May 2018
(Revised October 2018)

Remedial Investigation Work Plan

First Prize Center Site
68 Exchange Street
City of Albany & Town of Colonie
Albany County, New York
BCP Site #C401076

Prepared for:

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"I, Kirk Moline., certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this work plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with DER Technical Guidance for Site Investigation and Remediation (DER-10)."

REMEDIAL INVESTIGATION WORK PLAN
FIRST PRIZE CENTER SITE
68 EXCHANGE STREET
CITY OF ALBANY & TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

TABLE OF CONTENTS

PAGE

FIGURES

APPENDICES

1.0 INTRODUCTION & PURPOSE

1.1 Introduction

This Remedial Investigation Work Plan (RIWP) will be implemented to assess the nature and extent of environmental conditions at the First Prize Center BCP Site (the "Site") located at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York (see Figure 1: Site Location Map).

The Site developer, First Prize Development Partners, LLC, has been accepted into the BCP as a "Volunteer" per the executed May 1, 2018 Brownfield Cleanup Agreement (BCA). The intended use of the Site is for the phased construction of a comprehensive mixed-use community consisting of multi-family residences, retail stores and restaurants, office space, hotel, and open space for passive and active recreation.

1.2 Purpose and Scope

The purpose of this RIWP is to establish guidelines and procedures for the Remedial Investigation (RI). The Main Building will need to be demolished and the building slab removed to enable the collection of soil samples underneath the building floor slabs. Dust mitigation measures will be implemented for the demolition of the Main Building and any other structures to protect nearby residences from nuisance dust. The dust mitigation measures will be detailed in the building demolition specifications which will be provided to the DEC Project Manager for review. The environmental data obtained from the RI will be used to assess the nature and extent of Site contaminants and to evaluate the fate and transport mechanisms applied to the contaminants so that an appropriate remedy can be incorporated into the redevelopment plans for the Site. Previous environmental data for the Site's fill/soil and groundwater obtained from environmental investigations conducted in 2001 may be used to supplement the data collected during the RI as it relates to further defining the nature and extent of contamination.

The NYSDEC has recently required that Sites in the BCP collect several groundwater samples for analysis for emerging contaminants. These emerging contaminants include 1,4-dioxane and 21 per- and polyfluoroalkyl substances (PFAS). NYSDEC has indicated that soil samples do not need to be analyzed for PFAS at this time as there are currently

no NYS regulatory derived criteria. If PFAS are detected in groundwater at levels that suggests there could be an on-Site source and are not indicative of area-wide ubiquitous groundwater conditions, NYSDEC may require the collection of soil samples for laboratory analyses for PFAS.

The proposed RI is summarized, as follows.

- Conduct a survey of floor drains and pits related to the motor shop, the two (2) motor transportation service shops and the waste water treatment plant (Buildings 1, 2, 3 and 5.
- Collection of floor drain and pits sediment samples for subjective (i.e., visual, olfactory and PID headspace analyses) and laboratory analyses.
- Collection of surface soil samples within the Site for subjective and laboratory analyses.
- Collection of surface water and sediment samples for laboratory analyses from low-lying areas throughout the Site, including a drainage swale.
- Advancement of exploratory test pits within the Site to visually and physically assess subsurface conditions and to facilitate the collection of samples of historic fill material (HFM) and native soil for subjective and laboratory analysis.
- Advancement of test borings to facilitate the collection of HFM and native soil samples for subjective and laboratory analysis, to further evaluate the Site's subsurface conditions, and to aid in the installation of monitoring wells for the collection of groundwater samples for laboratory analysis.
- Advancement of soil probes in the vicinity of floor (trench) drains and abandoned underground hydraulic lifts to assess subsurface conditions, facilitate the collection of subsurface HFM and native soil samples for subjective and laboratory analyses, and if needed, for installation of monitoring wells to aid in the collection of groundwater samples for laboratory analyses.
- Soil gas survey. The necessity for conducting a soil gas survey will be based on the findings of the RI tasks listed above. If the findings of the RI and review of the proposed Site development plans indicate that a soil gas survey be conducted, then a supplemental work plan will be developed and submitted to the DEC Project Manager for review and approval.

- Remediation of Asbestos Containing Material (ACM) and Hazardous Building Material (HBM) and then demolition of the Main Building and the building slab removed to enable the investigation underneath the building floor slabs. Separate specifications and bidding documents will be prepared in relation to the building demolition work.

This RIWP outlines a systematic investigative approach specific to the Site considering its history, geology and hydrogeology, known or suspected contaminants, and surrounding land use. The goal of this RIWP is to acquire sufficient environmental data to support the development of the remedy for the Site.

2.0 SITE DESCRIPTION & HISTORY

2.1 Site Description

The Site is located at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York. The Site is 32.09 acres in size and is located in an urban setting characterized by adjacent commercial and residential development. The Site is generally level, with a slight slope towards the west on the western portion of the Site. The Patroon Creek is located approximately 400 feet to the west of the Site. See Figure 1: Site Location Map.

The Site features include five (5) building structures (identified on Figure 2 as the Main Building and Buildings 1, 2, 3 and 5; Building 4 has been demolished, asphalt and gravel parking areas and access-ways, and grassy and wooded areas. The buildings occupy the southern and central portions of the Site. Portions of the buildings are currently leased out to commercial tenants while other portions of the buildings are in varying stages of decay. Tenants will be vacated before Site preparation demolition activities are commenced. The asphalt and gravel parking areas and access-ways are concentrated around the buildings. Northern and north-central portions of the Site are predominantly vegetated with the exception of a partially fenced-in 2.3 acre tract of land that was formerly used for the staging and sale of automobiles, RVs, trailers, etc. See Figure 2: Site Features Map for the Site layout.

2.2 Adjacent Land Use

Adjacent land use includes mixed commercial and residential development to the south and east, railroad tracks, the Patroon Creek and Interstate I-90 to the west, and the Town of Colonie West Albany Pocket Park (ball fields) to the north.

2.3 Site History

Prior to the development of the Site that began in 1924, the Site was vacant land. Beginning in 1924 until the 1980's, the southern and central portions of the Site were used as Tobin's slaughterhouse and meat packing plant. Early historic uses may also have included the manufacture of fertilizers within this portion of the Site. After Tobin's ceased operations in the 1980's, the Site was renamed the First Prize Center, and

the buildings have been leased out to various commercial and industrial tenants including dry/cold/freezer storage, painting companies, laminating companies, vehicle storage and repair, a concrete plant, offices, health care facility, an art studio, etc. The northern portions of the Site previously contained an incinerator building that was used by Tobin's to incinerate its wastes, ball fields, and a staging area for the sale of RVs, trailers and automobiles.

2.4 Site Utilities

Electricity and natural gas are supplied to the Site by National Grid. Municipal water is provided to the Site by the Latham Water District. Sanitary sewer services are provided by Colonie Pure Waters.

2.5 Site Drainage Features

Precipitation infiltrates into the ground in vegetated portions of the Site and/or sheet flows over asphalt, concrete and gravel surfaces into vegetated areas or storm sewers. Storm sewers located in paved and gravel areas within the southern and central portions of the Site are assumed to discharge into storm sewers located along Exchange Street and/or into a drainage swale located in the southwestern corner of the Site.

2.6 Topographic Description and Nearby Surface Water Bodies

According to the United States Geological Survey (USGS) Topographic Map, the Site lies at approximately 200 to 205 feet above Mean Sea Level. The majority of the Site is generally level with lower-lying wet areas along the Site's western property boundary. See Figure 2. Based on observations, it appears that the Site was made level by the placement of fill materials. The edge of the fill material was observed to extend to the western-most portions of the Site where the fill ends and the low-lying wet areas begin. The Patroon Creek is located approximately 400 feet to the west of the Site.

2.7 Site Geology

Soils are mapped by the United States Department of Agriculture Web Soil Survey as urban land; nearly level to strongly sloping areas where asphalt, concrete, buildings or other impervious materials cover more than 85 percent of the surface. Surficial geology

is mapped as dunes. Dunes are fine to medium sands which are permeable and range in thickness from one (1) to 10 meters. Bedrock is mapped as Normanskill Shale.

Site specific subsurface conditions were assessed via the installation of test borings and test pits during previous environmental and geotechnical investigations conducted on the Site. Overall, the Site is generally mantled by fill material that generally consists of sand, silt and clay with heterogeneous occurrences of coal, ash, asphalt, concrete and brick. The fill material extends to depths that range from 0.5 to 12 feet below the ground surface (bgs). The highest frequency of fill material is in the vicinity of the Site's buildings on southern portions of the Site. Underlying the fill material are deposits of sand, silt and clay. Groundwater depths obtained during previous investigations ranged from five (5) to eight (8) feet below the ground surface (bgs).

2.8 Environmental Site History

2.8.1 Previous Property Use

The Site was historically used as a slaughterhouse and meat packing plant since its development in the 1920's. Prior to development of the Site, the property was vacant land. The plant was first occupied by Albany Packing Company/Tobin Packing Co., Inc. The facility processed pork products exclusively. The Site operated as a slaughterhouse and meat packing plant until the early 1980's. Starting in the mid-to-late 1980's, various commercial and industrial tenants started occupying the buildings and the Site was renamed the First Prize Center. Commercial and industrial uses at the First Prize Center include dry/cold/freezer storage, painting companies, laminating companies, vehicle storage, offices, a cement plant, vehicle repair, health care facilities, art studio, construction supply, etc.

During the operation of the Tobin plant, the Main Building (see Figure 2) was used as the slaughterhouse and meat packing plant, including cooler and freezer space, boiler room, laboratory, smoke rooms, warehouse space, etc. On the south end of the Main Building (Building #1) is the former machine shop, hog pen area and "cookers" room (i.e., where inedible waste was rendered).

The garage building (Building #2) was used by Tobin for the storage and maintenance of their fleet of trucks. A large portion of this building was previously leased to Goodyear Tire and Rubber Company from approximately 1985 until the 1990's. Several

tenants have reportedly occupied portions of this building for the purpose of vehicle service and repair shops, and as a construction supply warehouse, subsequent to the Tobin plant ceasing operation at the site.

Building #3 was historically used as a storage building and car repair shop by Tobin. Subsequent tenants of this building included Armor Elevator, Sound Barriers, and health care facilities.

The former hog pens (Building #4) were used to house hogs prior to slaughter. This structure was used for storage of equipment and parts by McNar Industries subsequent to the Tobin operations at the facility, until the building was demolished in the late 1980's or early 1990's.

The former wastewater treatment plant building (Building #5) was constructed in the 1960's to treat the wastewater discharged from the Tobin facility. Subsequent to the Tobin operations at the facility, the building was used as a concrete plant and a storage operation for an ice cream company.

Additionally, the Tobin operation had two incinerators over time. The original incinerator was located to the northwest of the Main Building and was used in the early years and up to the 1960s (exact dates unknown) to burn paper and wood refuse. The ash/coal byproduct from the incinerator was reportedly disposed of in an open field area northwest of the Main Building. The second incinerator was reportedly located in Building 5 after the original incinerator was decommissioned.

Other past uses of the Site included ball fields and the staging for sale of RVs, trailers and automobiles in northern and central portions of the Site.

2.8.2 Historical Chemical Use

The Site has historically been used for industrial, manufacturing and automotive repair. Chemicals associated with these uses likely include petroleum based products, solvents, glues, preservatives, acids, etc. Past environmental investigations conducted on the Site (see Section 2.9) identified volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and metals in the Site's fill/soil and VOCs, SVOCs and metals in the Site's groundwater at concentrations exceeding regulatory criteria.

2.8.3 Environmental Orders, Decrees and Violations Associated with the Site

There are no known USEPA or NYSDEC orders, decrees and violations relating to the Site, with the exception of the following:

Spill No. 8908716 was assigned to the Site on December 4, 1989 as a result of drums tipped over at the facility causing the release of 400 gallons of unknown material. The spill was allegedly cleaned up, and was closed on January 29, 1990.

Spill No. 9214479 was assigned to the Site on September 2, 1992 as a result of a worker overcome by vapors. It was determined that a forklift in the closed room caused the vapors, and the spill file was closed on March 31, 1993.

Spill No. 9210607 was assigned to the Site on December 14, 1992 as a result of the observance of an oily substance while excavating a gas main valve on Exchange Street near the Site. No action was recommended unless the situation changed. The spill file was subsequently closed on December 16, 1992.

Spill No. 9506248 was assigned to the Site on August 19, 1995 as a result of several 55 gallon drums leaking in a parking lot. The drums were removed and Speedi-Dry was used to absorb the spill. It was determined that the product was probably waste oil from a truck repair shop in the building. The spill file was subsequently closed on September 8, 1995.

Spill No. 0310007 was assigned to the Site on November 25, 2003 and reportedly involved oil deposits on the asphalt/soil surfaces and in select catch basins in the vicinity of Building 2. The cause of the spill was reportedly/potentially from overflowing catch basins adjacent to the Site during a rain event. The spill file was closed by the NYSDEC as of December 3, 2003.

2.9 Previous Environmental Investigations

Following is a summary of previous environmental assessment and investigation reports conducted at the Site. The environmental reports listed below were submitted to DEC with the BCP Application and are available in the document repositories with the exception of two (2) reports which were not available. These two (2) reports are identified with an asterix (*).

- Environmental Site Assessment Report, First Prize Center, City of Albany/Town of Colonie, Albany County, New York, C.T. Male Associates, P.C., October 17, 1988.

An environmental site assessment and a subsurface investigation consisting of the installation of monitoring wells, soil and groundwater sampling, field analysis of the soil samples and laboratory analyses of the groundwater samples was completed. Some of the environmental concerns that this report identified were: numerous drums and containers containing oil, unknown substances, chemical products and waste laboratory chemicals on the Site grounds and inside the buildings; at least three (3) abandoned underground fuel storage tanks; asbestos containing materials (ACM) in the Main Building; low levels of VOCs in soil; four transformers with possible PCB-containing fluid; and floor drains in a former garage suspect of discharging directly to the Albany County Sewer District without an oil/water separator.

- Asbestos Containing Materials Survey Report, First Prize Center, City of Albany/Town of Colonie, Albany County, New York, C.T. Male Associates, P.C., December 7, 1988 (Revised December 20, 1988).

The purpose of this report was to determine the presence of asbestos containing materials (ACM) in or on the Site buildings, the condition of the ACM, and quantify the amount of ACM present. It was determined that ACM was present in the Main Building, outside the Main Building, and in Building 5 in the form of thermal asbestos insulation on piping, on the boilers, on the boiler breaching, on tanks in the boiler rooms, and on the abandoned No. 6 fuel oil storage tank, and in asbestos transite board and asbestos vinyl floor tiles. In the report, it indicates that the majority of the ACM was damaged or exposed to some degree.

- Draft Phase I Environmental Site Assessment Update Report, First Prize Center, Exchange Street, City of Albany/Town of Colonie, Albany County, New York, C.T. Male Associates, P.C., July 30, 1990.

This was an update to the report titled "Environmental Site Assessment Report, First Prize Center, City of Albany, Town of Colonie, Albany County, New York" dated October 17, 1988, which generally revealed similar Site conditions to that which existed in 1988.

- Subsurface Investigation of Spill Areas and Soil Removal Report, First Prize Center, Exchange Street, Albany, New York, C.T. Male Associates, P.C., October 5, 1990.

This report documents a subsurface investigation of the soils in the area of the former incinerator to the northwest of the Main Building, where liquids had been spilled from staged drums. The investigations were conducted as requested by NYSDEC. This report describes the actual investigation and remediation performed, which included soil excavation, soil sampling for subjective VOCs screening in the field, summarizes the findings of soil sampling results from the excavated soil and bottom of the excavations, and makes recommendations for final actions in the spill area.

- Report on Closure of Petroleum Storage Tanks, First Prize Center, 76 Exchange Street, Albany, New York, C.T. Male Associates, P.C., October 4, 1991.

This report describes the work procedures performed to close eight (8) petroleum storage tanks on the Site. Seven (7) underground tanks were closed in place and one (1) aboveground tank was closed and disposed of off-site as scrap metal.

- *Environmental Site Inspection of Goodyear Tire and Rubber Company Facility, C.T. Male Associates, P.C., December 5, 1997.

This letter report presents the findings of a cursory environmental Site inspection of the Goodyear Tire and Rubber Company Facility in Building 2 at the Site. The purpose of the inspection was to identify potential sources of, or evidence of, environmental concerns of the area occupied by Goodyear. The findings were: observations of various areas of staining (oil, paint and adhesive), an adhesive/oil like residual waste and residual rubber on the floor and walls; rubber soot, shavings and residue on floor, walls and ceilings; oil stained sediment in floor drains; miscellaneous containers of chemical products; and suspect ACM in the office areas.

- *Phase I Environmental Site Assessment, 76 Exchange Street, Albany and Colonie, New York, GZA GeoEnvironmental, Inc., December 2000.

Some of the environmental concerns that this report identified were: significant volumes of ACM; suspect lead or PCB-containing peeling paint; suspect PCB-containing ballasts in facility light fixtures; possible presence of anhydrous ammonia in refrigeration units; hydraulic reservoirs to existing elevators; seven (7) abandoned in-place underground storage tanks; oil staining on pavement in loading dock area;

potential release of various chemicals, petroleum, antifreeze and paints from the various auto maintenance facilities to soil, floor drains, surface water or groundwater; and unlabeled 55 gallon drums at the Site.

- Draft Phase II Investigation Data Including Draft Proposed Exploratory Location Plan, First Prize Center Property, 76 Exchange Street, Albany, New York; Draft Boring and Well Logs; Draft Test Pit Logs and Analytical Reports, GZA GeoEnvironmental, Inc., November 2000 to March 2001.

A Phase II investigation was conducted at the First Prize Center from November 2000 to March 2001. A report was not produced for this investigation, but a draft Proposed Exploration Location Plan, draft boring and well logs, draft test pit logs, and laboratory analysis reports were generated. Based on the logs available, it is inferred that 13 test pits and 38 soil borings (13 of which were converted to groundwater monitoring wells) were completed for environmental purposes, and 37 test borings and 25 test pits were completed for geotechnical purposes.

Soil and groundwater samples collected for laboratory analyses during the Phase II investigation depicted VOCs, SVOCs, pesticides and metals in fill/soil and VOCs, SVOCs and metals in groundwater at concentrations exceeding regulatory criteria at this time. The highest frequency of contaminants in fill/soil were encountered in the vicinity of the Tobin plant occupying southern and central portions of the Site and the former incinerator located to the northwest of the Main Building. The contaminants in groundwater were generally distributed across the Site with the highest frequency occurring in southern and central portions of the Site containing the former Tobin's plant.

Figure 3, which is an enhanced reproduction of GZA's Draft Proposed Exploratory Location Plan, depicts the fill/soil sampling locations where results exceeded the current Soil Cleanup Objectives (SCOs) for Unrestricted and Restricted Residential Use Sites in 6 NYCRR Section 375-6.8(a-b).

Figure 4, which is an enhanced reproduction of GZA's Draft Proposed Exploratory Location Plan, depicts the groundwater sampling locations where results exceeded regulatory criteria promulgated in the DEC's Division of Water Technical and Operational Guidance Series (TOGS) and addendums.

3.0 OBJECTIVES, SCOPE & RATIONALE

3.1 Objectives

The objective of this RIWP is to complete an investigation to support the preparation of a Remedial Investigation Report (RIR) that presents the nature and extent of contamination at the Site. The intent is to obtain sufficient information to develop a suitable remedy, and to enable the planned mixed commercial and residential redevelopment to proceed at the Site.

3.2 Project Standards, Criteria and Guidance

The RI will include the collection of surface soil, subsurface HFM and native soil, groundwater, floor drain sediment, surface water and sediment samples for laboratory analysis for the Target Compound List (TCL) of VOCs, SVOCs, pesticides and PCBs, the Target Analyte List (TAL) of metals (including mercury), and cyanide (TCL/TAL parameters) . Per the NYSDEC's request for Sites in the BCP, representative groundwater samples will also be analyzed for emerging contaminants 1,4-dioxane and 21 PFAS. 1,4-dioxane is an analyte that is included in the TCL VOCs and/or SVOCs analytical suite. The list of substances comprising the 21 PFAS to be sampled are presented in Table 2B in the Quality Assurance Project Plan (QAPP) in Appendix B.

Surface soil, subsurface HFM and native soil sampling analytical results for the TCL/TAL parameters will be compared to soil cleanup objectives (SCOs) for Unrestricted, Residential, Restricted Residential, and Commercial Use Sites in 6 NYCRR Section 375-6.8(a-b). The HFM and native soil analytical results are compared to these SCOs because the Site is planned to be redeveloped for multiple uses which may include a combination of unrestricted (i.e., parks/recreational areas), residential, and commercial uses.

The floor drain sediment sampling analytical results for the TCL/TAL parameters will be compared to SCOs for Unrestricted and Restricted Use Sites in 6 NYCRR Section 375-6.8(a-b)

Groundwater sampling analytical results for the TCL/TAL parameters will be compared to groundwater standards and guidance values promulgated in the DEC

Division of Water Technical and Operational Guidance Series (TOGS) and addendums. 1,4-Dioxane will be compared to the New York State generic Maximum Contaminant Level (MCL) of 50 ppb for unspecified organic contaminants. NYSDEC has not established a regulatory standard or guidance value for perfluorooctanoic acid (PFOA) or perfluoroctane sulfonic acid (PFOS), so the PFOA and PFOS chemical constituents of the PFAS list will be compared to the November 2016 USEPA PFOA and PFOS Drinking Water Health Advisory of 70 parts per trillion (ppt). Regulatory standards and guidance values have not been developed for the remaining 19 PFAS and, therefore, analytical results for these PFAS are being collected at the request of the NYSDEC for information purposes only.

Surface water sampling analytical results for the TCL/TAL parameters will be compared to groundwater standards and guidance values promulgated in the DEC Division of Water Technical and Operational Guidance Series (TOGS) and addendums.

Sediment sampling analytical results for the TCL/TAL parameters will be compared to the NYSDEC's Division of Fish, Wildlife and Marine Resources Bureau of Habitat Screening and Assessment of Contaminated Sediment, dated June 24, 2014.

3.3 Scope and Rationale

The scope of work was developed based on present and historic Site conditions, the existing data collected from previous investigations performed within the Site, and the NYSDEC's requirement to assess the Site's groundwater for 1,4-dioxane and 21 PFAS compounds. Previous investigations depicted VOCs, SVOCs, pesticides and metals in fill/soil, and VOCs, SVOCs and metals in groundwater, at concentrations exceeding regulatory criteria.

Previous environmental reports of the Site indicate that seven (7) underground storage tanks were closed in-place in 1991. These tanks have not been registered in the NYS Petroleum Bulk Storage (PBS) Program. The tanks will be registered and the tanks will be closed by removal as part of the Site's remedy. In addition to the Site wide investigation planned as depicted on Figure 2, more sampling will be performed in the area of the tanks in accordance with DER-10's tank closure requirements.

The Site is serviced by public water and sanitary sewer. As such, a public and private well survey is not proposed as a component of the RI.

The type and analysis for all samples to be collected for laboratory analysis during the RI are summarized in Table 1: Analytical Sampling Program, which is presented at the end of this section.

The scope of work will include the following:

Due to the Site's large size and past development configuration, the Site has been subdivided into three (3) areas (Areas A, B and C) to geographically facilitate the proposed investigations (see Figure 2).

Area A

Area A encompasses northern and central portions of the Site that contain wooded and vegetated areas, low-lying wet areas, asphalt and gravel access-ways, and gravel parking areas. The following investigations will be completed within Area A.

-Conduct an underground drainage utility survey to assess the terminus of catch basins.

-Collection of surface soil samples at the locations depicted on Figure 2 for subjective (i.e., visual, olfactory and PID headspace analyses) and laboratory analyses.

-Advancement of test pits to physically observe subsurface conditions and to aid in the collection of subsurface HFM and native soil samples for subjective and laboratory analyses.

-Collection of surface water and sediment samples for laboratory analyses from low-lying areas within westernmost portions of Area A.

-Advancement of test borings to assess subsurface conditions, to aid in the collection of subsurface HFM and native soil samples for subjective analyses, and for installation of monitoring wells to aid in the collection of groundwater samples for laboratory analyses. HFM and native soil samples observed to be visually impacted or that have odors will be submitted for laboratory analyses. The test borings will be situated at strategic locations across Area A to assess subsurface conditions and environmental media at assumed up-gradient, mid-gradient and down-gradient locations with respect to groundwater flow direction, which is inferred to be from east to west towards the Patroon Creek.

Area B

Area B encompasses central and southern portions of the Site containing the Main Building, Building 5, asphalt access-ways and parking lots, wooded and vegetated areas, and low lying wet areas. The following investigations will be completed within Area B.

-Conduct an underground drainage utility survey to assess the terminus of catch basins and floor drains in Building 5. As the Main Building is dilapidated and unsafe, a drainage structure assessment will not be performed within this building.

-Collection of surface soil samples for subjective and laboratory analyses. As depicted on Figure 2, several surface soil samples will be collected beneath the Main Building. The Main Building will need to be demolished and the building slab removed to enable the collection of the soil samples underneath the building floor slabs. As discussed in Section 1.2, remediation of ACM and HBM and then demolition of the Main Building and removal of the building slab will need to occur to enable the investigation underneath the building floor slabs.

-Advancement of test pits to physically observe subsurface conditions and to aid in the collection of subsurface HFM and native soil samples for subjective and laboratory analyses. As depicted on Figure 2, several test pits are proposed to be completed beneath the Main Building. The Main Building will need to be remediated of ACM and HBM and then demolished, and the building slab removed, to enable the advancement of the test pits.

-Collection of surface water and sediment samples for laboratory analyses from low-lying wet areas within westernmost portions of Area B.

-Advancement of test borings to physically observe subsurface conditions, to aid in the collection of subsurface HFM and native soil samples for analyses, and for installation of monitoring wells to aid in the collection of groundwater samples for laboratory analyses. HFM and native soil samples appearing subjectively impacted will be submitted for laboratory analyses. The test borings will be situated at strategic locations across Area B to assess subsurface conditions and environmental media at assumed up-gradient, mid-gradient and down-gradient locations.

Area C

Area C encompasses the southern portion of the Site that contains Buildings 1, 2 and 3, a former electrical transformer yard, vegetated and wooded areas, low-lying wet areas and a drainage swale, and asphalt access-ways and parking areas. The following investigations will be completed within Area C.

-Conduct an underground drainage utility survey to assess the terminus of catch basins, floor drains and pits.

-Collection of surface soil samples for subjective and laboratory analyses. As depicted on Figure 2, two (2) surface soil samples are proposed to be collected beneath Building 2. These samples will be collected as part of the floor drain/hydraulic lift assessment, as discussed below.

-Advancement of test pits to physically observe subsurface conditions and to aid in the collection of subsurface HFM and native soil samples for subjective and laboratory analyses. Test pits will not be completed beneath Buildings 1 and 2. Rather, subsurface conditions and sampling of HFM and native soil will be conducted as part of the soil probes that will be advanced through concrete flooring within Buildings 1 and 2 as part of the floor drain/hydraulic lift assessment, as discussed below.

-Floor drain and hydraulic lift assessment. Floor (trench) drains and abandoned underground hydraulic lifts are located within Buildings 1, 2 and 3. Soil probes will be completed in the vicinity of these structures to assess subsurface conditions and to aid in the collection of subsurface HFM and native soil samples. Samples that are subjectively impacted will be submitted for laboratory analyses. If HFM, native soil and groundwater appears physically impacted, then select test borings will be converted into monitoring wells to aid in the collection of groundwater samples for laboratory analyses. As part of the soil probe program, two (2) surface soil samples will be collected immediately beneath the Building 2 concrete slab. If the concrete slab is underlain by sub-base material, the surface soil samples will be collected immediately beneath the sub-base material.

-Advancement of test borings to first physically observe subsurface conditions, to aid in the collection of subsurface HFM and native soil samples for analyses, and for installation of monitoring wells to aid in the collection of groundwater samples for

laboratory analyses. HFM and native soil samples appearing subjectively impacted will be submitted for laboratory analyses. The test borings will be situated to assess subsurface conditions and environmental media at assumed up-gradient, mid-gradient and down-gradient locations within Area C.

-Collection of floor drain sediment samples for physically observable visual and olfactory analyses and laboratory analyses from floor (trench) drains in Buildings 1, 2 and 3.

-Collection of surface water and sediment samples for laboratory analyses from low-lying areas within westernmost portions of Area C and a drainage swale within the southwestern portion of Area C.

3.3.1 Underground Drainage Utilities Survey

An underground drainage utility survey will be conducted to assess the subsurface layout and discharge points of catch basins and floor drains within the Site and the Site's buildings. The survey will be conducted by a private utility locator utilizing specialized equipment to trace underground piping affiliated with the catch basins and floor drains. The underground drainage utilities survey will be conducted prior to the planned test pit investigations so that the test pits can be focused on potential drainage utility discharge points, if encountered. An underground drainage utility survey will not be conducted in the Main Building due to its dilapidated and unsafe condition until after remediation and demolition of the Main Building structure occurs.

In the event that the survey is hindered due to the presence of sediment within the floor drains, the sediments will need to be characterized so that they can be removed. The removed sediments would then be disposed of off-site for disposal at an appropriate permitted disposal facility.

3.3.2 Surface Soil Sampling

Ninety-six (96) surface soil samples will be collected across the Site; 28 from Area A, 47 from Area B and 21 from Area C (see Figure 2). In general, the surface soil sampling locations are distributed over the Site to be representative of overall Site conditions with the exception that two (2) surface soil samples will be collected in the area of a former electrical transformer yard adjacent west of Building 1.

The rationale for the surface soil sampling, and the frequency of sampling is to evaluate the environmental quality of surface soil across the Site to aid in the selection of a remedy that will be protective of human health and the environment.

At each planned sampling location, the surrounding ground surface will be evaluated for indications of potential environmental concern such as staining; surface dumping; staged tanks, drums and containers; surface fill, former railroad tracks, etc. If observed, the surface soil sampling location will be adjusted to the area of potential environmental concern (e.g. one (1) surface soil sample will be taken in the area of observed surface staining southeast of Building 3). Subsequent surface soil samples may be collected and analyzed to further define the extent of impacts if there are contaminants of concern (COCs) identified through laboratory analysis in the vicinity of the parent surface soil sampling location. Laboratory analysis of additional media samples will be for those particular groups of compounds or analytes (i.e. VOCs, SVOCs, PCBs, Pesticides and metals) detected above their respective SCOs. If there are no indications of potential environmental concern, the surface soil sample will be collected from the planned location identified on Figure 2. Any additional investigations will be approved by the NYSDEC Project Manager.

The surface soil samples will be collected from either the 0 to 2" beneath the ground surface immediately beneath the vegetative root zone in vegetated areas; immediately beneath the gravel or stone layer in gravel covered areas; immediately beneath the asphalt and sub-base in paved areas; or immediately beneath the concrete slab and sub-base in concrete covered areas.

The surface soil samples will be collected utilizing a field decontaminated hand auger, shovel, pick ax, trowel and/or other field sampling equipment in accordance with the Field Sampling Plan (FSP) in Appendix A.

The surface soil samples will be field assessed employing subjective (i.e., visual, organoleptic and PID headspace analyses) methods and will be submitted for laboratory analyses for the TCL/TAL parameters.

3.3.3 Subsurface HFM and Native Soil Sampling

Ninety-two (92) test pits, 19 test borings to be converted into monitoring wells and 20 soil probes for the floor drain/hydraulic lift assessment within Buildings 1, 2 and 3 will

be completed across the Site to assess subsurface conditions, and to aid in the collection of subsurface HFM and native soil samples for subjective and laboratory analyses.

Test Pits

The test pits will be completed at the general locations depicted on Figure 2 after the surface soil sampling is completed. At each test pit location, the ground surface in the vicinity of the test pits will be evaluated for indications of potential environmental concern such as staining; surface dumping; staged tanks, drums and containers; etc. This effort will be informed by the surface soil investigation described above. The test pits will be focused in the areas of potential environmental concern observed in the field and in known suspect areas of environmental concern including closed in-place petroleum USTs at the northeast exteriors of the Main Building and Building No. 2, two (2) concrete structures at the northern exterior of Building No 5, the former electrical transformer yard at the western exterior of Building No. 1, a filled-in underground rectangular structure at the northeast exterior of Building No. 3, surface soil staining observed at the southeast exterior of Building No. 3, in the vicinity of a chemical storage shed along the western side of Building No. 5, and in the vicinity of stockpiled tires on west-central portions of the Site. Subsequent test pit samples may be collected and analyzed to further define the extent of impacts if there are COCs identified through laboratory analysis in the vicinity of the parent test pit location. Laboratory analysis of additional media samples will be for those particular groups of compounds or analytes (i.e. VOCs, SVOCs, PCBs, Pesticides and metals) detected above their respective SCOs. Any additional investigations will be approved by the NYSDEC Project Manager.

As noted in Section 3.3, Area C soil probes will be completed in lieu of test pitting beneath Buildings 1 and 2.

The test pits will be completed employing an excavator and will be advanced to the top of native soil or to the groundwater table, whichever is encountered first. HFM samples will be collected at two (2) foot intervals for subjective field analyses and for soil classification. HFM samples exhibiting subjective impacts, and representative samples of distinct HFM, will be submitted for laboratory analyses. HFM samples will not be submitted for laboratory analyses if there is no subjective evidence of impacts, and the type of HFM is visually the same HFM sampled and analyzed from other test pits. Select samples of native soil underlying the HFM will also be collected for laboratory analyses to confirm that any identified contaminants in overlying HFM are confined to

HFM and have not impacted underlying native soil in order to aid in the development of the proposed remedy. It is anticipated that 40 to 50 HFM and native soil samples will be submitted for laboratory analyses from the proposed test pits.

The subsurface HFM and native soil samples will be collected utilizing a field decontaminated excavator bucket in accordance with the Field Sampling Plan (FSP) in Appendix A.

Samples submitted for laboratory analysis will be analyzed for the TCL/TAL parameters.

The rationale for the test pits and subsurface HFM and native soil sampling, and the frequency of sampling, is to assess subsurface conditions and the environmental quality of subsurface HFM and native soil across the Site. This data will be used in the selection of a remedy that is protective of human health and the environment. The test pits will also aid in assessing the environmental quality of HFM and native soil in the vicinity of closed in-place petroleum USTs.

Excavated HFM and native soil from the test pits will be managed in accordance with DER-10 3.3(e)4.

Test Borings For Installation of Monitoring Wells

Nineteen (19) test borings will be completed across the Site at the locations shown on Figure 2. The test borings are primarily for the installation of monitoring wells to aid in the collection of groundwater samples, but also for the collection and laboratory analysis of HFM and subjectively impacted native soils above the first groundwater bearing zone.

The test borings will be completed employing hollow stem auger (HSA) drilling techniques and will be advanced five (5) feet into the groundwater table. HFM and native soil samples will be collected at two (2) foot intervals for subjective analyses and soil classification. HFM and native soil samples exhibiting subjective environmental impacts and representative samples of distinct HFM above the first water bearing zone will be submitted for laboratory analyses. If the HFM and native soil samples do not exhibit the aforementioned characteristics, samples will not be submitted for laboratory analyses.

The subsurface HFM and native soil samples will be collected utilizing a field decontaminated split spoon sampling barrel in accordance with the Field Sampling Plan (FSP) in Appendix A.

Samples submitted for laboratory analysis from the test borings will be analyzed for the TCL/TAL parameters.

Two (2) inch diameter PVC monitoring wells constructed of riser and screen will be installed in each of the test borings. The monitoring wells will be constructed so that the 10 foot screened section will straddle the aquifer approximately five (5) feet above and five (5) feet below the water table. The monitoring wells will be protected at the ground surface with either curb box or standpipe protective enclosures.

The rationale for the advancement of test borings for installation of monitoring wells is to further assess the Site's subsurface conditions and to evaluate the environmental quality of the Site's HFM, native soil and groundwater. The monitoring wells are strategically placed across the Site at up-gradient, mid-gradient and down-gradient locations with respect to predicted groundwater flow direction, which is inferred to be from east to west towards the Patroon Creek. Additionally, monitoring wells will be installed to assess groundwater quality in the vicinity potential areas of environmental concern which includes the closed in-place petroleum USTs at the northeast exteriors of the Main Building and Building No. 1, the former electrical transformer yard at the western exterior of Building No. 1, two (2) concrete tanks at the northern exterior of Building No. 5, and surface staining observed at the southeastern exterior of Building No. 3.

Soil Probes For the Floor Drain/Hydraulic Lift Assessment

Twenty (20) soil probes will be completed in the vicinity of floor (trench) drains and former underground hydraulic lifts within Buildings 1, 2 and 3, as depicted on Figure 2. Six (6) soil probes will be completed within Building 1, 10 soil probes will be completed within Building 2 and four (4) soil probes will be completed within Building 3. The proposed soil probe locations beneath Buildings 1 and 2 will substitute for the test pits that will not be able to be completed in this area and to aid in the collection of surface soil samples beneath Building 2 (see Test Pits heading in this Section and Section 3.3.1: Surface Soil Sampling).

The soil probes will be completed employing direct-push drilling techniques and will be advanced approximately one (1) foot below the apparent water table. HFM and native soil samples will be collected at two (2) foot intervals for subjective analyses and soil classification. HFM and native soil samples exhibiting physical environmental impacts will be submitted for laboratory analyses. If the HFM and native soil samples are not observed to be impacted, then no samples will be submitted for laboratory analyses.

The subsurface HFM and native soil samples will be collected utilizing a field decontaminated macro-core sampler in accordance with the Field Sampling Plan (FSP) in Appendix A.

Samples submitted for laboratory analysis from the soil probes will be analyzed for the TCL/TAL parameters.

In the event that there is observable physical evidence that groundwater may be environmentally impacted (stained/odiferous fill/soil within and immediately above the water table, sheen, product, etc), one (1) inch diameter PVC monitoring wells constructed of riser and screen may be installed in select soil probes to aid in the collection of subsequent groundwater samples. The monitoring wells will be constructed so that the 10 foot screened section will straddle the aquifer approximately five (5) feet above and five (5) feet below the water table. Because the monitoring wells will be located within the buildings and the buildings will be razed in the future, the monitoring wells will not be completed with protective covers (road boxes).

The rationale for the advancement of the soil probes is to assess subsurface conditions and the environmental quality of HFM, native soil and groundwater in the vicinity of floor (trench) drains and abandoned underground hydraulic lifts. This data will be used in the selection of a remedy that is protective of human health and the environment.

If analytical results for the subsurface HFM and native soil samples collected from the Geoprobe borings or groundwater in the small diameter monitoring wells identify compounds or analytes at concentrations exceeding SCGs, additional investigations may be conducted to delineate the areal extent of the contaminants. Any additional investigations will be approved by the NYSDEC Project Manager.

3.3.4 Groundwater Sampling

Groundwater samples will be collected for laboratory analysis from 19 monitoring wells, and potentially from any soil probes that are converted into small diameter monitoring wells as a function of the floor drain/hydraulic lift assessment, to assess the environmental quality of the Site's groundwater. The proposed monitoring wells are located across the Site at strategic locations to assess groundwater quality in apparent up-gradient, mid-gradient and down-gradient locations within the Site with respect to groundwater flow direction, which is inferred to be from east to west towards the Patroon Creek. Additionally, monitoring wells will be installed to assess groundwater quality in the vicinity of potential areas of environmental concern which includes the closed in-place USTs at the northeast exteriors of Buildings 1 and 2, the former electrical transformer yard at the western exterior of Building 1, two (2) concrete tanks at the northern exterior of Building 5, and surface staining observed at the northeast exterior of Building 3.

All of the monitoring wells will be developed, purged and sampled in accordance with the FSP in Appendix A.

Samples submitted for laboratory analysis from all monitoring wells will be analyzed for the TCL/TAL parameters. Samples submitted for laboratory analysis from select monitoring wells installed in an up-gradient (northeastern portion of Area B), mid-gradient (adjacent west of Building 1) and down-gradient (north of Building 3) will also be analyzed for PFAS. The groundwater samples to be analyzed for PFAS from the up-gradient monitoring well will assess if any of the 21 PFAS compounds may have migrated onto the Site from off-site sources. The groundwater sample for PFAS analysis from the mid-gradient monitoring well is situated down-gradient of Building 1 and the transformer yard. The groundwater sample for PFAS analysis from the down-gradient monitoring well is strategically placed to assess groundwater in a hydraulically down-gradient portion of the Site historically used for industrial, manufacturing and automotive repair.

