be utilized to monitor for the presence of volatile organic vapors within the breathing zone, the borehole, and subsurface samples upon their retrieval. Drill cuttings and excavation spoils will also be monitored by use of the PID. If subsurface conditions warrant, a combustible gas indicator (CGI) with oxygen alarm may also be used to monitor the borehole for the presence of combustible gases. Similar monitoring of fluids produced during well development will also be conducted.

8.1.2 Interim Remedial Measures

If future Interim Remedial Measures (IRM) occurs, monitoring will be performed during excavation and sampling operations when C&S personnel are within the work zone. Although historical information previously obtained at the site indicates low level of volatile organic vapors and compounds, a photoionization detector (PID) will be used during subsurface activities. If an IRM is performed, the, the remedial contractor will be required to employ dust control practices during work.

8.2 Action Levels

If readings on the PID exceed 10 ppm for more than fifteen minutes consecutively, then personal protective equipment should be upgraded to Level C. The air purifying respirator used with Level C protective equipment must be equipped with organic vapor cartridges. If readings on the explosive gas meter are within a range of 10%–25% of the LEL then continuous monitoring will be implemented. Readings above 25% of the LEL indicate the potential for an explosive condition. Sources of ignition should be removed and the site should be evacuated.

8.3 Personal Monitoring Procedures

Personal monitoring shall be performed as a contingency measure in the event that VOC concentrations are consistently above the 10 ppm action level as detected by the PID. If the concentration of VOCs is above this action level, then amendments to the HASP must be made before work can continue at the site.

8.4 Medical Surveillance Procedures for Evidence of Personal Exposure

All C&S Engineers Inc. personnel who will be performing field work at the Site must be medically qualified. Additional medical testing may be required by the HSO in consultation with the company physician and corporate Health & Safety Manager if an overt exposure or accident occurs, or if other site conditions warrant further medical surveillance.

SECTION 9 — COMMUNICATIONS

A cell phone will be located on site to be utilized by C&S personnel conducting investigation and IRM efforts. Cell phones will be the primary means of communicating with emergency support services/facilities. If cell phone service is not available or fails, then land line communication available in facilities associated with Mill No 1 can be accessed. Prior to commencing field activities, the location of back-up land lines will be identified and communicated to C&S employees on the site.

SECTION 10 — SAFETY CONSIDERATIONS FOR SITE OPERATIONS

10.1 General

Standard safe work practices that will be followed include:

- Do not climb over/under drums, or other obstacles.
- Do not enter the work zone alone.
- Practice contamination avoidance, on and off-site.
- Plan activities ahead of time, use caution when conducting concurrently running activities.
- No eating, drinking, chewing or smoking is permitted in work zones.
- Due to the unknown nature of waste placement at the site, extreme caution should be practiced during excavation activities.
- Apply immediate first aid to any and all cuts, scratches, abrasions, etc.

- Be alert to your own physical condition. Watch your buddy for signs of fatigue, exposure, etc.
- A work/rest regimen will be initiated when ambient temperatures and protective clothing create a potential heat stress situation.
- No work will be conducted without adequate natural light or without appropriate supervision.
- Task safety briefings will be held prior to onset of task work.
- Ignition of flammable liquids within or through improvised heating devices (barrels, etc.) or space heaters is forbidden.
- Entry into areas of spaces where toxic or explosive concentrations of gases or dust may exist without proper equipment is prohibited.
- Any injury or unusual health effect must be reported to the site health and safety officer.
- Prevent splashing or spilling of potentially contaminated materials.
- Use of contact lenses is prohibited while on site.
- Beards and other facial hair that would impair the effectiveness of respiratory protection are prohibited if respiratory protection is necessary.
- Field crew members should be familiar with the physical characteristics of investigations, including:
  - Wind direction in relation to potential sources
  - Accessibility to co-workers, equipment, and vehicles
  - Communication
  - Hot zones (areas of known or suspected contamination)
  - Site access
  - Nearest water sources
- The number of personnel and equipment in potentially contaminated areas should be minimized consistent with site operations.

10.2 Field Operations

10.2.1 Intrusive Operations

The HSO or designee will be present on-site during all intrusive work, e.g., drilling operations, excavations, trenching, and will provide monitoring to oversee that appropriate levels of protection and safety procedures are utilized by C&S Engineers, Inc., personnel. The use of salamanders or other equipment with an open flame is prohibited and the use of protective clothing, especially hard hats and boots, will be required during drilling or other heavy equipment operations.

10.2.2 Excavations and Excavation Trenching

Guidance relating to safe work practices for C&S employees regarding excavations and excavating/trenching operation is presented in Appendix E of this HASP.

SECTION 11 — DECONTAMINATION PROCEDURES

Decontamination involves physically removing contaminants and/or converting them chemically into innocuous substances. Only general guidance can be given on methods and techniques for decontamination. Decontamination procedures are designed to:

- Remove contaminant(s).
- Avoid spreading the contamination from the work zone.
- Avoid exposing unprotected personnel outside of the work zone to contaminants.

Contamination avoidance is the first and best method for preventing spread of contamination from a hazardous site. Each person involved in site operations must practice the basic methods of contamination avoidance listed below. Additional precautions may be required in the HASP.

- Know the limitations of all protective equipment being used.
- Do not enter a contaminated area unless it is necessary to carry out a specific objective.
- When in a contaminated area, avoid touching anything unnecessarily.
- Walk around pools of liquids, discolored areas, or any area that shows evidence of possible contamination.
- Walk upwind of contamination, if possible.
- Do not sit or lean against anything in a contaminated area. If you must kneel (e.g., to take samples), use a plastic ground sheet.
- If at all possible, do not set sampling equipment directly on contaminated areas. Place equipment on a protective cover such as a ground cloth.
- Use the proper tools necessary to safely conduct the work.

Specific methods that may reduce the chance of contamination are:

- Use of remote sampling techniques.
- Opening containers by non-manual means.
- Bagging monitoring instruments.

- Use of drum grapplers.
- Watering down dusty areas.

Equipment which will need to be decontaminated includes tools, monitoring equipment, and personal protective equipment. Items to be decontaminated will be brushed off, rinsed, and dropped into a plastic container supplied for that purpose. They will then be washed with a detergent solution and rinsed with clean water. Monitoring instruments will be wrapped in plastic bags prior to entering the field in order to reduce the potential for contamination. Instrumentation that is contaminated during field operations will be carefully wiped down. Heavy equipment, if utilized for operations where it may be contaminated, will have prescribed decontamination procedures to prevent hazardous materials from potentially leaving the site. The on-site contractor will be responsible for decontaminating all construction equipment prior to demobilization.

SECTION 12 – DISPOSAL PROCEDURES

All discarded materials, waste materials, or other objects shall be handled in such a way as to reduce or eliminate the potential for spreading contamination, creating a sanitary hazard, or causing litter to be left on-site. All potentially contaminated materials, e.g., clothing, gloves, etc., will be bagged or drummed as necessary and segregated for proper disposal. All contaminated waste materials shall be disposed of as required by the provisions included in the contract and consistent with regulatory provisions. All non-contaminated materials shall be collected and bagged for appropriate disposal. Investigation derived waste will be managed consistent with the work plan for this site and Draft DER-10 Technical Guidance for Site Investigation and Remediation dated November 2009

SECTION 13 – EMERGENCY RESPONSE PROCEDURES

As a result of the hazards at the site, and the conditions under which operations are conducted, there is the possibility of emergency situations. This section has established procedures for the implementation of an emergency plan.

13.1 Emergency Coordinator

Emergency Coordinator: .....Steven Vinci.....Work Phone: (315) 455-2000

The Emergency Coordinator or his on-site designee will, in concert with Norampac plant management, implement the emergency response procedures whenever conditions at the site warrant such action. The Emergency Coordinator or his on-site designee will be responsible for assuring the evacuation, emergency treatment, emergency transport of C&S personnel as necessary, and notification of emergency response units (refer to phone listing in the beginning of this HASP) and the appropriate management staff.

13.2 Evacuation

In the event of an emergency situation, such as fire, explosion, significant release of toxic gases, etc., all C&S personnel will evacuate and assemble in a designated assembly area. The Emergency Coordinator or his on-site designee will have authority to contact outside services as required. Under no circumstances will incoming personnel or visitors be allowed to proceed into the area once the emergency signal has been given. The Emergency Coordinator or his on-site designee must see that access for emergency equipment is provided and that all ignition sources have been shut down once the alarm has been sounded. Once the safety of all personnel is established, the Fire Department and other emergency response groups will be notified by telephone of the emergency.

13.3 Potential or Actual Fire or Explosion

Immediately evacuate the site and notify local fire and police departments, and other appropriate emergency response groups, if LEL values are above 25% in the work zone or if an actual fire or explosion has taken place.