3.3.5 Floor Drain Sediment Sampling

Ten (10) to 15 floor drain sediment samples will be collected based on observable physical impacts and sent for laboratory analysis from floor (trench) drains located in Buildings 1, 2 and 3. The floor drain sediment samples will be collected to assess the

environmental quality of the sediments for waste characterization purposes for the anticipated floor drain cleaning component of the remedy.

The floor drain sediment samples will be collected utilizing a field decontaminated trowel and/or by hand wearing new nitrile gloves in accordance with the Field Sampling Plan (FSP) in Appendix A.

The floor drain sediment samples will be submitted for laboratory analysis for the TCL/TAL parameters.

3.3.6 Surface Water and Sediment Sampling

An attempt will be made to co-locate each surface water and sediment sampling location. Six (6) surface water and six (6) sediment samples will be collected from six (6) co-located sampling locations in low-lying wet areas and a drainage swale in westernmost portions of the Site, as depicted on Figure 2. The samples will be collected to assess the environmental quality of surface water and sediment in assumed down-gradient portions of the Site not covered by fill material and in the vicinity of a drainage swale on the southwestern corner of the Site. If sampling is conducted during dry conditions, it may not be possible to collect the requisite number of surface water samples.

The surface water samples will either be collected directly into the sampling containers or collected utilizing a factory sealed disposable bailer. The sediment samples will be collected utilizing a field decontaminated trowel and/or by hand wearing new nitrile gloves. The surface water and sediment samples will be collected in accordance with the Field Sampling Plan (FSP) in Appendix A.

The surface water and sediment samples will be submitted for laboratory analysis for the TCL/TAL parameters.

If the analytical results for the sediment samples identify compounds or analytes at concentrations exceeding SCGs, additional investigations may be conducted to delineate the areal extent of the contaminants. Any additional investigations will be approved by the NYSDEC Project Manager.

3.3.7 Field Quality Control

Quality Assurance/Quality Control (QA/QC) samples at a ratio of 1 set of QA/QC samples per 20 media samples will be collected and analyzed. The six (6) media types are surface soil, subsurface HFM and native soil, groundwater, floor drain sediment, surface water and sediment. The QA/QC samples for each media will include a blind duplicate sample, matrix spike (MS) sample, matrix spike duplicate (MSD) sample and equipment (field) blank sample. Laboratory prepared Trip Blanks will be submitted with aqueous samples requiring analysis for TCL VOCs and PFAS. Field Trip Blanks will be submitted with aqueous samples requiring analysis for PFAS.

3.3.8 Laboratory Reporting and Data Validation

The laboratory will generate NYSDEC ASP Category B data deliverable packages of the investigative analytical data. A Data Usability Summary Report (DUSR) of the analytical data developed during this investigation will be prepared to confirm that it is valid and usable for subsequent decision making purposes. The DUSR will be completed by an independent data validator. The data validation company being considered for this project is Barr Engineering Co. of Minneapolis, Minnesota.

3.3.9 Survey

As discussed in Section 3.3.1, an underground drainage utility survey will be conducted to assess the terminus of catch basins and floor drains within the Site.

A topographic survey will be conducted to depict the Site's contour elevations and to locate the western edge of the fill material overlying the majority of the Site. The topographic survey will be amended to the Figure 2 Site Features Map.

The horizontal locations of surface soil, floor drain sediment, surface water and sediment sampling locations; test pits; test borings; soil probes; and monitoring wells and other pertinent surface features will be surveyed. The locations and features will be amended to the Figure 2 Site Features Map.

At the time the monitoring wells are sampled, depth to groundwater measurements will be recorded for the purpose of determining the direction of groundwater movement across the site. For the purpose of determining the direction of groundwater movement, the elevations of the top of the well casings will be established utilizing a

temporary benchmark with an assumed elevation of 100.00 feet. The groundwater elevations will be used to construct a groundwater contour map for inclusion in the RI Report.

3.3.10 Wetland Delineation

The recent survey map (dated October 27, 2017) prepared by Hershberg & Hershberg identified wetland markers on the northwestern portion of the Site (see Figure 2). Additionally, low-lying wet areas were observed on western portions of the Site. Based on this information, a wetland survey will be conducted in accordance with the New York State Freshwater Wetlands Delineation Manual, dated July 1995.

3.3.11 Fish and Wildlife Impact Analysis

A Fish and Wildlife Impact Analysis (FWIA) will not be completed as part of this investigation as the Site is located in an urban area and there are no fish and wildlife receptors within the immediate vicinity of the Site.

3.4 Investigation Derived Wastes

Investigation derived wastes from the RI may include drill cuttings from the test borings and soil probes, monitoring well development and purge water, decontamination water from manual sampling equipment and tool cleaning, water that accumulates in the decontamination pad, and disposable items such as nitrile gloves, plastic, wipes, etc.

Drill cuttings from test borings and soil probes that will not be converted to a monitoring well(s) meeting the conditions listed in NYSDEC DER-10, section 3.3(e), will be placed within the borehole from which they were generated. As per DER-10, drill cuttings and soil that are not used to backfill a borehole will be transferred to labeled DOT 17H approved 55-gallon open top steel drums, labeled and staged at a secure location within the Site once sealed pending off-site disposal. The contents of the drums will be characterized and profiled for off-site disposal.

Development and purge water from the monitoring wells that is not observed to be physically impacted (sheen, discoloration, petrochemical type odors, etc.), will be discharged to the ground surface adjacent to its corresponding monitoring well. Development and purge water that appears to be physically impacted, per DER-10, will be placed in DOT 17H approved 55-gallon open top steel drums, labeled and staged at a secure location once sealed within the Site pending off-site disposal. The contents of the drums will be characterized and profiled for off-site disposal.

Decontamination water from sampling equipment cleaning, manual tool cleaning and the decontamination pad will be placed in DOT 17H approved 55-gallon open top steel drums, labeled and staged at a secure location once sealed within the Site pending off-site disposal. The contents of the drums will be characterized and profiled for off-site disposal.

Disposable items such as nitrile gloves, plastic, wipes, etc. will be disposed of off-site as solid waste.

TABLE 1: ANALYTICAL SAMPLING PROGRAM

Media[1]	Depth Interval	Proposed Analysis	Sampling Method	Rationale
Surface Soil	0 to 2" below ground surface and/or 0 to 2" below the vegetative root zone, the gravel layer in gravel covered areas of the Site, immediately beneath the asphalt and sub-base in paved areas of the Site, immediately beneath the concrete slab and sub-base in concrete covered areas of the Site, and immediately below the surface stone bed in the transformer yard.	TCL/TAL Parameters[3]	Obtain samples utilizing field decontaminated hand auger, shovel, pick ax, trowel and/or other field sampling equipment per FSP in Appendix A.	To assess the nature and extent of the environmental quality of the Site's surface soil. If analytical results for the surface soil samples depict compounds and analytes at concentrations exceeding SCGs, additional investigations may be conducted to delineate the areal extent of the contaminants. Any additional investigations will be approved by the NYSDEC Project Manager.
Subsurface HFM and Native Soil (Test Pits, Test Borings and Soil Probes)	The depth interval samples will be collected from is predicated on observable physical evidence of contamination and the samples representative of HFM and native soil across the Site. [2]	TCL/TAL Parameters[3]	Obtain samples from the field decontaminated excavator bucket, split spoon sampling barrel and macro-core sampler utilizing new clean nitrile gloves per FSP in Appendix A.	To characterize the nature and extent of the Site's subsurface conditions and environmental quality. If analytical results for the subsurface HFM and native soil samples depict compounds and analytes at concentrations exceeding SCGs, additional investigations may be conducted to delineate the areal extent of the contaminants. Any additional investigations will be approved by the NYSDEC Project Manager.
Groundwater (Monitoring Wells)	One (1) groundwater sample from each newly installed monitoring well.	TCL/TAL Parameters[3], and PFAS[4]	Develop and purge each well per FSP in Appendix A. Collect groundwater samples using low-flow techniques per FSP in Appendix A.	To characterize the nature and extent of the environmental quality of the Site's groundwater.

Media[1]	Depth Interval	Proposed Analysis	Sampling Method	Rationale
Floor Drain Sediment	To the bottom of the floor drains which should range in depth from 6″ to 1′ below surrounding concrete flooring.	TCL/TAL Parameters[3]	Obtain samples utilizing a field decontaminated trowel and/or by hand wearing new nitrile gloves per FSP in Appendix A.	To assess the environmental quality of the sediments for waste characterization purposes for the anticipated floor drain cleaning component of the remedy.
Surface Water	Not applicable	TCL/TAL Parameters[3]	Collect the samples directly into the sampling containers or collect the samples utilizing a factory sealed disposable bailer per the FSP in Appendix A.	To assess the environmental quality of surface water in assumed down-gradient low-lying portions of the Site not covered by fill material and in the vicinity of a drainage swale in the southwestern corner of the Site.
Native Sediment	0 to 6″ below the ground surface.	TCL/TAL Parameters[3]	Obtain samples utilizing a field decontaminated trowel or hand auger, and/or by hand wearing new nitrile gloves per the FSP in Appendix A.	To assess the environmental quality of native sediments in assumed down-gradient low-lying portions of the Site not covered by fill material and in the vicinity of a drainage swale on the southwestern corner of the Site. If analytical results for the sediment samples depict compounds and analytes at concentrations exceeding SCGs, additional investigations may be conducted to delineate the areal extent of the contaminants. Any additional investigations will be approved by the NYSDEC Project Manager.

(1) Quality Assurance/Quality Control (QA/QC) samples will be prepared for each media type at a ratio of one (1) set of QA/QC samples per each 20 media samples. The QA/QC samples will consist of a duplicate (replicate) sample, equipment (field) blank sample, matrix spike (MS) sample and matrix spike duplicate (MSD) sample.
(2) Soil samples will be collected from discrete, non-homogenized sample locations.
(3) Full TCL/TAL Parameters include TCL VOCs, SVOCs, PCBs and Pesticides, TAL Metals (Including Mercury), and Cyanide. 1,4-Dioxane is a parameter that is analyzed for as part of the TCL VOCs and/or SVOCs analyses.
(4) The PFAS list is included in Table 2B of the QAPP.

4.0 SUPPLEMENTAL PLANS

4.1 Field Sampling Plan

The field activities for this project will include collection and laboratory analysis of surface soil, subsurface HFM and native soil, groundwater, floor drain sediment, surface water and native sediment samples. The procedures relative to implementation of these field activities are presented in the FSP in Appendix A, which also conforms to the QAPP presented in Appendix B. The FSP describes the various methods and techniques to be followed during the completion of the sampling activities, instrument operation and calibration, and chain of custody procedures.

4.2 Quality Assurance/ Quality Control Plan

The QAPP describes the quality assurance and quality control procedures to be followed from the time media samples are collected to the time they are analyzed by the environmental analytical laboratory and evaluated by a third party according to Environmental Protection Agency (EPA) and NYSDEC Data Usability Summary Report (DUSR) guidelines. The QAPP is presented in Appendix B of this RIWP.

The QAPP will be followed by field personnel during the RI activities and media sampling events. It will also be used by the project management team and Quality Assurance Officer to assure the data collected and generated is representative and accurate. The laboratory results will be reported with NYSDEC ASP Category B deliverables, which will be subjected to EPA and NYSDEC's DUSR guidelines to determine if the data is valid and usable.

4.3 Health and Safety Plan

A Site-specific Health and Safety Plan (HASP) has been prepared for this project to address C.T. Male's site worker health and safety hazards. The HASP is presented in Appendix C. Subcontractors will be required to develop their own HASP for work they will perform. A Community Air Monitoring Plan (CAMP) will be implemented during the RI field activities in accordance with the New York State Department of Health Generic CAMP, which is included in Appendix C of the HASP.

4.4 Citizen Participation (CP) Plan

A project-specific Citizen Participation Plan (CP Plan) has been developed as a standalone document in general accordance with NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation and NYSDEC DER-23: Citizen Participation Handbook for Remedial Programs. The objective of the CP Plan is to disseminate information to the public regarding the RI and other activities at the Site and to involve the public in the decision making process. This is accomplished by keeping the public informed of the investigation and remediation through direct mailings, email, public notice in local newspapers and other publications, and by having project documents available for review at publicly accessible repository locations and via the NYSDEC website. Although the CP Plan is a standalone document available for review in the document repositories, it also should be considered an integral part of the RIWP.

5.0 REPORTING AND SCHEDULE

5.1 Reporting

Upon completion of field activities and receipt and independent validation of the analytical laboratory data, a Draft RI Report will be prepared. The RI Report will summarize and discuss the investigations completed and explain non-conformance to the approved work plan. The report will present the investigations at the Site, analytical results of samples collected and analyzed, and interpretations of the data.

5.2 Schedule

Due to its dilapidated and unsafe condition, the Main Building will be required to be remediated of known ACM and HBM and then demolished to facilitate portions of the RI field work that will be conducted within the building's footprint. Separate specifications and bidding documents will be prepared in relation to the building demolition work.

Portions of the RI field work that can be completed outside of the footprint of the Main Building are anticipated to begin in December 2018. It is anticipated that the field investigation work will be completed within three (3) to four (4) weeks thereafter. Considering the length of time for the lab's preparation of ASP Category B analytical reports and subsequent third data validation, the final RI data and reporting for this portion of the RI would be available on or about February 2019. In the interim, it is estimated that demolition of the Main Building will start in December 2018 and should be completed in April 2019 and the remaining portions of the RI will be able to proceed. It is anticipated that remaining portions of the RI will begin in April/May 2019. It is anticipated that the field investigation work will be completed within two (2) to three (3) weeks thereafter. Considering the length of time for the lab's preparation of ASP Category B analytical reports and subsequent third data validation, the final RI data for this portion of the RI would be available for incorporation into the RI Report on or about July 2019. The complete draft RI Report will be provided for NYSDEC review on or about August 2019.

6.0 SUBMITTALS

Written communications will be transmitted primarily by email and may also be transmitted by United States Postal Service, private courier, or hand delivered to the following individuals. Final documents, as they become available, will also be submitted to the following individuals:

- John Grathwol
  NYS Department of Environmental Conservation
  Division of Environmental Remediation
  625 Broadway
  Albany, NY 12233-7016
  john.grathwol@dec.ny.gov

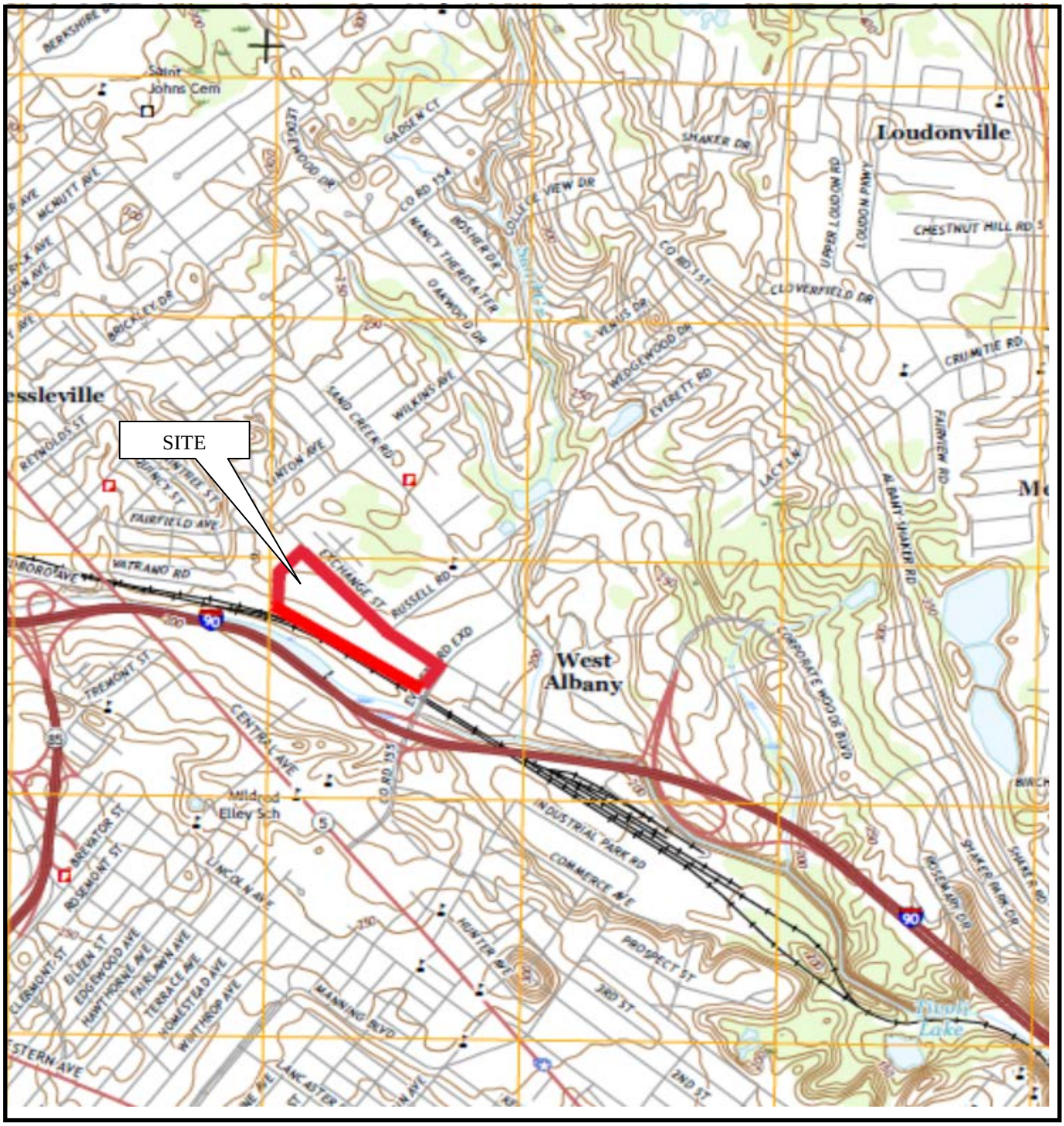
- Steven G. Berninger
  NYS Department of Health
  Bureau of Environmental Exposure Investigation
  Empire State Plaza
  Corning Tower, Room 1787
  Albany, NY 12237
  beei@health.ny.gov

- Stephen Rephser, Esq.
  NYS Department of Environmental Conservation
  Office of General Counsel
  1130 North Westcott Road
  Schenectady, NY 12306
  stephen.repsher@dec.ny.gov

- William Hoblock, Esq.
  First Prize Development Partners, LLC
  8 Paddocks Circle
  Saratoga Springs, NY 12866
  William.Hoblock@rbc-ny.com

- Linda R. Shaw, Esq.
  Knauf Shaw LLP
  1400 Crossroads Building, 2 State Street
  Rochester, NY 14614
  lshaw@nyenvlaw.com

FIGURES



Reference:
USGS Topographical Map
Albany, NY Quadrangle
2016

N

C.T.MALE ASSOCIATES
ENGINEERING, SURVEYING, ARCHITECTURE & LANDSCAPE ARCHITECTURE, D.P.C.

50 CENTURY HILL DRIVE
LATHAM, NY 12110

FIGURE 1 – SITE LOCATION MAP
FIRST PRIZE CENTER SITE

CITY OF ALBANY/TOWN OF COLONIE	ALBANY COUNTY, NY
SCALE: NTS	The locations and features depicted on this map are approximate and do not represent an actual survey.
DRAFTER: SHB	
PROJECT No: 17.7536	

XREFS: NONE

PROJECT NUMBER: 17.7536

GENERAL NOTES

1. UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209-2, OF THE NEW YORK STATE EDUCATION LAW.
2. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH THE LAND SURVEYOR'S SIGNATURE AND AN ORIGINAL EMBOSSED OR INK SEAL SHALL BE CONSIDERED VALID TRUE COPIES.
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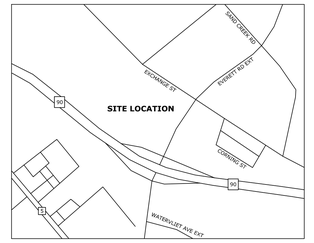
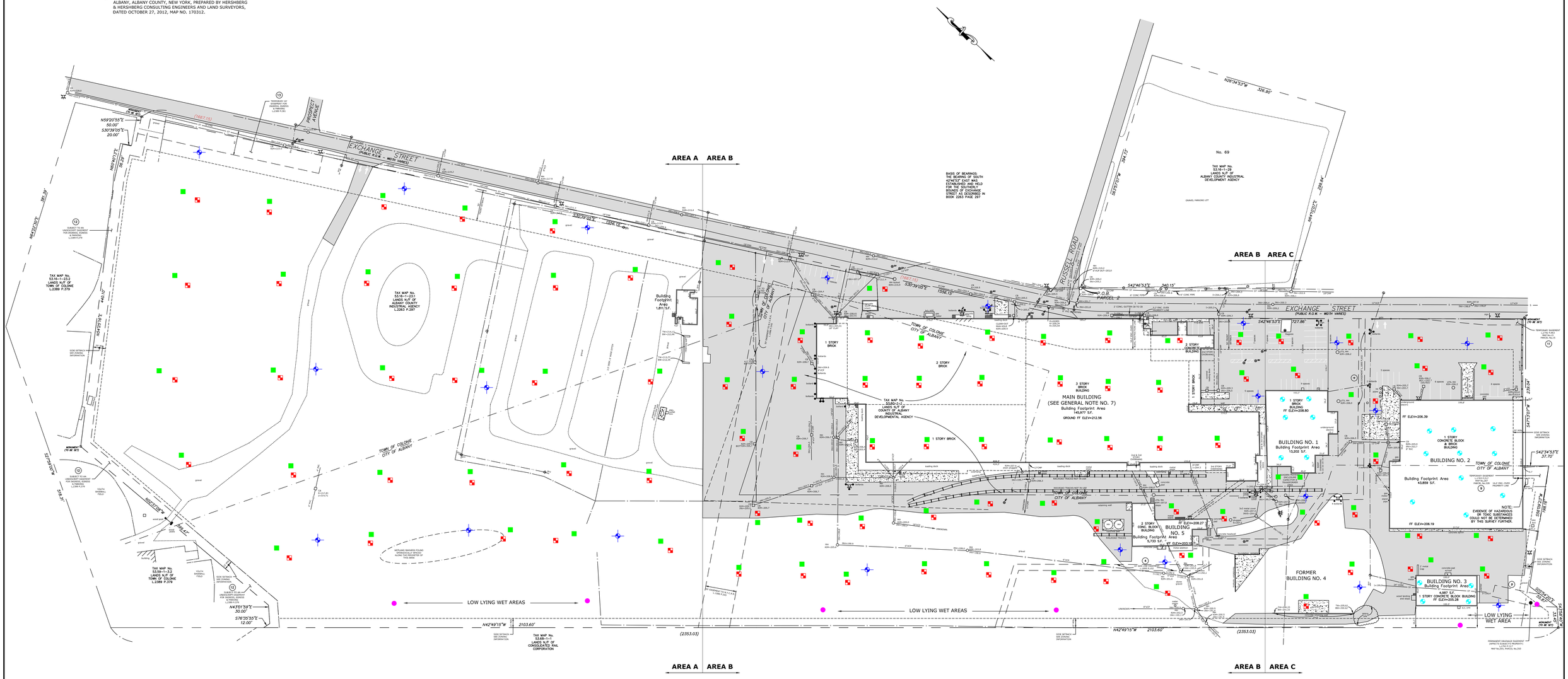
4. UNDERGROUND UTILITIES SHOWN ARE TAKEN FROM FIELD LOCATION WHERE POSSIBLE AND FROM RECORD DATA. THEIR EXACT LOCATION IN THE FIELD MAY DIFFER FROM THAT SHOWN HEREIN AND ADDITIONAL UTILITIES MAY EXIST. CALL UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT 1-800-962-7962 TO HAVE UTILITIES MARKED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. THERE IS NO EVIDENCE OF CEMETERIES ON SUBJECT PARCEL.
6. THIS SURVEY MAP WAS PREPARED WITH THE BENEFIT OF A TITLE POLICY No. 852-A-09916, FIRST AMERICAN TITLE INSURANCE COMPANY OF NEW YORK, DATED JUNE 29, 2006.
7. MAIN BUILDING - DUE TO THE DILAPIDATED AND UNSAFE CONDITION OF THE MAIN BUILDING, SURFACE SOIL SAMPLING AND ADVANCEMENT OF THE TEST PITS WILL BE COMPLETED AFTER THE BUILDING IS DEMOLISHED.

GENERAL REFERENCE

1. "FIRST PRIZE CENTER BCP SITE" TOWN OF COLONIE/CITY OF ALBANY, ALBANY COUNTY, NEW YORK, PREPARED BY HERSHBERG & HERSHBERG CONSULTING ENGINEERS AND LAND SURVEYORS, DATED OCTOBER 27, 2012, MAP NO. 170312.



VICINITY MAP
not not to scale



LEGEND

R.O.W.	RIGHT OF WAY		HYDRANT
No.	NUMBER		MONUMENT (TO BE SET)
encr.	ENCROACHMENT		MANHOLE
P.O.B.	POINT OF BEGINNING		CATCHBASIN
S.F.	SQUARE FEET		SIGN
N/F	NOW OR FORMERLY		BOLLARD
R	RECORD		FENCE LINE
M	MEASURED		GUARD RAIL
N	NORTH		STORM SEWER
S	SOUTH		UNDERGROUND ELECTRIC
E	EAST		OVERHEAD WIRE, UTILITY POLE & GUY WIRE
W	WEST		TRAFFIC FLOW ACCESS AREA
L	LIBER		WATER VALVE
P.	PAGE		GAS VALVE
			LIGHT POLE
			CONCRETE
			PAVEMENT

C.T. MALE LEGEND

- PROPOSED RI SURFACE WATER AND SEDIMENT SAMPLING LOCATION
- PROPOSED RI SURFACE SOIL SAMPLING LOCATION. THE RI SURFACE SOIL SAMPLING LOCATIONS WILL BE SKEWED TO AREAS WHERE ENVIRONMENTAL CONDITIONS ARE OBSERVED.
- PROPOSED RI TEST PIT LOCATION. THE RI TEST PIT LOCATIONS WILL BE SKEWED TO AREAS WHERE ENVIRONMENTAL CONDITIONS ARE OBSERVED.
- PROPOSED RI TEST BORING TO BE CONVERTED INTO A MONITORING WELL
- PROPOSED RI TEST BORINGS TO BE COMPLETED IN BUILDINGS 1, 2 & 3 ONLY. THE TEST BORINGS WILL BE SKEWED TO AREAS WITHIN THE BUILDINGS CONTAINING FLOOR/TRENCH DRAINS AND FORMER HYDRAULIC LIFTS

BAR SCALE
60 0 30 60 120
1 inch = 60 ft.

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DESIGNED: S.BIEBER
DRAFTED : S.WUNSCH
CHECKED : S.BIEBER
PROJ. NO : 17.7536
SCALE : 1"=60'
DATE : MAY 22, 2018

FIGURE 2: SITE FEATURES MAP

FIRST PRIZE CENTER SITE

CITY OF ALBANY & TOWN OF COLONIE — ALBANY COUNTY, NEW YORK

C.T. MALE ASSOCIATES
Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.
50 CENTURY HILL DRIVE, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299

FIG2
SHEET 1 OF 3
DWG. NO: 18-263

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

CAD DWG. FILE NAME: K:\Projects\17753X\Env\Drawings-Maps\Figure-2 - REV 1.dwg

Figure-2 - REV 1.dwg/FILENAME

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-A3-S2	*SVOCs (ug/kg)*				
Date Sampled: 3/12/2001	Benzo(a)anthracene	1,500	1,000	1,000	5,600
	Chyrsene	1,900	1,000	1,000	56,000
	Benzo(k)fluoranthene	1,200	800	1,000	56,000
	Metals (mg/kg)				
	Selenium	4.94	3.9	36	1,500

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-A5	*Metals (mg/kg)*				
Date Sampled: 3/8/2001	Zinc	140	109	2,200	10,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
SB-B6	*Metals (mg/kg)*				
Date Sampled: 3/8/2001	Arsenic	24.5	13	16	16
	Copper	51.7	50	270	270
	Mercury	0.271	0.18	0.81	2.8
	Lead	90.1	63	400	1,000
	Selenium	8.43	3.9	36	1,500

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-A2-S2	*Metals (mg/kg)*				
Date Sampled: 3/12/2001	Selenium	5.48	3.9	36	1,500

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-B4-S2	*Metals (mg/kg)*				
Date Sampled: 3/12/2001	Arsenic	35.7	13	16	16
	Copper	71.3	50	270	270
	Lead	75.8	63	400	1,000
	Selenium	7.35	3.9	36	1,500
	Pesticides (ug/kg)				
	Alpha-chlordane	330	94	910	24,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-A15	*SVOCs (ug/kg)*				
Date Sampled: 3/8/2001	Napthalene	49,000	12,000	100,000	500,000
	Dibenzofuran	17,000	7,000	14,000	350,000
	Benzo(a)anthracene	24,000	1,000	1,000	5,600
	Chyrsene	16,000	1,000	1,000	56,000
	Benzo(b)fluoranthene	19,000	1,000	1,000	5,600
	Benzo(k)fluoranthene	21,000	800	1,000	56,000
	Benzo(a)pyrene	18,000	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	9,800	500	500	5,600
	Dibenzo(a,h)anthracene	4,000	330	330	5,600

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-A1-S2	*Metals (mg/kg)*				
Date Sampled: 3/12/2001	Selenium	4.38	3.9	36	1,500

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
SB-C10	*Pesticides by EPA Method 8081*				
Date Sampled: 3/9/2001	DDE	13	3.3	1,800	62,000
	DDD	15	3.3	2,600	92,000
	DDT	27	3.3	1,700	47,000
	DDD	20	3.3	2,600	92,000
	DDT	31	3.3	1,700	47,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-C4-S1	*SVOCs (ug/kg)*				
Date Sampled: 3/8/2001	Napthalene	24,000	12,000	100,000	500,000
	Dibenzofuran	10,000	7,000	14,000	350,000
	Benzo(a)anthracene	24,000	1,000	1,000	5,600
	Chyrsene	16,000	1,000	1,000	56,000
	Benzo(b)fluoranthene	17,000	1,000	1,000	5,600
	Benzo(k)fluoranthene	22,000	800	1,000	56,000
	Benzo(a)pyrene	19,000	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	11,000	500	500	5,600
	Dibenzo(a,h)anthracene	4,400	330	330	560
	Zinc	120	109	2,200	10,000
	Pesticides (ug/kg)				
	DDE	91	3.3	1,800	62,000
	DDD	73	3.3	2,600	92,000
	DDT	100	3.3	1,700	47,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
SB-B7	*Metals (mg/kg)*				
Date Sampled: 3/8/2001	Lead	63.3	63	400	1,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-D2-S1	*Metals (mg/kg)*				
Date Sampled: 3/12/2001	Arsenic	13.1	13	16	16

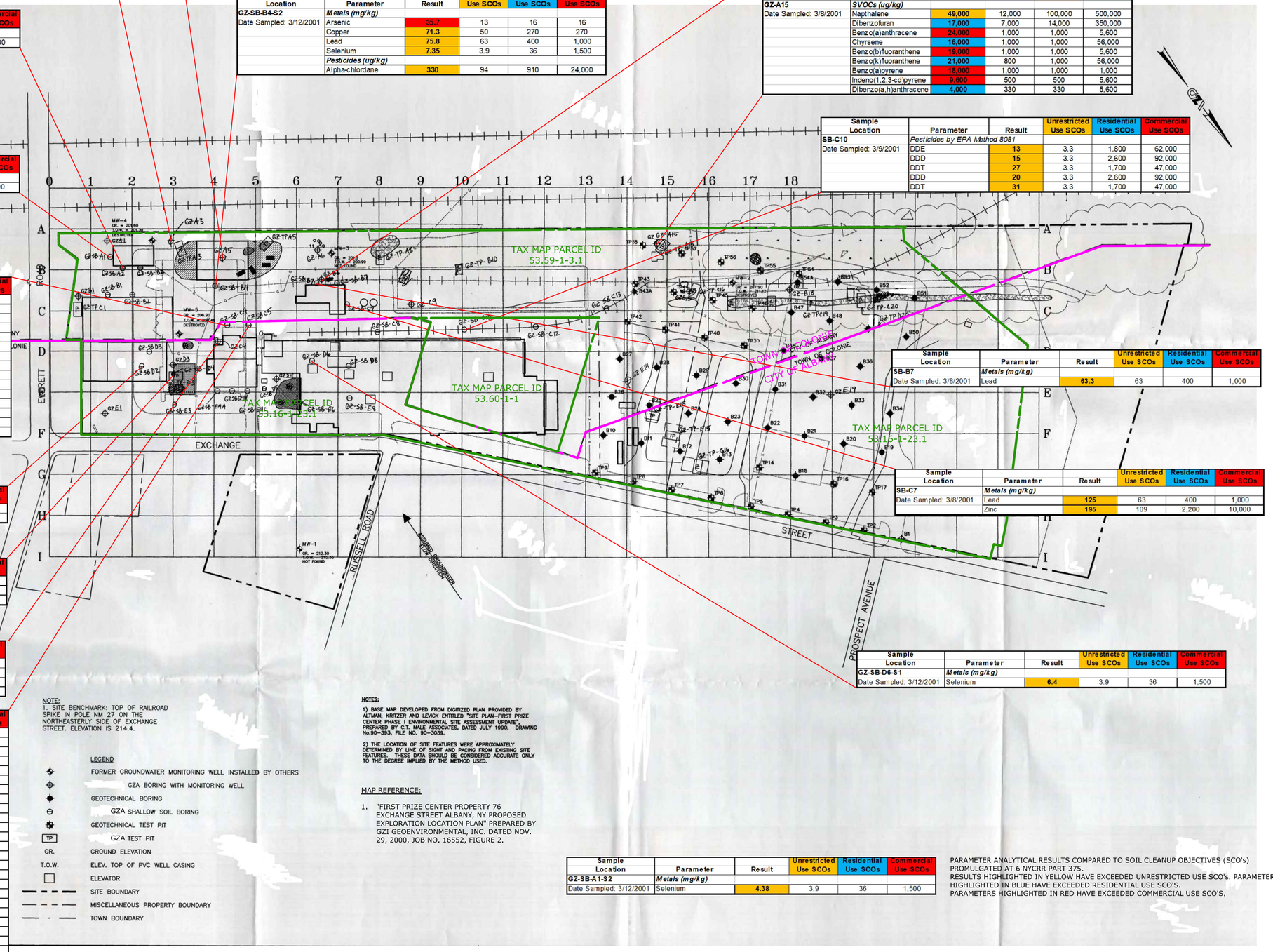
Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
SB-C7	*Metals (mg/kg)*				
Date Sampled: 3/8/2001	Lead	125	63	400	1,000
	Zinc	195	109	2,200	10,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-D4-S2	*VOCs (ug/kg)*				
Date Sampled: 3/12/2001	Ethylbenzene	5,800	1,000	30,000	390,000
	Xylenes, total	23,000	260	100,000	500,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-C4	*Metals (mg/kg)*				
Date Sampled: 3/12/2001	Lead	69.6	63	400	1,000
	Selenium	6.95	3.9	36	1,500
	Zinc	143	109	2,200	10,000

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-C5-S1	*VOCs (ug/kg)*				
Date Sampled: 3/12/2001	Acetone	1,800	50	100,000	500,000
	Xylenes, total	1,800	260	100,000	500,000
	SVOCs (ug/kg)				
	Napthalene	620,000	12,000	100,000	500,000
	Acenapthene	170,000	20,000	100,000	500,000
	Dibenzofuran	140,000	7,000	14,000	350,000
	Phenanthrene	950,000	100,000	100,000	500,000
	Anthracene	180,000	100,000	100,000	500,000
	Fluoranthene	290,000	100,000	100,000	500,000
	Pyrene	200,000	100,000	100,000	500,000
	Benzo(a)anthracene	32,000	1,000	1,000	5,600
	Chyrsene	76,000	1,000	1,000	56,000
	Benzo(b)fluoranthene	27,000	1,000	1,000	5,600
	Benzo(k)fluoranthene	39,000	800	1,000	56,000
	Benzo(a)pyrene	33,000	1,000	1,000	1,000
	Indeno(1,2,3-cd)pyrene	17,000	500	500	5,600
	Dibenzo(a,h)anthracene	7,800	330	330	560
	Pesticides (ug/kg)				
	DDE	310	3.3	1,800	62,000
	DDD	670	3.3	2,600	92,000
	DDT	1,200	3.3	1,700	47,000
	Alpha-chlordane	210	94	910	24,000
	Metals (mg/kg)				
	Selenium	5.05	3.9	36	1,500

Sample Location	Parameter	Result	Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs
GZ-SB-D6-S1	*Metals (mg/kg)*				
Date Sampled: 3/12/2001	Selenium	6.4	3.9	36	1,500



NOTE:
1. SITE BENCHMARK: TOP OF RAILROAD SPIKE IN POLE NM 27 ON THE NORTHEASTERLY SIDE OF EXCHANGE STREET. ELEVATION IS 214.4.

LEGEND

- FORMER GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- GZA BORING WITH MONITORING WELL
- GEOTECHNICAL BORING
- GZA SHALLOW SOIL BORING
- GEOTECHNICAL TEST PIT
- TP GZA TEST PIT
- GR. GROUND ELEVATION
- T.O.W. ELEV. TOP OF PVC WELL CASING
- ELEVATOR
- SITE BOUNDARY
- MISCELLANEOUS PROPERTY BOUNDARY
- TOWN BOUNDARY

NOTES:

1) BASE MAP DEVELOPED FROM DIGITIZED PLAN PROVIDED BY ALTMAN, KRITZER AND LEVICK ENTITLED "SITE PLAN--FIRST PRIZE CENTER PHASE I ENVIRONMENTAL SITE ASSESSMENT UPDATE", PREPARED BY C.T. MALE ASSOCIATES, DATED JULY 1990, DRAWING No.90-393, FILE NO. 90-3039.

2) THE LOCATION OF SITE FEATURES WERE APPROXIMATELY DETERMINED BY LINE OF SIGHT AND PACING FROM EXISTING SITE FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

MAP REFERENCE:

1. "FIRST PRIZE CENTER PROPERTY 76 EXCHANGE STREET ALBANY, NY PROPOSED EXPLORATION LOCATION PLAN" PREPARED BY GZI GEOENVIRONMENTAL, INC. DATED NOV. 29, 2000, JOB NO. 16552, FIGURE 2.

PARAMETER ANALYTICAL RESULTS COMPARED TO SOIL CLEANUP OBJECTIVES (SCO's) PROMULGATED AT 6 NYCRR PART 375.
RESULTS HIGHLIGHTED IN YELLOW HAVE EXCEEDED UNRESTRICTED USE SCO's. PARAMETERS HIGHLIGHTED IN BLUE HAVE EXCEEDED RESIDENTIAL USE SCO'S.
PARAMETERS HIGHLIGHTED IN RED HAVE EXCEEDED COMMERCIAL USE SCO'S.

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DESIGNED : S.BIEBER
DRAFTED : S.WUNSCH
CHECKED : S.BIEBER
PROJ. NO : 17.7536
SCALE : NONE
DATE : MAY 22, 2018

FIGURE 3
CONTAMINANTS IN SOIL EXCEEDING SOIL CLEANUP OBJECTIVES
PREVIOUS SITE INVESTIGATIONS
FIRST PRIZE CENTER SITE

CITY OF ALBANY AND TOWN OF COLONIE — ALBANY COUNTY, NEW YORK

C.T. MALE ASSOCIATES
Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.
50 CENTURY HILL DRIVE, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299

FIG 3
SHEET 2 OF 3
DWG. NO: 18-263

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-A3	*Metals*		
Sample Date: 3/13/2001	Arsenic	218	25
	Chromium	89	50
	Lead	25.7	25
	Antimony	138	3
	Selenium	121	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-A5	*Metals*		
Sample Date: 3/13/2001	Selenium	48	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-A15	*SVOCs*		
Sample Date: 3/14/2001	Napthalene	92	10 GV
	Metals		
	Selenium	42.9	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-B6	*Metals*		
Sample Date: 3/13/2001	Selenium	26.4	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-B15	*Metals*		
Sample Date: 3/14/2001	Selenium	67.5	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
MW-4	*Metals*		
Sample Date: 9/8/1988	Lead	150	25

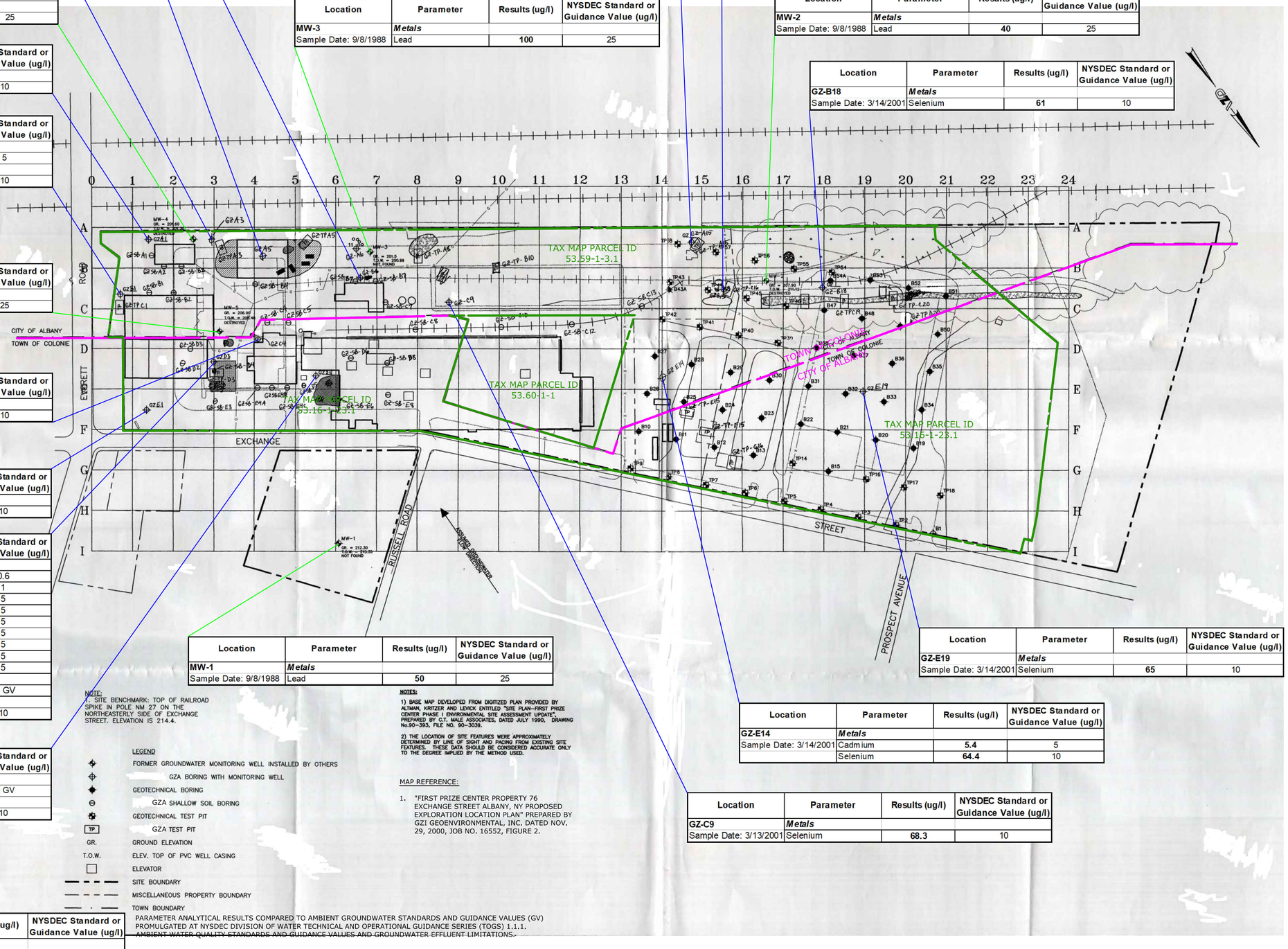
Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
MW-3	*Metals*		
Sample Date: 9/8/1988	Lead	100	25

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
MW-2	*Metals*		
Sample Date: 9/8/1988	Lead	40	25

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-A1	*Metals*		
Sample Date: 3/13/2001	Selenium	75.8	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-B18	*Metals*		
Sample Date: 3/14/2001	Selenium	61	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-B1	*VOCs*		
Sample Date: 3/14/2001	m&p-Xylene	5.8	5
	Metals		
	Selenium	50.3	10



Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
MW-5	*Metals*		
Sample Date: 9/8/1988	Lead	110	25

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-C4	*Metals*		
Sample Date: 3/13/2001	Selenium	44.2	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-E1	*Metals*		
Sample Date: 3/15/2001	Selenium	51.9	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-D3	*VOCs*		
Sample Date: 3/14/2001	1,2-Dichloroethane	6.5	0.6
	benzene	240	1
	toluene	21	5
	Ethylbenzene	290	5
	m&p-Xylene	150	5
	o-Xylene	11	5
	Isopropylbenzene	52	5
	n-propylbenzene	130	5
	1,2,4-Trimethylbenzene	6.4	5
	SVOCs		
	Napthalene	190	10 GV
	Metals		
	Selenium	31.7	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
MW-1	*Metals*		
Sample Date: 9/8/1988	Lead	50	25

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-E19	*Metals*		
Sample Date: 3/14/2001	Selenium	65	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-D5	*SVOCs*		
Sample Date: 3/14/2001	Napthalene	14	10 GV
	Metals		
	Selenium	47.9	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-E14	*Metals*		
Sample Date: 3/14/2001	Cadmium	5.4	5
	Selenium	64.4	10

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-C9	*Metals*		
Sample Date: 3/13/2001	Selenium	68.3	10

NOTE:
1. SITE BENCHMARK: TOP OF RAILROAD SPIKE IN POLE NM 27 ON THE NORTHEASTERLY SIDE OF EXCHANGE STREET. ELEVATION IS 214.4.

LEGEND
- FORMER GROUNDWATER MONITORING WELL INSTALLED BY OTHERS
- GZA BORING WITH MONITORING WELL
- GEOTECHNICAL BORING
- GZA SHALLOW SOIL BORING
- GEOTECHNICAL TEST PIT
- TP GZA TEST PIT
- GR. GROUND ELEVATION
- T.O.W. ELEV. TOP OF PVC WELL CASING
- ELEVATOR
- SITE BOUNDARY
- MISCELLANEOUS PROPERTY BOUNDARY
- TOWN BOUNDARY

NOTES:
1) BASE MAP DEVELOPED FROM DIGITIZED PLAN PROVIDED BY ALTMAN, KRITZER AND LEVICK ENTITLED "SITE PLAN–FIRST PRIZE CENTER PHASE I ENVIRONMENTAL SITE ASSESSMENT UPDATE", PREPARED BY C.T. MALE ASSOCIATES, DATED JULY 1990, DRAWING No.90–393, FILE NO. 90–3039.

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MAP REFERENCE:
1. "FIRST PRIZE CENTER PROPERTY 76 EXCHANGE STREET ALBANY, NY PROPOSED EXPLORATION LOCATION PLAN" PREPARED BY GZI GEOENVIRONMENTAL, INC. DATED NOV. 29, 2000, JOB NO. 16552, FIGURE 2.

Location	Parameter	Results (ug/l)	NYSDEC Standard or Guidance Value (ug/l)
GZ-A1	*Metals*		
Sample Date: 3/13/2001	Selenium	75.8	10

PARAMETER ANALYTICAL RESULTS COMPARED TO AMBIENT GROUNDWATER STANDARDS AND GUIDANCE VALUES (GV) PROMULGATED AT NYSDEC DIVISION OF WATER TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1. AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES AND GROUNDWATER EFFLUENT LIMITATIONS.

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DESIGNED : S.BIEBER
DRAFTED : S.WUNSCH
CHECKED : S.BIEBER
PROJ. NO : 17.7536
SCALE : NONE
DATE : MAY 22, 2018

FIGURE 4:
CONTAMINANTS IN GROUNDWATER EXCEEDING STANDARD AND GUIDANCE VALUES

PREVIOUS SITE INVESTIGATIONS
FIRST PRIZE CENTER SITE

CITY OF ALBANY AND TOWN OF COLONIE — ALBANY COUNTY, NEW YORK

C.T. MALE ASSOCIATES
Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.
50 CENTURY HILL DRIVE, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299

FIG 4
SHEET 3 OF 3
DWG. NO: 18-263

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CAD DWG. FILE NAME: figure-3 & 4.dwg

APPENDIX A

FIELD SAMPLING PLAN

May 2018
(Revised October 2018)

Field Sampling Plan

First Prize Center Site
68 Exchange Street
City of Albany & Town of Colonie
Albany County, New York
BCP Site #C401076

Prepared for:

FIRST PRIZE DEVELOPMENT PARTNERS, LLC
8 Paddocks Circle
Saratoga Springs, New York 12866

Prepared by:

C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, New York 12110
(518) 786-7400
FAX (518) 786-7299

C.T. Male Project No: 17.7536

FIELD SAMPLING PLAN
FIRST PRIZE CENTER SITE
CITY OF ALBANY & TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

TABLE OF CONTENTS

Page

1.0 INTRODUCTION

This document is the Field Sampling Plan (FSP) for the Remedial Investigation (RI) to be conducted at the First Prize Center Brownfield Cleanup Program (BCP) Site (C401076) located at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York (the "Site"). It has been developed in accordance with the RI Work Plan (RIWP) as prepared by C.T. Male Associates Engineering, Surveying, Architecture, & Landscape Architecture & Geology, D.P.C. (CT Male). A description of the property, background information, objectives, and the proposed scope of work, are presented in the referenced RIWP.

This FSP is a supplement to the RIWP in that it presents the standard field sampling and data gathering procedures to be followed during implementation of the field activity portion of the scope of work. This plan addresses sampling locations and frequencies, drilling methods including advancement of soil borings and installation of monitoring wells, decontamination procedures, various media sampling procedures, field screening and testing procedures, field instrumentation operating procedures, field measurements, sample handling and chain of custody procedures, and water level measurement procedures. The applicable portions of the RIWP that coincide with the FSP will be provided to, and followed by the field team. This FSP is intended to be applicable to field sampling activities conducted by C.T. Male and its subcontractors.

Included in this FSP are forms that are an integral part of the Quality Assurance Project Plan (QAPP). The field sampling and data gathering procedures presented in this FSP are incorporated into the QAPP by reference. The FSP and the QAPP document the laboratory quality assurance/quality control procedures to be followed during analysis of samples collected in the field so that valid data of a known quality is generated.

The FSP has been prepared, in part, in general accordance with the following New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (USEPA) guidance documents:

- NYSDEC, DER-10, Technical Guidance for Site Investigation and Remediation, and Appendices, May 2010.

- 6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 and 375-6, Effective December 14, 2006.
- NYSDEC, Department of Water, Technical and Operational Guidance Series (TOGS): TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998, and errata and addendum sheets.
- New York State Department of Health (NYSDOH) regulations and guidelines.
- A Compendium of Superfund Field Operations Methods, EPA/540/P-87/001, USEPA, December 1987, revised 2005.

2.0 MEDIA SAMPLING AND OVERVIEW OF FIELD ACTIVITIES

2.1 Media Sampling

Based on the RIWP, sampling may include volatile organic vapor screening, subjective media assessment, laboratory analyses, and for geologic and hydrogeologic characterization of the project Site. The environmental media that may be sampled includes:

- Fill/Soil,
- Groundwater,
- Surface water,
- Sediments, and
- Investigative Derived Waste.

2.2 Overview of Field Activities

The potential field activities are summarized in this FSP and details of each activity are provided within referenced standard operating procedures (SOPs).

Field Report Forms applicable to their corresponding field activity (i.e., test boring log, monitoring well construction log, water level record, etc.) are referenced in their respective SOPs.

3.0 SITE INVESTIGATION OVERVIEW

3.1 General

The proposed RI includes: collection and laboratory analysis of surface soil, groundwater, surface water and sediment samples for subjective and laboratory analysis; advancement of test pits to aid in the collection of subsurface fill/soil samples for subjective and laboratory analysis; advancement of test borings and soil probes to aid in the collection of fill/soil samples for subjective and laboratory analysis, for installation of monitoring wells and characterization of the Site's subsurface; collection and laboratory analysis of groundwater samples from the installed monitoring wells; collection of water levels; and sampling of investigative derived waste for disposal.

3.1.1 Field Quality Control Samples

Field Quality Control samples may include Equipment Blanks, Duplicates, Field blanks, and Matrix Spike/Matrix Spike Duplicates (MS/MSD). The types of field quality control samples to be collected and the sampling method and rationale are detailed in the QAPP. The SOP for this field activity is 'Collection of Quality Control Samples'.

3.1.2 Surface Soil Sampling

The SOP describes the method for collecting discrete surface soil samples to characterize the nature of soil contamination and the areal extent of contaminated soil. The SOP for this field activity is SOP 'Surface and Subsurface Soil Sampling'.

3.1.3 Surface Water Sampling

The SOP describes the methods for collecting surface water samples for laboratory analyses and water quality determinations. This procedure may apply to the collection of surface water samples from regulated surface water bodies, streams, rivers, ditches, lakes, ponds, lagoons, drainage swales, and wetlands. The SOP for this field activity is SOP 'Surface Water Sampling'.

3.1.4 Sediment Sampling

The SOP outlines the methods and steps for sampling sediments. This procedure may apply to the collection of sediment samples from streams, rivers, ditches, lakes, ponds,

lagoons, outlet drainage ways, drainage swales, storm water outfalls, and wetlands. The SOP for this field activity is SOP 'Sediment, Sludge, and Sewage Sampling'.

3.1.5 Test Pit Excavation and Sampling

The SOP outlines the methods and steps for conducting test pitting activities: excavation, sampling, and backfilling, as well as the commonly used tools for these techniques. Test pits may be square or rectangular in shape and any size. Test trenches are normally 3 to 6 feet wide and extend to any length needed to explore site conditions. The SOP for this field activity is SOP 'Test Pit Excavation and Sampling'.

3.2 Observation of Drilling Operations and Monitoring Well Installations

Drilling, monitoring well installation and other associated field work involved in the investigations to be performed by C.T. Male and their subcontractors will be observed by full-time, on-site, C.T. Male representatives. These representatives will be responsible for the collection of fill/soil samples, soil classification, field screening of fill/soil samples, recording of drilling and sampling data, recording of groundwater data, deciding on the final drilling depths and monitoring well screened intervals (with input from the project manager), recording the monitoring well construction procedures, and monitoring the decontamination procedures. The representatives will also develop and purge the monitoring wells and conduct groundwater sampling, as in accordance with SOPs. Field reports will be prepared that document the daily activities and their conformance to the work plan in accordance with the SOP 'Note Taking and Field Logs'.

The project manager will be kept informed of the progress of work and any problems encountered during the investigations so appropriate corrective action can be implemented in consultation with First Prize Development Partners, LLC and NYSDEC.

3.3 Drilling and Sampling

There are several different drilling techniques that can be utilized to aid in the collection of fill/soil samples and for installation of monitoring wells. These include direct-push, hollow stem auger and rotosonic and air rotary drilling techniques. The drilling techniques to be used for the investigation are outlined in the RIWP. C.T. Male

personnel will observe the drilling subcontractor and the drilling subcontractor will follow their SOPs for the drilling technique(s) specified in the work plan.

3.3.1 Soil Classification

Soils collected during drilling activities will be visually classified in the field using the Unified Soil Classification System in general accordance with ASTM D-2488, Standard Practice for Description and Identification of Soils. The soil description may include matrix and clast descriptions, moisture content, color, appearance, odor, behavior of the material and other pertinent observations. This information will be recorded on a subsurface exploration log form along with the boring identification and elevation, date started and completed, sampling intervals, standard penetration values, length of recovered sample and depth of first groundwater encountered. During the drilling, a photoionization detector (PID) meter will be used to monitor the volatile organic vapors exiting the borehole and soil cuttings, and of all recovered subsurface samples. These visual observations and field measurements will be recorded in accordance with the SOPs.

3.3.2 Borehole Abandonment and Drill Cuttings

During drilling activities, drill cuttings will need to be properly managed. Drill cuttings from borings that will not be converted to a monitoring well(s) meeting the conditions listed in NYSDEC DER-10, section 3.3(e), will be placed within the borehole from which they were generated. As per DER-10, drill cuttings and soil that are not used to backfill a borehole will be transferred to labeled DOT 17H approved 55-gallon open top steel drums which will be staged at a secure location within the Site pending off-site disposal. The contents of the drums will be subsequently characterized and profiled for off-site disposal.

3.4 Monitoring Well Installation in the Overburden

The installation of monitoring wells in the overburden groundwater may be used to identify hydrogeologic characteristics, groundwater constituents, contaminants of concern, contaminant plume transport, and the hydraulic relationship between the Site and localized groundwater flow. The SOP for this field activity is 'Monitoring Well Installation'.

Monitoring wells will be installed within select boreholes that are typically completed utilizing direct-push and hollow stem auger drilling methods. For the direct-push boreholes, typically one (1)-inch diameter monitoring wells with slotted screens will be installed in the open boreholes. For the hollow stem auger boreholes, typically two (2)-inch diameter monitoring wells with slotted screens will be installed within the flush hollow stem augers or casing in accordance with standard practices. Monitoring well depths, and screen lengths and depths will be calculated by the environmental scientist/geologist by maintaining accurate measurements of screen and casing placed in the borehole. C.T. Male personnel will complete the Monitoring Well Construction Log forms for the monitoring wells in accordance with the SOPs.

3.5 Monitoring Well Development

Once installed, each monitoring well will be developed by pumping/bailing in order to remove any accumulated fine sediment within the well and to establish a hydraulic connection with the surrounding aquifer. Wells will be developed at an appropriate time interval (at least 24 hours) post-installation using pumping techniques. Monitoring of temperature, specific conductivity, pH, and turbidity for defining stabilization will be completed. The SOP for this field activity is SOP 'Monitoring Well Development'.

3.6 Decontamination of Drilling and Sampling/Gauging Equipment

Drilling equipment including augers, rods, plugs, samplers, tools, drill unit and any piece of equipment that can come in contact with the formation will be cleaned with a high temperature/high pressure steam cleaner prior to the start of work and between each boring to prevent cross-contamination between borings. The equipment will also be cleaned using the same procedure at completion of the work to prevent any contamination from leaving the Site. The SOP for this field activity is SOP 'Equipment Decontamination Procedures'.

4.0 GROUNDWATER SAMPLING PROCEDURES

4.1 Groundwater Sampling

During groundwater sampling, acceptable techniques and protocol during the collection and transportation of groundwater samples are required to minimize the potential for sample variation from well to well. Quality control measures will be instituted as discussed in this document and the QAPP as a check on the procedures being utilized so that the quality of the data can be assessed. The groundwater samples will be analyzed in the laboratory by standard methods following the QA/QC procedures outlined in the QAPP.

Periodic monitoring/sampling events may be conducted. The SOP for this field activity is SOP 'Groundwater Sampling'.

4.2 Water level Measurements, Immiscible Layers, Total Well Depth in Well

Prior to sampling, static water heights will be measured using a water level indicator to determine the standing water column height. Water levels will be collected from all wells that are slated for sampling prior to initiating the purging/water sampling. The water column height and depth of the well are used to calculate the well water volume. Non-vented well caps will be removed for a period of 10 minutes to allow the water column to reach static conditions prior to taking the water level measurements.

The procedure is for measuring static water level, light non-aqueous phase liquid (LNAPL) level, dense non-aqueous phase liquid (DNAPL) level, and total well depth in a groundwater well. The SOP for this field activity is SOP 'Measuring Static Water Level, Immiscible Layers (DNAPL and LNAPL), and Total Well Depth in Wells'.

4.3 Well Purging Procedures

Prior to groundwater sampling, it is necessary to purge the wells. Purging of the wells allows for a fresh representative sample to be collected from the well by removing stagnant water.

Wells will be purged by either purging or surging, or both methods, followed by well recovery, well stabilization and then sampling via pumping or bailing. Wells will then

achieve stabilization through field parameter monitoring. The SOP for this field activity is SOP 'Groundwater Sampling'.

If the purge water from the monitoring wells does not appear subjectively impacted (sheen, discoloration, petrochemical type odors, etc.), it will be discharged to the ground surface adjacent to its corresponding monitoring well. Purge water that appears to be subjectively impacted, per DER-10, will be placed in DOT approved 55-gallon drums, labeled and stored in a secure location within the Site. The laboratory analyses results of the fill/soil and groundwater samples will be used to profile the waste and to determine the proper method of treatment or disposal for the material.

4.4 Well Stabilization

Well stabilization is conducted to verify the groundwater sample is representative of aquifer conditions. A well is considered stabilized after the groundwater stabilization parameter measurements are within acceptable limits for three (3) consecutive readings. The SOP for this field activity is SOP 'Groundwater Sampling'.

4.5 Sample Collection

Prior to sample collection, the wells will be purged, allowed to recover to at least 80% of their initial static water level, and have achieved water quality parameter stabilization. Slow recharging wells will be allowed to recover for a period of up to four (4) hours before sampling. Recovery times and water depths will be recorded in accordance with the SOPs. The wells will be allowed to stabilize prior to sampling. The SOP for this field activity is SOP 'Groundwater Sampling'.

4.5.1 Low Flow Sampling

Low flow sampling is a method of collecting samples from a well that does not require purging volumes of water from the well and relies on natural flow of formation water through the well. Using this method, the water flowing into and through the well is representative of the groundwater within the formation surrounding the screen and this representative groundwater sample can be obtained by slowly pumping.

Low-flow sampling methods emphasize minimal stress to the groundwater by low water-level drawdown and low pumping rates in order to collect samples with minimal

alterations to water chemistry (U.S. Environmental Protection Agency [EPA], 2002; ASTM D6771-02). Low-flow sampling is typically conducted using positive displacement pumps, submersible pumps, or peristaltic pumps. Commonly used low-flow pumps include the QED Sample Pro® bladder pump, Geotech® bladder pumps, Grundfos Redi-Flo 2® submersible pump, and the Geotech Geopump™ Series II peristaltic pump. The use of low flow sampling and the type of pump to be used will be specified in the RIWP. Pumps that are to be used on-site will be reviewed prior to use to ensure they would not bias the PFAS sampling due to their construction and parts. The SOP for this field activity is SOP, 'Low-Flow Sampling'.

4.5.2 Field Analyses

The field analyses of groundwater will include pH, temperature, specific conductivity, turbidity and oxidation-reduction potential (ORP). The field analyses will be measured immediately upon collection of each sample since the values of these parameters can change with time.

The pH, temperature, ORP and conductivity of a sample are measured with a portable unit capable of measuring all four (4) parameters concurrently and will be completed in accordance with SOPs. The portable unit automatically adjusts to compensate for the temperature of the sample. The turbidity of a sample is measured with a separate portable unit. The pH, temperature, conductivity, turbidity, and ORP will be recorded on a Groundwater Services Field Log. These units will be calibrated to known standards prior to the start of field activities every day. Measurement and operating procedures for these field analyses are presented in Section 7.0 of this FSP.

4.5.3 Analytical Groundwater Sampling

The groundwater samples will be subjected to laboratory analysis to assist in characterizing the environmental quality of the Site. The samples will be transferred from the sampling equipment directly into the designated sampling containers. The sampling containers for volatile organics analyses will be filled first to minimize volatilization of the sample. The laboratory analytical method, container type, sample holding times, and preservation of the samples are outlined in the QAPP and the RIWP. The SOPs for this field activity are included in SOPs, 'Groundwater Sampling', 'Chain of Custody Procedures' and 'Domestic Transport of Samples to Laboratories'

5.0 MEDIA SAMPLING AND ANALYTICAL PROCEDURES

Groundwater sampling and analytical procedures were discussed in Section 4.0.

5.1 Surface Soil Sampling

The surface soil samples will be collected utilizing a field decontaminated (alconox and tap water wash followed by a tap water rinse) hand auger, shovel, pick ax, trowel and/or other field sampling equipment. The collected soils will be logged in accordance with ASTM D2488 (visual-manual method) and screened for signs of obvious environmental impacts (*e.g.,* staining, sheen, odor, discoloration, or the presence of organic vapors as measured by a photoionization detector). The soil sample collection procedures will follow the RIWP and QAPP. The SOP for this field activity is SOP 'Surface and Subsurface Soil Sampling'.

5.2 Subsurface Fill/Soil Sampling

Subsurface fill/soil samples will be collected using a field decontaminated (alconox and tap water wash followed by a tap water rinse) excavator bucket during the test pits, spilt spoon sampler during conventional hollow stem auger drilling, and a macro-core sampler during direct-push drilling. The collected soils will be logged in accordance with ASTM D2488 (visual-manual method) and screened for signs of observable environmental impacts (*e.g.,* staining, sheen, odor, discoloration, or the presence of organic vapors as measured by a photoionization detector). The fill/soil sample collection procedures will follow the RIWP and QAPP. The SOP for this field activity is SOP 'Surface and Subsurface Soil Sampling'.

5.3 Surface Water Sampling

The surface water samples will either be collected directly into the sampling containers or collected utilizing a factory sealed disposable bailer. The surface water sample collection procedures will follow the RIWP and QAPP. The SOP for this field activity is SOP 'Surface Water Sampling'.

5.4 Sediment Sampling

The sediment samples will be collected utilizing a field decontaminated (alconox and tap water wash followed by a tap water rinse) trowel and/or by hand wearing new nitrile gloves. The sediment sample collection procedures will follow the RIWP and QAPP. The SOP for this field activity is SOP 'Sediment, Sludge, and Sewage Sampling'.

5.5 Analytical Media Sampling

The media samples (surface and subsurface fill/soil, surface water and sediments) will be subjected to laboratory analysis to assist in further characterizing the environmental quality of the Site. The samples will be extracted from the sampling equipment in a timely fashion such that the sample has limited exposure to the outside air, thus reducing the chance for volatilization. The sampling containers for volatile organics analyses will be filled first to minimize volatilization of the sample. The laboratory analytical method, container type, sample holding times, and preservation of the samples are outlined in the QAPP and the RIWP. The SOPs for this field activity are contained in SOP 'Collection of Quality Control Samples'; SOP 'Documentation of Chain of Custody'; SOP 'Domestic Transport of Samples to Laboratory'; SOP 'Surface and Subsurface Soil Sampling'; SOP 'Surface Water Sampling'; and SOP 'Sediment, Sludge, and Sewage Sampling'.

6.0 QUALITY CONTROL

6.1 Field Quality Control

Field Quality Control samples may include Equipment Blanks, Duplicates, Field Blanks, Laboratory Blanks and Matrix Spike/Matrix Spike Duplicates (MS/MSD). The types of field quality control samples to be collected and the sampling method and rationale are detailed in the QAPP. The SOP for this field activity is SOP 'Collection of Quality Control Samples'.

7.0 FIELD INSTRUMENTATION OPERATING PROCEDURES

7.1 General

The field instruments that may be utilized during implementation of the RI are: Photoionization Detector (PID) or Flame Ionization Detector (FID) for air monitoring of total VOCs in ambient air; PID or FID for headspace analysis of soil samples for total VOCs; and a temperature/pH/ORP/conductivity meter and turbidity meter for field analysis of groundwater samples. The field instruments used will be calibrated and operated in accordance with the manufacturers' instructions and the procedures identified in the SOP 'Field Quality Measurements and Calibration'.

7.2 Photoionization and Flame Ionization Detector

A PID meter and data logger with a 10.6 eV lamp will be utilized to measure total VOCs. If the ionization potential of the compound being measured is expected to be greater than 11.7eV, a FID meter may be utilized in place of the PID meter. The instrument is calibrated at the factory upon purchase and annually thereafter using certified service shops who utilize standards of benzene and isobutylene. Prior to use in the field, the instrument will be calibrated in accordance with the manufacturer's instructions using a disposable cylinder containing isobutylene obtained from a reputable supplier. The calibration value varies by the manufacturer, however, 100 parts per million (ppm) is commonly utilized. During use, the PID or FID meter will be calibrated at least once every 8 hours. The calibration procedure is contained in the PID or FID meter User's Manual.

Care will be taken when handling and using the PID or FID meter to prevent any debris from entering the sample line which will affect the instrument's operation. If this occurs, the field personnel will clean the unit or replace it with a functional PID or FID meter.

7.3 Air Monitoring for Potential Contaminant Exposure

Air monitoring for potential exposure to airborne contaminants is typically conducted using a PID, FID, Combustible Gas Indicator (CGI) (measuring oxygen level and explosive atmosphere), MultiRae Plus meter (measuring oxygen level, explosive

atmosphere, PID, and hydrogen sulfide), or dust/aerosol meter. The SOP for this field activity is SOP 'Organic Vapor Monitoring and Air Monitoring'.

7.4 Temperature, PH, ORP and Specific Conductivity

The instrument used to measure temperature, pH, ORP and specific conductivity will be equipped with automatic temperature control for accurate adjustment to the temperatures of the samples and calibration standards. Prior to collecting the pH, ORP, and/or specific conductivity readings, the instrument will be calibrated prior to use each day to ensure accuracy. The standard operating procedure for this field activity is SOP 'Field Water Quality Measurements and Calibration'.

8.0 SAMPLE HANDLING AND CHAIN OF CUSTODY PROCEDURES

The purpose of this procedure is to describe how to properly handle the sampling containers and how to document information on a Chain-of-Custody (COC) form. A COC is a legally binding document that includes sample identification and analyses required, and documents possession of samples from the time they are obtained until they arrive at the laboratory. The SOP for this field activity is 'Domestic Transport Samples to Laboratories'; SOP 'Documentation of a Chain of Custody'; and SOP 'Collection of Quality Control Samples'.

9.0 WATER LEVEL MEASUREMENT PROCEDURES

Water levels will be measured in the monitoring wells using a water level indicator probe. The water levels will be measured from the surveyed reference point to the nearest 0.01 foot. Water levels will be measured progressively from upgradient monitoring wells to downgradient monitoring wells, attempting to measure water levels from the well with the lowest concentration of target compounds to the well with the highest concentration of target compounds.

To avoid possible cross contamination of the wells, the water level indicator will be decontaminated prior to and following the water measurement at each individual well. The water level indicator will be decontaminated by rinsing it with potable water, vigorously scrubbing with a brush and laboratory-grade standard detergent (e.g., Alconox® or Liquinox®) and potable water, then rinsing it in accordance with the SOP 'Equipment Decontamination Procedures'.

The procedure for measuring the static water level and total well depth in a groundwater well is SOP 'Measuring Static Water Level, Immiscible Layers (DNAPL and LNAPL), and Total Well Depth in Wells'.

10.0 INVESTIGATIVE DERIVED WASTE, STORAGE, SAMPLING AND DISPOSAL

Investigative Derived Waste (IDW) will be containerized in appropriately sized compatible containers, properly stored, profiled and ultimately transported to a disposal facility permitted to accept the waste in accordance with NYSDEC DER-10 procedures and this FSP. The SOP for this field activity is SOP 'Sampling and Disposal of Investigative Derived Waste'.

APPENDIX B

QUALITY ASSURANCE PROJECT PLAN

May 2018
(Revised October 2018)

Quality Assurance Project Plan

First Prize Center Site
68 Exchange Street
City of Albany & Town of Colonie
Albany County, New York
BCP Site #C401076

Prepared for:

FIRST PRIZE DEVELOPMENT PARTNERS, LLC
8 Paddocks Circle
Saratoga Springs, New York 12866

Prepared by:

C.T. MALE ASSOCIATES
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Latham, New York 12110
(518) 786-7400
FAX (518) 786-7299

C.T. Male Associates Project No: 17.7536

QUALITY ASSURANCE PROJECT PLAN
FIRST PRIZE CENTER SITE
CITY OF ALBANY & TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

TABLE OF CONTENTS

TABLES

ATTACHMENTS

ACRONYM LIST

ARARs – Applicable or relevant and appropriate requirements

COC – Chain-of-custody

DQO – Data quality objective

HASP – Health & Safety Plan

LCS – Laboratory control sample

MDL – Method detection limit

MS – Matrix spike

NYSDEC – New York State Department of Environmental Conservation

PCB – Polychlorinated biphenyl

PARCCS– Precision, accuracy, representativeness, completeness, comparability, and sensitivity

PFAS – Per- and polyfluoroalkyl substances

PT – Proficiency testing

QA – Quality assurance

QAM – Quality Assurance Manual

QAPP – Quality Assurance Project Plan

QC – Quality control

RPD – Relative percent difference

SVOC – Semi-volatile organic compound

SOP – Standard operating procedure

TAL – Target Analyte List

TCL – Target Compound List

UFP – Uniform Federal Policy

USEPA – United States Environmental Protection Agency

VOC – Volatile organic compound

WWTP – Wastewater Treatment Plant

1.0 INTRODUCTION

C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture & Geology, D.P.C. (C.T. Male) has prepared this Quality Assurance Project Plan (QAPP) for the Remedial Investigation (RI) to be conducted at the First Prize Center BCP Site (Site)(BCP Site #C401076) located at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York. The QAPP was prepared in accordance with the United States Environmental Protection Agency (USEPA) Intergovernmental Data Quality Task Force's environmental requirements as specified in the Uniform Federal Policy (UFP) QAPP guidance document Part 2A Revised (March 2012) and addresses QAPP elements described in *EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5* and *EPA Guidance for Quality Assurance Project Plans, EPA QA/G-5*.

This project-specific QAPP provides the details of the organizations and the project management, objectives, data acquisition, data assessment, oversight and data review procedures associated with the project Site. Protocols for sample collection, handling, storage, chain-of-custody (COC), laboratory and/or field analyses, data evaluation and validation, and reporting are addressed. Some project details are included in the RI work plan. Field activities performed under this QAPP will be conducted in accordance with the applicable Field Sampling Plan (FSP) and the Site-Specific Health & Safety Plan (HASP).

1.1 Site History and Background

The Site is located at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York. The Site is 32.09 acres in size and is located in an urban setting characterized by adjacent industrial, commercial and residential development. The Site is generally level, with a slight slope towards the west on the southwestern portion of the Site. The Patroon Creek is located approximately 400 feet to the west of the Site.

The Site features include five (5) building structures, asphalt and gravel parking areas and access-ways, and grassy and wooded areas. The buildings occupy the southern portions of the Site. Portions of the buildings are currently leased out to tenants while other portions of the buildings are in varying stages of decay. The asphalt and gravel parking areas and access-ways are concentrated around the buildings. Northern and

central portions of the Site are predominantly vegetated with the exception of a partially fenced-in 2.3 acre tract of land that was formerly used for the storage and sale of RVs, trailers, etc.

Prior to the development of the Site that began in 1924, the Site was vacant land. Beginning in 1924 until the 1980's, the Site was used as Tobin's slaughterhouse and meat packing plant. Early historic uses may have included the manufacturing of fertilizers on the Site. After Tobin's ceased operations in the 1980's, the Site was renamed the First Prize Center, and has been used for a variety of commercial and industrial uses to the present date, including dry/cold/freezer storage, painting companies, laminating companies, vehicle storage and repair, a cement plant, offices, health care facility, and art studio, etc.

2.0 QAPP WORKSHEET #1 & 2 – TITLE AND APPROVAL PAGE

1. **Project Identifying Information**
    a. **Site name/project name:** First Prize Center Site
    b. **Site location/number:** 68 Exchange Street, City of Albany & Town of Colonie, Albany County, New York NYSDEC Site ID No. C401076.
2. **Lead Organization**
    a. **Lead Organization:** First Prize Development Partners, LLC
        i. **Project Manager (name/title/signature/date):**

        _____

        William Hoblock, Esq., Executive Vice President
3. **State Regulatory Agency:** New York State Department of Environmental Conservation (NYSDEC)
        i. **Project Manager (name/title/signature/date):**

        _____

        John Grathwol, Project Manager - NYSDEC
4. **Other Stakeholders (as needed)**
    a. **Consulting Engineers:** C.T. Male Associates
        i. **Project Principal (name/title/signature/date):**

        _____

        Daniel Reilly, P.E. / Environmental Services Manager
        ii. **Project Manager (name/title/signature/date):**

        _____

        Kirk Moline P.G. / Project Manager
        iii. **Quality Assurance (QA) Manager and Office Health & Safety Officer (OHSO) (name/title/signature/date):**

        _____

        Nancy Garry, P.E., CSP / Sr. Environmental Engineer

3.0 QAPP WORKSHEET #3 & 5 – PROJECT ORGANIZATIONAL AND QAPP DISTRIBUTION

This section identifies the reporting relationships between organizations involved in the project, including the lead organization and contractors and subcontractor organizations. It also includes recipients of controlled copies of the QAPP. The organizational chart in Attachment A identifies pertinent personnel, contractors and subcontractors who are responsible for document control within their organizations. Site-specific work plans may identify other personnel in similar roles.

4.0 QAPP WORKSHEET #4, 7 & 8 – PERSONNEL QUALIFICATIONS AND SIGN-OFF SHEET

This section identifies project personnel associated with each organization, contractor, and subcontractor participating in responsible roles. This includes the project manager, QA Manager, project contacts for organizations involved in the project, the project health & safety manager, field operation personnel, and the analytical services provider. This worksheet also lists individuals' project titles or roles; qualifications; and any specialized/non-routine training, certifications, or clearances required by the project. Signatures indicate personnel have read and understand how to implement this QAPP as written and that the QAPP will be kept on-file at each organization.

ORGANIZATION: C.T. Male Associates (C.T. Male)

Name	Title/Role	Education/Experience	Specialized Training/ Certifications	Signature/Date
Daniel Reilly, P.E.	Project Principal	See resumé included in Attachment B.	See certifications included in Attachment C.	
Kirk Moline, P.G.	Project Manager, Health & Safety Manager	See resumé included in Attachment B.	See certifications included in Attachment C.	
Nancy Garry, P.E., CSP	QA Manager	See resumé included in Attachment B.	See certifications included in Attachment C.	

ORGANIZATION: Alpha Analytical, Inc. of Westborough and Mansfield, Massachusetts (Alpha).

Name	Title/Role	Specialized Training/ Certifications	Signature/Date
Candace Fox	Project Manager	Training as required by laboratory QA Manual	
Jim Todaro	QA Manager	Training as required by laboratory QA Manual	

5.0 QAPP WORKSHEET #6 – COMMUNICATION PATHWAYS

Communication pathways for this project are shown below.

Communication Driver	Organization	Name	Contact Information	Procedure (Timing, pathway, etc.)
Regulatory Agency Interface	NYSDEC	John Grathwol	Office (O): 518-357-2008 john.grathwol@dec.ny.gov	C.T. Male will contact First Prize Development Partners, LLC and the regulatory agency (NYSDEC) via email if issues with the implementation of this QAPP occur impacting data quality, when comments to the submittals occur, and when new field sampling plans are identified for implementation.
	C.T. Male	Kirk Moline	O: 518-786-7400 k.moline@ctmale.com	
	First Prize Development Partners, LLC	William Hoblock, Esq.	O: 518-786-7100 William.Hoblock@rbc-ny.com	
Laboratory Problems/ Corrective Actions	C.T. Male	Nancy Garry	O: 518-786-7541 n.garry@ctmale.com	C.T. Male's QA Manager will be the contact for the laboratories should the laboratories experience issues with project samples. Barr Engineering Co. will contact the laboratories if issues are discovered from data validation.
	Barr	Ward Swanson	O: 952-832-2660 wswanson@barr.com	
	Alpha	Candace Fox	O: 716-427-5223 cfox@alphalab.com	
Field Problems/ Corrective Actions	C.T. Male	Kirk Moline	O: 518-786-7502 k.moline@ctmale.com	C.T. Male field staff will contact the C.T. Male Project Manager to discuss difficulties encountered during field activities. C.T. Male's Project Manager will coordinate with its QA Manager, as needed and appropriate.