13.4 Environmental Incident (spread or release of contamination)

Control or stop the spread of contamination if possible. Notify the Emergency Coordinator and the Project Manager. Other appropriate response groups will be notified as appropriate.

13.5 Personnel Injury

Emergency first aid shall be applied on-site as necessary. Then, decontaminate (en route if necessary) and transport the individual to nearest medical facility if needed. The ambulance/rescue squad shall be contacted for transport as necessary in an emergency. The directions to the hospital are shown in Section 1 of this HASP and a map is shown in Attachment A.

13.6 Personnel Exposure

- *Skin Contact*: Use copious amounts of soap and water. Wash/rinse affected area thoroughly, and then provide appropriate medical attention. Eyes should be thoroughly rinsed with water for at least 15 minutes.
- *Inhalation*: Move to fresh air and/or, if necessary, decontaminate and transport to emergency medical facility.
- *Ingestion*: Decontaminate and transport to emergency medical facility.
- *Puncture Wound/Laceration*: Decontaminate, if possible, and transport to emergency medical facility.

13.7 Adverse Weather Conditions

In the event of adverse weather conditions, the HSO will determine if work can continue without sacrificing the health and safety of C&S field workers.

13.8 Incident Investigation and Reporting

In the event of an incident, procedures discussed in the C&S Medical Emergency/Incident Response Protocol is presented in Appendix D of this HASP, shall be followed.

SECTION 14 — COMMUNITY RELATIONS

14.1 Community Relations

Community relations may be a sensitive matter. All C&S employees should be aware of issues associated with this specific site. Conversations with community members not involved in activities at the site should be limited. Conversations between site workers off the site, in restaurants, etc., should not include discussions of the potential hazards on the site nor should negative statements be

made regarding the site. The Owner and the New York State Department of Environmental Conservation are the designated spokespersons for the Former Mill No. 2 Brownfield Project.

14.2 Community Health and Safety Plan

14.2.1 Site Access

In general, the majority of active and/or intrusive efforts to be completed as part of the Site Investigation will occur during the completion of soil borings, installation of monitoring wells borings and test pit excavations completed for purposes of subsurface assessment relative to the nature and extent of contamination.. Community residences are located adjacent to the site. During completion of the Site Investigation activities, site access will be limited to only those personnel (field sampling technicians, geologists, engineers, and subcontractors) who are scheduled to be involved with site specific investigation.

14.2.2 Community Health and Safety Monitoring

As part of the Site Investigation, three general types of efforts are scheduled, including, non-intrusive reconnaissance tasks, sampling or monitoring tasks (monitoring point sampling), and intrusive tasks (test trenching, subsurface borings, monitoring well installation). During completion of general reconnaissance and sampling or monitoring tasks, potential for health and safety risks to off-site landowners or the local community are not anticipated.

During completion of intrusive efforts at or adjacent to the site, health and safety monitoring efforts will be concentrated on the area or areas in which intrusive efforts are being completed. Since the air pathway is the most available and likely avenue for the release of potential contaminants to the atmosphere at or near the site, in addition to limiting public or community access to the areas in which intrusive efforts are completed, health and safety measures will primarily consist of monitoring the air pathway for worker exposure.

14.2.3 Community Air Monitoring Plan

During completion of site investigation activities, efforts will be taken to complete field work in a manner which will minimize the creation of airborne dust or particulates. Under dry conditions, work areas may be wetted to control dust. During periods of extreme wind, intrusive field work may be

halted until such time as the potential for creating airborne dust or particulate matter as a result of investigation activities is limited. Periodic monitoring following the guidelines of the NYSDOH's Generic Community Air Monitoring Plan (see Appendix G) will be implemented during all non-intrusive site investigation activities, including surface soil and sediment sampling, and collection of groundwater samples from groundwater monitoring wells.

During completion of site investigation, a community air monitoring plan meeting the requirements of the NYSDOH's Generic Community Air Monitoring Plan (see Appendix G) will be implemented for the duration of intrusive activities. These additional air monitoring activities will include establishment of background conditions, continuous monitoring for volatile organic compounds and/or particulates at the downwind work area (exclusion zone) perimeter, recording of monitoring data, and institution and documentation of Response Levels and appropriate actions in accordance with NYSDOH guidance.

SECTION 15 — AUTHORIZATIONS

C&S personnel authorized to enter the Site while operations are being conducted must be approved by the HSO. Authorization will involve completion of appropriate training courses, medical examination requirements, and review and sign-off of this HASP. No C&S personnel should enter the work zone alone. Each C&S employee should check in with the HSO or Project Manager prior to entering the work zones.

APPENDIX C

Investigation Personnel and Qualifications

THOMAS A. BARBA
DEPARTMENT MANAGER, ENVIRONMENTAL SERVICES

EXPERIENCE

- Manages and provides technical review for a variety of projects including site investigations, contaminant fate and transport evaluations, air quality studies, environmental site assessments, environmental audits, NEPA/SEQRA reviews and compliance, environmental impact statements, environmental permitting, and environmental compliance.
- Managed site investigations and remediation at several spill and inactive hazardous waste sites. Supervised and conducted work plan development, hydrogeologic programs, sampling and analysis, health and safety, data evaluation, risk assessment, report preparation, remedial design, and construction. Sites included active and inactive disposal sites; ash landfills, PCB sites, drum disposal sites, and solvent/petroleum spill sites.
- Conducted air quality projects for industrial facilities including emission point and source surveys, emission estimates and inventories, and permitting programs. Permitting included minor and major (Title V) facilities.
- Prepared environmental assessments and environmental impact statements for several major projects including a semiconductor manufacturing facility, a truck stop / travel plaza, and an airport expansion.
- Directed various aspects of bulk petroleum and chemical tank management projects including removal, design, and installation of new facilities, testing, soil remediation, and SPCCs.
- Provided environmental consulting services to several colleges and universities. Aspects included air quality services, oil storage, chemical bulk storage, wastewater, hazardous chemical management, and environmental impact review.
- Conducted environmental audits and environmental site assessments for several industrial and commercial facilities. Aspects included air, wastewater, water supply, solid waste, hazardous waste, chemical and petroleum storage, chemicals handling, SARA, and wetlands.
- Provided technical and project management services to a variety of industrial clients including pulp and paper, metal finishing, foundries, metal working, utilities, electronics, food, utilities, cogeneration, recycling, and general manufacturing facilities.
- Managed wastewater treatment programs for several industrial clients for both direct and indirect discharges. Tasks included water use evaluations, SPDES and stormwater permitting, monitoring, treatability studies, and pilot studies. Negotiated reduced permit requirements for several clients resulting in decreased operating costs.
- Developed closure, stormwater, SPR, BMP, SPCC, and similar plans for various facilities.

Mr. Barba has extensive management and technical experience on environmental projects including work in industry and in the consulting field. He has been responsible for projects involving air emissions, wastewater, hazardous waste, site contamination, site investigations, environmental assessments and audits, wetlands and ecological studies, sampling and analysis programs, permitting, and environmental impact statements.

EDUCATION

B.S. (Biochemistry) SUNY College of Environmental Science and Forestry

B.S. (Chemistry) Syracuse University

SPECIALIZED TRAINING

Additional coursework in MBA program, Syracuse University

OSHA 40-Hour HAZWOPER

Risk Analysis in Environmental Health – Harvard University School of Public Health

Groundwater Pollution and Hydrology – Princeton University

Airport Wildlife Hazard Control

PROFESSIONAL ORGANIZATIONS

Air & Waste Management Association

American Chemical Society

STEVEN M. VINCI, CPG
MANAGING GEOLOGIST

EXPERIENCE
Mr. Vinci has completed over 200 Phase I and Phase II environmental site assessments for commercial real-estate transactions right-of-way acquisitions for roadway transportation projects and land acquisition for airports. These assessments have been located in residential, urban, and rural areas. Some of the transportation corridors Mr. Vinci has worked on have exceeded 3 miles in length, while land acquisition projects have been greater than 15,000 acres.

He has experience in assessing undeveloped parcels; low rise and high rise buildings, industrial properties, and areas where extensive modification to the original topography has resulted due to the placement of fill materials. Through this experience, Mr. Vinci has branched into environmental response at construction/demolition sites and pre-construction and pre-demolition assessments to help owners and contractors properly manage waste generated during redevelopment activities on distressed properties.

More recently, Mr. Vinci has utilized his skill set to help assess and develop remedial actions at Brownfield and Voluntary Cleanup program sites located in:

- Meridian, New York – abandoned repair shop/gasoline station
- Syracuse, New York – 20 acre abandoned dry cleaning equipment manufacturing complex, abandoned aerospace contractor machine shop and gasoline station.
- Buffalo, New York – arsenic contaminated soil, Boon Park
- Carthage, New York – abandoned manufacturing complex
- Bradford, New York – former school building utilized by a now-defunct laboratory reagent broker
- Clay, New York – abandoned asphalt and petroleum bulk storage facility

Mr. Vinci has managed over 230 UST/AST removal, spill investigation, and remediation projects throughout New York State as part of multiple year term agreements with the New York State Office of General Services. Included in this work is tank removal oversight, preliminary assessments, preparation of specifications, remedial design, remedial technology pilot testing, installation and O&M of remedial systems, waste disposal, and negotiations with regulators.

PUBLICATIONS
Vinci, S., "Evolution of Practice in New York State", New York State Real Estate Journal, Vol. 6, No. 14.

Vinci, S., "Phase II Environmental Site Assessments: Tackling the Liability Issue", NY State Real Estate Journal, Vol. 7, No. 14.

Beyers, Stephen B., Vinci, Steven M., "Changes At the Town Pump: Helping Towns Understand and Apply Regulations, Clean Up Spills, and Design and Inspect New Fuel Facilities" Talk of the Towns, Vol. 9, No. 4.

Mr. Vinci's responsibilities have included planning, implementation, and supervision of environmental and forensic investigations as well as remedial actions for hazardous waste Brownfield and Voluntary Cleanup programs as well as spill sites. Mr. Vinci has branched into pre-construction and pre-demolition assessments to help owners and contractors properly manage waste generated during redevelopment activities on distressed properties.

EDUCATION
B.S., Geology, SUNY Fredonia

A.S., Liberal Arts, Monroe Community College

SPECIALIZED TRAINING
Aeration Technologies for Soil and Groundwater Remediation Association of Engineering Geologists

40 Hour Safety Course and 8 Hour Supervisors Course for Hazardous Waste Operations as Required by OSHA 29CFR 1910.120

Environmental Site Assessments in Conjunction with Real Estate Transactions, Association of Groundwater Scientists and Engineers

Risk Based Corrective Action Applied at Petroleum Release Sites ASTM RBCA User Training

REGISTRATION
Professional Geologist, South Carolina, Florida, Pennsylvania

PROFESSIONAL ORGANIZATIONS
American Institute of Professional Geologists – Certified Professional Geologist

American Association of Petroleum Geologists – Charter Member Division of Environmental Geosciences

Association of Engineering Geologists

Heron,G., Vinci S., "Combining Thermal Treatment with MNA at a Brownfield DNAPL Site" Proceedings Seventh International Conference Batelle Remediation of Chlorinated and Recalcitrant Compounds, May 2010.

PRESENTATIONS

Defining the Extent of Contamination/Environmental Due Diligence
Presented at: Transactions and the Environment, Contaminated Property Issues in Real Estate and Corporate Matters
New York State Bar Association CLE Seminar, June 2006, Rochester, NY

RORY WOODMANSEE
SENIOR ENGINEER

EXPERIENCE
Environmental Assessments and Brownfield Site Investigations:

Has performed field work, public contact, and document preparation, associated with site investigations and environmental review processes, including Brownfield site investigations consisting of historical document review, development of sampling and QA/QC plans, and field oversight of sampling activities for:

- Boone Park, Buffalo, New York: recreational facility with arsenic contaminated soil.
- Midler Ave Industrial Park, Syracuse, NY; abandoned factory than manufacturer commercial dry cleaning and laundry machines.
- Sims Matchplate, Syracuse, New York: abandoned factory which formerly made high precision castings for aerospace industry.
- Zip-Zip Mini Mart, Syracuse, New York: former gasoline service station.
- Maider Road, Clay, New York: abandoned 63-acre petroleum and asphalt bulk storage terminal
- Meridian Brownfield, Cayuga County New York: former gasoline service station.
- Phase I Environmental Assessments for municipal and industrial clients, including Departments of Transportation (corridor assessments) and Industrial Development projects (site assessments).
- Principal author of an Expanded Environmental Assessment (per New York State SEQRA) for installation of fiber optic line along Interstate Route 87 from Albany to Montreal. Included assessment of construction impacts within wetlands and adjacent to hazardous waste sites and within the boundaries of the Adirondack Park.

Environmental Design and Evaluation:

Provided design services, including work plans, sampling plans, quality assurance plans, site management plans, and contractor bid documents for environmental projects, including:

- Excavation and off-site disposal of PCB-impacted soils at the Oswego Fire Training School, a CERCLA site and facility operated by Niagara Mohawk Power Corporation.
- Construction and operation of a treatment system to treat PCB im-

Mr. Woodmansee has been involved with environmental investigation, design, and remediation activities for clients within the private, institutional, and government sectors. He has developed subsurface investigations and conducted sampling of soil, sediments, surface water and groundwater associated with releases of petroleum and chemicals at a variety of large and small sites as well as those associated with Brownfield and Voluntary Cleanup Programs. He has also been involved with designing and implementing remediation systems, including excavation and off-site disposal of soils impacted by petroleum products, PCBs, and volatile organic compounds.

EDUCATION

B.S., Environmental Resource and Forest Engineering
State University of New York College of Environmental Science and Forestry

A.S., Engineering
Cayuga County Community College

REGISTRATION

E.I.T., New York State

40-hour Hazardous Waste Operator Certified

pacted groundwater encountered during an excavation and disposal action at a Niagara Mohawk Power Corporation Temporary Storage and Disposal Facility in Liverpool, New York.

- A Feasibility Study for remediating PCB contamination of soil, sediments, and groundwater at a CERCLA site in Cobleskill, New York.

- Design of a bioremediation system for treated saturated soils impacted by volatile and semi-volatile organic compounds at a McKesson Corporation site in Syracuse, New York.

Field Sampling, Construction Oversight and Project Implementation:

Provided field engineering and technical support for environmental projects of varying magnitude, including:

- Field Service Manager for New York State Office of General Services-led removals of underground petroleum storage tanks, including determination of extent of contaminated materials and collection of remediation verification samples.

- Contractor oversight and verification sampling for PCB impacted soils at sites where total volumes of impacted materials ranged from several hundred cubic yards to over 10,000 cubic yards.

- Installation of permanent and temporary water treatment facilities for environmental projects, including installation of buildings, pumping systems, chemical precipitation/flocculation addition, contact clarification tanks, groundwater monitoring wells, and separate phase liquid extraction systems.

THOMAS C.WIRICKX
ENVIRONMENTAL SCIENTIST

EXPERIENCE

As an environmental scientist, Mr. Wirickx is responsible for environmental and ecological investigations and assessments including brownfields, inactive hazardous waste sites, Phase I and Phase II site investigations for real-estate transactions and construction projects as well as performing ecological assessments and wetland delineations. Some of his experience includes the following:

- Oversight of subsurface investigations to assess hydrogeology and extent of groundwater and subsurface contamination.
- Supervision of remedial excavations and UST removal projects
- Supervision of the installation of a variety of remediation systems including soil vapor extraction, air sparge, air stripper, oxygen injection, product recovery, and multi-phase recovery systems
- Operation and maintenance of soil vapor extraction systems, air sparge systems, air stripper systems, oxygen injection systems, carbon filtration systems, product recovery systems, and multi-phase recovery systems.
- Preparation of a variety of documents, including tank closure reports, subsurface investigation reports, remedial action plans, site status reports, and site closure reports.
- Preparation of ecological assessments, wetland delineation reports, and threatened and endangered species screenings and surveys for numerous impact studies, and environmental assessments.
- Conducting wetland delineations consistent with the 1987 Corps of Engineers Wetland Delineation Manual and the New York State Department of Environmental Conservation 1995 Wetlands Delineation Manual, wetland mitigation design and wetland mitigation monitoring for projects ranging from one acre to over fifty acres in size.

As an environmental scientist, Mr. Wirickx is responsible for environmental and ecological assessments and site investigations for real-estate transactions, construction projects and right-of-way acquisition. In addition, Mr. Wirickx is responsible for stream and wetland mitigation planning, design and monitoring, and remediation system design, operation and maintenance

EDUCATION

B.S., Environmental and Forest Biology
SUNY College of Environmental Science and Forestry

A.S., Natural Resources Conservation
SUNY Morrisville College of Agriculture and Technology

Water Purification Specialist
Military Occupational Specialty
United States Army Quartermaster School

SPECIALIZED TRAINING

40-Hour Safety Course for Hazardous Waste Operations
OSHA 29 CFR 1910.120

10-Hour Construction Industry Training
OSHA 29 CFR 1926

Asbestos Awareness Training
OSHA 29 CFR 1910.1001 &
OSHA 29 CFR 1926.1101

Wildlife Hazard Management at Airports and Bird Identification
USDA APHIS

WAYNE N. RANDALL
GEOLOGIST

EXPERIENCE

Mr. Randall is a member of the Remediation and Compliance Group at C&S. Some of his responsibilities include:

- Performing environmental assessments for municipal, commercial, airport, industrial, and private clients. Assessment responsibilities include, but are not limited to; on site inspection, historical use investigations, regulatory review, and report preparation.
- Oversight of subsurface investigations to assess hydrogeology and extent/migration of groundwater and soil contamination at sites. Investigative responsibilities include sampling and field analysis of water, soil and air.
- Performing landfill inspections and combustible gas monitoring in accordance with the NYSDEC.