Communication Driver	Organization	Name	Contact Information	Procedure (Timing, pathway, etc.)
Safety Issues	C.T. Male	Nancy Garry	O: 518-786-7541 n.garry@ctmale.com	C.T. Male field staff will contact the C.T. Male Project Manager/Office Health & Safety Manager and work may stop until safety issues are cleared. NYSDEC may be contacted if safety issues delay obtaining/reporting of data.
Field Activity Modifications	NYSDEC	John Grathwol	Office (O): 518-357-2008 john.grathwol@dec.ny.gov	First Prize Development Partners, LLC and C.T. Male will propose modifications to the current sampling program via periodic updates or otherwise as needed. Reduction of testing parameters or frequencies will be performed in consultation with and approval from NYSDEC.
	C.T. Male	Kirk Moline	O: 518-786-7400 k.moline@ctmale.com	
	First Prize Development Partners, LLC	William Hoblock, Esq.	O: 518-786-7100 William.Hoblock@rbc-ny.com	

6.0 QAPP WORKSHEET #9 – PROJECT SCOPING SESSION PARTICIPANTS SHEET

As noted in the introduction, investigation activities will be conducted in accordance with a RI Work Plan that has been approved by the NYSDEC. The sampling and analysis activities implemented as part of additional investigations or studies will follow the protocols set forth in this QAPP. Additionally, this QAPP will be updated as needed based on the planned sampling and analysis activities.

7.0 QAPP WORKSHEET #10 – SITE MODEL

The Site was accepted into the BCP (Site #C401076) pursuant to contaminants in fill/soil and groundwater at concentrations exceeding regulatory standards and guidance values for the intended use of the Site.

Parameters that will be analyzed to evaluate the environmental quality of the Site's media include per- and polyfluoroalkyl substances (PFAS), the Target Compound List (TCL) of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs), the Target Analyte List (TAL) of metals (including mercury) including cyanide, and percent moisture in the soils samples. The laboratory performing the analytical services is depicted in Table 1, which includes the laboratory's address and the list of parameters that the laboratory will perform.

The sample type, laboratory analysis, sampling method and sampling rationale for the samples collected during the RI are summarized in the site-specific work plans.

The proposed sampling activities are summarized below and are described in more detail in the RI Work Plan and FSP.

- Collection of surface soil samples for subjective and laboratory analysis.
- Collection of surface water and sediment samples for subjective and laboratory analysis.
- Advancement of boreholes to collect subsurface fill/soil samples for subjective and laboratory analysis and to install monitoring wells in the overburden groundwater.
- Advancement of test pits to collect subsurface fill/soil samples for subjective and laboratory analysis.
- Development of the newly installed temporary and/or permanent monitoring wells. Purging and collection of groundwater samples for laboratory analysis from the monitoring wells.
- Collection of quality control field samples for laboratory analysis.
- Collection of equipment rinse blank samples.
- Collection of investigation-derived waste samples for laboratory analysis.

8.0 QAPP WORKSHEET #11 – PROJECT/DATA QUALITY OBJECTIVES

Data Quality Objectives (DQOs) are qualitative and quantitative statements that clearly state the objective of a proposed project, define the most appropriate type of data to collect, determine the appropriate conditions for data collection, and specify acceptable decision error limits that establish the quantity and quality of data needed for decision making.

DQOs for measurements during this project will be addressed in terms of the data quality indicators: precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS). The numerical PARCCS parameters will be determined from the project DQOs to ensure that they are met. The DQOs and resulting PARCCS parameters will require that the sampling be performed using standard methods with properly operated and calibrated equipment, and conducted by trained personnel and are summarized in Worksheet #12.

9.0 QAPP WORKSHEET #12 – MEASUREMENT PERFORMANCE CRITERIA TABLE

This worksheet displays the data quality indicator, QC activity, matrix, and measurement performance criteria for both the sampling and analytical measurement systems.

Data Quality Indicator	QC sample or measurement performance activity	Matrix	Measurement Performance Criteria
Precision (field)	Field duplicate samples	Water, soil and sediment	Values > 5x RL; RPD ≤ 30%
Precision (laboratory)	Laboratory duplicate samples	As required by the method	Values > RL; method-specific (See Table 2)
Overall accuracy/bias (field and laboratory) /representativeness	Field, equipment, rinsate blanks	Water, soil and sediment	No target analyte concentrations ≥ RL
	Laboratory Trip blanks	Water (volatile organics and PFAS)	
Overall accuracy/bias (laboratory)	Method blanks	Water, soil and sediment	No target analyte concentrations ≥ RL
Analytical accuracy/bias/precision (laboratory)	Laboratory control samples (LCS) and LCS duplicates	Water, soil and sediment	Water, soil and sediment - analyte-specific (See Table 2)
Analytical accuracy/bias/precision (laboratory)	Matrix Spikes (MS) and MS duplicates	Water, soil and sediment	Analyte-specific (See Table 2)
Analytical accuracy/bias (laboratory)	Surrogate recoveries	Water, soil and sediment	Analyte-specific (See Table 2)
Sensitivity	Samples reported to method detection limit (MDL)	All	Analyte-specific (See Table 2)
Completeness	See Worksheet #34	All	See Worksheet #34

10.0 QAPP WORKSHEET #13 – SECONDARY DATA USES AND LIMITATIONS TABLE

Secondary data and information that will be used for the project and their originating sources are identified. Analytical data obtained prior to this QAPP is presented.

Data type	Source	Data uses relative to current project	Factors affecting the reliability of data and limitations on data use
1988 ESA Report	C. T. Male	Data used to determine if the Site's groundwater was impacted above regulatory standards and guidance values for the Site's intended use.	The laboratory data was not independently validated. The report provided laboratory analyses of four (4) groundwater samples that were collected in 1988; making this data 30 years old.
2001 Analytical Report, Boring Logs, Bore Hole and Test Pit Locations Map, and Field Logs.	GZA Geoenviro-nmental, Inc. (GZA)	Data used to determine if the Site's media (fill/soil and groundwater) was impacted above regulatory standards and guidance values for the Site's intended use.	The laboratory data was not independently validated. The laboratory analysis was performed on soil and groundwater samples that were collected in March 2001; more than 17 years ago.

11.0 QAPP WORKSHEET #14 & 16 – PROJECT TASKS & SCHEDULE TABLE

Listed are the project activities as well as the QA assessments that will be performed during the course of the project.

Activities	Organization	Dates		Deliverable(s)	Anticipated Deliverable Due Date
		Anticipated Date(s) of Initiation	Anticipated Date of Completion		
Well drilling and installing / soil probe sampling/ Test Pits	C.T. Male	Phase I: Oct./Nov. 2018 Phase II: Apr./May 2019	Phase I: Dec. 2018 Phase II: June 2019	Field reports and sample results	Phase I: Dec. 2018 Phase II: June 2019
Collecting surface soil, fill/soil, sediment, surface water and groundwater samples	C. T. Male	Phase I: Oct./Nov. 2018 Phase II: Apr./May 2019	Phase I: Dec. 2018 Phase II: June 2019	Field reports and sample results	Phase I: Dec. 2018 Phase II: June 2019
Chemical analysis	Alpha	Phase I: Oct./Nov. 2018 Phase II: Apr./May 2019	Phase I: Dec. 2018 Phase II: June 2019	Laboratory reports	Phase I: Dec. 2018 Phase II: June 2019
Data evaluation / validation	Barr	After receipt of data reports	Phase I: Dec. 2018 Phase II: June 2019	Validation Report	Phase I: Dec. 2018 Phase II: June 2019
Summarizing data	C.T. Male	After receipt of data reports	Phase I: Dec. 2018 Phase II: June 2019	Analytical Data Tables	Phase I: Dec. 2018 Phase II: June 2019
RI report	C.T. Male	After receipt and review of relevant data reports	March/April 2019	RI Report	July 2019

12.0 QAPP WORKSHEET #15 – PROJECT ACTION LIMITS AND LABORATORY-SPECIFIC DETECTION/QUANTITATION LIMITS

Analytical data quality objectives are used to ensure that the analysis will accurately and adequately identify the contaminants of concern. The applicable or relevant and appropriate requirements (ARARs) are related to defining satisfactory cleanup efforts. To be able to evaluate the data generated with respect to potential ARARs, the samples will be reported to the MDL. The analytical methods selected for this project are designed to achieve ARAR values. The laboratory limits for specific parameters are included in Table 2A for soil and sediment and Table 2B for surface water and groundwater.

13.0 QAPP WORKSHEET #17 – SAMPLING DESIGN AND RATIONALE

The design and rationale of the sampling program is outlined in Worksheet #10 and will be specified in the RI Work Plan.

14.0 QAPP WORKSHEET #18 – SAMPLING LOCATIONS AND METHODS

The RI Work Plan and Field Sampling Plan (FSP) will provide specific detail regarding the individual sample locations and methods.

15.0 QAPP WORKSHEET #19 & 30 – SAMPLE CONTAINERS, PRESERVATION, AND HOLD TIMES TABLE

Sample Parameters, Matrix, Containers, Preservation, Hold Times per Analytical Group

Analytical Group	Matrix	Containers (number, size & type per sample)(1)	Preservation	Preparation/ Analytical Holding Time(2)
PFAS	Water	250 mL HDPE	Cool ≤6°C, Trizma (drinking water only)	14 days (water) until extraction; analysis within 28 days of extraction
TCL VOCs	Water	3-40 mL glass VOA vials	HCl to pH<2, cool ≤6°C, no headspace	14 days. Unpreserved samples - 7 days
	Soil and Sediment	40 mL VOA vial or coring device kit	1:1 solvent or zero headspace, cool ≤6°C. Additional unpreserved for %moisture if solvent collection	48 hours from sample collection to preservation; 14 days
TCL SVOCs	Water	2-1000 mL amber glass	Cool ≤6°C	7 days until extraction/analysis within 40 days of extraction
	Soil and Sediment	8 oz glass jar	Cool ≤6°C	14 days until extraction/analysis within 40 days of extraction
TCL Pesticides	Water	2-1000 mL amber glass	Cool ≤6°C	7 days until extraction/analysis within 40 days of extraction
	Soil and Sediment	8 oz. glass jar	Cool ≤6°C	14 days until extraction/analysis within 40 days of extraction
TCL PCBs	Water	2-1000 mL amber glass	Cool ≤6°C	1 year until extraction / analysis within 40 days of extraction
	Soil and Sediment	8 oz. glass jar / each analysis	Cool ≤6°C	1 year until extraction / analysis within 40 days of extraction
TAL Metals (Excluding Mercury	Water	500 ml plastic	HNO_3 to pH <2 Cool, 4°C	180 days to analysis
	Soil and Sediment	8 oz. glass jar	Cool ≤6°C	
Mercury	Water	500 ml plastic	HNO_3 to pH <2 Cool, 4°C	28 days to analysis
	Soil and Sediment	8 oz. glass jar	Cool ≤6°C	

Analytical Group	Matrix	Containers (number, size & type per sample)(1)	Preservation	Preparation/ Analytical Holding Time(2)
Cyanide	Water	250 ml plastic	NaOH	14 days to analysis
	Soil	8 oz. glass jar	Cool ≤6°C	

(1) Container types and sizes listed are for guidance only. Laboratories may use different containers or combine analyses into larger volume containers.
(2) Holding time starts from date of collection unless otherwise noted.
Note: Laboratory standard operating procedures (SOPs) are retained at each laboratory's place of business and are available upon request for review.

16.0 QAPP WORKSHEET #20 – FIELD QUALITY CONTROL SUMMARY

The Site-specific work plans may provide additional detail on the sample type, parameter, frequency, and sampling methods of field QC samples. Internal laboratory quality control checks will be those specified in EPA Methods or in the most recent NYSDEC ASP for the analytical method performed.

The laboratory will be responsible for performing what is necessary for complying with appropriate standards and certifications of the selected EPA method and NYSDEC ASP requirements. The laboratory quality control acceptance criterion is method specific and will be the laboratory's responsibility to meet the most recent NYSDEC ASP criteria.

At a minimum the following field quality control samples will be collected.

Matrix	**Analytical Group**	**No. of Field Duplicate Pairs**	**No. of MS/MSD**	**No. of Laboratory Trip Blanks**	**No. of Equip. Blanks**
Soil and Sediment	All analytical groups	1 per 20 samples	1 per 20 samples	None	1 per 20 samples
Groundwater and Surface Water	All analytical groups	1 per 20 samples	1 per 20 samples	1 per each for VOC and PFAS analyses per cooler per day	1 per 20 samples

17.0 QAPP WORKSHEET #21 – PROJECT SAMPLING SOP REFERENCES

The field activities for this Site will include collecting fill/soil, sediment, surface water and groundwater samples for laboratory analysis. The procedures relative to implementing these field activities are included in the RI Work Plan and FSP.

18.0 QAPP WORKSHEET #22 – FIELD EQUIPMENT CALIBRATION, MAINTENANCE, TESTING, AND INSPECTION

The field equipment calibration, maintenance, testing, and inspection information are included in the FSP.

19.0 QAPP WORKSHEET #23 – ANALYTICAL AND VALIDATION SOPS

The laboratory's SOPs and the data validation SOPs are retained at each place of business and are available upon request for review.

20.0 QAPP WORKSHEET #24 – ANALYTICAL INSTRUMENT CALIBRATION

The analytical instrument calibration information is included in the laboratory QAM and/or the appropriate SOP. These documents are retained at the laboratory's place of business and are available upon request for review.

21.0 QAPP WORKSHEET #25 – ANALYTICAL INSTRUMENT AND EQUIPMENT MAINTENANCE, TESTING, AND INSPECTION

The analytical instrument and equipment maintenance, testing, and inspection information are included in the laboratory QAM and/or the appropriate SOP. These documents are retained at the laboratory's place of business and are available upon request for review.

22.0 QAPP WORKSHEET #26 & 27 – SAMPLE HANDLING, CUSTODY, AND DISPOSAL

Sampling Organization: C.T. Male Associates
Laboratories: Alpha of Westborough and Mansfield, MA
Method of sample delivery (shipper/carrier): Alpha provided courier
Number of days from reporting until sample disposal: As documented in laboratory QAM.

The FSP describes the various methods and techniques to be followed during the completion of the sampling activities, instrument operation and calibration, and chain of custody procedures.

23.0 QAPP WORKSHEET #28 –ANALYTICAL QUALITY CONTROL AND CORRECTIVE ACTION

The analytical quality control and corrective action information are included in the laboratory QAM and/or the appropriate SOP. These documents are retained at the laboratory's place of business and are available upon request for review. Corrective action may be requested of the laboratory if issues arise that affect the quality of the data.

24.0 QAPP WORKSHEET #29 – PROJECT DOCUMENTS AND RECORDS TABLE

The documents and records that will be generated for the project including, but not limited to, sample collection and field measurement, analysis, and data assessment, are noted below.

Sample Collection Documents and Records	Generation	Verification	Where Maintained
Field Documents Field Notes Field Sample Forms COC Records Field Instrument Calibration Logs Sampling Notes Photographs Health and Safety Plan	C.T. Male Field Staff	C.T. Male Project Manager	Field documents generated by C.T. Male field staff will be maintained in the project file located at C.T. Male offices until scanned and electronically filed.
Project Report Documents Project sign-off forms Project report submittals	C.T. Male Project Staff	C.T. Male Project Manager	Report documents will be maintained in the project file located at C.T. Male offices until scanned and electronically filed.
Laboratory Documents Sample receipt, custody, and tracking record Equipment calibration logs (electronically stored) Sample preparation logs (electronically stored) Analysis Run Logs (electronically stored) Raw data	Laboratory Project Manager	Laboratory Quality Assurance Manager	As detailed in the laboratory QAM(s), data is typically retained for a period of 5 years from the report date.
Correspondence	C.T. Male Project Staff	C.T. Male Project Manager	Project communications regarding the work plans, QAPP and schedule will be kept at C.T. Male offices.

Laboratory Record	PFAS	VOCs	SVOCs	Pesticides	PCBs	Metals	Cyanide
Narrative	X	X	X	X	X	X	X
COC and any additional receiving documentation	X	X	X	X	X	X	X
Sample Results	X	X	X	X	X	X	X
QC Results	X	X	X	X	X	X	X
Raw Data (including but not limited to the following where appropriate - preparation logs, tune checks, ICALs, DDT/Endrin breakdown, instrument logs, tailing factor, chromatograms)	X	X	X	X	X	X	X

25.0 QAPP WORKSHEET #31, 32, & 33 – ASSESSMENTS AND CORRECTIVE ACTION TABLE

Assessments:

Assessment Type	Responsible Party & Organization	Number/ Frequency	Estimated Dates	Assessment Deliverable	Deliverable due date
Review of field procedures	C.T. Male - QA Manager and/or Project Manager for work completed by C.T. Male	As warranted	As warranted	On-site audit	1 Month from completion
Review of field notes/deviations from work plans	C.T. Male – QA Manager and/or Project Manager for work completed by C.T. Male	Every event/report	Ongoing	Documentation of review	Ongoing
Review of COCs	C.T. Male - QA Manager / Laboratory for samples collected by C.T. Male	Every event/report	Within 5 days of receipt	Documentation of review	Ongoing
Review/validation analytical reports	Barr Engineering Co.	Level IIA (NYSDEC ASP Category B) every event/report and Level IV (NYSDEC ASP Category B) determined on a case by case basis.	Ongoing	Documentation of review	Ongoing

Assessment Response and Corrective Action:

Assessment Type	Responsibility for responding to assessment findings	Assessment Response Documentation	Timeframe for Response	Responsibility for Implementing Corrective Action	Responsible for monitoring
Review of field procedures	C.T. Male - QA Manager and/or Project Manager	Written report	30 days	Project Manager and/or QA Manager, C.T. Male	Project Manager and/or QA Manager, C.T. Male
Review of field notes/deviations from work plans	C.T. Male – Project Manager	Note in field notes, project file, retained in correspondence	Immediately to within 3 days of deviation	Project Manager and/or QA Manager, C.T. Male	Project Manager and/or QA Manager, C.T. Male
Review of COCs	C.T. Male - QA Manager / Laboratory	Note on COC	Immediately to within 3 days of discrepancy	QA Manager, C.T. Male	QA Manager, C.T. Male
Review analytical reports	C.T. Male – QA Manager	QA/QC Summary Sheet	Immediately to within 3 days of discrepancy	QA Manager, C.T. Male Project Manager, Laboratory	QA Manager, C.T. Male Project Manager, Laboratory
Review Validation Analytical Reports	Laboratory / Barr Engineering, Co.	QA/QC Summary Sheet	Immediately to within 3 days of discrepancy	QA Manager, C.T. Male Project Manager, Laboratory	QA Manager, C.T. Male Project Manager, Laboratory

26.0 QAPP WORKSHEET #34 – DATA VERIFICATION AND VALIDATION INPUTS TABLE

The following worksheets define the data verification and validation process. This worksheet describes how each item will be verified. Worksheets #35 and #36 describe when specific activities will occur, what documentation is necessary and identifies the person(s) responsible for field and analytical data respectively.

Item	Description	Verification (completeness)	Validation (conformance to specifications)
Planning Documents/Records			
1	Approved QAPP	X	
2	Contract	X	
3	Field SOPs	X	
4	Laboratory SOPs	X	
Field Records			
5	Field notes	X	X
6	Equipment calibration records	X	X
7	COC forms	X	X
8	Sampling diagrams/surveys	X	X
9	Relevant correspondence	X	X
10	Change orders/deviations	X	X
Analytical Data Package (Verified by the Laboratory QA Officer)			
13	Cover sheet (laboratory identifying information)	X	X
14	Case narrative	X	X
15	Internal laboratory COC	X	X
16	Sample receipt records	X	X
17	Sample chronology (i.e., dates and times of receipt, preparation, and analysis)	X	X
18	Definition of laboratory qualifiers	X	X
19	Results reporting forms	X	X
20	QC sample results	X	X
21	Compound(s) identified and reported in proper units	X	X
22	Labeled sample chromatograms (organics)	X	X
23	Electronic data deliverable	X	X
24	Communication records	X	X
25	MDL/RL establishment and verification	X	X

Item	Description	Verification (completeness)	Validation (conformance to specifications)
26	Standards traceability	X	X
27	Instrument calibration records	X	X
28	Corrective action reports	X	X
29	Raw data	X	X

27.0 QAPP WORKSHEET #35 – DATA VERIFICATION PROCEDURES TABLE

Described below are the processes that will be followed to validate project field data.

Records Reviewed	Requirement Documents	Process Description	Responsible Person, Organization
Field notes and forms	QAPP, Field SOPs	Verify that records are present and complete for each day of field activities. Verify that planned samples were collected and that sample collection locations are documented. Verify that changes/exceptions are documented and reported in accordance with requirements. Verify that required field monitoring was performed and results are documented.	C.T. Male Project Manager for work completed by C.T. Male field staff.
COC forms	QAPP, Field SOPs	Verify the completeness of COC records. Examine entries for consistency with the field notes. Verify that required signatures and dates are present. Check for transcription errors.	C.T. Male Project Manager for work completed by C.T. Male field staff.

28.0 QAPP WORKSHEET #36 – DATA VALIDATION PROCEDURES

The data validator is responsible for review of the analytical data generated for this Site. The data validator will review analytical data and prepare a report documenting if the analytical data is valid and usable. The report will also present data rejection and qualification, where necessary, based on laboratory performance. The data validation will conform to NYSDEC DER-10, Appendix 2B, Data Usability Summary Reports (DUSR).

External data validation will be performed by an independent data validator who will utilize the applicable analytical method, standard laboratory practices and where applicable, NYSDEC ASP Category B Data Deliverable, the USEPA National and Regional Validation Guidelines/Procedures to determine the applicable qualifications of the data. This will include an evaluation of the laboratory raw data which may include but is not limited to the following:

- Analytical holding times
- Instrument performance checks
- Initial and continuing calibration
- Blanks
- Laboratory control samples
- Deuterated/surrogate compounds
- Matrix spike and spike duplicate samples
- Internal standards
- Target compound identification
- Target compound quantitation
- System performance
- Overall assessment of data

The validator will then prepare a DUSR of the review. The data validation company for this project is Barr Engineering Co.

29.0 QAPP WORKSHEET #37 – DATA USABILITY ASSESSMENT

Described below are the procedures / methods / activities that will be used to determine whether data are of the right type, quality, and quantity to support environmental decision making for the project. Also noted are how data quality issues will be addressed and how limitations on the use of the data will be handled.

Personnel (organization and position/title) responsible for participating in the data usability assessment:

For work completed by C.T. Male - C.T. Male Project Manager, C.T. Male QA Manager

The usability of the data will be assessed based on a review of the field measurements and laboratory results. The laboratory results will be reviewed by the laboratory prior to submittal and by the C.T. Male QA Manager upon receipt.

Step 1	**Review the project's objectives and sampling design** Review the key outputs defined during systematic planning (i.e., DQOs) to make sure they are still applicable. Review the sampling design for consistency with stated objectives. This step provides the context for interpreting the data in subsequent steps.
Step 2	**Review the data verification and data validation outputs** Review available QA reports, including the data verification and/or data validation reports. Perform basic calculations and summarize the data (using graphs, maps, tables, etc.). Look for patterns, trends, and anomalies (i.e., unexpected results). Review deviations from planned activities (e.g., number and locations of samples, holding time exceedances, damaged samples, and SOP deviations) and determine their impacts on the data usability. Evaluate implications of unacceptable QC sample results.

Step 3	**Verify the assumptions of the selected statistical method** Verify whether underlying assumptions for selected statistical methods (if documented in the QAPP) are valid. Common assumptions include the distributional form of the data, independence of the data, dispersion characteristics, homogeneity, etc. Depending on the robustness of the statistical method, minor deviations from assumptions usually are not critical to statistical analysis and data interpretation. If serious deviations from assumptions are discovered, then another statistical method may need to be selected.
Step 4	**Implement the statistical method** Implement the specified statistical procedures for analyzing the data and review underlying assumptions. For decision projects that involve hypothesis testing (e.g., "concentrations of lead in groundwater are below the action level") consider the consequences for selecting the incorrect alternative; for estimation projects (e.g., establishing a boundary for surface soil contamination), consider the tolerance for uncertainty in measurements.
Step 5	**Document data usability and draw conclusions** Determine if the data can be used as intended, considering implications of deviations and corrective actions. Discuss data quality indicators. Assess the performance of the sampling design and identify limitations on data use. Update the conceptual site model and document conclusions in the remedial investigation report.

30.0 REFERENCES

Intergovernmental Data Quality Task Force Uniform Federal Policy (UFP), 2012. *Uniform Federal Policy for Quality Assurance Project Plans – Part 2A (Revised).* EPA-505-B-04-900C. March 2012.

United States Environmental Protection Agency (USEPA), 2006. *EPA Requirements for Quality Assurance Project Plans.* EPA QA/R-5. 2006

United States Environmental Protection Agency (USEPA). *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review.*

New York State Department of Environmental Conservation (NYSDEC), May 2010. *DER-10, Technical Guidance for Site Investigation and Remediation.*

TABLES

Table 1
Laboratory Analyses
First Prize Center BCP Site
City of Albany & Town of Colonie, Albany County, New York

Alpha Analytical, Inc. (Alpha) 8 Walkup Drive Westborough, MA 01581	Matrices TCL VOCs (soil and water) – EPA 8260 TCL SVOCs (soil and water) – EPA 8270 TCL Pesticides (soil and water) – EPA 8081 TCL PCBs (soil and water) – EPA 8082 Cyanide (soil and water) – EPA 9010 / EPA 9012 % moisture (soil) – SM 2540 G
Alpha Analytical, Inc. (Alpha) 320 Forbes Boulevard Mansfield, MA 02048	Matrices Metals (soil and water) – EPA 6010 / EPA 6020 PFAS (water) – EPA 537 modified

TABLE 2A: PARAMETERS - METHODS, LIMITS, ACCURACY, AND PRECISION (SOIL)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Volatiles - EPA 8260C/5035 High&Low (SOIL)										
Methylene chloride	75-09-2	10	1.65	ug/kg	70-130	30	70-130	30	30	
1,1-Dichloroethane	75-34-3	1.5	0.27	ug/kg	70-130	30	70-130	30	30	
Chloroform	67-66-3	1.5	0.37	ug/kg	70-130	30	70-130	30	30	
Carbon tetrachloride	56-23-5	1	0.345	ug/kg	70-130	30	70-130	30	30	
1,2-Dichloropropane	78-87-5	3.5	0.228	ug/kg	70-130	30	70-130	30	30	
Dibromochloromethane	124-48-1	1	0.176	ug/kg	70-130	30	70-130	30	30	
1,1,2-Trichloroethane	79-00-5	1.5	0.313	ug/kg	70-130	30	70-130	30	30	
Tetrachloroethene	127-18-4	1	0.302	ug/kg	70-130	30	70-130	30	30	
Chlorobenzene	108-90-7	1	0.348	ug/kg	70-130	30	70-130	30	30	
Trichlorofluoromethane	75-69-4	5	0.417	ug/kg	70-139	30	70-139	30	30	
1,2-Dichloroethane	107-06-2	1	0.246	ug/kg	70-130	30	70-130	30	30	
1,1,1-Trichloroethane	71-55-6	1	0.35	ug/kg	70-130	30	70-130	30	30	
Bromodichloromethane	75-27-4	1	0.308	ug/kg	70-130	30	70-130	30	30	
trans-1,3-Dichloropropene	10061-02-6	1	0.208	ug/kg	70-130	30	70-130	30	30	
cis-1,3-Dichloropropene	10061-01-5	1	0.231	ug/kg	70-130	30	70-130	30	30	
1,3-Dichloropropene, Total	542-75-6	1	0.208	ug/kg				30	30	
1,3-Dichloropropene, Total	542-75-6	1	0.208	ug/kg				30	30	
Bromoform	75-25-2	4	0.237	ug/kg	70-130	30	70-130	30	30	
1,1,2,2-Tetrachloroethane	79-34-5	1	0.298	ug/kg	70-130	30	70-130	30	30	
Benzene	71-43-2	1	0.193	ug/kg	70-130	30	70-130	30	30	
Toluene	108-88-3	1.5	0.195	ug/kg	70-130	30	70-130	30	30	
Ethylbenzene	100-41-4	1	0.17	ug/kg	70-130	30	70-130	30	30	
Chloromethane	74-87-3	5	0.436	ug/kg	52-130	30	52-130	30	30	
Bromomethane	74-83-9	2	0.338	ug/kg	57-147	30	57-147	30	30	
Vinyl chloride	75-01-4	2	0.315	ug/kg	67-130	30	67-130	30	30	
Chloroethane	75-00-3	2	0.316	ug/kg	50-151	30	50-151	30	30	
1,1-Dichloroethene	75-35-4	1	0.372	ug/kg	65-135	30	65-135	30	30	
trans-1,2-Dichloroethene	156-60-5	1.5	0.241	ug/kg	70-130	30	70-130	30	30	
Trichloroethene	79-01-6	1	0.302	ug/kg	70-130	30	70-130	30	30	
1,2-Dichlorobenzene	95-50-1	5	0.182	ug/kg	70-130	30	70-130	30	30	
1,3-Dichlorobenzene	541-73-1	5	0.218	ug/kg	70-130	30	70-130	30	30	
1,4-Dichlorobenzene	106-46-7	5	0.182	ug/kg	70-130	30	70-130	30	30	
Methyl tert butyl ether	1634-04-4	2	0.153	ug/kg	66-130	30	66-130	30	30	
p/m-Xylene	179601-23-1	2	0.351	ug/kg	70-130	30	70-130	30	30	
o-Xylene	95-47-6	2	0.338	ug/kg	70-130	30	70-130	30	30	
Xylene (Total)	1330-20-7	2	0.338	ug/kg				30	30	
Xylene (Total)	1330-20-7	2	0.338	ug/kg				30	30	
cis-1,2-Dichloroethene	156-59-2	1	0.342	ug/kg	70-130	30	70-130	30	30	
1,2-Dichloroethene (total)	540-59-0	1	0.241	ug/kg				30	30	
1,2-Dichloroethene (total)	540-59-0	1	0.241	ug/kg				30	30	
Styrene	100-42-5	2	0.401	ug/kg	70-130	30	70-130	30	30	
Dichlorodifluoromethane	75-71-8	10	0.5	ug/kg	30-146	30	30-146	30	30	
Acetone	67-64-1	10	2.29	ug/kg	54-140	30	54-140	30	30	

TABLE 2A: PARAMETERS - METHODS, LIMITS, ACCURACY, AND PRECISION (SOIL)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Volatiles - EPA 8260C/5035 High&Low (SOIL)										
Carbon disulfide	75-15-0	10	1.1	ug/kg	59-130	30	59-130	30	30	
2-Butanone	78-93-3	10	0.69	ug/kg	70-130	30	70-130	30	30	
4-Methyl-2-pentanone	108-10-1	10	0.244	ug/kg	70-130	30	70-130	30	30	
2-Hexanone	591-78-6	10	0.666	ug/kg	70-130	30	70-130	30	30	
Bromochloromethane	74-97-5	5	0.357	ug/kg	70-130	30	70-130	30	30	
1,2-Dibromoethane	106-93-4	4	0.199	ug/kg	70-130	30	70-130	30	30	
n-Butylbenzene	104-51-8	1	0.228	ug/kg	70-130	30	70-130	30	30	
sec-Butylbenzene	135-98-8	1	0.217	ug/kg	70-130	30	70-130	30	30	
tert-Butylbenzene	98-06-6	5	0.247	ug/kg	70-130	30	70-130	30	30	
1,2-Dibromo-3-chloropropane	96-12-8	5	0.396	ug/kg	68-130	30	68-130	30	30	
Isopropylbenzene	98-82-8	1	0.194	ug/kg	70-130	30	70-130	30	30	
p-Isopropyltoluene	99-87-6	1	0.202	ug/kg	70-130	30	70-130	30	30	
Naphthalene	91-20-3	5	0.138	ug/kg	70-130	30	70-130	30	30	
n-Propylbenzene	103-65-1	1	0.215	ug/kg	70-130	30	70-130	30	30	
1,2,3-Trichlorobenzene	87-61-6	5	0.251	ug/kg	70-130	30	70-130	30	30	
1,2,4-Trichlorobenzene	120-82-1	5	0.215	ug/kg	70-130	30	70-130	30	30	
1,3,5-Trimethylbenzene	108-67-8	5	0.161	ug/kg	70-130	30	70-130	30	30	
1,2,4-Trimethylbenzene	95-63-6	5	0.186	ug/kg	70-130	30	70-130	30	30	
Methyl Acetate	79-20-9	20	0.463	ug/kg	51-146	30	51-146	30	30	
Cyclohexane	110-82-7	20	0.433	ug/kg	59-142	30	59-142	30	30	
1,4-Dioxane	123-91-1	40	14.4	ug/kg	65-136	30	65-136	30	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	20	0.514	ug/kg	50-139	30	50-139	30	30	
Methyl cyclohexane	108-87-2	4	0.24	ug/kg	70-130	30	70-130	30	30	
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*
Toluene-d8	*2037-26-5*									*70-130*
4-Bromofluorobenzene	*460-00-4*									*70-130*
Dibromofluoromethane	*1868-53-7*									*70-130*
TCL Semivolatiles - EPA 8270D (SOIL)										
Acenaphthene	83-32-9	133.6	17.3012	ug/kg	31-137	50	31-137	50	50	
1,2,4-Trichlorobenzene	120-82-1	167	19.1048	ug/kg	38-107	50	38-107	50	50	
Hexachlorobenzene	118-74-1	100.2	18.704	ug/kg	40-140	50	40-140	50	50	
Bis(2-chloroethyl)ether	111-44-4	150.3	22.6452	ug/kg	40-140	50	40-140	50	50	
2-Chloronaphthalene	91-58-7	167	16.5664	ug/kg	40-140	50	40-140	50	50	
1,2-Dichlorobenzene	95-50-1	167	29.9932	ug/kg	40-140	50	40-140	50	50	
1,3-Dichlorobenzene	541-73-1	167	28.724	ug/kg	40-140	50	40-140	50	50	
1,4-Dichlorobenzene	106-46-7	167	29.1582	ug/kg	28-104	50	28-104	50	50	
3,3'-Dichlorobenzidine	91-94-1	167	44.422	ug/kg	40-140	50	40-140	50	50	
2,4-Dinitrotoluene	121-14-2	167	33.4	ug/kg	40-132	50	40-132	50	50	
2,6-Dinitrotoluene	606-20-2	167	28.6572	ug/kg	40-140	50	40-140	50	50	
Fluoranthene	206-44-0	100.2	19.1716	ug/kg	40-140	50	40-140	50	50	
4-Chlorophenyl phenyl ether	7005-72-3	167	17.869	ug/kg	40-140	50	40-140	50	50	
4-Bromophenyl phenyl ether	101-55-3	167	25.4842	ug/kg	40-140	50	40-140	50	50	
Bis(2-chloroisopropyl)ether	108-60-1	200.4	28.5236	ug/kg	40-140	50	40-140	50	50	

TABLE 2A: PARAMETERS - METHODS, LIMITS, ACCURACY, AND PRECISION (SOIL)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Semivolatiles - EPA 8270D (SOIL)										
Bis(2-chloroethoxy)methane	111-91-1	180.36	16.7334	ug/kg	40-117	50	40-117	50	50	
Hexachlorobutadiene	87-68-3	167	24.4488	ug/kg	40-140	50	40-140	50	50	
Hexachlorocyclopentadiene	77-47-4	477.62	151.302	ug/kg	40-140	50	40-140	50	50	
Hexachloroethane	67-72-1	133.6	27.0206	ug/kg	40-140	50	40-140	50	50	
Isophorone	78-59-1	150.3	21.6766	ug/kg	40-140	50	40-140	50	50	
Naphthalene	91-20-3	167	20.3406	ug/kg	40-140	50	40-140	50	50	
Nitrobenzene	98-95-3	150.3	24.716	ug/kg	40-140	50	40-140	50	50	
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	133.6	19.0046	ug/kg	36-157	50	36-157	50	50	
n-Nitrosodi-n-propylamine	621-64-7	167	25.7848	ug/kg	32-121	50	32-121	50	50	
Bis(2-Ethylhexyl)phthalate	117-81-7	167	57.782	ug/kg	40-140	50	40-140	50	50	
Butyl benzyl phthalate	85-68-7	167	42.084	ug/kg	40-140	50	40-140	50	50	
Di-n-butylphthalate	84-74-2	167	31.6632	ug/kg	40-140	50	40-140	50	50	
Di-n-octylphthalate	117-84-0	167	56.78	ug/kg	40-140	50	40-140	50	50	
Diethyl phthalate	84-66-2	167	15.4642	ug/kg	40-140	50	40-140	50	50	
Dimethyl phthalate	131-11-3	167	35.07	ug/kg	40-140	50	40-140	50	50	
Benzo(a)anthracene	56-55-3	100.2	18.8042	ug/kg	40-140	50	40-140	50	50	
Benzo(a)pyrene	50-32-8	133.6	40.748	ug/kg	40-140	50	40-140	50	50	
Benzo(b)fluoranthene	205-99-2	100.2	28.1228	ug/kg	40-140	50	40-140	50	50	
Benzo(k)fluoranthene	207-08-9	100.2	26.72	ug/kg	40-140	50	40-140	50	50	
Chrysene	218-01-9	100.2	17.368	ug/kg	40-140	50	40-140	50	50	
Acenaphthylene	208-96-8	133.6	25.7848	ug/kg	40-140	50	40-140	50	50	
Anthracene	120-12-7	100.2	32.565	ug/kg	40-140	50	40-140	50	50	
Benzo(ghi)perylene	191-24-2	133.6	19.6392	ug/kg	40-140	50	40-140	50	50	
Fluorene	86-73-7	167	16.2324	ug/kg	40-140	50	40-140	50	50	
Phenanthrene	85-01-8	100.2	20.3072	ug/kg	40-140	50	40-140	50	50	
Dibenzo(a,h)anthracene	53-70-3	100.2	19.3052	ug/kg	40-140	50	40-140	50	50	
Indeno(1,2,3-cd)Pyrene	193-39-5	133.6	23.2798	ug/kg	40-140	50	40-140	50	50	
Pyrene	129-00-0	100.2	16.5998	ug/kg	35-142	50	35-142	50	50	
Biphenyl	92-52-4	380.76	38.744	ug/kg	54-104	50	54-104	50	50	
4-Chloroaniline	106-47-8	167	30.394	ug/kg	40-140	50	40-140	50	50	
2-Nitroaniline	88-74-4	167	32.1976	ug/kg	47-134	50	47-134	50	50	
3-Nitroaniline	99-09-2	167	31.4962	ug/kg	26-129	50	26-129	50	50	
4-Nitroaniline	100-01-6	167	69.138	ug/kg	41-125	50	41-125	50	50	
Dibenzofuran	132-64-9	167	15.7982	ug/kg	40-140	50	40-140	50	50	
2-Methylnaphthalene	91-57-6	200.4	20.1736	ug/kg	40-140	50	40-140	50	50	
Acetophenone	98-86-2	167	20.6746	ug/kg	14-144	50	14-144	50	50	
2,4,6-Trichlorophenol	88-06-2	100.2	31.6632	ug/kg	30-130	50	30-130	50	50	
P-Chloro-M-Cresol	59-50-7	167	24.883	ug/kg	26-103	50	26-103	50	50	
2-Chlorophenol	95-57-8	167	19.7394	ug/kg	25-102	50	25-102	50	50	
2,4-Dichlorophenol	120-83-2	150.3	26.8536	ug/kg	30-130	50	30-130	50	50	
2,4-Dimethylphenol	105-67-9	167	55.11	ug/kg	30-130	50	30-130	50	50	
2-Nitrophenol	88-75-5	360.72	62.792	ug/kg	30-130	50	30-130	50	50	
4-Nitrophenol	100-02-7	233.8	68.136	ug/kg	11-114	50	11-114	50	50	