Some of the projects Mr. Randall has been involved with at C&S include:

Oneida Indian Nation

- Phase I Environmental Site Assessment on a collection of Oneida Indian Nation properties, which was performed consistent with the American Society for Testing and Materials (ASTM) E1527–00*, Standard Practice for Environmental Site Assessments – Phase I Environmental Site Assessment Process*.

Pioneer Midler Avenue, LLC

- Brownfield Remedial Investigation conducted at the former Midler City Industrial Park site, located in the City of Syracuse, Onondaga County, New York.

Knoxboro, New York and Clay, New York Landfills

- Landfill inspection including gas vent pipe monitoring, inspections of the groundwater well network, landfill cap system, vegetative cover, drainage swales, perimeter fence and gate, and surface water retention ponds.

Mr. Randall also has over four years experience working in the groundwater consulting industry. His knowledge and expertise include the following:

- Assess the geologic and hydrologic characteristics of an area and design a plan for groundwater development.
- Conduct geophysical surveys and analysis of geophysical data
- Geophysical Techniques used: Seismic Refraction, VLF (very low frequency), Elecromagnetic, GPR (ground penetrating radar), Electrical Resistivity, Microgravity, and CSAMT (controlled source audio magne-telluric)
- Fracture Trace Analysis of aerial photography and digital elevation models.

Mr. Randall's responsibilities, as a Geologist, include a wide variety of projects dealing with environmental monitoring, regulatory compliance, data interpretation, and environmental assessment.

EDUCATION

B.A., Geology, State University of New York at Potsdam

SPECIALIZED TRAINING

40-hour Safety Training for Hazardous Waste Operations as Required by OSHA 29CFR 1910.120

10-hour Occupational Safety and Health Training Course

Introduction to Permit Required Confined Spaces

PROFESSIONAL ORGANIZATIONS

Geological Society of America

- Oversee well drilling, filter pack design, and well development.
- Supervise well construction and sampling, perform aquifer tests, and water quality sampling for sand and gravel and bedrock wells.
- Sieve analysis of aquifer materials for well screen design.
- Conduct GIS work creating maps and diagrams using Arcveiw 3.x, Spatial Analyst, and Global Mapper to help define geological characteristics of an area.

Some of the projects representative of his past experience include:

Water and Sewage Authority of Trinidad and Tobago (WASA), Trinidad and Tobago, West Indies

- Conducted extensive geophysical surveys to map deep alluvial aquifers through hundreds of feet of clay as well as deep fractured bedrock zones.
- Organized and implemented field crews of up to five people.
- Efforts lead to the discovery of 16 million gallons of new potable groundwater for the island.

Montserrat Water Authority, Montseratt, West Indies

- Conducted CSAMT (controlled source audio magne-tellurics) and Microgravity surveys to locate a groundwater well that yields 1 million gallons of potable water a day.

Village of Malone, NY

- Conducted Electrical Resistivity and Microgravity surveys to locate two wells capable of yielding over 4 million gallons of new potable groundwater to replace surface water intakes the village was using and had to replace per NYS law.

AMANDA B. ATWELL, CPSS
ENVIRONMENTAL SCIENTIST

EXPERIENCE

As an environmental scientist, Ms. Atwell is responsible for environmental and ecological assessments for municipal, commercial, airport, industrial, and private clients. Assessment responsibilities include, but are not limited to; on site inspection, historical use investigations, regulatory review, and report preparation. In addition, she performs wetland delineations, and rare and endangered species reviews for real-estate transactions and right-of-way acquisition. Ms. Atwell coordinates firm activities regarding environmental permits including wetlands mitigation planning and design.

Prior to joining C&S Ms. Atwell conducted environmental and ecological assessments including environmental assessments, brownfields remediation, soil survey and interpretations, wetland delineations, rare and endangered species reviews, tree stand evaluations, and resource protection area determinations as a consultant with firms located in the Washington, DC metropolitan area and in Syracuse, New York. She has considerable experience regarding state and federal environmental permits and wetlands mitigation planning and design. Ms. Atwell conducted her masters' thesis project on mitigation wetlands within the Great Dismal Swamp ecosystem.

Some of her responsibilities while at C&S have included the following:

- Oneida Indian Nation, Oneida, New York. Phase I Environmental Site Assessments on over 7,500 acres encompassing rural agricultural, woodland, and other Oneida Indian Nation properties, which were performed consistent with the American Society for Testing and Materials (ASTM) E1527–00, *Standard Practice for Environmental Site Assessments – Phase I Environmental Site Assessment Process*.

- Syracuse Airport, City of Syracuse, New York. Environmental Due Diligence Audits in the Conduct of FAA Real Property Transactions for Airport acquisitions, which were performed consistent with the American Society for Testing and Materials (ASTM) E1527–00, *Standard Practice for Environmental Site Assessments – Phase I Environmental Site Assessment Process*.

- Crucible Landfill, Solvay, New York. Landfill inspection including groundwater well network monitoring and inspections landfill cap system, vegetative cover, drainage swales, perimeter fence and gate, and surface water retention ponds.

- Lockheed Martin, Syracuse, New York. Phase II investigation regarding potentially contaminated soils.

- Pioneer Midler Avenue, LLC, Syracuse, New York. Brownfield Remedial Investigation, including confirmation sampling, conducted at the former Midler City Industrial Park site.

- Chautauqua County Airport, Runway Safety Area Improvement

Ms. Atwell's responsibilities include a wide variety of projects dealing with environmental and ecological assessments, regulatory affairs, and wetlands mitigation planning and design. In addition, she has experience with brownfields remediation, Phase I and II site investigations, environmental monitoring, regulatory compliance, and data interpretation.

EDUCATION

M.S., Soil, and Environmental Sciences
Virginia Polytechnic Institute and State University

B.S. Environmental Science
Water and Soils Minor
Environmental Ethics Minor
University of Florida

SPECIALIZED TRAINING

Wetland Delineation Training, J.W. Teaford & Company

Wetland Mitigation, Pawtuxet Wildlife Refuge, Environmental Concern, Inc.

40-hour Safety Training for Hazardous Waste Operations as Required by OSHA 29CFR 1910.120

CERTIFICATIONS

Certified Professional Soil Scientist, ARCPACS: A Federation of Certifying Boards in Agriculture, Biology, Earth & Environmental Sciences, 2003

PUBLICATIONS

2001. Wetlands as a Significant Water Quality Issue. Virginia Water Environment Association Newsletter.

2005. Season Length Indicators and Land-Use Effects Southeast

Project, Jamestown, New York: Environmental permitting, wetland mitigation planning and design for creation of a seven-acre wetland including an Osprey nest pole.

- Fort Drum Department of Public Works, Fort Drum, New York, Environmental permitting, wetland mitigation planning and design for creation of four-acre wetland.
- Dormitory Authority of New York State, St. Lawrence Psychiatric Center, Ogdensburg, New York: Wetland delineation and environmental permitting.
- Confidential Client, Syracuse, New York, Construction Development: Wetlands reconnaissance and screening for various proposed locations for project.
- Confidential Client, Proposed Wind Farm siting study in Towns of Fairfield, Little Falls, and Norway, Herkimer County, New York, Conducted Quality Control for a Wetland Delineation along a 43 mile corridor.
- Confidential Client, Proposed Wind Farm wetlands delineation and permitting in Town of Italy, Yates County, and Town of Prattsburg, Steuben County, New York for a 16,000 acre general study area.

Virginia Wet Flats. Soil Science Society of America Journal.

2006. Using CO_2 Efflux Rates to Indicate Below-ground Growing Seasons by Land-use Treatment. Wetlands Ecology and Management. 14:133-145.

ORGANIZATIONS

Mid-Atlantic Hydric Soils Committee

New York State Wetlands Forum

APPENDIX D

Citizen's Participation Plan

New York State Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan
for
Norampac Industries, Former Mill No. 2

Site # C932150
4001 Packard Road
City of Niagara Falls
Niagara County, New York

March 2010
Revised August 2010

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* * * * *

Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's remedial process.

Applicant: Norampac Industries, Inc. ("Applicant")
Site Name: Former Mill No.2 ("site")
Site Number: C932150
Site Address: 4001 Packard Road, City of Niagara Falls
Site County: Niagara

1. What is New York's Brownfield Cleanup Program?

New York's Brownfield Cleanup Program (BCP) is designed to encourage the private sector to investigate, remediate (clean up) and redevelop brownfields. A brownfield is any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal and financial burdens on a community. If the brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants accepted into the BCP as they conduct brownfield site remedial activities. The BCP contains strict investigation and remediation (cleanup) requirements, ensuring that cleanups protect public health and the environment based on the intended use of the brownfield site. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use. For more information about the BCP, go online at: www.dec.state.ny.us/website/der/bcp

2. Citizen Participation Plan Overview

A Citizen Participation (CP) Plan provides members of the affected and interested public with information about how NYSDEC will inform and involve them during the investigation and remediation (cleanup) of a site under the BCP.

This CP Plan has been developed for the site under the BCP. Appendix D contains a map locating the site. NYSDEC is committed to informing and involving the public concerning the investigation and remediation (cleanup) of the site. This CP Plan describes the public information and involvement program that will be carried out with assistance from the Applicant.

Appendix A of this CP Plan identifies NYSDEC project contact(s) to whom the public may address questions or request information about the site's remedial program. The locations of the site's document repositories also are identified in Appendix A. The document repositories provide convenient access to important project documents for public review and comment.

Appendix B contains the brownfield site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and remediation process. The brownfield site contact list includes, at a minimum:

- Chief executive officer and zoning board of each county, city, town and village in which the site is located;

- Residents on and/or adjacent to the site;
- The public water supplier which services the area in which the site is located;
- Any person who has requested to be placed on the site contact list;
- The administrator of any school or day care facility located on and/or adjacent to the site for purposes of posting and/or dissemination at the facility; and
- Document repositories and their contacts.

The brownfield site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project, including notifications of upcoming remedial activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The brownfield site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A.

Appendix C identifies the CP activities that have been and will be conducted during the site's remedial program.

The CP activities are designed to achieve the following objectives:

- Help the interested and affected public to understand contamination issues related to a brownfield site, and the nature and progress of an Applicant's efforts, under State oversight, to investigate and, if appropriate, remediate (clean up) a brownfield site.

- Ensure open communication between the public and project staff throughout a brownfield site's remedial process.

- Create opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a brownfield site's investigation and remediation (cleanup).

This CP Plan may be revised due to changes in major issues of public concern or in the nature and scope of remedial activities. Modifications may include additions to the site contact list, updates to major issues of concern to the public, and changes in planned citizen participation activities. The public is encouraged to discuss its ideas and suggestions about the citizen participation program with the project contact(s) listed in Appendix A.

3. Site Information

Site Description

The project site referred to as Former Mill No. 2 (as shown on Figures 1, 2 and 3 Refer to Appendix D) is located on approximately 10.3 acres and has a street address of 4001 Packard Road. The site is within a highly industrialized urban area of Niagara Falls, Niagara County, New York. Adjoining properties include: the active paper mill operated by Norampac Industries, Inc. to the north; "Franks Vacuum Service and the former Frontier Chemical Site to the south and west; National Grid

(Niagara Mohawk) and New York Power Authority right- of- way to the east. Further to the northeast of the site are other commercial properties and a little league baseball diamond.

Site History

This former mill, encompassing approximately 661,980 square feet ,historically housed paper manufacturing , finishing and packaging operations of completed goods. The former mill consists of several interconnected two story and five story concrete and masonry buildings which were constructed during various time frames, with the earliest being 1923 and the latest reported date of 1974. The former mill was taken out service several years ago and has fallen into disrepair to the point where certain areas have collapsed and while others exhibit evidence of structural distress.

Given the age of construction, asbestos containing building materials are present in and on the building. Also, PCBs may be present in those areas where electrical equipment had been located including the active transformer yard located in the vicinity of the northwest corner of the former mill.

Relative to historical operations, the use of hazardous substances and petroleum products would have been common. The types of products apparently used at the site included solvents for de-inking (which reportedly occurred on the first floor of Building 14), bleaches, caustics and mineral spirits. Additionally, Building 15 was the location of a "Maintenance Shop" where it is suspected that similar products were used. Building 15 is also the location where a tire fire occurred. A fire of that nature, (which caused obvious structural damage such as cracking and heaving of the concrete floor and ceiling) in a location where unknown containers may have been present, has the potential to be a source area of underlying contaminants in the subsurface.

Based upon information gathered during the preparation of the BCP Application for this site other contaminants which may be in soil or ground water include volatile organic compounds, semi-volatile organic compounds, metals and pesticides.

Environmental History

The following investigative/assessment reports pertaining to the site have been prepared:

- Draft Phase I Environmental Site Assessment Report- 4001 Packard Road- Mill No. 2 Niagara Falls, New York, dated March 2008. Prepared consistent with ASTM E-1527-05 by LaBella Associates, P.C., Rochester, New York.

    - The report documents the findings of a Phase I Environmental Site Assessment and identified several suspect Recognized Environmental Conditions which appeared to warrant further investigation and included:

        - Use of various chemical and petroleum products.

        - Evidence of staining.

- Various process equipment, conveyors as well as an underground hydraulic oil reservoir.

- Electrical transformers

- Rail lines, spurs and sidings on along the north and south side of former Mill No. 2

- Preliminary Subsurface Site Assessment Summary- 4001 Packard Road-Mill No. 2, Niagara Falls, New York, dated August 2008. Prepared by LaBella Associates, P.C., Rochester, New York.

  - Subsequent to the Phase I Environmental Site Assessment Report, a subsurface investigation to obtain soil and groundwater samples was completed. That work consisted of 19 soil borings and 4 groundwater monitoring wells.
  - Laboratory analysis of samples revealed that specific metals, volatile organic compounds and semivolatile organic compounds were found in soil at concentrations that exceeded clean-up objectives to protect groundwater. Also, volatile organic compounds were detected in groundwater at concentrations above NYSDEC guidance/standards

- Summary of Condition of "Abandoned Mill 2" Buildings as Relative to Asbestos Containing Materials @ 4001 Packard Road, Niagara Falls, New York 14303, dated August 8, 2008. Prepared by AFI Environmental.

  - This report provided a general identification of those building materials that are suspect to contain asbestos.

- Draft Environmental Subsurface Investigation-4001 Packard Road Mill No. 2, Niagara Falls, New York, dated December 2009. Prepared by C&S Engineers, Inc., Syracuse, New York.

  - Six soil borings were made as part of a preliminary building foundation investigation. The analytical laboratory results for soil samples were compared to NYSDEC Sub-part 375-6 Remedial Program Soil Cleanup Objectives for the Protection of Public Health for Industrial Use. For the most part, the analytical results did not exceed the Part 375 soil cleanup objectives for industrial use.

Those reports were made a part of the BCP Application for this site.

The site has not been determined to be a significant threat to public health and/or the environment.

4. Remedial Process

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a Volunteer. This means that the Applicant was not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the site took place after the discharge or disposal of contaminants.

The Applicant in its Application proposes that the site will be used for restricted purposes.

To achieve this goal, the Applicant will conduct remedial activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement provides the responsibilities of each party in conducting a remedial program at the site.

If the Applicant conducts a remedial investigation (RI) of the site, it will be performed with NYSDEC oversight, and with the following goals:

1) Define the nature and extent of contamination in soil, surface water, groundwater and any other impacted media;

2) Identify the source(s) of the contamination;

3) Assess the impact of the contamination on public health and/or the environment; and

4) Provide information to support the development of a Remedial Work Plan to address the contamination, or to support a conclusion that the contamination does not need to be addressed.

The Applicant will prepare an RI Report after it completes the RI. This report will summarize the results of the RI and will include the Applicant's recommendation of whether remediation (cleanup) is needed to address site-related contamination. The RI Report is subject to review and approval by NYSDEC. Before the RI Report is approved, a fact sheet that describes the RI Report will be sent to the site's contact list.

NYSDEC determines whether the site poses a significant threat to public health and/or the environment. If NYSDEC determines that the site is a "significant threat," a qualifying community group may apply for a TAG. The purpose of a TAG is to provide funds to the qualifying community group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development/implementation of a remedy.

For more information about the TAG Program and the availability of TAGs, go online at: www.dec.state.ny.us/website/der

After NYSDEC approves the RI Report, the Applicant will be able to develop a Remedial Work Plan. The Remedial Work Plan describes how the Applicant would address the contamination related to the site.

The public would have the opportunity to review and comment on the remediation (cleanup) proposal. The site contact list would be sent a fact sheet that describes the Remedial Work Plan and announces a 45-day public comment period. NYSDEC would factor this input into its decision to approve, reject or modify the Remedial Work Plan.

Approval of the Remedial Work Plan by NYSDEC would allow the Applicant to design and construct the alternative selected to remediate (clean up) the site. The site contact list would receive notification before the start of site remediation. When the Applicant completes remedial activities, it will prepare a Remedial Action Report that certifies that remediation (cleanup) activities have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the remediation is protective of public health and the environment for the intended use for the site. The site contact list would receive a fact sheet that announces the completion of remedial activities and the review of the Remedial Action Report.