TABLE 2A: PARAMETERS - METHODS, LIMITS, ACCURACY, AND PRECISION (SOIL)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Semivolatiles - EPA 8270D (SOIL)										
2,4-Dinitrophenol	51-28-5	801.6	77.822	ug/kg	4-130	50	4-130	50	50	
4,6-Dinitro-o-cresol	534-52-1	434.2	80.16	ug/kg	10-130	50	10-130	50	50	
Pentachlorophenol	87-86-5	133.6	36.74	ug/kg	17-109	50	17-109	50	50	
Phenol	108-95-2	167	25.217	ug/kg	26-90	50	26-90	50	50	
2-Methylphenol	95-48-7	167	25.885	ug/kg	30-130.	50	30-130.	50	50	
3-Methylphenol/4-Methylphenol	106-44-5	240.48	26.1522	ug/kg	30-130	50	30-130	50	50	
2,4,5-Trichlorophenol	95-95-4	167	31.9972	ug/kg	30-130	50	30-130	50	50	
Benzoic Acid	65-85-0	541.08	169.004	ug/kg	10-110	50	10-110	50	50	
Benzyl Alcohol	100-51-6	167	51.102	ug/kg	40-140	50	40-140	50	50	
Carbazole	86-74-8	167	16.2324	ug/kg	54-128	50	54-128	50	50	
2-Fluorophenol	*367-12-4*									*25-120*
Phenol-d6	*13127-88-3*									*10-120*
Nitrobenzene-d5	*4165-60-0*									*23-120*
2-Fluorobiphenyl	*321-60-8*									*30-120*
2,4,6-Tribromophenol	*118-79-6*									*10-136*
4-Terphenyl-d14	*1718-51-0*									*18-120*
TCL Pesticides - EPA 8081B (SOIL)										
Delta-BHC	319-86-8	7.992	1.5651	ug/kg	30-150	30	30-150	50	50	
Lindane	58-89-9	3.33	1.48851	ug/kg	30-150	30	30-150	50	50	
Alpha-BHC	319-84-6	3.33	0.94572	ug/kg	30-150	30	30-150	50	50	
Beta-BHC	319-85-7	7.992	3.0303	ug/kg	30-150	30	30-150	50	50	
Heptachlor	76-44-8	3.996	1.79154	ug/kg	30-150	30	30-150	50	50	
Aldrin	309-00-2	7.992	2.81385	ug/kg	30-150	30	30-150	50	50	
Heptachlor epoxide	1024-57-3	14.985	4.4955	ug/kg	30-150	30	30-150	50	50	
Endrin	72-20-8	3.33	1.3653	ug/kg	30-150	30	30-150	50	50	
Endrin aldehyde	7421-93-4	9.99	3.4965	ug/kg	30-150	30	30-150	50	50	
Endrin ketone	53494-70-5	7.992	2.05794	ug/kg	30-150	30	30-150	50	50	
Dieldrin	60-57-1	4.995	2.4975	ug/kg	30-150	30	30-150	50	50	
4,4'-DDE	72-55-9	7.992	1.84815	ug/kg	30-150	30	30-150	50	50	
4,4'-DDD	72-54-8	7.992	2.85048	ug/kg	30-150	30	30-150	50	50	
4,4'-DDT	50-29-3	14.985	6.4269	ug/kg	30-150	30	30-150	50	50	
Endosulfan I	959-98-8	7.992	1.88811	ug/kg	30-150	30	30-150	50	50	
Endosulfan II	33213-65-9	7.992	2.67066	ug/kg	30-150	30	30-150	50	50	
Endosulfan sulfate	1031-07-8	3.33	1.58508	ug/kg	30-150	30	30-150	50	50	
Methoxychlor	72-43-5	14.985	4.662	ug/kg	30-150	30	30-150	50	50	
Toxaphene	8001-35-2	149.85	41.958	ug/kg	30-150	30	30-150	50	50	
cis-Chlordane	5103-71-9	9.99	2.78388	ug/kg	30-150	30	30-150	50	50	
trans-Chlordane	5103-74-2	9.99	2.63736	ug/kg	30-150	30	30-150	50	50	
Chlordane	57-74-9	64.935	26.4735	ug/kg	30-150	30	30-150	50	50	
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*
Decachlorobiphenyl	*2051-24-3*									*30-150*
TCL PCBs - EPA 8082A (SOIL)										
Aroclor 1016	12674-11-2	33.5	3.7989	ug/kg	40-140	50	40-140	50	50	

TABLE 2A: PARAMETERS - METHODS, LIMITS, ACCURACY, AND PRECISION (SOIL)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL PCBs - EPA 8082A (SOIL)										
Aroclor 1221	11104-28-2	33.5	5.0987	ug/kg	40-140	50	40-140	50	50	
Aroclor 1232	11141-16-5	33.5	3.2964	ug/kg	40-140	50	40-140	50	50	
Aroclor 1242	53469-21-9	33.5	4.1004	ug/kg	40-140	50	40-140	50	50	
Aroclor 1248	12672-29-6	33.5	3.7587	ug/kg	40-140	50	40-140	50	50	
Aroclor 1254	11097-69-1	33.5	2.7336	ug/kg	40-140	50	40-140	50	50	
Aroclor 1260	11096-82-5	33.5	3.4974	ug/kg	40-140	50	40-140	50	50	
Aroclor 1262	37324-23-5	33.5	2.7537	ug/kg	40-140	50	40-140	50	50	
Aroclor 1268	11100-14-4	33.5	2.3718	ug/kg	40-140	50	40-140	50	50	
PCBs, Total	1336-36-3	33.5	1.541	ug/kg				50	50	
PCBs, Total	1336-36-3	33.5	1.541	ug/kg				50	50	
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*
Decachlorobiphenyl	*2051-24-3*									*30-150*
METALS by 6010C/7471B (SOIL)										
Aluminum, Total	7429-90-5	4	1.08	mg/kg	48-151		75-125	20	20	
Antimony, Total	7440-36-0	2	0.152	mg/kg	1-208		75-125	20	20	
Arsenic, Total	7440-38-2	0.4	0.0832	mg/kg	79-121		75-125	20	20	
Barium, Total	7440-39-3	0.4	0.0696	mg/kg	83-117		75-125	20	20	
Beryllium, Total	7440-41-7	0.2	0.0132	mg/kg	83-117		75-125	20	20	
Cadmium, Total	7440-43-9	0.4	0.0392	mg/kg	83-117		75-125	20	20	
Calcium, Total	7440-70-2	4	1.4	mg/kg	81-119		75-125	20	20	
Chromium, Total	7440-47-3	0.4	0.0384	mg/kg	80-120		75-125	20	20	
Cobalt, Total	7440-48-4	0.8	0.0664	mg/kg	84-115		75-125	20	20	
Copper, Total	7440-50-8	0.4	0.1032	mg/kg	81-118		75-125	20	20	
Iron, Total	7439-89-6	2	0.3612	mg/kg	45-155		75-125	20	20	
Lead, Total	7439-92-1	2	0.1072	mg/kg	81-117		75-125	20	20	
Magnesium, Total	7439-95-4	4	0.616	mg/kg	76-124		75-125	20	20	
Manganese, Total	7439-96-5	0.4	0.0636	mg/kg	81-117		75-125	20	20	
Mercury, Total	7439-97-6	0.08	0.016896	mg/kg	72-128		80-120	20	20	
Nickel, Total	7440-02-0	1	0.0968	mg/kg	83-117		75-125	20	20	
Potassium, Total	7440-09-7	100	5.76	mg/kg	71-129		75-125	20	20	
Selenium, Total	7782-49-2	0.8	0.1032	mg/kg	78-122		75-125	20	20	
Silver, Total	7440-22-4	0.4	0.1132	mg/kg	75-124		75-125	20	20	
Sodium, Total	7440-23-5	80	1.26	mg/kg	72-127		75-125	20	20	
Thallium, Total	7440-28-0	0.8	0.126	mg/kg	80-120		75-125	20	20	
Vanadium, Total	7440-62-2	0.4	0.0812	mg/kg	78-122		75-125	20	20	
Zinc, Total	7440-66-6	2	0.1172	mg/kg	82-118		75-125	20	20	
CYANIDE by 9010C/9012B (SOIL)										
Cyanide, Total	57-12-5	1	0.212	mg/kg	80-120	35	75-125	35	35	

TABLE 2B: PARAMETERS - METHODS, LIMITS, ACCURACY AND PRECISION (WATER)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
PFAS - EPA 537(M)-Isotope Dilution (WATER)										
Perfluorobutanoic Acid (PFBA)	375-22-4	2	0.1312	ng/l	50-150	30	50-150	30	30	
Perfluoropentanoic Acid (PFPeA)	2706-90-3	2	0.0856	ng/l	50-150	30	50-150	30	30	
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	2	0.11	ng/l	50-150	30	50-150	30	30	
Perfluorohexanoic Acid (PFHxA)	307-24-4	2	0.1264	ng/l	50-150	30	50-150	30	30	
Perfluoroheptanoic Acid (PFHpA)	375-85-9	2	0.0924	ng/l	50-150	30	50-150	30	30	
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	2	0.1076	ng/l	50-150	30	50-150	30	30	
Perfluorooctanoic Acid (PFOA)	335-67-1	2	0.0504	ng/l	50-150	30	50-150	30	30	
Perfluorononanoic Acid (PFNA)	375-95-1	2	0.1008	ng/l	50-150	30	50-150	30	30	
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	2	0.1116	ng/l	50-150	30	50-150	30	30	
Perfluorodecanoic Acid (PFDA)	335-76-2	2	0.1904	ng/l	50-150	30	50-150	30	30	
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	2	0.2908	ng/l	50-150	30	50-150	30	30	
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA	2355-31-9	2	0.2504	ng/l	50-150	30	50-150	30	30	
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	2	0.1912	ng/l	50-150	30	50-150	30	30	
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	2	0.2224	ng/l	50-150	30	50-150	30	30	
Perfluorooctanesulfonamide (FOSA)	754-91-6	2	0.2268	ng/l	50-150	30	50-150	30	30	
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	2	0.3728	ng/l	50-150	30	50-150	30	30	
Perfluorododecanoic Acid (PFDoA)	307-55-1	2	0.0916	ng/l	50-150	30	50-150	30	30	
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	2	0.0904	ng/l	50-150	30	50-150	30	30	
Perfluorotetradecanoic Acid (PFTA)	376-06-7	2	0.072	ng/l	50-150	30	50-150	30	30	
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)		2	0.194	ng/l	50-150	30	50-150	30	30	
Perfluoroheptanesulfonic Acid (PFHpS)		2	0.155	ng/l	50-150	30	50-150	30	30	
Perfluoro[13C4]Butanoic Acid (MPFBA)	*NONE*									*50-150*
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	*NONE*									*50-150*
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	*NONE*									*50-150*
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	*NONE*									*50-150*
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	*NONE*									*50-150*
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	*NONE*									*50-150*
Perfluoro[13C8]Octanoic Acid (M8PFOA)	*NONE*									*50-150*
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6.	*NONE*									*50-150*
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	*NONE*									*50-150*
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	*NONE*									*50-150*
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	*NONE*									*50-150*
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8	*NONE*									*50-150*
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (	*NONE*									*50-150*
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	*NONE*									*50-150*
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	*NONE*									*50-150*
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5	*NONE*									*50-150*
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	*NONE*									*50-150*
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	*NONE*									*50-150*
TCL Volatiles - EPA 8260C (WATER)										
Methylene chloride	75-09-2	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,1-Dichloroethane	75-34-3	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Chloroform	67-66-3	2.5	0.7	ug/l	70-130	20	70-130	20	20	

TABLE 2B: PARAMETERS - METHODS, LIMITS, ACCURACY AND PRECISION (WATER)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Volatiles - EPA 8260C (WATER)										
Carbon tetrachloride	56-23-5	0.5	0.134	ug/l	63-132	20	63-132	20	20	
1,2-Dichloropropane	78-87-5	1	0.137	ug/l	70-130	20	70-130	20	20	
Dibromochloromethane	124-48-1	0.5	0.149	ug/l	63-130	20	63-130	20	20	
1,1,2-Trichloroethane	79-00-5	1.5	0.5	ug/l	70-130	20	70-130	20	20	
Tetrachloroethene	127-18-4	0.5	0.181	ug/l	70-130	20	70-130	20	20	
Chlorobenzene	108-90-7	2.5	0.7	ug/l	75-130	20	75-130	20	20	
Trichlorofluoromethane	75-69-4	2.5	0.7	ug/l	62-150	20	62-150	20	20	
1,2-Dichloroethane	107-06-2	0.5	0.132	ug/l	70-130	20	70-130	20	20	
1,1,1-Trichloroethane	71-55-6	2.5	0.7	ug/l	67-130	20	67-130	20	20	
Bromodichloromethane	75-27-4	0.5	0.192	ug/l	67-130	20	67-130	20	20	
trans-1,3-Dichloropropene	10061-02-6	0.5	0.164	ug/l	70-130	20	70-130	20	20	
cis-1,3-Dichloropropene	10061-01-5	0.5	0.144	ug/l	70-130	20	70-130	20	20	
1,3-Dichloropropene, Total	542-75-6	0.5	0.144	ug/l				20	20	
1,3-Dichloropropene, Total	542-75-6	0.5	0.144	ug/l				20	20	
Bromoform	75-25-2	2	0.65	ug/l	54-136	20	54-136	20	20	
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.167	ug/l	67-130	20	67-130	20	20	
Benzene	71-43-2	0.5	0.159	ug/l	70-130	20	70-130	20	20	
Toluene	108-88-3	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Ethylbenzene	100-41-4	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Chloromethane	74-87-3	2.5	0.7	ug/l	64-130	20	64-130	20	20	
Bromomethane	74-83-9	2.5	0.7	ug/l	39-139	20	39-139	20	20	
Vinyl chloride	75-01-4	1	0.0714	ug/l	55-140	20	55-140	20	20	
Chloroethane	75-00-3	2.5	0.7	ug/l	55-138	20	55-138	20	20	
1,1-Dichloroethene	75-35-4	0.5	0.169	ug/l	61-145	20	61-145	20	20	
trans-1,2-Dichloroethene	156-60-5	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Trichloroethene	79-01-6	0.5	0.175	ug/l	70-130	20	70-130	20	20	
1,2-Dichlorobenzene	95-50-1	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,3-Dichlorobenzene	541-73-1	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,4-Dichlorobenzene	106-46-7	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Methyl tert butyl ether	1634-04-4	2.5	0.7	ug/l	63-130	20	63-130	20	20	
p/m-Xylene	179601-23-1	2.5	0.7	ug/l	70-130	20	70-130	20	20	
o-Xylene	95-47-6	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Xylene (Total)	1330-20-7	2.5	0.7	ug/l				20	20	
Xylene (Total)	1330-20-7	2.5	0.7	ug/l				20	20	
cis-1,2-Dichloroethene	156-59-2	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,2-Dichloroethene (total)	540-59-0	2.5	0.7	ug/l				20	20	
1,2-Dichloroethene (total)	540-59-0	2.5	0.7	ug/l				20	20	
Styrene	100-42-5	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Dichlorodifluoromethane	75-71-8	5	1	ug/l	36-147	20	36-147	20	20	
Acetone	67-64-1	5	1.46	ug/l	58-148	20	58-148	20	20	
Carbon disulfide	75-15-0	5	1	ug/l	51-130	20	51-130	20	20	
2-Butanone	78-93-3	5	1.94	ug/l	63-138	20	63-138	20	20	
4-Methyl-2-pentanone	108-10-1	5	1	ug/l	59-130	20	59-130	20	20	

TABLE 2B: PARAMETERS - METHODS, LIMITS, ACCURACY AND PRECISION (WATER)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Volatiles - EPA 8260C (WATER)										
2-Hexanone	591-78-6	5	1	ug/l	57-130	20	57-130	20	20	
Bromochloromethane	74-97-5	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,2-Dibromoethane	106-93-4	2	0.65	ug/l	70-130	20	70-130	20	20	
n-Butylbenzene	104-51-8	2.5	0.7	ug/l	53-136	20	53-136	20	20	
sec-Butylbenzene	135-98-8	2.5	0.7	ug/l	70-130	20	70-130	20	20	
tert-Butylbenzene	98-06-6	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,2-Dibromo-3-chloropropane	96-12-8	2.5	0.7	ug/l	41-144	20	41-144	20	20	
Isopropylbenzene	98-82-8	2.5	0.7	ug/l	70-130	20	70-130	20	20	
p-Isopropyltoluene	99-87-6	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Naphthalene	91-20-3	2.5	0.7	ug/l	70-130	20	70-130	20	20	
n-Propylbenzene	103-65-1	2.5	0.7	ug/l	69-130	20	69-130	20	20	
1,2,3-Trichlorobenzene	87-61-6	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,2,4-Trichlorobenzene	120-82-1	2.5	0.7	ug/l	70-130	20	70-130	20	20	
1,3,5-Trimethylbenzene	108-67-8	2.5	0.7	ug/l	64-130	20	64-130	20	20	
1,2,4-Trimethylbenzene	95-63-6	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Methyl Acetate	79-20-9	2	0.234	ug/l	70-130	20	70-130	20	20	
Cyclohexane	110-82-7	10	0.271	ug/l	70-130	20	70-130	20	20	
1,4-Dioxane	123-91-1	250	60.8	ug/l	56-162	20	56-162	20	20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	2.5	0.7	ug/l	70-130	20	70-130	20	20	
Methyl cyclohexane	108-87-2	10	0.396	ug/l	70-130	20	70-130	20	20	
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*
Toluene-d8	*2037-26-5*									*70-130*
4-Bromofluorobenzene	*460-00-4*									*70-130*
Dibromofluoromethane	*1868-53-7*									*70-130*
TCL Semivolatiles - EPA 8270D (WATER)										
Acenaphthene	83-32-9	2	0.591	ug/l	37-111	30	37-111	30	30	
1,2,4-Trichlorobenzene	120-82-1	5	0.661	ug/l	39-98	30	39-98	30	30	
Hexachlorobenzene	118-74-1	2	0.579	ug/l	40-140	30	40-140	30	30	
Bis(2-chloroethyl)ether	111-44-4	2	0.669	ug/l	40-140	30	40-140	30	30	
2-Chloronaphthalene	91-58-7	2	0.64	ug/l	40-140	30	40-140	30	30	
1,2-Dichlorobenzene	95-50-1	2	0.732	ug/l	40-140	30	40-140	30	30	
1,3-Dichlorobenzene	541-73-1	2	0.688	ug/l	40-140	30	40-140	30	30	
1,4-Dichlorobenzene	106-46-7	2	0.708	ug/l	36-97	30	36-97	30	30	
3,3'-Dichlorobenzidine	91-94-1	5	1.39	ug/l	40-140	30	40-140	30	30	
2,4-Dinitrotoluene	121-14-2	5	0.845	ug/l	48-143	30	48-143	30	30	
2,6-Dinitrotoluene	606-20-2	5	1.12	ug/l	40-140	30	40-140	30	30	
Fluoranthene	206-44-0	2	0.568	ug/l	40-140	30	40-140	30	30	
4-Chlorophenyl phenyl ether	7005-72-3	2	0.625	ug/l	40-140	30	40-140	30	30	
4-Bromophenyl phenyl ether	101-55-3	2	0.731	ug/l	40-140	30	40-140	30	30	
Bis(2-chloroisopropyl)ether	108-60-1	2	0.696	ug/l	40-140	30	40-140	30	30	
Bis(2-chloroethoxy)methane	111-91-1	5	0.626	ug/l	40-140	30	40-140	30	30	
Hexachlorobutadiene	87-68-3	2	0.717	ug/l	40-140	30	40-140	30	30	
Hexachlorocyclopentadiene	77-47-4	20	7.84	ug/l	40-140	30	40-140	30	30	

TABLE 2B: PARAMETERS - METHODS, LIMITS, ACCURACY AND PRECISION (WATER)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Semivolatiles - EPA 8270D (WATER)										
Hexachloroethane	67-72-1	2	0.682	ug/l	40-140	30	40-140	30	30	
Isophorone	78-59-1	5	0.601	ug/l	40-140	30	40-140	30	30	
Naphthalene	91-20-3	2	0.68	ug/l	40-140	30	40-140	30	30	
Nitrobenzene	98-95-3	2	0.753	ug/l	40-140	30	40-140	30	30	
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	2	0.644	ug/l	40-140	30	40-140	30	30	
n-Nitrosodi-n-propylamine	621-64-7	5	0.7	ug/l	29-132	30	29-132	30	30	
Bis(2-Ethylhexyl)phthalate	117-81-7	3	0.91	ug/l	40-140	30	40-140	30	30	
Butyl benzyl phthalate	85-68-7	5	1.26	ug/l	40-140	30	40-140	30	30	
Di-n-butylphthalate	84-74-2	5	0.689	ug/l	40-140	30	40-140	30	30	
Di-n-octylphthalate	117-84-0	5	1.14	ug/l	40-140	30	40-140	30	30	
Diethyl phthalate	84-66-2	5	0.628	ug/l	40-140	30	40-140	30	30	
Dimethyl phthalate	131-11-3	5	0.65	ug/l	40-140	30	40-140	30	30	
Benzo(a)anthracene	56-55-3	2	0.61	ug/l	40-140	30	40-140	30	30	
Benzo(a)pyrene	50-32-8	2	0.539	ug/l	40-140	30	40-140	30	30	
Benzo(b)fluoranthene	205-99-2	2	0.635	ug/l	40-140	30	40-140	30	30	
Benzo(k)fluoranthene	207-08-9	2	0.597	ug/l	40-140	30	40-140	30	30	
Chrysene	218-01-9	2	0.543	ug/l	40-140	30	40-140	30	30	
Acenaphthylene	208-96-8	2	0.658	ug/l	45-123	30	45-123	30	30	
Anthracene	120-12-7	2	0.645	ug/l	40-140	30	40-140	30	30	
Benzo(ghi)perylene	191-24-2	2	0.611	ug/l	40-140	30	40-140	30	30	
Fluorene	86-73-7	2	0.619	ug/l	40-140	30	40-140	30	30	
Phenanthrene	85-01-8	2	0.613	ug/l	40-140	30	40-140	30	30	
Dibenzo(a,h)anthracene	53-70-3	2	0.548	ug/l	40-140	30	40-140	30	30	
Indeno(1,2,3-cd)Pyrene	193-39-5	2	0.707	ug/l	40-140	30	40-140	30	30	
Pyrene	129-00-0	2	0.569	ug/l	26-127	30	26-127	30	30	
Biphenyl	92-52-4	2	0.757	ug/l	40-140	30	40-140	30	30	
4-Chloroaniline	106-47-8	5	0.632	ug/l	40-140	30	40-140	30	30	
2-Nitroaniline	88-74-4	5	1.14	ug/l	52-143	30	52-143	30	30	
3-Nitroaniline	99-09-2	5	1.22	ug/l	25-145	30	25-145	30	30	
4-Nitroaniline	100-01-6	5	1.3	ug/l	51-143	30	51-143	30	30	
Dibenzofuran	132-64-9	2	0.656	ug/l	40-140	30	40-140	30	30	
2-Methylnaphthalene	91-57-6	2	0.72	ug/l	40-140	30	40-140	30	30	
Acetophenone	98-86-2	5	0.847	ug/l	39-129	30	39-129	30	30	
2,4,6-Trichlorophenol	88-06-2	5	0.681	ug/l	30-130	30	30-130	30	30	
P-Chloro-M-Cresol	59-50-7	2	0.617	ug/l	23-97	30	23-97	30	30	
2-Chlorophenol	95-57-8	2	0.631	ug/l	27-123	30	27-123	30	30	
2,4-Dichlorophenol	120-83-2	5	0.769	ug/l	30-130	30	30-130	30	30	
2,4-Dimethylphenol	105-67-9	5	1.64	ug/l	30-130	30	30-130	30	30	
2-Nitrophenol	88-75-5	10	1.52	ug/l	30-130	30	30-130	30	30	
4-Nitrophenol	100-02-7	10	1.77	ug/l	10-80	30	10-80	30	30	
2,4-Dinitrophenol	51-28-5	20	5.47	ug/l	20-130	30	20-130	30	30	
4,6-Dinitro-o-cresol	534-52-1	10	2.1	ug/l	20-164	30	20-164	30	30	
Pentachlorophenol	87-86-5	10	3.43	ug/l	9-103	30	9-103	30	30	

TABLE 2B: PARAMETERS - METHODS, LIMITS, ACCURACY AND PRECISION (WATER)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL Semivolatiles - EPA 8270D (WATER)										
Phenol	108-95-2	5	1.89	ug/l	12-110	30	12-110	30	30	
2-Methylphenol	95-48-7	5	1.02	ug/l	30-130	30	30-130	30	30	
3-Methylphenol/4-Methylphenol	106-44-5	5	1.11	ug/l	30-130	30	30-130	30	30	
2,4,5-Trichlorophenol	95-95-4	5	0.715	ug/l	30-130	30	30-130	30	30	
Benzoic Acid	65-85-0	50	12.9	ug/l	10-164	30	10-164	30	30	
Benzyl Alcohol	100-51-6	2	0.725	ug/l	26-116	30	26-116	30	30	
Carbazole	86-74-8	2	0.627	ug/l	55-144	30	55-144	30	30	
2-Fluorophenol	*367-12-4*									*21-120*
Phenol-d6	*13127-88-3*									*10-120*
Nitrobenzene-d5	*4165-60-0*									*23-120*
2-Fluorobiphenyl	*321-60-8*									*15-120*
2,4,6-Tribromophenol	*118-79-6*									*10-120*
4-Terphenyl-d14	*1718-51-0*									*41-149*
1,4 Dioxane - EPA 8270D-SIM (ug/L) (WATER)										
1,4-Dioxane	123-91-1	0.15	0.075	ug/l	40-140	30	40-140	30	30	
1,4-Dioxane-d8	*17647-74-4*									*15-110*
1,4-Dioxane-d8 (IS)	17647-74-4			ug/l						
TCL Pesticides - EPA 8081B (WATER)										
Delta-BHC	319-86-8	0.02	0.00467	ug/l	30-150	20	30-150	30	30	
Lindane	58-89-9	0.02	0.00434	ug/l	30-150	20	30-150	30	30	
Alpha-BHC	319-84-6	0.02	0.00439	ug/l	30-150	20	30-150	30	30	
Beta-BHC	319-85-7	0.02	0.0056	ug/l	30-150	20	30-150	30	30	
Heptachlor	76-44-8	0.02	0.0031	ug/l	30-150	20	30-150	30	30	
Aldrin	309-00-2	0.02	0.00216	ug/l	30-150	20	30-150	30	30	
Heptachlor epoxide	1024-57-3	0.02	0.00415	ug/l	30-150	20	30-150	30	30	
Endrin	72-20-8	0.04	0.00429	ug/l	30-150	20	30-150	30	30	
Endrin aldehyde	7421-93-4	0.04	0.0081	ug/l	30-150	20	30-150	30	30	
Endrin ketone	53494-70-5	0.04	0.00477	ug/l	30-150	20	30-150	30	30	
Dieldrin	60-57-1	0.04	0.00429	ug/l	30-150	20	30-150	30	30	
4,4'-DDE	72-55-9	0.04	0.00381	ug/l	30-150	20	30-150	30	30	
4,4'-DDD	72-54-8	0.04	0.00464	ug/l	30-150	20	30-150	30	30	
4,4'-DDT	50-29-3	0.04	0.00432	ug/l	30-150	20	30-150	30	30	
Endosulfan I	959-98-8	0.02	0.00345	ug/l	30-150	20	30-150	30	30	
Endosulfan II	33213-65-9	0.04	0.00519	ug/l	30-150	20	30-150	30	30	
Endosulfan sulfate	1031-07-8	0.04	0.00481	ug/l	30-150	20	30-150	30	30	
Methoxychlor	72-43-5	0.2	0.00684	ug/l	30-150	20	30-150	30	30	
Toxaphene	8001-35-2	0.2	0.0627	ug/l	30-150	20	30-150	30	30	
cis-Chlordane	5103-71-9	0.02	0.00666	ug/l	30-150	20	30-150	30	30	
trans-Chlordane	5103-74-2	0.02	0.00627	ug/l	30-150	20	30-150	30	30	
Chlordane	57-74-9	0.2	0.0463	ug/l	30-150	20	30-150	30	30	
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*
Decachlorobiphenyl	*2051-24-3*									*30-150*

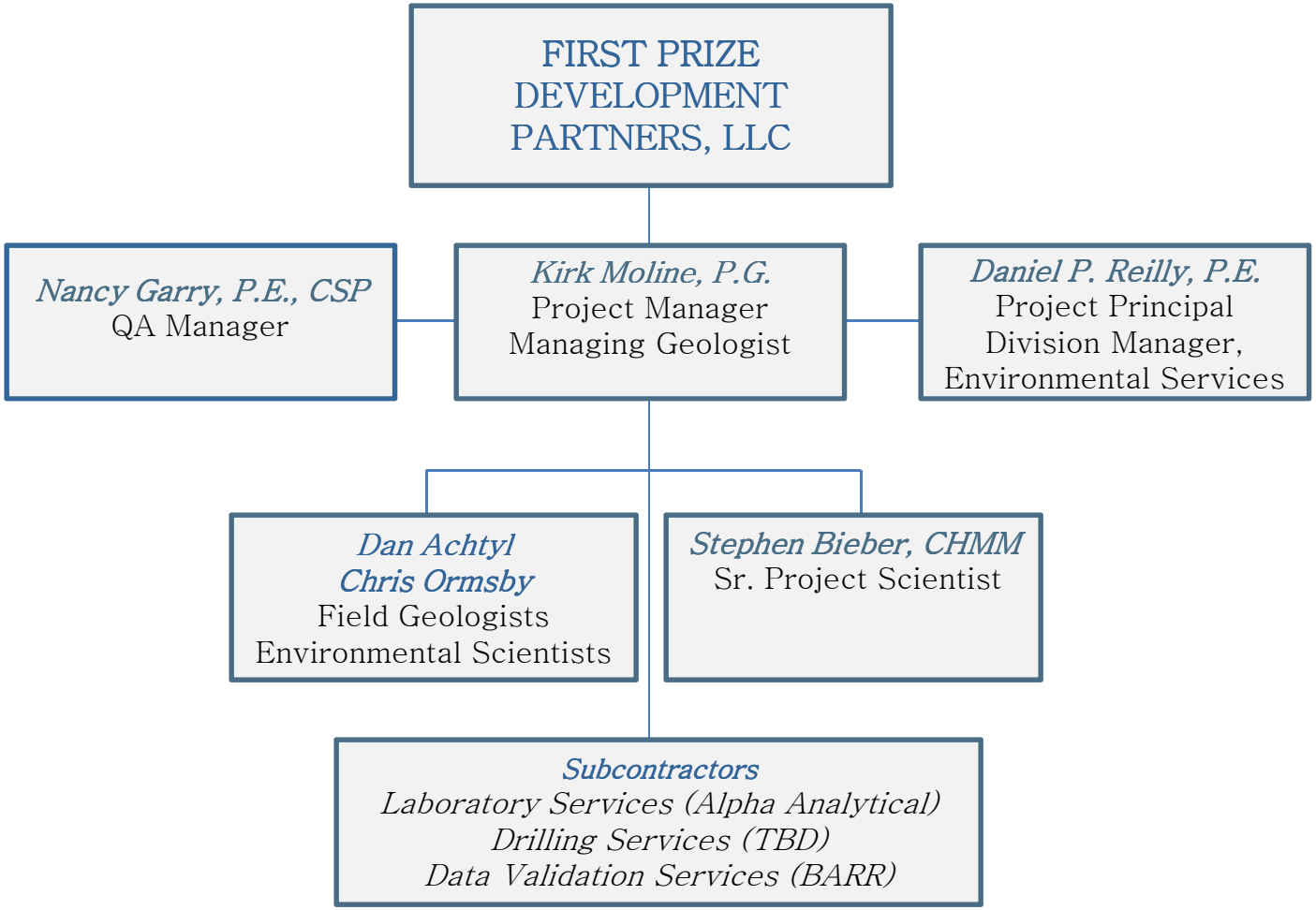
TABLE 2B: PARAMETERS - METHODS, LIMITS, ACCURACY AND PRECISION (WATER)
FIRST PRIZE CENTER BCP SITE
CITY OF ALBANY and TOWN OF COLONIE, ALBANY COUNTY

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria
TCL PCBs - EPA 8082A (WATER)										
Aroclor 1016	12674-11-2	0.083	0.019588	ug/l	40-140	50	40-140	50	50	
Aroclor 1221	11104-28-2	0.083	0.031872	ug/l	40-140	50	40-140	50	50	
Aroclor 1232	11141-16-5	0.083	0.027058	ug/l	40-140	50	40-140	50	50	
Aroclor 1242	53469-21-9	0.083	0.029548	ug/l	40-140	50	40-140	50	50	
Aroclor 1248	12672-29-6	0.083	0.022576	ug/l	40-140	50	40-140	50	50	
Aroclor 1254	11097-69-1	0.083	0.034611	ug/l	40-140	50	40-140	50	50	
Aroclor 1260	11096-82-5	0.083	0.01992	ug/l	40-140	50	40-140	50	50	
Aroclor 1262	37324-23-5	0.083	0.017098	ug/l	40-140	50	40-140	50	50	
Aroclor 1268	11100-14-4	0.083	0.027058	ug/l	40-140	50	40-140	50	50	
PCBs, Total	1336-36-3	0.083	0.017098	ug/l				50	50	
PCBs, Total	1336-36-3	0.083	0.017098	ug/l				50	50	
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*
Decachlorobiphenyl	*2051-24-3*									*30-150*
METALS by 6020A/7471B (WATER)										
Aluminum, Total	7429-90-5	0.01	0.00327	mg/l	80-120		75-125	20	20	
Antimony, Total	7440-36-0	0.004	0.000429	mg/l	80-120		75-125	20	20	
Arsenic, Total	7440-38-2	0.0005	0.000165	mg/l	80-120		75-125	20	20	
Barium, Total	7440-39-3	0.0005	0.000173	mg/l	80-120		75-125	20	20	
Beryllium, Total	7440-41-7	0.0005	0.000107	mg/l	80-120		75-125	20	20	
Cadmium, Total	7440-43-9	0.0002	0.0000599	mg/l	80-120		75-125	20	20	
Calcium, Total	7440-70-2	0.1	0.0394	mg/l	80-120		75-125	20	20	
Chromium, Total	7440-47-3	0.001	0.000178	mg/l	80-120		75-125	20	20	
Cobalt, Total	7440-48-4	0.0005	0.000163	mg/l	80-120		75-125	20	20	
Copper, Total	7440-50-8	0.001	0.000384	mg/l	80-120		75-125	20	20	
Iron, Total	7439-89-6	0.05	0.0191	mg/l	80-120		75-125	20	20	
Lead, Total	7439-92-1	0.001	0.000343	mg/l	80-120		75-125	20	20	
Magnesium, Total	7439-95-4	0.07	0.0242	mg/l	80-120		75-125	20	20	
Manganese, Total	7439-96-5	0.001	0.00044	mg/l	80-120		75-125	20	20	
Mercury, Total	7439-97-6	0.0002	0.000066	mg/l	80-120		75-125	20	20	
Nickel, Total	7440-02-0	0.002	0.000556	mg/l	80-120		75-125	20	20	
Potassium, Total	7440-09-7	0.1	0.0309	mg/l	80-120		75-125	20	20	
Selenium, Total	7782-49-2	0.005	0.00173	mg/l	80-120		75-125	20	20	
Silver, Total	7440-22-4	0.0004	0.000163	mg/l	80-120		75-125	20	20	
Sodium, Total	7440-23-5	0.1	0.0293	mg/l	80-120		75-125	20	20	
Thallium, Total	7440-28-0	0.0005	0.000143	mg/l	80-120		75-125	20	20	
Vanadium, Total	7440-62-2	0.005	0.00157	mg/l	80-120		75-125	20	20	
Zinc, Total	7440-66-6	0.01	0.00341	mg/l	80-120		75-125	20	20	
CYANIDE by 9010c/9012B (WATER)										
Cyanide, Total	57-12-5	0.005	0.0018	mg/l	85-115	20	80-120	20	20	

ATTACHMENT A

ORGANIZATIONAL CHART

C.T. MALE PROJECT ORGANIZATION – FIRST PRIZE CENTER SITE



ATTACHMENT B

PERSONNEL RESUMES

C. T. Male Associates

Kirk Moline, P.G., CEI, CES
Managing Geologist/Principal

Education:
Bachelor of Arts, Geological Science, SUNY Potsdam, Potsdam, NY

Professional Background:
Licensed Professional Geologist – NY

Environmental Assessment Association
- Certified Environmental Inspector
- Certified Environmental Specialist

Professional Affiliations:
Board Member, Town of Wilton Zoning Board of Appeals, 2005-2006

Vice Chair, Town of Wilton Water & Sewer Authority, 2006-Present

Continuing Education:

ASTM 1527-05 Phase I ESA Training and Certification

ASTM Risk Based Corrective Action Certification

Environmental Due Diligence in Real Estate and Commercial Transactions

Principals and Practice of Forced Air Remediation

Groundwater Pollution and Hydrology

REI Site Assessment of Real Estate for Hazardous Waste

OSHA 1910.120 HAZWOPER and Annual 8 Hour Certification

Hazardous Waste Management, Environmental Law, RPI

Mr. Moline has been with C. T. Male for over 20 years serving as a Senior Project Manager/Hydrogeologist. His experience is broad and has primarily focused on hazardous waste and petroleum spill site investigation and remediation, environmental site assessments, and exploration and development of municipal and private water supplies. With the passing of the 1996 NYS Clean Air Clean Water Environmental Bond Act, Mr. Moline has served as the Project Manager on many Environmental Restoration Program Projects, and several Brownfield Cleanup Program project sites. His experience also includes management of over 1,000 environmental site assessments, nearly 200 Phase II environmental site assessments, vapor intrusion assessments solid waste landfill closure hydrogeologic investigations, mineral resource evaluations, geophysical surveying, and expert witness testimony.

Notable Project Experience:

NYSDEC ERP & BCP Projects
- 188 Warburton & 33 Ashburton BCPs, Yonkers, NY
- Former Grand Union BCP, Fort Edward, NY
- Long Energy Site BCP Application, Albany, NY
- 312 Broadway & 314 Clinton Street, Schenectady, NY
- Pan American Tannery, Independent Leather & Risedorph Tannery, Gloversville, NY
- Durkee Street Parking Lot, Plattsburgh, NY
- South Troy Industrial Park, Troy, NY
- 99 North Main Street, 104 & 107 South Main Street, Dolgeville, NY
- 400 Broadway, Saranac Lake, NY
- Former Dix Avenue Drive-In Theater, Kingsbury, NY
- Former CP Rail Yard, Plattsburgh, NY
- South Troy Industrial Park, Troy, NY
- Public School #6, Yonkers, NY

Environmental Site Assessment Phase I & II
- Managed and performed over 3,000 assessments
- Land Reutilization Corp. of the Capital Region – Phase I ESAs & NEPA Reviews
- Albany County Land Bank, Multiple Phase I ESAs
- Petroleum Spill Investigation, Johnstown, NY
- Burgess Terminal, Scotia, NY
- Former YMCA, Saratoga Springs, NY
- Former IGA Supermarket, Greenwich, NY
- Former Texaco Terminal, Bethlehem, NY

C. T. Male Associates

Daniel P. Reilly, P.E.
Division Manager - Environmental Services
Director of Operations

Professional Background:
Licensed Professional Engineer – New York

Education:
Bachelor of Science, Environmental Engineering, Rensselaer Polytechnic Institute, Troy, NY

Professional Affiliations:
Eastern NY Chapter Air & Waste Management Association

Specialized Training:
OSHA 40-Hour Health & Safety Training

Mr. Reilly joined C.T. Male Associates in 1993 as an Environmental Engineer. He was subsequently offered and accepted responsibilities as an Owner and Principal, which includes the responsibility of representing the firm at many community and professional functions. In 2012 Mr. Reilly was promoted to Operations Manager of the Environmental Services Division, and was subsequently promoted to Division Manager of Environmental Services and the firm's Director of Operations. Mr. Reilly is responsible for the personnel, production and operations of the Environmental Services Group and for coordinating similar functions within the other Divisions. He manages and supervises a staff of 22 employees consisting of licensed professional engineers, certified geologists/hydro-geologists, industrial hygienists, scientists, and support staff. He is responsible for aligning appropriate staff to accommodate the production demands of many active projects within the Group. He also prepares and reviews proposals, budgets and contract documents, and performs quality reviews of project deliverables.