NYSDEC would then issue the Applicant a Certificate of Completion. This Certificate states that remediation (cleanup) goals have been achieved, and relieves the Applicant from future remedial liability, subject to statutory conditions. If the Applicant used institutional controls or engineering controls to achieve remedial objectives, the site contact list would receive a fact sheet discussing such controls.

An institutional control is a non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of site management at or pertaining to a brownfield site. An example of an institutional control is an environmental easement.

An engineering control is a physical barrier or method employed to actively or passively contain, stabilize, or monitor contamination, restrict the movement of contamination to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to contamination. Examples include caps and vapor barriers.

Site management will be conducted by the Applicant as required with appropriate NYSDEC oversight.

Activities required to be conducted to inform and involve the public during the site's remedial process are introduced in Section 5 and identified in the chart in Appendix C.

5. Citizen Participation Activities

CP activities that have already occurred and are planned during the investigation and remediation of the site under the BCP are included in Appendix C: Summary of Citizen Participation Activities. NYSDEC will ensure that these CP activities are conducted, with appropriate assistance from the Applicant.

All CP activities seek to provide the public with significant information about site findings and planned remedial activities, and some activities announce comment periods and request public input about important draft documents such as the Proposed Remedial Work Plan.

The CP Plan for the site may be revised based on changes in the site's remedial program or major issues of public concern.

All written materials developed for the public will be reviewed and approved by NYSDEC for clarity and accuracy before they are distributed.

6. Major Issue of Public Concern

This section of the CP Plan identifies major issues of public concern as they relate to the site. Additional major issues of public concern may be identified during the site's remedial process.

At this juncture the public has not identified major concerns with the project. However, issues which are commonly concerns with demolition and site work activities include:

- Dust
- Noise
- Health Risks
- Site Security
- Truck Traffic
- Traffic Disruptions

Mitigation of those concerns will be, in part, a responsibility of the contractor performing the work. As described in the Interim Remedial Measure (IRM) Work Plan for the demolition of former Mill No.2, the demolition contractor has specific obligations and will be required to prepare the following plans for implementation during the project:

Site-Specific Asbestos Abatement Work Plan

Prior to demolition, New York State Department of Labor Code Rule 56 requires that asbestos be removed from a building prior to demolition. This work plan to be prepared by the asbestos abatement contractor will include:

- Contractor's Asbestos Handling License and Contractor's employees' asbestos handling certificates.
- Abatement schedule (bar graph) indicating critical dates of the job.
- Work plan summary of method of asbestos removal consisting of a brief overall discussion of proposed asbestos removal methods and materials.
- Written description and plans (i.e., drawings) for the construction of decontamination enclosure systems (personnel and waste), asbestos work zones/areas, decontamination systems locations, proposed placement locations of negative air equipment, and other engineering controls.
- Written description of critical barriers to be used consistent with New York State Department of Labor Code Rule 6.
- Manufacturer's certifications that vacuums, ventilation equipment, and all other equipment required to contain airborne fibers conform to high efficiency particulate absorbing filtration standards.

- Security and Contingency Plans.
- Written proof of notifications to local emergency responders and hospital, New York State Department of Labor, United States Environmental Protection Agency, and the City of Niagara Falls.
- Written respiratory protection program and record keeping requirements for employees.
- Identification of all waste transporters and disposal facilities including all relevant permits.

Demolition Plan of Operations

The Plan of Operation will include a detailed outline of intended demolition, shoring, utility disconnection, protection of adjoining buildings, surface features, infrastructure as well as other related building demolition procedures. The demolition plan will not relieve the Contractor of complete responsibility for the successful performance of the work in accordance with all applicable federal, state, and local codes and restrictions. This plan will also identify the proposed location of major demolition equipment, waste staging areas, waste segregation and characterization procedures.

Building Pre-Cleaning Plan of Operations

Within the building there is abandoned machinery, electrical devices and containers all of which will be removed prior to demolition. This document will include a description of sequencing, phasing, and methods of the work to ensure the proper removal, characterization, and disposal of all wastes within the buildings.

Fire Safety and Pre-fire Plan prepared in accordance with Fire Code of New York State Chapter 4 Emergency Planning and Preparedness; Chapter 5 Fire Service Features and Chapter 14 Fire Safety during Construction and Demolition.

Fugitive Dust Suppression Plan and Community Air Monitoring Program

This submittal by the contractor will be prepared consistent with New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum (TAGM) 4031 entitled "*Fugitive Dust Suppression and Particulate Monitoring Program"* and New York State Department of Health (NYSDOH) "*Generic Community Air Monitoring Plan"*. The elements of this submittal will include:

- Description of dust suppression techniques to be employed during site activities including demolition and earthwork.
- Description of particulate monitoring techniques and frequency, instrumentation and analytical methods including the name of the professional performing this monitoring.
- Location of monitoring points and record keeping of meteorological data.
- Action levels, corrective actions, and stop work levels.
- Quality Assurance/Quality Control Plan.

In addition to the contractor's responsibilities listed above, Norampac will retain an independent third party laboratory to perform project air monitoring and analysis during the controlled demolition and asbestos abatement activities consistent with New York State Department of Labor (NYSDOL) Code Rule 56-4. Norampac will also retain an independent NYSDOL Certified Project Monitor to

perform a final clearance and visual inspection consistent with Code Rule 56-9 and ASTM Standard E-1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects."

Site Security

The demolition contractor will erect a suitable fence to prohibit entry by unauthorized personnel. Also, Norampac has a closed circuit video surveillance system that is capable of viewing the area adjacent to the former Mill No. 2. That surveillance system is monitored on a regular basis.

Traffic

Since the project site adjoins the active Mill No.1 operated by Norampac, the routing and use of vehicles associated with demolition and other site activities will be coordinated with Norampac facility operations.

In the event major concerns are expressed, future communication will be issued to stakeholders.

Appendix A – Project Contacts and Document Repositories

Project Contacts

For information about the site's remedial program, the public may contact the following NYSDEC project contacts:

Michael Hinton, P.E.
Project Manager
NYSDEC Region 9
Division of Environmental Remediation
270 Michigan Avenue
(716)851-7220

Document Repositories

The document repositories identified below have been established to provide the public with convenient access to important project documents:

Niagara Falls Public Library
Earl W. Brydges Building
1425 Main Street
Niagara Falls, New York, 14305
Phone: (716) 286-4894
Hours: Mon,Tues,Wed 9AM-9PM
Thurs,Fri,Sat 9AM-5PM
Closed Sunday

NYSDEC Region 9 Office
270 Michigan Avenue
Attn: Michael Hinton, P.E.
Phone: (716)851-7220
Hours: Monday –Friday 8:30AM-4:30PM
(call for appointment)

Appendix B – Brownfield Site Contact List

1. *Chief Executive Officer and City Administrator of each County, City, Town and Village in which the Site is located.*

   a. City of Niagara Falls

   Office of the Mayor
   Mayor Paul A. Dyster
   City Hall
   745 Main Street
   PO Box 69
   Niagara Falls, NY 14302
   (716) 286-4310

   Office of City Administrator
   Ms. Donna D. Owens
   City Hall
   745 Main Street
   PO Box 69
   Niagara Falls, NY 14302
   (716) 286-4320

   Department of Code Enforcement
   Mr. Guy A. Bax-Director/Zoning
   City Hall
   745 Main Street, Room 306
   PO Box 69
   Niagara Falls, NY 14302
   (716)286-4450

   b. Niagara County

   Greg Lewis, County Manager
   2nd Floor Philo J. Brooks County Office Building
   59 Park Avenue
   Lockport, NY 14049
   (716)439-7006

2. *Residents, Owners, and Occupants of the Site and Properties Adjacent to the Site*

   a. Residents, Owners and Occupants of the Site

   Niagara County IDA

Vantage Center
6311 Inducon Corporate Drive
Sanborn, NY 14132
(716) 278-8769

b. Residents, Owners and Occupants of Adjacent Properties

National Vacuum Corp
408 47th Street
Niagara Falls, NY 14304
(866) 773-1167

Midtown Little League, Inc.
4700 Niagara Falls Boulevard
Niagara Falls, NY 14304
(716) 285-1994

Niagara Mohawk Power Corp.
300 Erie Boulevard
Syracuse, NY 13202
(315) 424-1511

3. *Local News Media from which the community typically obtains information*

Niagara Gazette (Newspaper)
310 Niagara Street
PO Box 540
Niagara Falls, NY 14302
(716) 282-2311

WKSE – 98.5 FM (Radio)
401 City Avenue, Suite 809
Bala CYNWYD, PA 19004

WJJL – 1440 AM (Radio)
920 Union Road
West Seneca, NY 14224
(716) 674-9555

WGRZ – NBC (Channel 2)
259 Delaware Avenue
Buffalo, NY 14202
(716) 849-2222

WIVB – CBS (Channel 4)
2077 Elmwood Avenue
Buffalo, NY 14207
(716) 874-4410

WKBK – ABC (Channel 7)
7 Broadcast Plaza
Buffalo, NY 14202
(716) 845-6100

WUTV – FOX (Channel 29)
699 Hertel Avenue, Suite 100
Buffalo, NY 14207

4. *Public Water Supplier which services the area*

Niagara Falls Water Board
PO Box 1114
Buffalo, NY 14240

5. *Any person who has requested to be placed on the contact list*

None Identified to Date

6. *The administrator of any school or day care facility located on or near the property*

None Identified

7. *The location of a document repository for the project*

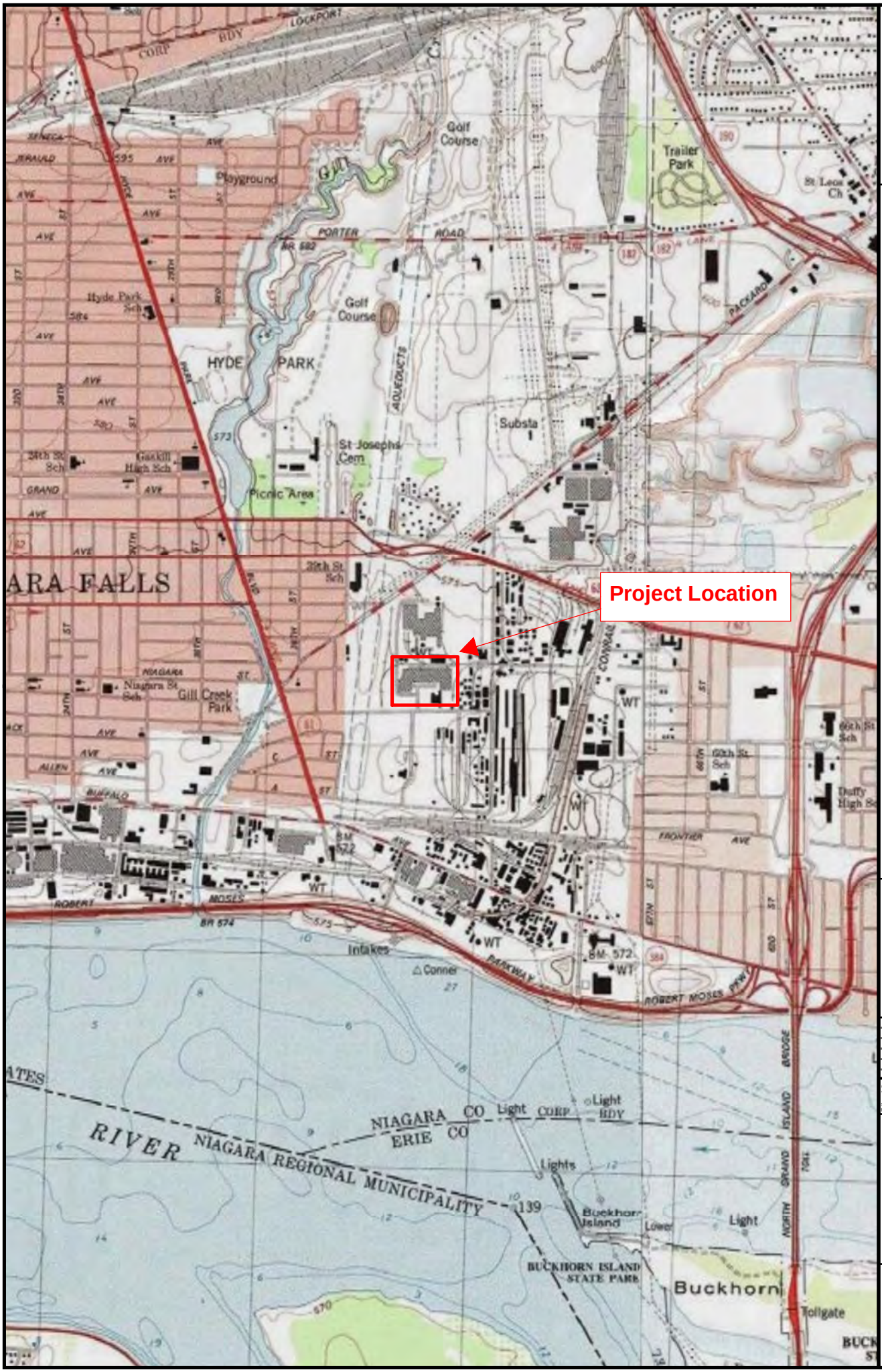
Niagara Falls Public Library
Earl W. Bridges Building
1425 Main Street
Niagara Falls, NY 14305

Appendix C – Identification of Citizen Participation Activities

Required Citizen Participation Activity	CP activity(ies) occur at this point	Date Completed
Application Process:		
• Prepare brownfield site contact list (BSCL) • Establish document repositories • Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day comment period • Publish above ENB content in local newspaper • Mail above ENB content to BSCL	At time of preparation of application to participate in BCP When NYSDEC determines that BCP application is complete. The 30-day comment period begins on date of publication of notice in ENB. End date of comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice and notice to the BSCL should be provided to the public at the same time.	BCP Application Jan.28, 2010 Niagara Gazette Feb.11,2010 ENB Published Feb.17, 2010 BCP Application placed at Niagara Falls Public Library Feb.16,2010 Public Notice Mailed Feb.16,2010
After Execution of Brownfield Site Cleanup Agreement:		
• Prepare citizen participation (CP) plan	Draft CP Plan must be submitted within 20 days of entering Brownfield Site Cleanup Agreement. CP Plan must be approved by NYSDEC before distribution	Draft CPP submitted as part of Draft IRM Work Plan for Demolition of Former Mill #2 March 26, 2010. Conditional Approval by NYSDEC June 14, 2010. CPP revised to incorporate NYSDEC Comments August 2010
After Remedial Investigation (RI) Work Plan Received:		
• Mail fact sheet to BSCL about proposed RI activities and announcing 30-day public comment period on draft RI Work Plan	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, comment periods will be combined and public notice will include fact sheet. 30-day comment period begins/ends as per dates identified in fact sheet.	Draft RI Work Plan submitted to NYSDEC April 2010. Conditional Approval by NYSDEC June 30, 2010.
After RI Completion:		
• Mail fact sheet to BSCL describing results of RI	Before NYSDEC approves RI Report	
After Remedial Work Plan (RWP) Received:		
• Mail fact sheet to BSCL about proposed RWP and announcing 45-day comment period • Public meeting by NYSDEC about proposed RWP (if requested by public)	Before NYSDEC approves RWP. 45-day comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day comment period.	
After Approval of RWP:		
• Mail fact sheet to BSCL summarizing upcoming remedial construction	Before the start of remedial construction	
After Remedial Action Completed:		
• Mail fact sheet to BSCL announcing that remedial construction has been completed • Mail fact sheet to BSCL announcing issuance of Certificate of Completion (COC)	At the time NYSDEC approves Final Engineering Report. These two fact sheets should be combined when possible if there is not a delay in issuance of COC	

APPENDIX D

SITE LOCATION MAPS



C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Former Mill No. 2, site ID # C932150
Norampac Industries
4001 Packard Road
Niagara Falls, New York