Mr. Reilly has managed two NYSOGS Term Contracts. Projects under these contracts have included:

- Renovation of a Historic Rest Area Building as the First Taste NY Facility, Todd Hill Rest Area
- Water System Improvements, Bedford Hills Correctional Facility
- WWTP, I684 Rest Area
- Replace Water Main, Clinton Correctional Facility
- Clean Waste Water Treatment Plant Building 44 Lagoons, Green Haven Correctional Facility
- Provide Lead Abatement of Water Storage Tank, Bedford Hill Correctional Facility
- Study to Evaluate Leach Field, Region 1 Duanesburg MSH
- Install Water Meters and Water Meter Pits, Hudson Correctional Facility
- Replace Water Distribution System, Elmira Correctional Facility
- Asbestos, Lead and Bird Dropping Sampling & Design Services, Eastern Correctional Facility

C. T. Male Associates

Nancy E. Garry, P.E., C.S.P.
Senior Environmental Engineer

Professional Background:
Licensed Professional Engineer – New York

Certified Safety Professional

Education:
Master of Arts, Environmental Engineering, Rensselaer Polytechnic Institute, Troy, NY

Bachelor of Arts, Chemistry/Biology, College of St. Rose, Albany, NY

Professional Affiliations:
NYS Society of Professional Engineers

Capital District Chapter, NYS Society of Professional Engineers, Director 2017-2019

Specialized Training:
OSHA 40-Hour Health & Safety Training

OSHA 10-Hour Construction Safety & Health

Ms. Garry joined C.T. Male in 2017 as a Senior Environmental Engineer. She has over 20 years experience in site investigation and remediation projects and environmental compliance. Ms. Garry also has extensive experience in OSHA and environmental, health and safety on-site compliance for industrial and government clients.

Ms. Garry is responsible for projects including Clean Air Act assessments and compliance; Risk Management Plans; chemical and petroleum bulk storage assessments and compliance; environmental audits; Phase 1 & 2 environmental site assessments; and various environmental engineering projects.

Notable Project Experience:

NYSDEC ERP & BCP

- Former Stevens & Thompson Paper Mill, Greenwich, NY, BCP
- Scolite Site, City of Troy, NY, ERP
- South Troy Waterfront, Troy, NY, NYS BOA (Brownfield Opportunity Assessment)
- Sawmill Place Remediation Area A, B, and C, Wallkill, NY, BCP
- Mechanicville Light Industrial Park, City of Mechanicville, NY, ERP
- 37 Commonwealth Drive, Wyandanch, NY, ERP

Ms. Garry has managed a three year NYSOGS and a seven year NYSDEC Term Contract. Projects under these contracts have included:

- Tank design packages for the removal and installation of ASTs for back up fuel sources and fueling stations at numerous Department of Corrections and Community Supervision facilities throughout NYS.
- Three NYSDOT former spills sites that required remediation, ongoing monitoring, and spill closure.
- Managed approx. twenty five projects under the NYSDEC contract that included site characterizations, remedial investigations, feasibility studies, and site management throughout NYS.

C. T. Male Associates

Stephen H. Bieber, CHMM
Environmental Scientist III

Education:
Bachelor of Science, Environmental Science, SUNY Plattsburgh, Plattsburgh, New York

Specialized Training:
OSHA 40-Hour Health & Safety Training
OSHA 10-Hour Construction Safety Training

Certifications
IHMM Certified Hazardous Materials Manager (CHMM)

Mr. Bieber joined C.T. Male in 2004. His duties include the preparation of budgets, applications, work plans, specifications, subcontractor acquisition and reports of findings for Environmental Restoration, Brownfield and Superfund projects; Environmental Site Assessments; groundwater investigations/remediation; tank closures, and subsurface investigations.

Notable Project Experience:

NYSDEC ERP & BCP

- Saint-Gobain Performance Plastics, NY, VT & NH
- 354 Broadway Site, Fort Edward, NY
- 312 Broadway Site, Schenectady, NY
- Cottage Gardens, Yonkers, NY
- Castleton Paperboard, Castleton On Hudson, NY
- Former Miron Pre-Cast Site, Ulster, NY
- 48 Orchard Street Site, Newburgh, NY
- 33 Ashburton Avenue Site, Yonkers, NY
- 350-352 Liberty Street Site, Newburgh, NY
- 104 and 107 Main Street, Dolgeville, NY
- 400 Broadway, Saranac Lake, NY
- Old Champlain Mill, Whitehall, NY
- Schuyler Heights Fire District Site, Colonie, NY
- Bedford Hills Water Tower Site, Bedford Hills, NY
- Former Dix Avenue Drive-In Theater, Kingsbury, NY
- Durkee Street Parking Lot Site, Plattsburgh, NY
- Former Hettling Farm, Clermont, NY
- South Troy Industrial Park, Troy, NY
- Victory Mills Site, Victory Mills, NY

Phase I ESA's

- Conducted several hundred Phase I ESA's and Transaction Screen Assessments (TSA).

Phase II ESA's, Tank Closures & Remediation

- Conducted several Phase II Environmental Site Assessments. Work included Ground Penetrating Radar Surveys, test borings, monitoring wells, dye testing of drainage systems and project reporting.

Field Work

- Conducted drilling and construction observation, collection of media samples, and coordination with subcontractors.

Experience

Ward Swanson has 20 years of experience in environmental quality assurance and quality control. He has assisted on some of most complex analytical issues faced by industry and regulatory authorities related to the preservation or restoration of the environment. Ward is a nationally recognized expert on laboratory regulations, analytical methodology and certification updates, and internal database quality. He leads Barr's data quality management team, which is responsible for reviewing and reporting more than four million dollars of analytical data for Barr's clients each year. Ward's responsibilities include annual examination and improvements to the quality management system, implementing the company laboratory audit program, development of quality assurance project plans (QAPPs), reviewing and updating all Barr standard operating procedures, and overseeing Barr's analytical system operations.

Ward often coordinates with laboratories to implement specialty analysis for unique site conditions. Examples of that work include hydrocarbon fingerprinting, low-level mercury analysis, dioxin/furan analysis, and emerging chemicals of environmental concern such as perfluorochemicals.

Example of Ward's experience includes:

- Preparing over 30 QAPPs for state and federal programs in the past 10 years, including several for U.S. Environmental Protection Agency brownfields grant programs. These have included:
  - Working with the Hennepin County environmental staff to write and implement one of the first QAPPs to be used in piloting the USPA brownfields grant program in this region for site investigation and cleanup. Continues to work with the County to provide data validation and QAPP amendments to assure that their QAPP remains a usable document that is applicable for their investigation and clean-up efforts.
  - Working with the Fond du Lac Indian Reservation environmental staff to develop and implement a QAPP for the investigation and cleanup of potentially contaminated properties located on and near their reservation.
  - Assisting the City of Duluth to develop and implement an investigation and cleanup grant QAPP to address multiple potentially contaminated properties in the Duluth area.
  - Working with the City of New Brighton to develop a QAPP for the investigation and cleanup grant program for efforts related to large redevelopment projects within the city limits.
- Working in an expert witness capacity for a legal dispute involving sampling and analytical issues around the placement of power lines near private property. This project involved giving an expert opinion on the laboratory analysis and laboratory analytical technique.

- Serving as quality assurance officer for the laboratory of Flint Hills Resources' refinery in Rosemount, Minnesota. Responsibilities include performing audits, upgrading quality systems such as data management, and data handling.
- Serving as project manager for groundwater monitoring for a former boiler ash landfill in Cottage Grove, Minnesota. Work included coordinating sample collection and reporting for compliance with Minnesota solid waste rules.

Examples of Ward's experience prior to his joining Barr include:

- Acting as operations manager for Matrix Technologies, Inc., a company that specializes in direct-push sampling and mobile laboratory services for site assessment data gathering. Responsibilities included project management, laboratory direction, chemist training, quality control, chemical inventory control, and establishing laboratory standard operating procedures.
- Operating a gas chromatograph (GC), HPLC, UV-Vis Spectrophotometer, IR, total halogen analyzer, as well as software such as HP Chemstation, EZ Chrome, and Apex Chromatography Software.

Education

B.A., Chemistry, Gustavus Adolphus College, 1991

Memberships

Former president, Minnesota Chromatography Forum

Former treasurer, Minnesota Laboratory Association

Presentations/ Publications

"The Use of Isotopically Labeled Perfluorooctanic Acid as a Quality Assurance Tool in Measuring the Effectiveness of Multimatrix Sampling and Analysis for Ammonium Perfluorooctanate." Coauthor. Presentation at the 26th Annual Society of Environmental Toxicology and Chemistry North America Meeting. 2005.

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DANA BAKER PASI
Environmental Scientist

Experience

Dana Baker Pasi has more than four years of experience providing technical support for data quality assurance and related services. She often coordinates with field staff and laboratories to implement analysis for site-specific conditions. Prior to this, Dana had three years of experience as an environmental data management technician at Barr, which included assisting with data entry and verification of laboratory data into EQuIS databases; producing database documentation; and preparing and sending out monitoring reports for several remediation sites. Dana's work at Barr has included:

- Coordinating sample events for a variety of environmental remediation and investigation sites, including railways, former manufactured-gas-plant sites, mining sites, landfill sites, pipelines, and voluntary investigation and cleanup sites. Responsibilities include acting as lab liaison, performing laboratory sampling audits, and examining analytical data to data-quality-control measures.
- Preparing quality assurance project plans (QAPPs) and sampling and analysis plans (SAPs); validating analytical data under both contract laboratory program (CLP) and non-CLP data management guidelines; coordinating laboratory analysis and services; and preparing analytical data validation reports.
- Assisting with the data management team for internal database quality and training new staff on quality assurance/quality control (QA/QC) systems.
- Preparing analytical cost estimates and work orders.
- Providing guidance to client's regarding industrial stormwater compliance.
- Following method-specific quality assurance criteria.
- Following the USEPA's Contract Laboratory Program National Functional Guidelines for data validation.

Prior to joining Barr, Dana served as a pharmacy technician for a hospital in St. Paul, Minnesota. She also served as a research administrator for the Mount Sinai School of Medicine in New York City, including working as senior administrator on a $14 million government contract, which included working alongside NIH officials to mediate various protocols, compiling semi-annual progress reports, and organizing and administering lectures and conferences.

Education

BS, Biology, University of Minnesota, 2005

Training

Data Evaluation for Vapor Intrusion Studies, Air & Waste Management Association (2014)

Introduction to Risk Assessment Guidance, United States Environmental Protection Agency (2011)

Minnesota Wastewater Operators Association Annual Laboratory Training, Minnesota Department of Health (2011)

Industrial Stormwater Sampling and Monitoring Training, Minnesota Pollution Control Agency (2011)

Introduction to Groundwater Investigations, United States Environmental Protection Agency (2010)

EQuIS Power User Training, EarthSoft (2009)

Experience

Terri Olson has 31 years of experience working with analytical laboratory data. She is currently a senior consultant whose responsibilities include performing periodic review and auditing of analytical facilities and their procedures; evaluating laboratory data; and reviewing and making improvements to Barr's quality management system, which includes updates to Barr's standard operating procedures for field work and data evaluation and quality management plan. She has considerable experience with the wide variety of regulatory methods used for environmental analyses and has worked with many of the mining analyses. Terri's project work at Barr has included:

- Working directly with state and federal regulatory agencies in developing and revising quality assurance project plans (QAPPs).
- Reviewing sampling and analysis plans, QAPPs, and data evaluation reports.
- Evaluating analytical data under both contract laboratory program (CLP) and non-CLP guidelines.
- Coordinating laboratory analysis and services for air, water, wild rice, and soil projects.
- Preparing analytical data evaluation reports.
- Troubleshooting data issues for clients.
- Assisting with the quality management system for a client's National Pollutant Discharge Elimination System (NPDES) laboratory.
- Conducting technical laboratory and field-sampling audits.

Prior to working at Barr, Terri's work experience included:

- Serving as client manager for an analytical laboratory in St. Paul, Minnesota. Responsibilities include:
- Coordinating client needs and requirements with laboratory capabilities.
- Setting up projects with information specific to client needs to reduce potential issues when analyzing and reporting.
- Reviewing QAPPs.
- Reviewing data within reports and acting on any discrepancies found.
- Generating laboratory reports and invoices.
- Serving as LIMS manager for an analytical laboratory in St. Paul, Minnesota. Responsibilities include:
  - Setting up analyses and clients using Promium LIMS.
  - Training new employees on use of the LIMS for sample receiving, project management, invoicing, and reporting.
  - Preparing report, bid, and invoice formats using Crystal Reports.
  - Interfacing with vendor to develop and maintain custom EDD formats.
  - Training employees on new features within LIMS updates.

- Serving as QA/QC coordinator for an analytical laboratory in St. Paul, Minnesota. Responsibilities include:
  - Implementing ISO 9001:2000 standards.
  - Managing the control of documents and records.
  - Implementing laboratory certifications and accreditations.
  - Assuring documentation and resolution of corrective actions and client complaints.
  - Coordinating proficiency-testing program.
  - Updating and reviewing control limits.
  - Reviewing and revising quality assurance manual.
  - Monitoring and coordinating review of standard operating procedures.
  - Coordinating and conducting internal audits.
  - Coordinating outside auditing processes and providing required follow-up.
  - Developing Excel spreadsheets for calculations and charting.
  - Reviewing and signing various laboratory reports.
  - Training and supervising QA/QC assistants.
  - Conducting training sessions on QA topics.
- Serving as lab administrator for an analytical laboratory in LaCrosse, Wisconsin. Responsibilities included:
  - Implementing and supervising all internal processes necessary from sample receipt to report distribution.
  - Developing standard forms for lab reports and invoices.
  - Responding to client requests for quotes, status, results, and interpretation.
  - Assisting in coordinating and facilitating work of support staff.
- Serving as quality control coordinator and microbiologist for an analytical laboratory in LaCrosse, Wisconsin. Responsibilities included:
  - Reviewing results prior to final submittal to the laboratory director.
  - Tracking analyst qualifications and corrective action statements.
  - Performing internal audits on data.
  - Updating control and warning limits.
  - Creating QC spreadsheets for clients.
  - Serving as liaison for state certification audits.
  - Training and supervising student interns.
  - Analyzing proficiency samples for compliance.
  - Developing immunoassay techniques.

Education

BS, Microbiology, University of Wisconsin – LaCrosse, 1984
minor: Chemistry

Training

Elements of Analytical Laboratory Data Quality (2015)

Mechanics of Project Management (2015)

ISO/IEC 17025 Internal Auditor Training & Workshop (2014)

ISO/IEC 17025 Measurement Uncertainty Workshop (2014)

Understanding Water Chemistry for Practical Application (2013)

40 Hour OSHA HAZWOPER (2012)

Internal Auditor Training Instructor for ISO 9001:2008 (2010)

Internal Auditor Training Instructor for ISO 9001:2000 (2008)

LIMS Management Training (2004)

Internal Auditor Training for ISO 9001:2000 (2003)

Affiliations

Minnesota Laboratory Association (2001-2006); Secretary (December 2002-April 2005)

Minnesota Rules Advisory Committee (2001-2006)

MN-ELAP Advisory Committee (2012)

MPCA Laboratory Registration Steering Committee (2012-present

MN-ELAP Assessor Selection Committee (February 2013-December 2014)

ATTACHMENT C

CERTIFICATIONS

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Lead on Air Filter	EPA 40 CFR Part 50 App. G	AE	x	Y	
NY	PCBs and Aroclors	EPA TO-10A	AE	x	Y	
NY	Acenaphthene	EPA TO-13A Full Scan	AE	x	Y	
NY	Acenaphthylene	EPA TO-13A Full Scan	AE	x	Y	
NY	Anthracene	EPA TO-13A Full Scan	AE	x	Y	
NY	Benzo(a)anthracene	EPA TO-13A Full Scan	AE	x	Y	
NY	Benzo(a)pyrene	EPA TO-13A Full Scan	AE	x	Y	
NY	Benzo(b)fluoranthene	EPA TO-13A Full Scan	AE	x	Y	
NY	Benzo(ghi)perylene	EPA TO-13A Full Scan	AE	x	Y	
NY	Benzo(k)fluoranthene	EPA TO-13A Full Scan	AE	x	Y	
NY	Chrysene	EPA TO-13A Full Scan	AE	x	Y	
NY	Dibenzo(a,h)anthracene	EPA TO-13A Full Scan	AE	x	Y	
NY	Fluoranthene	EPA TO-13A Full Scan	AE	x	Y	
NY	Fluorene	EPA TO-13A Full Scan	AE	x	Y	
NY	Indeno(1,2,3-cd)pyrene	EPA TO-13A Full Scan	AE	x	Y	
NY	Naphthalene	EPA TO-13A Full Scan	AE	x	Y	
NY	Phenanthrene	EPA TO-13A Full Scan	AE	x	Y	
NY	Pyrene	EPA TO-13A Full Scan	AE	x	Y	
NY	1,1,1-Trichloroethane	EPA TO-15	AE	x	Y	
NY	1,1,2,2-Tetrachloroethane	EPA TO-15	AE	x	Y	
NY	1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA TO-15	AE	x	Y	
NY	1,1,2-Trichloroethane	EPA TO-15	AE	x	Y	
NY	1,1-Dichloroethane	EPA TO-15	AE	x	Y	
NY	1,1-Dichloroethene	EPA TO-15	AE	x	Y	
NY	1,2,4-Trichlorobenzene	EPA TO-15	AE	x	Y	
NY	1,2,4-Trimethylbenzene	EPA TO-15	AE	x	Y	
NY	1,2-Dibromo-3-Chloropropane (DBCP)	EPA TO-15	AE	x	Y	
NY	1,2-Dibromoethane (EDB)	EPA TO-15	AE	x	Y	
NY	1,2-Dichlorobenzene	EPA TO-15	AE	x	Y	
NY	1,2-Dichloroethane	EPA TO-15	AE	x	Y	
NY	1,2-Dichloropropane	EPA TO-15	AE	x	Y	
NY	1,2-Dichlorotetrafluoroethane	EPA TO-15	AE	x	Y	
NY	1,3,5-Trimethylbenzene	EPA TO-15	AE	x	Y	
NY	1,3-Butadiene	EPA TO-15	AE	x	Y	
NY	1,3-Dichlorobenzene	EPA TO-15	AE	x	Y	
NY	1,4-Dichlorobenzene	EPA TO-15	AE	x	Y	
NY	1,4-Dioxane	EPA TO-15	AE	x	Y	
NY	2,2,4-Trimethylpentane	EPA TO-15	AE	x	Y	
NY	2-Butanone	EPA TO-15	AE	x	Y	
NY	2-Chlorotoluene	EPA TO-15	AE	x	Y	
NY	3-Chloropropene	EPA TO-15	AE	x	Y	
NY	4-Methyl-2-Pentanone	EPA TO-15	AE	x	Y	
NY	Acetaldehyde	EPA TO-15	AE	x	Y	
NY	Acetone	EPA TO-15	AE	x	Y	
NY	Acetonitrile	EPA TO-15	AE	x	Y	
NY	Acrolein	EPA TO-15	AE	x	Y	
NY	Acrylonitrile	EPA TO-15	AE	x	Y	
NY	Benzene	EPA TO-15	AE	x	Y	
NY	Benzyl Chloride	EPA TO-15	AE	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Bromodichloromethane	EPA TO-15	AE	x	Y	
NY	Bromoform	EPA TO-15	AE	x	Y	
NY	Bromomethane	EPA TO-15	AE	x	Y	
NY	Carbon Disulfide	EPA TO-15	AE	x	Y	
NY	Carbon Tetrachloride	EPA TO-15	AE	x	Y	
NY	Chlorobenzene	EPA TO-15	AE	x	Y	
NY	Chloroethane	EPA TO-15	AE	x	Y	
NY	Chloroform	EPA TO-15	AE	x	Y	
NY	Chloromethane	EPA TO-15	AE	x	Y	
NY	cis-1,2-Dichloroethene	EPA TO-15	AE	x	Y	
NY	cis-1,3-Dichloropropene	EPA TO-15	AE	x	Y	
NY	Cyclohexane	EPA TO-15	AE	x	Y	
NY	Dibromochloromethane	EPA TO-15	AE	x	Y	
NY	Dichlorodifluoromethane	EPA TO-15	AE	x	Y	
NY	Ethylbenzene	EPA TO-15	AE	x	Y	
NY	Hexachlorobutadiene	EPA TO-15	AE	x	Y	
NY	Isopropyl Alcohol	EPA TO-15	AE	x	Y	
NY	Isopropylbenzene	EPA TO-15	AE	x	Y	
NY	m+p-Xylene	EPA TO-15	AE	x	Y	
NY	Methyl Alcohol (methanol)	EPA TO-15	AE	x	Y	
NY	Methyl Methacrylate	EPA TO-15	AE	x	Y	
NY	Methyl tert-butyl ether	EPA TO-15	AE	x	Y	
NY	Methylene Chloride	EPA TO-15	AE	x	Y	
NY	Naphthalene	EPA TO-15	AE	x	Y	
NY	n-Heptane	EPA TO-15	AE	x	Y	
NY	n-Hexane	EPA TO-15	AE	x	Y	
NY	o-Xylene	EPA TO-15	AE	x	Y	
NY	Styrene	EPA TO-15	AE	x	Y	
NY	Tert-Butyl Alcohol	EPA TO-15	AE	x	Y	
NY	Tetrachloroethene	EPA TO-15	AE	x	Y	
NY	Toluene	EPA TO-15	AE	x	Y	
NY	Total Xylenes	EPA TO-15	AE	x	Y	
NY	Trans-1,2-Dichloroethene	EPA TO-15	AE	x	Y	
NY	Trans-1,3-Dichloropropene	EPA TO-15	AE	x	Y	
NY	Trichloroethene	EPA TO-15	AE	x	Y	
NY	Trichlorofluoromethane	EPA TO-15	AE	x	Y	
NY	Vinyl acetate	EPA TO-15	AE	x	Y	
NY	Vinyl Bromide	EPA TO-15	AE	x	Y	
NY	Vinyl Chloride	EPA TO-15	AE	x	Y	
NY	Turbidity	EPA 180.1	DW	Y	x	
NY	Aluminum	EPA 200.7	DW	x	Y	
NY	Barium	EPA 200.7	DW	x	Y	
NY	Beryllium	EPA 200.7	DW	x	Y	
Ny	Boron	EPA 200.7	DW	x	Y	
NY	Cadmium	EPA 200.7	DW	x	Y	
NY	Calcium	EPA 200.7	DW	x	Y	
NY	Calcium Hardness	EPA 200.7	DW	x	Y	
NY	Chromium	EPA 200.7	DW	x	Y	
NY	Copper	EPA 200.7	DW	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Iron	EPA 200.7	DW	x	Y	
NY	Magnesium	EPA 200.7	DW	x	Y	
NY	Manganese	EPA 200.7	DW	x	Y	
NY	Nickel	EPA 200.7	DW	x	Y	
NY	Potassium	EPA 200.7	DW	x	Y	
NY	Silver	EPA 200.7	DW	x	Y	
NY	Sodium	EPA 200.7	DW	x	Y	
Ny	Vanadium	EPA 200.7	DW	x	Y	
NY	Zinc	EPA 200.7	DW	x	Y	
NY	Aluminum	EPA 200.8	DW	x	Y	
NY	Antimony	EPA 200.8	DW	x	Y	
NY	Arsenic	EPA 200.8	DW	x	Y	
NY	Barium	EPA 200.8	DW	x	Y	
NY	Beryllium	EPA 200.8	DW	x	Y	
NY	Cadmium	EPA 200.8	DW	x	Y	
NY	Copper	EPA 200.8	DW	x	Y	
NY	Lead	EPA 200.8	DW	x	Y	
Ny	Manganese	EPA 200.8	DW	x	Y	
NY	Nickel	EPA 200.8	DW	x	Y	
NY	Selenium	EPA 200.8	DW	x	Y	
NY	Silver	EPA 200.8	DW	x	Y	
NY	Thallium	EPA 200.8	DW	x	Y	
NY	Vanadium	EPA 200.8	DW	x	Y	
NY	Zinc	EPA 200.8	DW	x	Y	
NY	Mercury	EPA 245.1	DW	x	Y	
NY	Chloride	EPA 300.0	DW	Y	x	
NY	Fluoride	EPA 300.0	DW	Y	x	
NY	Sulfate	EPA 300.0	DW	Y	x	
NY	Perchlorate	EPA 332.0	DW	Y	x	
NY	1,2-Dibromo-3-Chloropropane (DBCP)	EPA 504.1	DW	Y	x	
NY	1,2-Dibromoethane (EDB)	EPA 504.1	DW	Y	x	
NY	1,1,1,2-Tetrachloroethane	EPA 524.2	DW	Y	x	
NY	1,1,1-Trichloroethane	EPA 524.2	DW	Y	x	
NY	1,1,2,2-Tetrachloroethane	EPA 524.2	DW	Y	x	
NY	1,1,2-Trichloroethane	EPA 524.2	DW	Y	x	
NY	1,1-Dichloroethane	EPA 524.2	DW	Y	x	
NY	1,1-Dichloroethene	EPA 524.2	DW	Y	x	
NY	1,1-Dichloropropene	EPA 524.2	DW	Y	x	
NY	1,2,3-Trichlorobenzene	EPA 524.2	DW	Y	x	
NY	1,2,3-Trichloropropane	EPA 524.2	DW	Y	x	
NY	1,2,4-Trichlorobenzene	EPA 524.2	DW	Y	x	
NY	1,2,4-Trimethylbenzene	EPA 524.2	DW	Y	x	
NY	1,2-Dichlorobenzene	EPA 524.2	DW	Y	x	
NY	1,2-Dichloroethane	EPA 524.2	DW	Y	x	
NY	1,2-Dichloropropane	EPA 524.2	DW	Y	x	
NY	1,3,5-Trimethylbenzene	EPA 524.2	DW	Y	x	
NY	1,3-Dichlorobenzene	EPA 524.2	DW	Y	x	
NY	1,3-Dichloropropane	EPA 524.2	DW	Y	x	
NY	1,4-Dichlorobenzene	EPA 524.2	DW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	2,2-Dichloropropane	EPA 524.2	DW	Y	x	
NY	2-Chlorotoluene	EPA 524.2	DW	Y	x	
NY	4-Chlorotoluene	EPA 524.2	DW	Y	x	
NY	Benzene	EPA 524.2	DW	Y	x	
NY	Bromobenzene	EPA 524.2	DW	Y	x	
NY	Bromochloromethane	EPA 524.2	DW	Y	x	
NY	Bromodichloromethane	EPA 524.2	DW	Y	x	
NY	Bromoform	EPA 524.2	DW	Y	x	
NY	Bromomethane	EPA 524.2	DW	Y	x	
NY	Carbon Tetrachloride	EPA 524.2	DW	Y	x	
NY	Chlorobenzene	EPA 524.2	DW	Y	x	
NY	Chloroethane	EPA 524.2	DW	Y	x	
NY	Chloroform	EPA 524.2	DW	Y	x	
NY	Chloromethane	EPA 524.2	DW	Y	x	
NY	cis-1,2-Dichloroethene	EPA 524.2	DW	Y	x	
NY	cis-1,3-Dichloropropene	EPA 524.2	DW	Y	x	
NY	Dibromochloromethane	EPA 524.2	DW	Y	x	
NY	Dibromomethane	EPA 524.2	DW	Y	x	
NY	Dichlorodifluoromethane	EPA 524.2	DW	Y	x	
NY	Ethylbenzene	EPA 524.2	DW	Y	x	
NY	Hexachlorobutadiene	EPA 524.2	DW	Y	x	
NY	Isopropylbenzene	EPA 524.2	DW	Y	x	
NY	Methyl tert-butyl ether	EPA 524.2	DW	Y	x	
NY	Methylene chloride	EPA 524.2	DW	Y	x	
NY	Naphthalene	EPA 524.2	DW	Y	x	
NY	n-Butylbenzene	EPA 524.2	DW	Y	x	
NY	n-Propylbenzene	EPA 524.2	DW	Y	x	
NY	p-Isopropyltoluene	EPA 524.2	DW	Y	x	
NY	sec-Butylbenzene	EPA 524.2	DW	Y	x	
NY	Styrene	EPA 524.2	DW	Y	x	
NY	Tert-Butylbenzene	EPA 524.2	DW	Y	x	
NY	Tetrachloroethene	EPA 524.2	DW	Y	x	
NY	Toluene	EPA 524.2	DW	Y	x	
NY	Total Trihalomethanes	EPA 524.2	DW	Y	x	
NY	Total Xylenes	EPA 524.2	DW	Y	x	
NY	Trans-1,2-Dichloroethene	EPA 524.2	DW	Y	x	
NY	Trans-1,3-Dichloropropene	EPA 524.2	DW	Y	x	
NY	Trichloroethene	EPA 524.2	DW	Y	x	
NY	Trichlorofluoromethane	EPA 524.2	DW	Y	x	
NY	Vinyl chloride	EPA 524.2	DW	Y	x	
NY	Perfluoro-n-octanoic acid (PFOA)	EPA 537	DW	x	Y	
NY	Perfluorooctanesulfonic acid (PFOS)	EPA 537	DW	x	Y	
NY	Color	SM 2120B	DW	Y	x	
NY	Turbidity	SM 2130B	DW	Y	x	
NY	Odor	SM 2150B	DW	Y	x	
NY	Alkalinity	SM 2320B	DW	Y	x	
NY	Specific Conductance	SM 2510B	DW	Y	x	
NY	Total Dissolved Solids	SM 2540C	DW	Y	x	
NY	Cyanide, Distillation	SM 4500 CN C	DW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Cyanide, Total	SM 4500 CN E	DW	Y	x	
NY	Fluoride	SM 4500 F-C	DW	Y	x	
NY	Nitrate-N	SM 4500 NO3-F	DW	Y	x	
NY	Nitrite-N	SM 4500 NO3-F	DW	Y	x	
NY	Total Organic Carbon	SM 5310C	DW	Y	x	
NY	Heterotrophic Plate Count	SM 9215B	DW	Y	x	
NY	Coliform, Total	SM 9223B	DW	Y	x	
NY	E. Coli	SM 9223B	DW	Y	x	P/A
NY	E. Coli	SM 9223B	DW	Y	x	Enumeration
NY	Specific Conductance	EPA 120.1	NPW	Y	x	
NY	Mercury	EPA 1631E	NPW	x	Y	
NY	Oil & Grease	EPA 1664A	NPW	Y	x	
NY	Oil & Grease (TPH)	EPA 1664A	NPW	Y	x	
NY	Turbidity	EPA 180.1	NPW	Y	x	
NY	Aluminum	EPA 200.7	NPW	x	Y	
NY	Antimony	EPA 200.7	NPW	x	Y	
NY	Arsenic	EPA 200.7	NPW	x	Y	
NY	Barium	EPA 200.7	NPW	x	Y	
NY	Beryllium	EPA 200.7	NPW	x	Y	
NY	Boron	EPA 200.7	NPW	x	Y	
NY	Cadmium	EPA 200.7	NPW	x	Y	
NY	Calcium	EPA 200.7	NPW	x	Y	
NY	Chromium	EPA 200.7	NPW	x	Y	
NY	Cobalt	EPA 200.7	NPW	x	Y	
NY	Copper	EPA 200.7	NPW	x	Y	
NY	Iron	EPA 200.7	NPW	x	Y	
NY	Lead	EPA 200.7	NPW	x	Y	
NY	Magnesium	EPA 200.7	NPW	x	Y	
NY	Manganese	EPA 200.7	NPW	x	Y	
NY	Molybdenum	EPA 200.7	NPW	x	Y	
NY	Nickel	EPA 200.7	NPW	x	Y	
NY	Potassium	EPA 200.7	NPW	x	Y	
NY	Selenium	EPA 200.7	NPW	x	Y	
NY	Silica, Dissolved	EPA 200.7	NPW	x	Y	
NY	Silver	EPA 200.7	NPW	x	Y	
NY	Sodium	EPA 200.7	NPW	x	Y	
NY	Strontium	EPA 200.7	NPW	x	Y	
NY	Thallium	EPA 200.7	NPW	x	Y	
NY	Tin	EPA 200.7	NPW	x	Y	
NY	Titanium	EPA 200.7	NPW	x	Y	
NY	Total Hardness (CaCO3)	EPA 200.7	NPW	x	Y	
NY	Vanadium	EPA 200.7	NPW	x	Y	
NY	Zinc	EPA 200.7	NPW	x	Y	
NY	Aluminum	EPA 200.8	NPW	x	Y	
NY	Antimony	EPA 200.8	NPW	x	Y	
NY	Arsenic	EPA 200.8	NPW	x	Y	
NY	Barium	EPA 200.8	NPW	x	Y	
NY	Beryllium	EPA 200.8	NPW	x	Y	
NY	Cadmium	EPA 200.8	NPW	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Chromium	EPA 200.8	NPW	x	Y	
NY	Cobalt	EPA 200.8	NPW	x	Y	
NY	Copper	EPA 200.8	NPW	x	Y	
NY	Lead	EPA 200.8	NPW	x	Y	
NY	Manganese	EPA 200.8	NPW	x	Y	
NY	Molybdenum	EPA 200.8	NPW	x	Y	
NY	Nickel	EPA 200.8	NPW	x	Y	
NY	Selenium	EPA 200.8	NPW	x	Y	
NY	Silver	EPA 200.8	NPW	x	Y	
NY	Thallium	EPA 200.8	NPW	x	Y	
NY	Vanadium	EPA 200.8	NPW	x	Y	
NY	Zinc	EPA 200.8	NPW	x	Y	
NY	Mercury	EPA 245.1	NPW	x	Y	
NY	Bromide	EPA 300.0	NPW	Y	x	
NY	Chloride	EPA 300.0	NPW	Y	x	
NY	Fluoride	EPA 300.0	NPW	Y	x	
NY	Nitrate-N	EPA 300.0	NPW	Y	x	
NY	Sulfate	EPA 300.0	NPW	Y	x	
NY	Acid Digestion of Waters	EPA 3005A	NPW	x	Y	
NY	Microwave Acid Digestion	EPA 3015A	NPW	x	Y	
NY	Acid Digestion of Waters	EPA 3020A	NPW	x	Y	
NY	Ammonia	EPA 350.1	NPW	Y	x	
NY	Nitrogen, Total Kjeldahl	EPA 351.1	NPW	Y	x	
NY	Separatory Funnel Extraction	EPA 3510C	NPW	Y	Y	
NY	Nitrate-N	EPA 353.2	NPW	Y	x	
NY	Nitrate-Nitrite	EPA 353.2	NPW	Y	x	
NY	Chemical Oxygen Demand	EPA 410.4	NPW	Y	x	
NY	Total Phenolics	EPA 420.1	NPW	Y	x	
NY	Purge & Trap Aqueous	EPA 5030C	NPW	Y	x	
NY	Aluminum	EPA 6010C	NPW	x	Y	
NY	Antimony	EPA 6010C	NPW	x	Y	
NY	Arsenic	EPA 6010C	NPW	x	Y	
NY	Barium	EPA 6010C	NPW	x	Y	
NY	Beryllium	EPA 6010C	NPW	x	Y	
NY	Boron	EPA 6010C	NPW	x	Y	
NY	Cadmium	EPA 6010C	NPW	x	Y	
NY	Calcium	EPA 6010C	NPW	x	Y	
NY	Chromium	EPA 6010C	NPW	x	Y	
NY	Cobalt	EPA 6010C	NPW	x	Y	
NY	Copper	EPA 6010C	NPW	x	Y	
NY	Iron	EPA 6010C	NPW	x	Y	
NY	Lead	EPA 6010C	NPW	x	Y	
NY	Magnesium	EPA 6010C	NPW	x	Y	
NY	Manganese	EPA 6010C	NPW	x	Y	
NY	Molybdenum	EPA 6010C	NPW	x	Y	
NY	Nickel	EPA 6010C	NPW	x	Y	
NY	Potassium	EPA 6010C	NPW	x	Y	
NY	Selenium	EPA 6010C	NPW	x	Y	
NY	Silver	EPA 6010C	NPW	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Sodium	EPA 6010C	NPW	x	Y	
NY	Strontium	EPA 6010C	NPW	x	Y	
NY	Thallium	EPA 6010C	NPW	x	Y	
NY	Tin	EPA 6010C	NPW	x	Y	
NY	Vanadium	EPA 6010C	NPW	x	Y	
NY	Zinc	EPA 6010C	NPW	x	Y	
NY	Aluminum	EPA 6020A	NPW	x	Y	
NY	Antimony	EPA 6020A	NPW	x	Y	
NY	Arsenic	EPA 6020A	NPW	x	Y	
NY	Barium	EPA 6020A	NPW	x	Y	
NY	Beryllium	EPA 6020A	NPW	x	Y	
NY	Boron	EPA 6020A	NPW	x	Y	
NY	Cadmium	EPA 6020A	NPW	x	Y	
NY	Calcium	EPA 6020A	NPW	x	Y	
NY	Chromium	EPA 6020A	NPW	x	Y	
NY	Cobalt	EPA 6020A	NPW	x	Y	
NY	Copper	EPA 6020A	NPW	x	Y	
NY	Iron	EPA 6020A	NPW	x	Y	
NY	Lead	EPA 6020A	NPW	x	Y	
NY	Magnesium	EPA 6020A	NPW	x	Y	
NY	Manganese	EPA 6020A	NPW	x	Y	
NY	Molybdenum	EPA 6020A	NPW	x	Y	
NY	Nickel	EPA 6020A	NPW	x	Y	
NY	Potassium	EPA 6020A	NPW	x	Y	
NY	Selenium	EPA 6020A	NPW	x	Y	
NY	Silver	EPA 6020A	NPW	x	Y	
NY	Strontium	EPA 6020A	NPW	x	Y	
NY	Thallium	EPA 6020A	NPW	x	Y	
NY	Tin	EPA 6020A	NPW	x	Y	
NY	Titanium	EPA 6020A	NPW	x	Y	
NY	Vanadium	EPA 6020A	NPW	x	Y	
NY	Zinc	EPA 6020A	NPW	x	Y	
NY	4,4'-DDD	EPA 608	NPW	Y	x	
NY	4,4'-DDE	EPA 608	NPW	Y	x	
NY	4,4'-DDT	EPA 608	NPW	Y	x	
NY	Aldrin	EPA 608	NPW	Y	x	
NY	Alpha-BHC	EPA 608	NPW	Y	x	
NY	Beta-BHC	EPA 608	NPW	Y	x	
NY	Chlordane	EPA 608	NPW	Y	x	
NY	Delta-BHC	EPA 608	NPW	Y	x	
NY	Dieldrin	EPA 608	NPW	Y	x	
NY	Endosulfan I	EPA 608	NPW	Y	x	
NY	Endosulfan II	EPA 608	NPW	Y	x	
NY	Endosulfan Sulfate	EPA 608	NPW	Y	x	
NY	Endrin	EPA 608	NPW	Y	x	
NY	Endrin Aldehyde	EPA 608	NPW	Y	x	
NY	Heptachlor	EPA 608	NPW	Y	x	
NY	Heptachlor Epoxide	EPA 608	NPW	Y	x	
NY	Lindane (gamma-BHC)	EPA 608	NPW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Methoxychlor	EPA 608	NPW	Y	x	
NY	PCB-1016	EPA 608	NPW	Y	x	
NY	PCB-1221	EPA 608	NPW	Y	x	
NY	PCB-1232	EPA 608	NPW	Y	x	
NY	PCB-1242	EPA 608	NPW	Y	x	
NY	PCB-1248	EPA 608	NPW	Y	x	
NY	PCB-1254	EPA 608	NPW	Y	x	
NY	PCB-1260	EPA 608	NPW	Y	x	
NY	Toxaphene	EPA 608	NPW	Y	x	
NY	1,1,1-Trichloroethane	EPA 624	NPW	Y	x	
NY	1,1,2,2-Tetrachloroethane	EPA 624	NPW	Y	x	
NY	1,1,2-Trichloroethane	EPA 624	NPW	Y	x	
NY	1,1-Dichloroethane	EPA 624	NPW	Y	x	
NY	1,1-Dichloroethene	EPA 624	NPW	Y	x	
NY	1,2-Dichlorobenzene	EPA 624	NPW	Y	x	
NY	1,2-Dichloroethane	EPA 624	NPW	Y	x	
NY	1,2-Dichloropropane	EPA 624	NPW	Y	x	
NY	1,3-Dichlorobenzene	EPA 624	NPW	Y	x	
NY	1,4-Dichlorobenzene	EPA 624	NPW	Y	x	
NY	2-Chloroethyl Vinyl ether	EPA 624	NPW	Y	x	
NY	Acetone	EPA 624	NPW	Y	x	
NY	Acrolein	EPA 624	NPW	Y	x	
NY	Acrylonitrile	EPA 624	NPW	Y	x	
NY	Benzene	EPA 624	NPW	Y	x	
NY	Bromodichloromethane	EPA 624	NPW	Y	x	
NY	Bromoform	EPA 624	NPW	Y	x	
NY	Bromomethane	EPA 624	NPW	Y	x	
NY	Carbon Tetrachloride	EPA 624	NPW	Y	x	
NY	Chlorobenzene	EPA 624	NPW	Y	x	
NY	Chloroethane	EPA 624	NPW	Y	x	
NY	Chloroform	EPA 624	NPW	Y	x	
NY	Chloromethane	EPA 624	NPW	Y	x	
NY	cis-1,2-Dichloroethene	EPA 624	NPW	Y	x	
NY	cis-1,3-Dichloropropene	EPA 624	NPW	Y	x	
NY	Dibromochloromethane	EPA 624	NPW	Y	x	
NY	Dichlorodifluoromethane	EPA 624	NPW	Y	x	
NY	Ethylbenzene	EPA 624	NPW	Y	x	
NY	Methylene Chloride	EPA 624	NPW	Y	x	
NY	Methyl tert-butyl ether	EPA 624	NPW	Y	x	
NY	Styrene	EPA 624	NPW	Y	x	
NY	Tert-Butyl Alcohol	EPA 624	NPW	Y	x	
NY	Tetrachloroethene	EPA 624	NPW	Y	x	
NY	Toluene	EPA 624	NPW	Y	x	
NY	Total Xylenes	EPA 624	NPW	Y	x	
NY	Trans-1,2-Dichloroethene	EPA 624	NPW	Y	x	
NY	Trans-1,3-Dichloropropene	EPA 624	NPW	Y	x	
NY	Trichloroethene	EPA 624	NPW	Y	x	
NY	Trichlorofluoromethane	EPA 624	NPW	Y	x	
NY	Vinyl Acetate	EPA 624	NPW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Vinyl Chloride	EPA 624	NPW	Y	x	
NY	1,2,4-Trichlorobenzene	EPA 625	NPW	Y	x	
NY	2,4,5-Trichlorophenol	EPA 625	NPW	Y	x	
NY	2,4,6-Trichlorophenol	EPA 625	NPW	Y	x	
NY	2,4-Dichlorophenol	EPA 625	NPW	Y	x	
NY	2,4-Dimethylphenol	EPA 625	NPW	Y	x	
NY	2,4-Dinitrophenol	EPA 625	NPW	Y	x	
NY	2,4-Dinitrotoluene (2,4-DNT)	EPA 625	NPW	Y	x	
NY	2,6-Dinitrotoluene (2,6-DNT)	EPA 625	NPW	Y	x	
NY	2-Chloronaphthalene	EPA 625	NPW	Y	x	
NY	2-Chlorophenol	EPA 625	NPW	Y	x	
NY	2-Methyl-4,6-dinitrophenol	EPA 625	NPW	Y	x	
NY	2-Methylphenol	EPA 625	NPW	Y	x	
NY	2-Nitrophenol	EPA 625	NPW	Y	x	
NY	3,3-Dichlorobenzidine	EPA 625	NPW	Y	x	
NY	3-Methylphenol	EPA 625	NPW	Y	x	
NY	4-Bromophenyl phenyl ether	EPA 625	NPW	Y	x	
NY	4-Chloro-3-methylphenol	EPA 625	NPW	Y	x	
NY	4-Chlorophenyl phenyl ether	EPA 625	NPW	Y	x	
NY	4-Methylphenol	EPA 625	NPW	Y	x	
NY	4-Nitrophenol	EPA 625	NPW	Y	x	
NY	Acenaphthene	EPA 625	NPW	Y	x	
NY	Acenaphthylene	EPA 625	NPW	Y	x	
NY	Acetophenone	EPA 625	NPW	Y	x	
NY	Aniline	EPA 625	NPW	Y	x	
NY	Anthracene	EPA 625	NPW	Y	x	
NY	Benzidine	EPA 625	NPW	Y	x	
NY	Benzo(a)anthracene	EPA 625	NPW	Y	x	
NY	Benzo(a)pyrene	EPA 625	NPW	Y	x	
NY	Benzo(b)fluoranthene	EPA 625	NPW	Y	x	
NY	Benzo(ghi)perylene	EPA 625	NPW	Y	x	
NY	Benzo(k)fluoranthene	EPA 625	NPW	Y	x	
NY	Bis(2-chloroethoxy) methane	EPA 625	NPW	Y	x	
NY	Bis(2-chloroethyl) ether	EPA 625	NPW	Y	x	
NY	Bis(2-chloroisopropyl) ether	EPA 625	NPW	Y	x	
NY	Bis(2-ethylhexyl) phthalate	EPA 625	NPW	Y	x	
NY	Butyl Benzyl phthalate	EPA 625	NPW	Y	x	
NY	Carbazole	EPA 625	NPW	Y	x	
NY	Chrysene	EPA 625	NPW	Y	x	
NY	Dibenzo(a,h)anthracene	EPA 625	NPW	Y	x	
NY	Diethyl phthalate	EPA 625	NPW	Y	x	
NY	Dimethyl phthalate	EPA 625	NPW	Y	x	
NY	Di-n-butyl phthalate	EPA 625	NPW	Y	x	
NY	Di-n-octyl phthalate	EPA 625	NPW	Y	x	
NY	Fluoranthene	EPA 625	NPW	Y	x	
NY	Fluorene	EPA 625	NPW	Y	x	
NY	Hexachlorobenzene	EPA 625	NPW	Y	x	
NY	Hexachlorobutadiene	EPA 625	NPW	Y	x	
NY	Hexachlorocyclopentadiene	EPA 625	NPW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Hexachloroethane	EPA 625	NPW	Y	x	
NY	Indeno(1,2,3-cd)pyrene	EPA 625	NPW	Y	x	
NY	Isophorone	EPA 625	NPW	Y	x	
NY	Naphthalene	EPA 625	NPW	Y	x	
NY	N-Decane	EPA 625	NPW	Y	x	
NY	Nitrobenzene	EPA 625	NPW	Y	x	
NY	N-Nitrosodimethylamine	EPA 625	NPW	Y	x	
NY	N-Nitrosodi-n-propylamine	EPA 625	NPW	Y	x	
NY	N-Nitrosodiphenylamine	EPA 625	NPW	Y	x	
NY	N-Octadecane	EPA 625	NPW	Y	x	
NY	Pentachlorophenol	EPA 625	NPW	Y	x	
NY	Phenanthrene	EPA 625	NPW	Y	x	
NY	Phenol	EPA 625	NPW	Y	x	
NY	Pyrene	EPA 625	NPW	Y	x	
NY	Pyridine	EPA 625	NPW	Y	x	
NY	Chromium VI	EPA 7196A	NPW	Y	x	
NY	Mercury	EPA 7470A	NPW	x	Y	
NY	1,2-Dibromoethane (EDB)	EPA 8011	NPW	Y	x	
NY	1,2-Dibromo-3-Chloropropane (DBCP)	EPA 8011	NPW	Y	x	
NY	Diesel Range Organics	EPA 8015C	NPW	Y	x	
NY	Gasoline Range Organics	EPA 8015C	NPW	Y	x	
NY	Amyl alcohol	EPA 8015D	NPW	x	Y	
NY	Diesel Range Organics	EPA 8015D	NPW	x	Y	
NY	Ethyl alcohol	EPA 8015D	NPW	x	Y	
NY	Ethylene glycol	EPA 8015D	NPW	x	Y	
NY	Gasoline Range Organics	EPA 8015D	NPW	x	Y	
NY	Iso-butyl Alcohol	EPA 8015D	NPW	x	Y	
NY	Methyl Alcohol (methanol)	EPA 8015D	NPW	x	Y	
NY	Tert-Butyl Alcohol	EPA 8015D	NPW	x	Y	
NY	4,4'-DDD	EPA 8081B	NPW	Y	Y	
NY	4,4'-DDE	EPA 8081B	NPW	Y	Y	
NY	4,4'-DDT	EPA 8081B	NPW	Y	Y	
NY	Aldrin	EPA 8081B	NPW	Y	Y	
NY	alpha-BHC	EPA 8081B	NPW	Y	Y	
NY	alpha-Chlordane	EPA 8081B	NPW	Y	Y	
NY	beta-BHC	EPA 8081B	NPW	Y	Y	
NY	Chlordane	EPA 8081B	NPW	Y	Y	
NY	delta-BHC	EPA 8081B	NPW	Y	Y	
NY	Dieldrin	EPA 8081B	NPW	Y	Y	
NY	Endosulfan I	EPA 8081B	NPW	Y	Y	
NY	Endosulfan II	EPA 8081B	NPW	Y	Y	
NY	Endosulfan Sulfate	EPA 8081B	NPW	Y	Y	
NY	Endrin	EPA 8081B	NPW	Y	Y	
NY	Endrin Aldehyde	EPA 8081B	NPW	Y	Y	
NY	Endrin Ketone	EPA 8081B	NPW	Y	Y	
NY	gamma-Chlordane	EPA 8081B	NPW	Y	Y	
NY	Heptachlor	EPA 8081B	NPW	Y	Y	
NY	Heptachlor Epoxide	EPA 8081B	NPW	Y	Y	
NY	Hexachlorobenzene	EPA 8081B	NPW	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Lindane (gamma-BHC)	EPA 8081B	NPW	Y	Y	
NY	Methoxychlor	EPA 8081B	NPW	Y	Y	
NY	Mirex	EPA 8081B	NPW	x	Y	
NY	Toxaphene	EPA 8081B	NPW	Y	Y	
NY	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB	EPA 8082A	NPW	x	Y	
NY	2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	EPA 8082A	NPW	x	Y	
NY	2,2',3,3',4,4'-Hexachlorobiphenyl (PCB 128)	EPA 8082A	NPW	x	Y	
NY	2,2',3,4,4',5'-Hexachlorobiphenyl (PCB 138)	EPA 8082A	NPW	x	Y	
NY	2,2',3,5'-Tetrachlorobiphenyl (PCB 44)	EPA 8082A	NPW	x	Y	
NY	2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	EPA 8082A	NPW	x	Y	
NY	2,2',5-Trichlorobiphenyl (PCB 18)	EPA 8082A	NPW	x	Y	
NY	2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	EPA 8082A	NPW	x	Y	
NY	2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	EPA 8082A	NPW	x	Y	
NY	PCB-1016	EPA 8082A	NPW	Y	Y	
NY	PCB-1221	EPA 8082A	NPW	Y	Y	
NY	PCB-1232	EPA 8082A	NPW	Y	Y	
NY	PCB-1242	EPA 8082A	NPW	Y	Y	
NY	PCB-1248	EPA 8082A	NPW	Y	Y	
NY	PCB-1254	EPA 8082A	NPW	Y	Y	
NY	PCB-1260	EPA 8082A	NPW	Y	Y	
NY	PCB-1262	EPA 8082A	NPW	Y	Y	
NY	PCB-1268	EPA 8082A	NPW	Y	Y	
NY	2,4,5-T	EPA 8151A	NPW	Y	x	
NY	2,4,5-TP (Silvex)	EPA 8151A	NPW	Y	x	
NY	2,4-D	EPA 8151A	NPW	Y	x	
NY	2,4-DB	EPA 8151A	NPW	Y	x	
NY	Dalapon	EPA 8151A	NPW	Y	x	
NY	Dicamba	EPA 8151A	NPW	Y	x	
NY	Dichloroprop	EPA 8151A	NPW	Y	x	
NY	Dinoseb	EPA 8151A	NPW	Y	x	
NY	1,1,1,2-Tetrachloroethane	EPA 8260C	NPW	Y	x	
NY	1,1,1-Trichloroethane	EPA 8260C	NPW	Y	x	
NY	1,1,2,2-Tetrachloroethane	EPA 8260C	NPW	Y	x	
NY	1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C	NPW	Y	x	
NY	1,1,2-Trichloroethane	EPA 8260C	NPW	Y	x	
NY	1,1-Dichloroethane	EPA 8260C	NPW	Y	x	
NY	1,1-Dichloroethene	EPA 8260C	NPW	Y	x	
NY	1,1-Dichloropropene	EPA 8260C	NPW	Y	x	
NY	1,2,3-Trichlorobenzene	EPA 8260C	NPW	Y	x	
NY	1,2,3-Trichloropropane	EPA 8260C	NPW	Y	x	
NY	1,2,4-Trichlorobenzene	EPA 8260C	NPW	Y	x	
NY	1,2,4-Trimethylbenzene	EPA 8260C	NPW	Y	x	
NY	1,2-Dibromo-3-Chloropropane (DBCP)	EPA 8260C	NPW	Y	x	
NY	1,2-Dibromoethane (EDB)	EPA 8260C	NPW	Y	x	
NY	1,2-Dichlorobenzene	EPA 8260C	NPW	Y	x	
NY	1,2-Dichloroethane	EPA 8260C	NPW	Y	x	
NY	1,2-Dichloropropane	EPA 8260C	NPW	Y	x	
NY	1,3,5-Trimethylbenzene	EPA 8260C	NPW	Y	x	
NY	1,3-Dichlorobenzene	EPA 8260C	NPW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	1,3-Dichloropropane	EPA 8260C	NPW	Y	x	
NY	1,4-Dichlorobenzene	EPA 8260C	NPW	Y	x	
NY	1,4-Dioxane	EPA 8260C	NPW	Y	x	
NY	1-Butanol	EPA 8260C	NPW	Y	x	
NY	2,2-Dichloropropane	EPA 8260C	NPW	Y	x	
NY	2-Butanone	EPA 8260C	NPW	Y	x	
NY	2-Chloroethyl Vinyl ether	EPA 8260C	NPW	Y	x	
NY	2-Chlorotoluene	EPA 8260C	NPW	Y	x	
NY	2-Hexanone	EPA 8260C	NPW	Y	x	
NY	4-Chlorotoluene	EPA 8260C	NPW	Y	x	
NY	4-Methyl-2-Pentanone	EPA 8260C	NPW	Y	x	
NY	Acetone	EPA 8260C	NPW	Y	x	
NY	Acrolein	EPA 8260C	NPW	Y	x	
NY	Acrylonitrile	EPA 8260C	NPW	Y	x	
NY	Benzene	EPA 8260C	NPW	Y	x	
NY	Bromobenzene	EPA 8260C	NPW	Y	x	
NY	Bromochloromethane	EPA 8260C	NPW	Y	x	
NY	Bromodichloromethane	EPA 8260C	NPW	Y	x	
NY	Bromoform	EPA 8260C	NPW	Y	x	
NY	Bromomethane	EPA 8260C	NPW	Y	x	
NY	Carbon Disulfide	EPA 8260C	NPW	Y	x	
NY	Carbon Tetrachloride	EPA 8260C	NPW	Y	x	
NY	Chlorobenzene	EPA 8260C	NPW	Y	x	
NY	Chloroethane	EPA 8260C	NPW	Y	x	
NY	Chloroform	EPA 8260C	NPW	Y	x	
NY	Chloromethane	EPA 8260C	NPW	Y	x	
NY	cis-1,2-Dichloroethene	EPA 8260C	NPW	Y	x	
NY	cis-1,3-Dichloropropene	EPA 8260C	NPW	Y	x	
NY	Cyclohexane	EPA 8260C	NPW	Y	x	
NY	Dibromochloromethane	EPA 8260C	NPW	Y	x	
NY	Dibromomethane	EPA 8260C	NPW	Y	x	
NY	Dichlorodifluoromethane	EPA 8260C	NPW	Y	x	
NY	Diethyl ether	EPA 8260C	NPW	Y	x	
NY	Diisopropyl ether	EPA 8260C	NPW	Y	x	
NY	Ethanol	EPA 8260C	NPW	Y	x	
NY	Ethyl acetate	EPA 8260C	NPW	Y	x	
NY	Ethyl Methacrylate	EPA 8260C	NPW	Y	x	
NY	Ethylbenzene	EPA 8260C	NPW	Y	x	
NY	Hexachlorobutadiene	EPA 8260C	NPW	Y	x	
NY	Isopropyl Alcohol	EPA 8260C	NPW	Y	x	
NY	Isopropylbenzene	EPA 8260C	NPW	Y	x	
NY	m+p-Xylene	EPA 8260C	NPW	Y	x	
NY	Methyl Acetate	EPA 8260C	NPW	Y	x	
NY	Methyl Cyclohexane	EPA 8260C	NPW	Y	x	
NY	Iodomethane (Methyl Iodide)	EPA 8260C	NPW	Y	x	
NY	Methyl Methacrylate	EPA 8260C	NPW	Y	x	
NY	Methyl tert-butyl ether	EPA 8260C	NPW	Y	x	
NY	Methylene Chloride	EPA 8260C	NPW	Y	x	
NY	Naphthalene	EPA 8260C	NPW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	n-Butylbenzene	EPA 8260C	NPW	Y	x	
NY	n-Propylbenzene	EPA 8260C	NPW	Y	x	
NY	o-Xylene	EPA 8260C	NPW	Y	x	
NY	p-Isopropyltoluene	EPA 8260C	NPW	Y	x	
NY	sec-Butylbenzene	EPA 8260C	NPW	Y	x	
NY	Styrene	EPA 8260C	NPW	Y	x	
NY	Tert-Amyl Methyl Ether (TAME)	EPA 8260C	NPW	Y	x	
NY	Tert-Butyl Alcohol	EPA 8260C	NPW	Y	x	
NY	tert-butyl Ethyl Ether	EPA 8260C	NPW	Y	x	
NY	Tert-Butylbenzene	EPA 8260C	NPW	Y	x	
NY	Tetrachloroethene	EPA 8260C	NPW	Y	x	
NY	Tetrahydrofuran	EPA 8260C	NPW	Y	x	
NY	Toluene	EPA 8260C	NPW	Y	x	
NY	Total Xylenes	EPA 8260C	NPW	Y	x	
NY	Trans-1,2-Dichloroethene	EPA 8260C	NPW	Y	x	
NY	Trans-1,3-Dichloropropene	EPA 8260C	NPW	Y	x	
NY	Trans-1,4-Dichloro-2-butene	EPA 8260C	NPW	Y	x	
NY	Trichloroethene	EPA 8260C	NPW	Y	x	
NY	Trichlorofluoromethane	EPA 8260C	NPW	Y	x	
NY	Vinyl acetate	EPA 8260C	NPW	Y	x	
NY	Vinyl Chloride	EPA 8260C	NPW	Y	x	
NY	1,1'-Biphenyl	EPA 8270D	NPW	x	Y	
NY	1,2,4,5-Tetrachlorobenzene	EPA 8270D	NPW	Y	Y	
NY	1,2,4-Trichlorobenzene	EPA 8270D	NPW	Y	Y	
NY	1,2-Dichlorobenzene	EPA 8270D	NPW	Y	Y	
NY	1,2-Diphenylhydrazine	EPA 8270D	NPW	Y	Y	
NY	1,3-Dichlorobenzene	EPA 8270D	NPW	Y	Y	
NY	1,4-Dichlorobenzene	EPA 8270D	NPW	Y	Y	
NY	1,4-Dioxane	EPA 8270D	NPW	x	Y	
NY	2,3,4,6-Tetrachlorophenol	EPA 8270D	NPW	Y	Y	
NY	2,4,5-Trichlorophenol	EPA 8270D	NPW	Y	Y	
NY	2,4,6-Trichlorophenol	EPA 8270D	NPW	Y	Y	
NY	2,4-Dichlorophenol	EPA 8270D	NPW	Y	Y	
NY	2,4-Dimethylphenol	EPA 8270D	NPW	Y	Y	
NY	2,4-Dinitrophenol	EPA 8270D	NPW	Y	Y	
NY	2,4-Dinitrotoluene (2,4-DNT)	EPA 8270D	NPW	Y	Y	
NY	2,6-Dinitrotoluene (2,6-DNT)	EPA 8270D	NPW	Y	Y	
NY	2-Chloronaphthalene	EPA 8270D	NPW	Y	Y	
NY	2-Chlorophenol	EPA 8270D	NPW	Y	Y	
NY	2-Methyl-4,6-dinitrophenol	EPA 8270D	NPW	Y	Y	
NY	2-Methylnaphthalene	EPA 8270D	NPW	Y	Y	
NY	2-Methylphenol	EPA 8270D	NPW	Y	Y	
NY	2-Nitroaniline	EPA 8270D	NPW	Y	Y	
NY	2-Nitrophenol	EPA 8270D	NPW	Y	Y	
NY	3,3-Dichlorobenzidine	EPA 8270D	NPW	Y	Y	
NY	3-Methylphenol	EPA 8270D	NPW	Y	Y	
NY	3-Nitroaniline	EPA 8270D	NPW	Y	Y	
NY	4-Bromophenyl phenyl ether	EPA 8270D	NPW	Y	Y	
NY	4-Chloro-3-methylphenol	EPA 8270D	NPW	Y	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	4-Chloroaniline	EPA 8270D	NPW	Y	Y	
NY	4-Chlorophenyl phenyl ether	EPA 8270D	NPW	Y	Y	
NY	4-Methylphenol	EPA 8270D	NPW	Y	Y	
NY	4-Nitroaniline	EPA 8270D	NPW	Y	Y	
NY	4-Nitrophenol	EPA 8270D	NPW	Y	Y	
NY	Acenaphthene	EPA 8270D	NPW	Y	Y	
NY	Acenaphthylene	EPA 8270D	NPW	Y	Y	
NY	Acetophenone	EPA 8270D	NPW	Y	x	
NY	Aniline	EPA 8270D	NPW	Y	Y	
NY	Anthracene	EPA 8270D	NPW	Y	Y	
NY	Atrazine	EPA 8270D	NPW	Y	x	
NY	Benzaldehyde	EPA 8270D	NPW	Y	Y	
NY	Benzidine	EPA 8270D	NPW	Y	Y	
NY	Benzo(a)anthracene	EPA 8270D	NPW	Y	Y	
NY	Benzo(a)pyrene	EPA 8270D	NPW	Y	Y	
NY	Benzo(b)fluoranthene	EPA 8270D	NPW	Y	Y	
NY	Benzo(ghi)perylene	EPA 8270D	NPW	Y	Y	
NY	Benzo(k)fluoranthene	EPA 8270D	NPW	Y	Y	
NY	Benzoic Acid	EPA 8270D	NPW	Y	Y	
NY	Benzyl alcohol	EPA 8270D	NPW	Y	Y	
NY	Biphenyl	EPA 8270D	NPW	Y	x	
NY	Bis(2-chloroethoxy) methane	EPA 8270D	NPW	Y	Y	
NY	Bis(2-chloroethyl) ether	EPA 8270D	NPW	Y	Y	
NY	Bis(2-chloroisopropyl) ether	EPA 8270D	NPW	Y	Y	
NY	Bis(2-ethylhexyl) phthalate	EPA 8270D	NPW	Y	Y	
NY	Butyl Benzyl phthalate	EPA 8270D	NPW	Y	Y	
NY	Caprolactam	EPA 8270D	NPW	Y	Y	
NY	Carbazole	EPA 8270D	NPW	Y	Y	
NY	Chrysene	EPA 8270D	NPW	Y	Y	
NY	Cresols, Total	EPA 8270D	NPW	Y	x	
NY	Dibenzo(a,h)anthracene	EPA 8270D	NPW	Y	Y	
NY	Dibenzofuran	EPA 8270D	NPW	Y	Y	
NY	Diethyl phthalate	EPA 8270D	NPW	Y	Y	
NY	Dimethyl phthalate	EPA 8270D	NPW	Y	Y	
NY	Di-n-butyl phthalate	EPA 8270D	NPW	Y	Y	
NY	Di-n-octyl phthalate	EPA 8270D	NPW	Y	Y	
NY	Diphenylamine	EPA 8270D	NPW	Y	x	
NY	Fluoranthene	EPA 8270D	NPW	Y	Y	
NY	Fluorene	EPA 8270D	NPW	Y	Y	
NY	Hexachlorobenzene	EPA 8270D	NPW	Y	Y	
NY	Hexachlorobutadiene	EPA 8270D	NPW	Y	Y	
NY	Hexachlorocyclopentadiene	EPA 8270D	NPW	Y	Y	
NY	Hexachloroethane	EPA 8270D	NPW	Y	Y	
NY	Indeno(1,2,3-cd)pyrene	EPA 8270D	NPW	Y	Y	
NY	Isophorone	EPA 8270D	NPW	Y	x	
NY	Naphthalene	EPA 8270D	NPW	Y	Y	
NY	Nitrobenzene	EPA 8270D	NPW	Y	Y	
NY	N-Nitrosodimethylamine	EPA 8270D	NPW	Y	Y	
NY	N-Nitrosodi-n-propylamine	EPA 8270D	NPW	Y	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	N-Nitrosodiphenylamine	EPA 8270D	NPW	Y	Y	
NY	Parathion	EPA 8270D	NPW	Y	x	
NY	Pentachlorophenol	EPA 8270D	NPW	Y	Y	
NY	Phenanthrene	EPA 8270D	NPW	Y	Y	
NY	Phenol	EPA 8270D	NPW	Y	Y	
NY	Pyrene	EPA 8270D	NPW	Y	Y	
NY	Pyridine	EPA 8270D	NPW	Y	Y	
NY	Thionazin	EPA 8270D	NPW	Y	x	
NY	Acenaphthene	EPA 8270D-SIM	NPW	Y	Y	
NY	Acenaphthylene	EPA 8270D-SIM	NPW	Y	Y	
NY	Anthracene	EPA 8270D-SIM	NPW	Y	Y	
NY	Benzo(a)anthracene	EPA 8270D-SIM	NPW	Y	Y	
NY	Benzo(a)anthracene	EPA 8270D-SIM	NPW	Y	x	
NY	Benzo(a)pyrene	EPA 8270D-SIM	NPW	Y	Y	
NY	Benzo(a)pyrene	EPA 8270D-SIM	NPW	Y	x	
NY	Benzo(b)fluoranthene	EPA 8270D-SIM	NPW	Y	Y	
NY	Benzo(b)fluoranthene	EPA 8270D-SIM	NPW	Y	x	
NY	Benzo(ghi)perylene	EPA 8270D-SIM	NPW	Y	Y	
NY	Benzo(k)fluoranthene	EPA 8270D-SIM	NPW	Y	x	
NY	Benzo(k)fluoranthene	EPA 8270D-SIM	NPW	Y	Y	
NY	Chrysene	EPA 8270D-SIM	NPW	Y	Y	
NY	Dibenzo(a,h)anthracene	EPA 8270D-SIM	NPW	Y	Y	
NY	Dibenzo(a,h)anthracene	EPA 8270D-SIM	NPW	Y	x	
NY	Fluoranthene	EPA 8270D-SIM	NPW	Y	Y	
NY	Fluorene	EPA 8270D-SIM	NPW	Y	Y	
NY	Indeno(1,2,3-cd)pyrene	EPA 8270D-SIM	NPW	Y	Y	
NY	Indeno(1,2,3-cd)pyrene	EPA 8270D-SIM	NPW	Y	x	
NY	Naphthalene	EPA 8270D-SIM	NPW	Y	Y	
NY	Phenanthrene	EPA 8270D-SIM	NPW	Y	Y	
NY	Pyrene	EPA 8270D-SIM	NPW	Y	Y	
NY	Formaldehyde	EPA 8315A	NPW	Y	x	
NY	Cyanide - Amenable, Distillation	EPA 9010C	NPW	Y	x	
NY	Cyanide, Distillation	EPA 9010C	NPW	Y	x	
NY	Total Cyanide	EPA 9012B	NPW	Y	x	
NY	Total Cyanide	EPA 9014	NPW	Y	x	
NY	Sulfide	EPA 9030B	NPW	Y	x	
NY	Phenolics	EPA 9065	NPW	Y	x	
NY	Ethane	EPA RSK-175	NPW	x	Y	
NY	Ethene	EPA RSK-175	NPW	x	Y	
NY	Methane	EPA RSK-175	NPW	x	Y	
NY	Propane	EPA RSK-175	NPW	x	Y	
NY	Nitrogen, Total Kjeldahl	Lachat 10-107-06-2	NPW	Y	x	
NY	Cyanide, Total	Lachat 10-204-00-1-X	NPW	Y	x	
NY	Color	SM 2120B	NPW	Y	x	
NY	Turbidity	SM 2130B	NPW	Y	x	
NY	Acidity	SM 2310B	NPW	Y	x	
NY	Alkalinity	SM 2320B	NPW	Y	x	
NY	Total Hardness (CaCO3)	SM 2340B	NPW	x	Y	
NY	Specific Conductance	SM 2510B	NPW	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Total Residue	SM 2540B	NPW	Y	x	
NY	Total Dissolved Solids	SM 2540C	NPW	Y	x	
NY	Total Suspended Solids	SM 2540D	NPW	Y	x	
NY	Volatile Solids	SM 2540E	NPW	Y	x	
NY	Total Settleable Solids	SM 2540F	NPW	Y	x	
NY	Chromium VI	SM 3500 Cr B	NPW	Y	x	
NY	Sulfate	SM 4500 SO4-E	NPW	Y	x	
NY	Chloride	SM 4500 CL-E	NPW	Y	x	
NY	Cyanide, Total	SM 4500 CN E	NPW	Y	x	
NY	Fluoride Preliminary Distillation	SM 4500 F-B	NPW	Y	x	
NY	Fluoride	SM 4500 F-C	NPW	Y	x	
NY	Ammonia	SM 4500 NH3 B	NPW	Y	x	
NY	Ammonia	SM 4500 NH3-H	NPW	Y	x	
NY	Nitrogen, Total Kjeldahl	SM 4500 NH3-H	NPW	Y	x	
NY	Nitrogen, Total Kjeldahl (Distillation)	SM 4500Norg-C	NPW	Y	x	
NY	Nitrite-N	SM 4500 NO2-B	NPW	Y	x	
NY	Nitrate-N	SM 4500 NO3-F	NPW	Y	x	
NY	Nitrate-N	SM 4500 NO3-F	NPW	Y	x	
NY	Nitrate-Nitrite	SM 4500 NO3-F	NPW	Y	x	
NY	Orthophosphate	SM 4500 P-E	NPW	Y	x	
NY	Total Phosphorus (Digestion)	SM 4500 P-B	NPW	Y	x	
NY	Total Phosphorus	SM 4500 P-E	NPW	Y	x	
NY	Sulfide	SM 4500 S2-D	NPW	Y	x	
NY	Sulfate	SM 4500 SO4-E	NPW	Y	x	
NY	Biochemical Oxygen Demand	SM 5210B	NPW	Y	x	
NY	Biochemical Oxygen Demand - Carbonaceous	SM 5210B	NPW	Y	x	
NY	Chemical Oxygen Demand	SM 5220D	NPW	Y	x	
NY	Total Organic Carbon	SM 5310C	NPW	Y	x	
NY	Surfactants (MBAS)	SM 5540C	NPW	Y	x	
NY	Heterotrophic Plate Count	SM 9215B	NPW	Y	x	
NY	Coliform, Total MPN	SM 9221B	NPW	Y	x	
NY	Coliform, Fecal MPN	SM 9221C	NPW	Y	x	
NY	Coliform, Fecal MPN	SM 9221E	NPW	Y	x	
NY	Coliform, Total MF	SM 9222B	NPW	Y	x	
Ny	Titanium	EPA 6010C	NPW	x	Y	
NY	Flashpoint	EPA 1010A	SCM	Y	x	
NY	Ignitability	EPA 1030	SCM	Y	x	
NY	TCLP	EPA 1311	SCM	Y	Y	
NY	SPLP	EPA 1312	SCM	Y	x	
NY	Microwave Acid Digestion	EPA 3050B	SCM	Y	Y	
NY	Microwave Acid Digestion	EPA 3051A	SCM	Y	Y	
NY	Chromium VI Digestion	EPA 3060A	SCM	x	Y	
NY	Soxhlet Extraction	EPA 3540C	SCM	Y	Y	
NY	Microwave Acid Digestion	EPA 3546	SCM	Y	x	
NY	Microscale Solvent Extraction (MSE)	EPA 3570	SCM	x	Y	
NY	Waste Dilution	EPA 3580A	SCM	Y	Y	
NY	Purge & Trap Soil Low/High	EPA 5035A	SCM	Y	x	
NY	Aluminum	EPA 6010C	SCM	x	Y	
NY	Antimony	EPA 6010C	SCM	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Arsenic	EPA 6010C	SCM	x	Y	
NY	Barium	EPA 6010C	SCM	x	Y	
NY	Beryllium	EPA 6010C	SCM	x	Y	
NY	Boron	EPA 6010C	SCM	x	Y	
NY	Cadmium	EPA 6010C	SCM	x	Y	
NY	Calcium	EPA 6010C	SCM	x	Y	
NY	Chromium	EPA 6010C	SCM	x	Y	
NY	Cobalt	EPA 6010C	SCM	x	Y	
NY	Copper	EPA 6010C	SCM	x	Y	
NY	Iron	EPA 6010C	SCM	x	Y	
NY	Lead	EPA 6010C	SCM	x	Y	
NY	Magnesium	EPA 6010C	SCM	x	Y	
NY	Manganese	EPA 6010C	SCM	x	Y	
NY	Molybdenum	EPA 6010C	SCM	x	Y	
NY	Nickel	EPA 6010C	SCM	x	Y	
NY	Potassium	EPA 6010C	SCM	x	Y	
NY	Selenium	EPA 6010C	SCM	x	Y	
NY	Silver	EPA 6010C	SCM	x	Y	
NY	Sodium	EPA 6010C	SCM	x	Y	
NY	Strontium	EPA 6010C	SCM	x	Y	
NY	Thallium	EPA 6010C	SCM	x	Y	
NY	Tin	EPA 6010C	SCM	x	Y	
NY	Titanium	EPA 6010C	SCM	x	Y	
NY	Vanadium	EPA 6010C	SCM	x	Y	
NY	Zinc	EPA 6010C	SCM	x	Y	
NY	Aluminum	EPA 6020A	SCM	x	Y	
NY	Antimony	EPA 6020A	SCM	x	Y	
NY	Arsenic	EPA 6020A	SCM	x	Y	
NY	Barium	EPA 6020A	SCM	x	Y	
NY	Beryllium	EPA 6020A	SCM	x	Y	
NY	Boron	EPA 6020A	SCM	x	Y	
NY	Cadmium	EPA 6020A	SCM	x	Y	
NY	Calcium	EPA 6020A	SCM	x	Y	
NY	Chromium	EPA 6020A	SCM	x	Y	
NY	Cobalt	EPA 6020A	SCM	x	Y	
NY	Copper	EPA 6020A	SCM	x	Y	
NY	Iron	EPA 6020A	SCM	x	Y	
NY	Lead	EPA 6020A	SCM	x	Y	
NY	Magnesium	EPA 6020A	SCM	x	Y	
NY	Manganese	EPA 6020A	SCM	x	Y	
NY	Molybdenum	EPA 6020A	SCM	x	Y	
NY	Nickel	EPA 6020A	SCM	x	Y	
NY	Potassium	EPA 6020A	SCM	x	Y	
NY	Selenium	EPA 6020A	SCM	x	Y	
NY	Silver	EPA 6020A	SCM	x	Y	
NY	Sodium	EPA 6020A	SCM	x	Y	
NY	Strontium	EPA 6020A	SCM	x	Y	
NY	Thallium	EPA 6020A	SCM	x	Y	
NY	Tin	EPA 6020A	SCM	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Vanadium	EPA 6020A	SCM	x	Y	
NY	Zinc	EPA 6020A	SCM	x	Y	
NY	Chromium VI	EPA 7196A	SCM	Y	x	
NY	Mercury	EPA 7471B	SCM	x	Y	
NY	Mercury	EPA 7474	SCM	x	Y	
NY	Diesel Range Organics	EPA 8015C	SCM	Y	x	
NY	Gasoline Range Organics	EPA 8015C	SCM	Y	x	
NY	Diesel Range Organics	EPA 8015D	SCM	x	Y	
NY	Ethylene glycol	EPA 8015D	SCM	x	Y	
NY	Gasoline Range Organics	EPA 8015D	SCM	x	Y	
NY	Iso-butyl Alcohol	EPA 8015D	SCM	x	Y	
NY	Tert-Butyl Alcohol	EPA 8015D	SCM	x	Y	
NY	4,4'-DDD	EPA 8081B	SCM	Y	Y	
NY	4,4'-DDE	EPA 8081B	SCM	Y	Y	
NY	4,4'-DDT	EPA 8081B	SCM	Y	Y	
NY	Aldrin	EPA 8081B	SCM	Y	Y	
NY	alpha-BHC	EPA 8081B	SCM	Y	Y	
NY	alpha-Chlordane	EPA 8081B	SCM	Y	x	
NY	beta-BHC	EPA 8081B	SCM	Y	Y	
NY	Chlordane	EPA 8081B	SCM	Y	Y	
NY	delta-BHC	EPA 8081B	SCM	Y	Y	
NY	Dieldrin	EPA 8081B	SCM	Y	Y	
NY	Endosulfan I	EPA 8081B	SCM	Y	Y	
NY	Endosulfan II	EPA 8081B	SCM	Y	Y	
NY	Endosulfan Sulfate	EPA 8081B	SCM	Y	Y	
NY	Endrin	EPA 8081B	SCM	Y	Y	
NY	Endrin Aldehyde	EPA 8081B	SCM	Y	Y	
NY	Endrin Ketone	EPA 8081B	SCM	Y	Y	
NY	gamma-Chlordane	EPA 8081B	SCM	Y	Y	
NY	Heptachlor	EPA 8081B	SCM	Y	Y	
NY	Heptachlor Epoxide	EPA 8081B	SCM	Y	Y	
NY	Lindane (gamma-BHC)	EPA 8081B	SCM	Y	Y	
NY	Methoxychlor	EPA 8081B	SCM	Y	Y	
NY	Mirex	EPA 8081B	SCM	x	Y	
NY	Toxaphene	EPA 8081B	SCM	Y	Y	
NY	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB	EPA 8082A	SCM	x	Y	
NY	2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	EPA 8082A	SCM	x	Y	
NY	2,2',3,3',4,4'-Hexachlorobiphenyl (PCB 128)	EPA 8082A	SCM	x	Y	
NY	2,2',3,4,4',5,5'-Heptacholorbiphenyl (PCB 180)	EPA 8082A	SCM	x	Y	
NY	2,2',3,4,4',5',6-Heptachlorobiphenyl (PCB 183)	EPA 8082A	SCM	x	Y	
NY	2,2',3,4,4',5'-Hexachlorobiphenyl (PCB 138)	EPA 8082A	SCM	x	Y	
NY	2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	EPA 8082A	SCM	x	Y	
NY	2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	EPA 8082A	SCM	x	Y	
NY	2,2',3,4,5'-Pentachlorobiphenyl (PCB 87)	EPA 8082A	SCM	x	Y	
NY	2,2',3,5,5',6-Hexachlorobiphenyl (PCB 151)	EPA 8082A	SCM	x	Y	
NY	2,2',3,5'-Tetrachlorobiphenyl (PCB 44)	EPA 8082A	SCM	x	Y	
NY	2,2',4,4',5,5'-Hexachlorobiphenyl (PCB 153)	EPA 8082A	SCM	x	Y	
NY	2,2',4,5,5'-Pentachlorobiphenyl (PCB 101)	EPA 8082A	SCM	x	Y	
NY	2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	EPA 8082A	SCM	x	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	2,2',5-Trichlorobiphenyl (PCB 18)	EPA 8082A	SCM	x	Y	
NY	2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	EPA 8082A	SCM	x	Y	
NY	2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	EPA 8082A	SCM	x	Y	
NY	2,3-Dichlorobiphenyl (PCB 5)	EPA 8082A	SCM	x	Y	
NY	2,4'-Trichlorobiphenyl (PCB 31)	EPA 8082A	SCM	x	Y	
NY	2-Chlorobiphenyl (PCB 1)	EPA 8082A	SCM	x	Y	
NY	PCB-1016	EPA 8082A	SCM	Y	Y	
NY	PCB-1221	EPA 8082A	SCM	Y	Y	
NY	PCB-1232	EPA 8082A	SCM	Y	Y	
NY	PCB-1242	EPA 8082A	SCM	Y	Y	
NY	PCB-1248	EPA 8082A	SCM	Y	Y	
NY	PCB-1254	EPA 8082A	SCM	Y	Y	
NY	PCB-1260	EPA 8082A	SCM	Y	Y	
NY	PCB-1262	EPA 8082A	SCM	Y	Y	
NY	PCB-1268	EPA 8082A	SCM	Y	Y	
NY	PCBs in Oil	EPA 8082A	SCM	Y	x	
NY	2,4,5-T	EPA 8151A	SCM	Y	x	
NY	2,4,5-TP (Silvex)	EPA 8151A	SCM	Y	x	
NY	2,4-D	EPA 8151A	SCM	Y	x	
NY	2,4-DB	EPA 8151A	SCM	Y	x	
NY	Dalapon	EPA 8151A	SCM	Y	x	
NY	Dicamba	EPA 8151A	SCM	Y	x	
NY	Dichloroprop	EPA 8151A	SCM	Y	x	
NY	Dinoseb	EPA 8151A	SCM	Y	x	
NY	MCPA	EPA 8151A	SCM	Y	x	
NY	MCPP	EPA 8151A	SCM	Y	x	
NY	1,1,1,2-Tetrachloroethane	EPA 8260C	SCM	Y	x	
NY	1,1,1-Trichloroethane	EPA 8260C	SCM	Y	x	
NY	1,1,2,2-Tetrachloroethane	EPA 8260C	SCM	Y	x	
NY	1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C	SCM	Y	x	
NY	1,1,2-Trichloroethane	EPA 8260C	SCM	Y	x	
NY	1,1-Dichloroethane	EPA 8260C	SCM	Y	x	
NY	1,1-Dichloroethene	EPA 8260C	SCM	Y	x	
NY	1,1-Dichloropropene	EPA 8260C	SCM	Y	x	
NY	1,2,3-Trichloropropane	EPA 8260C	SCM	Y	x	
NY	1,2,4-Trichlorobenzene	EPA 8260C	SCM	Y	x	
NY	1,2,4-Trimethylbenzene	EPA 8260C	SCM	Y	x	
NY	1,2-Dibromo-3-Chloropropane (DBCP)	EPA 8260C	SCM	Y	x	
NY	1,2-Dibromoethane (EDB)	EPA 8260C	SCM	Y	x	
NY	1,2-Dichlorobenzene	EPA 8260C	SCM	Y	x	
NY	1,2-Dichloroethane	EPA 8260C	SCM	Y	x	
NY	1,2-Dichloropropane	EPA 8260C	SCM	Y	x	
NY	1,3,5-Trimethylbenzene	EPA 8260C	SCM	Y	x	
NY	1,3-Dichlorobenzene	EPA 8260C	SCM	Y	x	
NY	1,3-Dichloropropane	EPA 8260C	SCM	Y	x	
NY	1,4-Dichlorobenzene	EPA 8260C	SCM	Y	x	
NY	1,4-Dioxane	EPA 8260C	SCM	Y	x	
NY	2,2-Dichloropropane	EPA 8260C	SCM	Y	x	
NY	2-Butanone	EPA 8260C	SCM	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	2-Chloroethyl Vinyl ether	EPA 8260C	SCM	Y	x	
NY	2-Chlorotoluene	EPA 8260C	SCM	Y	x	
NY	2-Hexanone	EPA 8260C	SCM	Y	x	
NY	4-Chlorotoluene	EPA 8260C	SCM	Y	x	
NY	4-Methyl-2-Pentanone	EPA 8260C	SCM	Y	x	
NY	Acetone	EPA 8260C	SCM	Y	x	
NY	Acrolein	EPA 8260C	SCM	Y	x	
NY	Acrylonitrile	EPA 8260C	SCM	Y	x	
NY	Benzene	EPA 8260C	SCM	Y	x	
NY	Bromobenzene	EPA 8260C	SCM	Y	x	
NY	Bromochloromethane	EPA 8260C	SCM	Y	x	
NY	Bromodichloromethane	EPA 8260C	SCM	Y	x	
NY	Bromoform	EPA 8260C	SCM	Y	x	
NY	Bromomethane	EPA 8260C	SCM	Y	x	
NY	Carbon Disulfide	EPA 8260C	SCM	Y	x	
NY	Carbon Tetrachloride	EPA 8260C	SCM	Y	x	
NY	Chlorobenzene	EPA 8260C	SCM	Y	x	
NY	Chloroethane	EPA 8260C	SCM	Y	x	
NY	Chloroform	EPA 8260C	SCM	Y	x	
NY	Chloromethane	EPA 8260C	SCM	Y	x	
NY	cis-1,2-Dichloroethene	EPA 8260C	SCM	Y	x	
NY	cis-1,3-Dichloropropene	EPA 8260C	SCM	Y	x	
NY	Cyclohexane	EPA 8260C	SCM	Y	x	
NY	Dibromochloromethane	EPA 8260C	SCM	Y	x	
NY	Dibromomethane	EPA 8260C	SCM	Y	x	
NY	Dichlorodifluoromethane	EPA 8260C	SCM	Y	x	
NY	Diethyl ether	EPA 8260C	SCM	Y	x	
NY	Ethyl acetate	EPA 8260C	SCM	Y	x	
NY	Ethyl Methacrylate	EPA 8260C	SCM	Y	x	
NY	Ethylbenzene	EPA 8260C	SCM	Y	x	
NY	Hexachlorobutadiene	EPA 8260C	SCM	Y	x	
NY	Isopropylbenzene	EPA 8260C	SCM	Y	x	
NY	m+p-Xylene	EPA 8260C	SCM	Y	x	
NY	Methyl Acetate	EPA 8260C	SCM	Y	x	
NY	Methyl Cyclohexane	EPA 8260C	SCM	Y	x	
NY	Methyl tert-butyl ether	EPA 8260C	SCM	Y	x	
NY	Methylene Chloride	EPA 8260C	SCM	Y	x	
NY	Naphthalene	EPA 8260C	SCM	Y	x	
NY	n-Butanol	EPA 8260C	SCM	Y	x	
NY	n-Butylbenzene	EPA 8260C	SCM	Y	x	
NY	n-Propylbenzene	EPA 8260C	SCM	Y	x	
NY	o-Xylene	EPA 8260C	SCM	Y	x	
NY	p-Isopropyltoluene	EPA 8260C	SCM	Y	x	
NY	sec-Butylbenzene	EPA 8260C	SCM	Y	x	
NY	Styrene	EPA 8260C	SCM	Y	x	
NY	Tert-Butyl Alcohol	EPA 8260C	SCM	Y	x	
NY	Tert-Butylbenzene	EPA 8260C	SCM	Y	x	
NY	Tetrachloroethene	EPA 8260C	SCM	Y	x	
NY	Toluene	EPA 8260C	SCM	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Total Xylenes	EPA 8260C	SCM	Y	x	
NY	Trans-1,2-Dichloroethene	EPA 8260C	SCM	Y	x	
NY	Trans-1,3-Dichloropropene	EPA 8260C	SCM	Y	x	
NY	Trans-1,4-Dichloro-2-butene	EPA 8260C	SCM	Y	x	
NY	Trichloroethene	EPA 8260C	SCM	Y	x	
NY	Trichlorofluoromethane	EPA 8260C	SCM	Y	x	
NY	Vinyl Acetate	EPA 8260C	SCM	Y	x	
NY	Vinyl Chloride	EPA 8260C	SCM	Y	x	
NY	1,1'-Biphenyl	EPA 8270D	SCM	x	Y	
NY	1,2,4,5-Tetrachlorobenzene	EPA 8270D	SCM	Y	Y	
NY	1,2,4-Trichlorobenzene	EPA 8270D	SCM	Y	Y	
NY	1,2-Dichlorobenzene	EPA 8270D	SCM	Y	Y	
NY	1,2-Diphenylhydrazine	EPA 8270D	SCM	Y	Y	
NY	1,3-Dichlorobenzene	EPA 8270D	SCM	Y	Y	
NY	1,4-Dichlorobenzene	EPA 8270D	SCM	Y	Y	
NY	2,3,4,6-Tetrachlorophenol	EPA 8270D	SCM	Y	Y	
NY	2,4,5-Trichlorophenol	EPA 8270D	SCM	Y	Y	
NY	2,4,6-Trichlorophenol	EPA 8270D	SCM	Y	Y	
NY	2,4-Dichlorophenol	EPA 8270D	SCM	Y	Y	
NY	2,4-Dimethylphenol	EPA 8270D	SCM	Y	Y	
NY	2,4-Dinitrophenol	EPA 8270D	SCM	Y	Y	
NY	2,4-Dinitrotoluene (2,4-DNT)	EPA 8270D	SCM	Y	x	
NY	2,6-Dinitrotoluene (2,6-DNT)	EPA 8270D	SCM	Y	x	
NY	2-Chloronaphthalene	EPA 8270D	SCM	Y	Y	
NY	2-Chlorophenol	EPA 8270D	SCM	Y	Y	
NY	2-Methyl-4,6-dinitrophenol	EPA 8270D	SCM	Y	Y	
NY	2-Methylnaphthalene	EPA 8270D	SCM	Y	Y	
NY	2-Methylphenol	EPA 8270D	SCM	Y	Y	
NY	2-Nitroaniline	EPA 8270D	SCM	Y	Y	
NY	2-Nitrophenol	EPA 8270D	SCM	Y	Y	
NY	3,3-Dichlorobenzidine	EPA 8270D	SCM	Y	Y	
NY	3-Methylphenol	EPA 8270D	SCM	Y	Y	
NY	3-Nitroaniline	EPA 8270D	SCM	Y	Y	
NY	4-Bromophenyl phenyl ether	EPA 8270D	SCM	Y	Y	
NY	4-Chloro-3-methylphenol	EPA 8270D	SCM	Y	Y	
NY	4-Chlorophenyl phenyl ether	EPA 8270D	SCM	Y	Y	
NY	4-Methylphenol	EPA 8270D	SCM	Y	Y	
NY	4-Nitroaniline	EPA 8270D	SCM	Y	Y	
NY	4-Nitrophenol	EPA 8270D	SCM	Y	Y	
NY	Acenaphthene	EPA 8270D	SCM	Y	Y	
NY	Acenaphthylene	EPA 8270D	SCM	Y	Y	
NY	Acetophenone	EPA 8270D	SCM	Y	Y	
NY	Aniline	EPA 8270D	SCM	Y	Y	
NY	Anthracene	EPA 8270D	SCM	Y	Y	
NY	Atrazine	EPA 8270D	SCM	Y	x	
NY	Benzaldehyde	EPA 8270D	SCM	Y	Y	
NY	Benzidine	EPA 8270D	SCM	Y	Y	
NY	Benzo(a)anthracene	EPA 8270D	SCM	Y	Y	
NY	Benzo(a)pyrene	EPA 8270D	SCM	Y	Y	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Benzo(b)fluoranthene	EPA 8270D	SCM	Y	Y	
NY	Benzo(ghi)perylene	EPA 8270D	SCM	Y	Y	
NY	Benzo(k)fluoranthene	EPA 8270D	SCM	Y	Y	
NY	Benzoic Acid	EPA 8270D	SCM	Y	Y	
NY	Benzyl alcohol	EPA 8270D	SCM	Y	Y	
NY	Biphenyl	EPA 8270D	SCM	Y	x	
NY	Bis(2-chloroethoxy) methane	EPA 8270D	SCM	Y	Y	
NY	Bis(2-chloroethyl) ether	EPA 8270D	SCM	Y	Y	
NY	Bis(2-chloroisopropyl) ether	EPA 8270D	SCM	Y	Y	
NY	Bis(2-ethylhexyl) phthalate	EPA 8270D	SCM	Y	Y	
NY	Butyl Benzyl phthalate	EPA 8270D	SCM	Y	Y	
NY	Caprolactam	EPA 8270D	SCM	Y	Y	
NY	Carbazole	EPA 8270D	SCM	Y	Y	
NY	Chrysene	EPA 8270D	SCM	Y	Y	
NY	Dibenzo(a,h)anthracene	EPA 8270D	SCM	Y	Y	
NY	Dibenzofuran	EPA 8270D	SCM	Y	Y	
NY	Diethyl phthalate	EPA 8270D	SCM	Y	Y	
NY	Dimethyl phthalate	EPA 8270D	SCM	Y	Y	
NY	Di-n-butyl phthalate	EPA 8270D	SCM	Y	Y	
NY	Di-n-octyl phthalate	EPA 8270D	SCM	Y	Y	
NY	Diphenylamine	EPA 8270D	SCM	Y	x	
NY	Fluoranthene	EPA 8270D	SCM	Y	Y	
NY	Fluorene	EPA 8270D	SCM	Y	Y	
NY	Hexachlorobenzene	EPA 8270D	SCM	Y	Y	
NY	Hexachlorobutadiene	EPA 8270D	SCM	Y	x	
NY	Hexachlorocyclopentadiene	EPA 8270D	SCM	Y	Y	
NY	Hexachloroethane	EPA 8270D	SCM	Y	Y	
NY	Indeno(1,2,3-cd)pyrene	EPA 8270D	SCM	Y	Y	
NY	Isophorone	EPA 8270D	SCM	Y	Y	
NY	Naphthalene	EPA 8270D	SCM	Y	Y	
NY	Nitrobenzene	EPA 8270D	SCM	Y	Y	
NY	N-Nitrosodimethylamine	EPA 8270D	SCM	Y	Y	
NY	N-Nitrosodi-n-propylamine	EPA 8270D	SCM	Y	Y	
NY	N-Nitrosodiphenylamine	EPA 8270D	SCM	Y	Y	
NY	Parathion	EPA 8270D	SCM	Y	x	
NY	Pentachloronitrobenzene	EPA 8270D	SCM	Y	Y	
NY	Pentachlorophenol	EPA 8270D	SCM	Y	Y	
NY	Phenanthrene	EPA 8270D	SCM	Y	Y	
NY	Phenol	EPA 8270D	SCM	Y	Y	
NY	Pyrene	EPA 8270D	SCM	Y	Y	
NY	Pyridine	EPA 8270D	SCM	Y	Y	
NY	Acenaphthene	EPA 8270D-SIM	SCM	Y	x	
NY	Acenaphthylene	EPA 8270D-SIM	SCM	Y	x	
NY	Anthracene	EPA 8270D-SIM	SCM	Y	x	
NY	Benzo(a)anthracene	EPA 8270D-SIM	SCM	Y	x	
NY	Benzo(a)pyrene	EPA 8270D-SIM	SCM	Y	x	
NY	Benzo(b)fluoranthene	EPA 8270D-SIM	SCM	Y	x	
NY	Benzo(ghi)perylene	EPA 8270D-SIM	SCM	Y	x	
NY	Benzo(k)fluoranthene	EPA 8270D-SIM	SCM	Y	x	