N

0 500 1,000 2,000
Feet

PROJECT NO:	III.005.001.110
DATE:	March 22, 2010
SCALE:	AS SHOWN
DRAWN BY:	WNR
DESIGNED BY:	WNR
CHECKED BY:	SV

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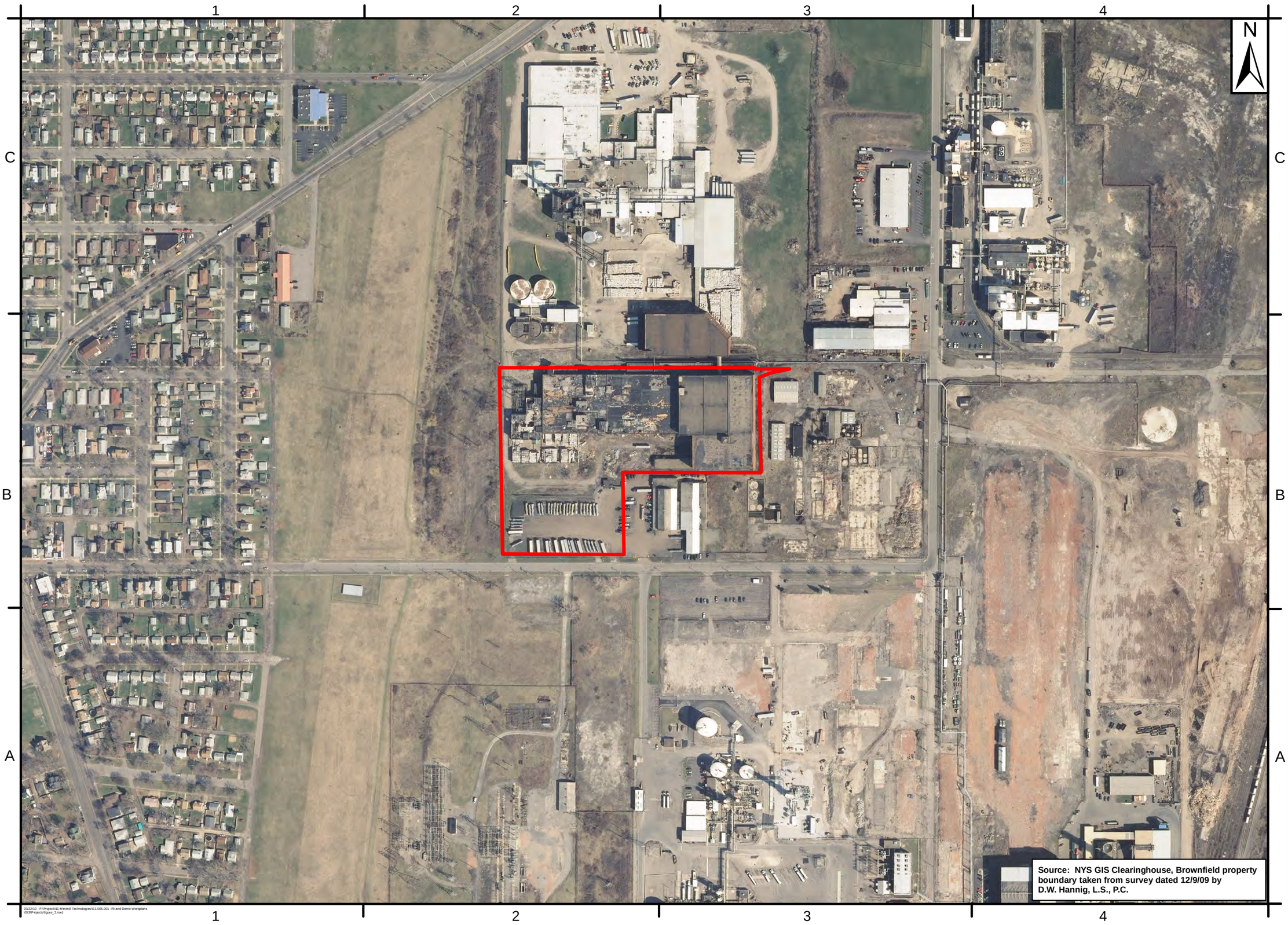
Source: ESRI USA_Topo_Maps
http://services.arcgisonline.com/arcgis/services

Appendix D
Site Location Map

Figure 1



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C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Legend

Approximate Brownfield Property Boundary

Former Mill No. 2, site ID # C932150
Norampac Industries
4001 Packard Road
Niagara Falls, New York

0 100 200
Feet

PROJECT NO:	III.005.001.110
DATE:	March 22, 2010
SCALE:	AS SHOWN
DRAWN BY:	WNR
DESIGNED BY:	WNR
CHECKED BY:	SV

Appendix D
Property Map

Figure 2

Source: Image from NYS GIS Clearinghouse, Plant layout from Plant Layout drawing for Kimberly Clark Corporation, Drawing No. F-54000-D dated 1964

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C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Former Mill No. 2, site ID # C932150
Norampac Industries
4001 Packard Road
Niagara Falls, New York

0 25 50 100 Feet

PROJECT NO:	III.005.001.110
DATE:	March 22, 2010
SCALE:	AS SHOWN
DRAWN BY:	WNR
DESIGNED BY:	WNR
CHECKED BY:	SV

Appendix D
Historic Site Plan

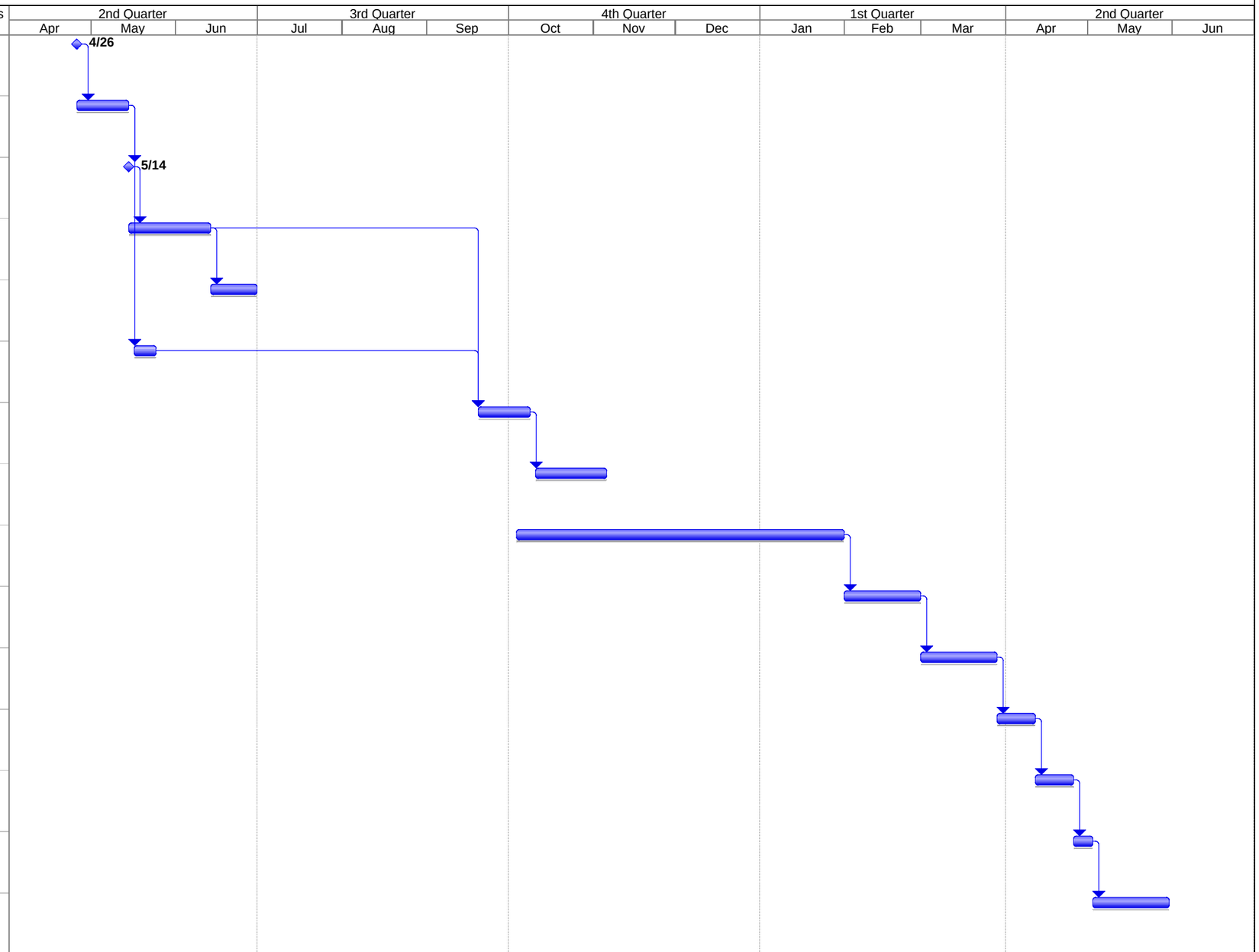
Figure 3

APPENDIX E

Project Schedule

Norampac Brownfield Cleanup Remedial Investigation Draft Schedule

ID	Task Name	Duration	Start	Finish	Predecessors
1	RI work plan submitted to DEC	0 days	4/26/10	4/26/10	
2	NYSDEC & NYSDOH review of RI work plan	15 days	4/26/10	5/14/10	1
3	RI work plan approved by DEC and 30 day public comment period commences	0 days	5/14/10	5/14/10	2
4	RI work plan public comment period	30 edays	5/14/10	6/13/10	3
5	NYSDEC / NYSDOH approval of RI work plan	13 days	6/14/10	6/30/10	4
6	Solicit subcontractor bids (e.g., driller, labs)	6 days	5/17/10	5/24/10	2
7	RI field work	15 days	9/20/10	10/8/10	4,6
8	Analytical work	20 days	10/11/10	11/5/10	7
9	Building demolition	120 edays	10/4/10	2/1/11	
10	Field work under slab and installation of monitoring wells (following demolition)	20 days	2/1/11	2/28/11	9
11	Analytical work	20 days	3/1/11	3/28/11	10
12	Prepare RI report	10 days	3/29/11	4/11/11	11
13	Review of RI Report by client	10 days	4/12/11	4/25/11	12
14	RI report revisions	5 days	4/26/11	5/2/11	13
15	NYSDEC review of RI report	20 days	5/3/11	5/30/11	14



Project: Project Schedule RI 081010
Date: 8/10/10

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External MileTask
Split