Alpha Analytical

Summary of Certification

State	Parameter	Method	Matrix	Alpha Westboro	Alpha Mansfield	Notes
NY	Chrysene	EPA 8270D-SIM	SCM	Y	x	
NY	Dibenzo(a,h)anthracene	EPA 8270D-SIM	SCM	Y	x	
NY	Fluoranthene	EPA 8270D-SIM	SCM	Y	x	
NY	Fluorene	EPA 8270D-SIM	SCM	Y	x	
NY	Indeno(1,2,3-cd)pyrene	EPA 8270D-SIM	SCM	Y	x	
NY	Naphthalene	EPA 8270D-SIM	SCM	Y	x	
NY	Phenanthrene	EPA 8270D-SIM	SCM	Y	x	
NY	Pyrene	EPA 8270D-SIM	SCM	Y	x	
NY	Cyanide - Amenable, Distillation	EPA 9010C	SCM	Y	x	
NY	Cyanide, Distillation	EPA 9010C	SCM	Y	x	
NY	Cyanide, Total	EPA 9012B	SCM	Y	x	
NY	Cyanide, Total	EPA 9014	SCM	Y	x	
NY	Extractable Organic Halides (EOX)	EPA 9023	SCM	Y	x	
NY	Sulfate	EPA 9038	SCM	Y	x	
NY	pH	EPA 9040C	SCM	Y	x	
NY	pH	EPA 9045D	SCM	Y	x	
NY	Specific Conductance	EPA 9050A	SCM	Y	x	
NY	Total Organic Carbon	EPA 9060	SCM	x	Y	
NY	Total Phenolics	EPA 9065	SCM	Y	x	
NY	Oil & Grease	EPA 9071B	SCM	Y	x	
NY	Chloride	EPA 9251	SCM	Y	x	
NY	Total Organic Carbon	Lloyd Kahn	SCM	x	Y	

APPENDIX C

HEALTH AND SAFETY PLAN

May 2018
(Revised October 2018)

Site Specific Health & Safety Plan

First Prize Center Site
68 Exchange Street
City of Albany & Town of Colonie
Albany County, New York
BCP Site #C401076

Prepared by:

C.T. MALE ASSOCIATES
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Latham, New York 12110
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C.T. Male Associates Project No: 17.7536

SITE SPECIFIC HEALTH & SAFETY PLAN
FIRST PRIZE CENTER SITE
CITY OF ALBANY & TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

TABLE OF CONTENTS

Page

SITE SPECIFIC HEALTH & SAFETY PLAN
FIRST PRIZE CENTER SITE
CITY OF ALBANY & TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

TABLE OF CONTENTS (cont.)

Page

1.0 GENERAL

1.1 Overview

This Health and Safety Plan (HASP) has been prepared for use during implementation of a Remedial Investigation (RI) at the First Prize Center BCP Site ("the Site") located at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York.

A designated Office Health and Safety Officer (OHSO) will be responsible for implementing CT Male's health and safety policies and to ensure field work is in compliance with CT Male policies. A designated Site Health and Safety Officer (SHSO) will be responsible for implementing this HASP during the completion of the field work, and be on-site during work activities. All persons or parties who enter the work area (support zone, decontamination zone or exclusion zone) must review, sign and comply with this HASP. A partial list of individuals authorized to enter the exclusion zone at the Site is presented in Section 13.0 of this HASP. Others may be added to the list as needed. A copy of this HASP will be maintained at the Site throughout the duration of the project. A complete description of the RI work is presented in the RI Work Plan. A brief description of the proposed scope of work is outlined below:

<u>Remedial Investigation:</u>

- Collection of surface soil, surface water and sediment samples for subjective assessment and laboratory analyses;
- Oversee the drilling of soil borings and installation of groundwater monitoring wells;
- Collection of subsurface fill/soil samples from the soil borings for classification, subjective assessment and laboratory analyses;
- Installation and development of monitoring wells;
- Collection of groundwater samples for laboratory analyses;
- Collection of solid and aqueous field quality control samples for laboratory analysis;
- Sampling locations and monitoring well location and elevation survey;

- Other unforeseen environmental conditions which may be encountered during the RI work.

This HASP is applicable to the RI tasks as outlined above. To enable the collection of RI soil samples beneath the existing Main Building, the Main Building will be demolished and the asbestos containing material (ACM) and any other Hazardous Building Material (HBM) within the building will be remediated in accordance with State and Federal regulations. The HASP for the demolition and remediation of ACM and HBM in the Main Building will be addressed under separate HASPs that will be specific to this work. The building demolition work will be conducted separately from the RI.

1.2 Contact Names & Numbers

For this project, the following project contacts have been assigned.

FIRST PRIZE DEVELOPMENT PARTNERS, LLC CONTACTS:

PROJ. MANAGER:	William Hoblock, Esq. First Prize Development Partners, LLC 8 Paddocks Circle Saratoga Springs, New York 12866	518-786-7100 (O)

CONSULTANT CONTACTS:

CONSULTING ENGINEER:	C.T. Male Associates 50 Century Hill Drive Latham, New York 12110	518.786.7400 (O)
	Dan Reilly, Project Principal	518.786.7625 (O) 518.928.9792 (C)
	Kirk Moline, Project Manager	518.786.7502 (O) 518.265.1708 (C)
	Nancy Garry, Office Health & Safety Officer	518.786.7541 (O) 518.320.5783 (C)

	Jon Dippert, Site Health & Safety Officer	518.786.7563 (O) 518.469.1183 (C)

EMERGENCY PHONE NUMBERS:

PERSONAL INJURY OR EMERGENCY:	Albany Medical Center 43 New Scotland Avenue Albany, New York 12208	518.262.3131 (approx. 15 minutes)
FIRE DEPARTMENT:	Emergency	911
City of Albany	Albany Fire Department (Headquarters) 26 Broad Street Albany, New York 12202	518.447.7879
Town of Colonie	West Albany Fire Department (Volunteer) 113 Sand Creek Road Albany, New York 12205	518.438.4750
POLICE:	Emergency	911
City of Albany	Albany Police Department 165 Henry Johnson Boulevard Albany, New York 12210	518.462.8013
Town of Colonie	Colonie Police Department 312 Wolf Road Latham, New York 12110	518.783.2744
NYS Police	Emergency NYS Police Troop G 760 Troy Schenectady Road Latham, New York 12110	911 518.783.3211
UPSTATE NEW YORK REGIONAL POISON CONTROL CENTER:	University Hospital Upstate Medical University SUNY Health Science Center 750 East Adams Street Syracuse, New York 13201	(800) 222-1222

NATIONAL RESPONSE CENTER:	c/o United States Coast Guard (G-OPF) 2100 2nd Street, Southwest - Room 2611 Washington, DC 20593-0001	(800) 424-8802
NYSDEC SPILL HOTLINE:		(800) 457-7362

2.0 HEATLH AND SAFETY PERSONNEL

The Office Health and Safety Officer (OHSO) will be responsible for implementing CT Male's health and safety policies and to ensure field work is in compliance with CT Male policies.

The Site Health and Safety Officer (SHSO) will be responsible for implementation of the HASP and the delegation of health and safety duties. The SHSO will coordinate the resolution of safety issues that arise during site work. When field operations require only Level D protection, it will not be necessary for the SHSO to be present on-site at all times. When the SHSO is not present on-site, a designee will be authorized to perform the duties of the SHSO, and the designee will be responsible for implementation of the HASP.

The SHSO or designee has authority to stop work upon their determination of an imminent safety hazard, emergency situation or other potentially dangerous situations (e.g. weather conditions). Authorization to resume work will be issued by the OSHO or SHSO.

3.0 SITE LOCATION AND DESCRIPTION

The Site is located at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York. The Site is 32.09 acres in size and is located in an urban setting characterized by adjacent industrial, commercial and residential development. The Site is located within the City of Albany and the Town of Colonie based on tax parcel and property information. The Site is generally level, with a slight slope towards the west on the southwestern portion of the Site. The Patroon Creek is located approximately 400 feet to the southwest of the Site.

The Site features include five (5) building structures, asphalt and gravel parking areas and access-ways, and grassy and wooded areas. The buildings occupy the southern portions of the Site. Portions of the buildings are currently leased out to tenants while other portions of the buildings are structurally unsound and in varying stages of decay. The asphalt and gravel parking areas and access-ways are concentrated around the buildings. Southwestern portions of the Site are predominantly vegetated with the exception of a partially fenced-in 2.3 acre tract of land that was formerly used for the storage and sale of RVs, trailers, etc.

Past environmental investigations of the Site have identified contaminants in the Site's fill/soil and groundwater. For fill/soil, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and metals were detected at concentrations exceeding Soil Cleanup Objectives (SCOs) for Unrestricted, Residential and Commercial Use Sites at 6 NYCRR Part 375 Sections 375-6.8(a-b). For groundwater, VOCs, SVOCs and metals were detected at concentrations exceeding TOGS regulatory standards and guidance values.

4.0 POTENTIAL SITE CONTAMINANTS

Contaminants that may be encountered during the RI include VOCs, SVOCs, pesticides and metals in fill/soil and VOCs, SVOCs and metals in groundwater.

Hazard assessment of the investigation work tasks and exposure to potential Site contaminants are outlined in section 5.0 of this HASP.

5.0 HAZARD ASSESSMENT

5.1 General

The hazard assessment, use of specific protective equipment, and monitoring associated with each field work task of the RI to be conducted at the subject Site are presented in following subsections.

For this project, C.T. Male will be subcontracting portions of the RI activities. Each subcontractor will be responsible for developing and implementing a Site specific health and safety plan for their activities, for protection of their employees, and use of personal protective equipment. The subcontractor will also be responsible for developing and following their own Respiratory Protection Program, as applicable.

5.2 Media Sampling

5.2.1 Soil, Sediment, Surface Water and Groundwater Sampling

Soil, sediment, surface water and groundwater sampling are planned for the Site. The potential hazards to personnel during this work are primarily dermal contact. Level D protection should be sufficient to protect against dermal contact during handling of soils, sediment and water. If organic vapors are present at the action levels described in Section 5.5, on the basis of organic vapor monitoring of the area during the work, it may be necessary to upgrade to Level C respiratory protection.

5.3 Subsurface Work

Exploratory test borings (including the installation of monitoring wells) into soils are planned for the site. The potential hazards to personnel during this work are primarily dermal contact. Level D protection should be sufficient to protect against dermal contact during drilling of and/or handling of the subsurface soils and groundwater. If organic vapors are present at the action levels described in Section 5.5, on the basis of organic vapor monitoring of the area during the work, it may be necessary to upgrade to Level C respiratory protection.

5.4 Confined Space

Only trained and experienced personnel are allowed to enter confined spaces. If there is a confined space that will be entered, CT Male's confined space and safety procedures will need to follow. Confined spaces are defined as an enclosed space which meets the following criteria:

1. It is large enough and so configured that a person can bodily enter and exit;
2. It has limited or restricted means for entry or exit;
3. It is not designated for continuous human occupancy;
4. It has one or more of the following:
    a. Contains or has a known potential to contain a hazardous atmosphere;
    b. Contains a material with the potential for engulfment of an entrant;
    c. Has an internal configuration such that an entrant could be trapped or asphyxiated by inward converging walls, or a floor that slopes downward; and
    d. Contains any other recognized serious safety or health hazard.

Confined spaces include, but are not limited to, storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, and open top spaces more than 4 feet in depth such as pits, manholes, vaults and vessels.

5.5 Ambient Air Monitoring during Intrusive Site Activities

During ground intrusive activities, the ambient air in the work area will be monitored with a photoionization detection meter (total volatile compounds – MiniRAE 3000, with 10.6 eV bulb) prior to the start of work and periodically as conditions warrant. If a concentration of 10 ppm (sustained for 5 minutes) of total volatile compounds is detected within the work area on the instrument, relative to an isobutylene standard (used to calibrate the instrument), work will cease immediately and the workers shall shut down equipment and leave the area immediately. The level of personal protective equipment (PPE) protection will be evaluated prior to continuing work. If a PPE upgrade to Level C is required, it will include: a half face air purifying respirator equipped with combination organic vapor and particulate cartridges for 10-15 ppm exposure levels; and a full-face air purifying respirator for greater than 15 ppm to less than 50 ppm exposure levels,

prior to continuing work. If a concentration greater than 50 ppm is encountered, work will cease immediately and the situation will be evaluated prior to continuation of work. Table 1 summarizes the action levels relative to the required respiratory protection.

Table 1
C.T. Male Action Levels & Required Respiratory Protection

Action Level	Level of PPE	Type of Respiratory Protection
0-10 parts per million	Level D	No respiratory protection
10-15 parts per million	Level C	Negative pressure half-face respirator
15-50 parts per million	Level C	Positive pressure full-face respirator
Greater than 50	Cease Work	Evaluate work procedures

-Facial hair is not permitted while wearing most respirators.

-Workers required to wear a respirator must have a minimum of OSHA 40 Hour training with current medical monitoring and fit test documentation.

5.6 Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) will be followed during ground intrusive remedial activities (i.e., excavation, disturbance and handling of site fill/soil). The intent of the CAMP is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of the RI. The CAMP is not intended for use in establishing action levels for worker respiratory protection. The CAMP will monitor the air for dust (particulate air monitoring, see Section 5.5.1) and volatile organic compound vapors (VOC air monitoring, see Section 5.5.2) at the downwind perimeter of the work area. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. The CAMP is included in Appendix B.

5.6.1 Particulate Air Monitoring

Two (2) real-time particulate monitors capable of continuously measuring concentrations of particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) will be utilized. The

instruments will be placed inside environmental enclosures at temporary monitoring stations based on the prevailing wind direction each work day, one (1) upwind and one (1) downwind of the designated work areas.

Each particulate monitor will be equipped with a telemetry unit capable of transmitting real-time particulate data to the Remediation Engineer and/or field representative. The particulate monitoring instruments will be capable of displaying and transmitting the short term exposure limit (STEL) or 15 minute averaging period, which will be compared to the NYSDOH Generic Community Air Monitoring Plan action levels for particulates, as listed below. The instruments are programmed to alarm at preset action levels. At the end of each day, the readings for each instrument will be downloaded to a PC and retained for future reference and reporting.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that the downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, the downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

In the event of poor weather such as heavy rain, particulate monitoring will not be performed for protection of instrumentation. These weather conditions would limit the effectiveness of the sensitive monitoring equipment and likely suppress particulate generation. Work activities will be halted if fugitive dust migration is visually observed for a sustained period of time during poor weather conditions.

5.6.2 Volatile Organic Compound Air Monitoring

C.T. Male will continuously monitor for volatile organic compounds (VOCs) at the downwind perimeter of the immediate work areas with a MiniRAE 3000 VOC monitor or equal. The VOC monitor will be placed in the downwind environmental enclosure containing a particulate monitor. The downwind VOC monitor will be equipped with a telemetry unit capable of transmitting real-time VOC data to the Remediation Engineer and/or field representative. The VOC monitoring instrument will be capable of displaying and transmitting the short term exposure limit (STEL) or 15 minute averaging period, which will be compared to the NYSDOH Generic Community Air Monitoring Plan action levels for VOCs, as listed below. The downwind VOC STEL readings will be downloaded to a PC and retained for future reference and reporting.

Upwind VOC STEL concentrations will be measured at the start of the work day and periodically thereafter employing a handheld MiniRae 3000 (with 10.6 eV bulb) VOC monitor to evaluate the Site's background conditions. The upwind VOC STEL readings will be manually recorded for future reference and reporting.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown. Work activities will then be evaluated to determine the source of the organic vapors and the engineering controls required to reduce/eliminate the organic vapors.

5.7 Hazard Identification and Control

The following Table 2 presents generalized hazards potentially involved with the tasks to be completed on this project. The table identifies general procedures to follow to prevent or reduce accident, injury or illness. Any worker on-site who identifies a potential hazard must report the condition to the SHSO or designee, and initiate control of the hazardous condition.

Table 2
Potential Hazards and Control

Potential Hazard	Control
Vehicular and Pedestrian Traffic	1. Wear safety vest when vehicular hazards exist. 2. Use cones, flags, barricades, and caution tape to define work area. 3. Equipment must be located in an area that does not present a hazard to by-standers or pedestrians in area. 4. Barriers to be used to separate the work areas from both vehicular and pedestrian traffic areas. 5. Contact local police for high traffic situations on public roadways.
Slip, Trip, and Fall Protection	1. Assess work area to determine if there is a potential for falling, tripping or slippery surfaces (i.e., mud, water, condensation). 2. Make sure work area is neat and tools are staged in one general area. 3. Wear steel-toe boots with adequate tread and always watch where the individual is walking. Carry flashlight when walking in poorly lighted areas.
Inclement Weather	1. Stop outdoor work during electrical storms and other extreme weather conditions such as extreme heat or cold temperatures. 2. Take cover indoors or in vehicle. 3. Listen to local forecasts for warnings about specific weather hazards such as tornadoes, hurricanes, and flash floods.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
Utility Lines Contact	1. Contact UFPO to have utility lines marked prior to a subsurface investigation, including but not limited to underground excavation, trenching or drilling. UFPO must be contacted at least 72 hours prior to work. 2. Refer to site drawings for utility locations. 3. Manually dig 3 to 5 feet below grade and 5 feet on each side of utility marked to avoid breaking utility lines.
Noise	1. Wear hearing protection when exposed to noise levels above 85 decibels, which includes equipment such as a drill rig, excavator, jackhammer, or other heavy equipment is operating on-site. 2. Wear hearing protection whenever you need to raise your voice above normal conversational speech due to a loud noise source; as this much noise indicates the need for protection. 3. Hearing protection is required when measured sound exceeds 85 decibels (dB) where employees stand or conduct work.
Electrical Shock	1. Maintain appropriate distance between heavy equipment and overhead utilities; 20 foot minimum clearance from power lines; and 10 foot minimum clearance from shielded power lines. 2. Contact local underground utility locating service prior to penetrating the ground surface.
Physical Injury	1. Wear hard hats and safety glasses at all times when on-site. 2. Maintain visual contact with equipment operators and wear orange safety vest when heavy equipment is operating on-site. Be aware of pedestrians and other vehicle traffic while heavy machinery is operating on-site. 3. Avoid loose clothing, long hair, and jewelry when working around rotary equipment. 4. Keep hands and feet away from drilling augers/casing/rods/samplers and excavation equipment tracks/tires/bucket. 5. Test emergency shut-off switches on drill rigs and excavation equipment prior to daily use.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
	6. Wear life preserver in boats. 7. Do not enter manholes. 8. Be aware of openings into manholes and keep area clear of trip hazards. 9. Be aware of outside terrain – steep slopes and slip, trip hazards while working. 10. Be aware of biological hazards on-site such as insects (bees, mosquitoes, and flies), ticks, spiders, and snakes. 11. Be aware of botanical hazards such as poison ivy, poison sumac, and giant hogweed.
Back Injury	1. Use a mechanical lifting device or a lifting aid where appropriate. 2. Ensure the route is free of obstructions. 3. Bend at the knees and use leg muscles when lifting. 4. Use the buddy system if lifting heavy or awkward objects. 5. Do not twist or jerk your body when lifting.
Heat Stress	1. Increase water intake while working. 2. Avoid excessive alcohol intake the night before working in heat stress situations. 3. Increase number of rest breaks as necessary, and rest in a shaded area. 4. Watch for signs and symptoms of heat exhaustion and fatigue. 5. Rest in cool, dry areas. 6. In the event of heat stress or heat stroke, bring the victim to a cool environment and call 911.
Cold Stress	1. Wear cotton, wool or synthetic (polypropylene) undergarments to absorb perspiration from the body. 2. Wear additional layers of light clothing as needed for warmth. The layering effect holds in air, trapping body heat, and some layers could be removed as the temperature rises during the day. 3. Pay close attention to body signals and feelings (hypothermia symptoms), especially to the extremities. Correct any problem indicators by breaking from the work activity and moving to a rest area to warm up and add additional clothing.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
	4. Increase water intake while working. 5. Avoid excessive alcohol intake the night before working in cold conditions. 6. Increase the number of rest breaks as necessary, and rest in a warm area. 7. In the event of hypothermia or frost bite, bring the victim to a warm environment and call 911.
Fire Control	1. Smoking is not allowed on-site. 2. Keep flammable liquids in closed containers. 3. Isolate flammable and combustible materials from ignition sources. 4. Keep fire extinguisher nearby and use only if deemed safe. 5. Inform SHSO if a chemical is brought on-site.
Media Sampling (water, soil, sediment, etc.)	1. Wear appropriate PPE to avoid skin, eye, and inhalation contact with contaminated media. 2. Stand upwind to minimize possible inhalation exposure, especially when opening monitoring wells or closed containers/vessels. 3. Conduct air monitoring, whenever necessary, to determine level of chemical vapors and determine respiratory protection. 4. If necessary, employ engineering controls to assist in controlling chemical vapors. 5. When collecting samples on or near water bodies, wear a life jacket and employ the buddy system. 6. When collecting samples from water bodies, assess water conditions and the water current and ensure that the sampling vessel is stabilized.
Cleaning Equipment	1. Wear appropriate PPE to avoid skin and eye contact with Alconox or other cleaning materials. 2. Stand upwind to minimize possible inhalation exposure. 3. Properly dispose of spent chemical cleaning solutions and rinse accordingly.
Poor Structural Building Condition	1. Assess building and rooftop condition prior to accessing and note where exit points are at all times. 2. Be cautious when walking inside a building. Always look for holes in

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
	the floors or hanging debris which could cause injury. 3. Carry a high powered flashlight and use as necessary in low light areas. 4. If working in a building, ensure work area is neat and tools are staged in one general area. 5. If working on a rooftop, maintain a safe distance from the roof ledge and do not access sloped roof surfaces without proper safety controls. 6. Wear steel-toe boots with adequate tread. 7. Attempt to employ the buddy system so someone knows what part of the building individuals are in.
Deer Ticks	1. Wear pants and long sleeve shirts. 2. Wear tick repellant coated pants and long sleeve shirts. See SHSO for appropriate clothing. 3. Use tick repellent. The repellent will need to be cleared with OSHO or SHSO to ensure that new chemicals are not introduced to the Site. 4. Perform personal body checks for the presence of ticks, or insect bites after field work is complete and before personnel have left the Site. 5. Notify the OHSO or SHSO immediately if you have been bitten by a tick or notice other insect bites and contact your physician.
Note: A first aid kit and fire extinguisher will be located in the C.T. Male company vehicle.	

Response actions to personal exposure from on-site contaminants include skin contact, eye contact, inhalation, ingestion, and puncture or laceration. The recommended response actions are presented in Section 11.2.

6.0 TRAINING

Site specific training of workers and personnel will be conducted and provided by the OHSO or SHSO or designee prior to any on-site activity. The training will specifically address the activities, procedures, monitoring and equipment for the site operations. It will include area and facility layout, hazards, emergency services (police, hospital, fire, etc.), and review of this HASP. Questions by workers, field personnel, etc. will be addressed at this time.

Workers and personnel conducting and/or supervising the project must have attended and successfully completed a 40 Hour Health and Safety Training Course for Hazardous Waste Operations and an annual 8 hour Refresher Course. Workers must take part in an employer medical surveillance program in accordance with OSHA 1910.120 requirements. . Including that the workers have an annual medical physical that is up to date and not past the prior year's annual physical date, prior to the date the employee begins Site work. In addition, these results of the annual physical most show that a worker has been cleared by a physician (as per 29 CFR 1910.120) to perform this type of work, and that they are physically able to wear a respirator. Documentation of training and medical surveillance will be submitted to the OHSO or SHSO or designee prior to the start of any on-site work. A copy of the training certificates for C.T. Male personnel are maintained at C.T. Male's place of business and are available on demand.

7.0 SITE ACCESS

The RI will be conducted within the Site boundaries. Due to the Site location, it is possible that the public or building tenants may be present at the time of the work. As such, the work area and exclusion zone will be considered as the following, dependent on the investigative tasks performed.

- Caution tape, stakes, and/or tall safety cones will be used to establish an exclusion zone of 30 foot square area around each test boring location where surface and subsurface soil samples will be collected and where the monitoring wells will be installed. All work and equipment will remain within the designated work area/exclusion zone until completion of the test boring and installation of the monitoring well.
- Stakes or tall safety cones with caution tape will be used to establish a decontamination zone adjacent to the exclusion zone that has been established. Entry and exit from the exclusion zone will be through the contamination reduction zone.
- Traffic cones will be used to establish a 10 foot square around each manhole sampling location and a flagger will be utilized to direct traffic flow away from the Site investigation area/exclusion zone.
- It should be noted that the size of the containment zones are approximate and due to Site constraints (e.g. roads, fencing, building footprints, etc.) the field health and safety officer can adjust the size of the containments zones as needed based on access and activities within the zone.
- Caution tape will be used to delineate an approximate 10 foot square around each potential surface water and sediment sampling location and each soil sampling location not originating from a test boring. All work and equipment will remain within the designated work area/exclusion zone until completion of the sampling. If a boat is utilized to aid in the collection of the surface water and sediment samples, then the boat will be considered as the designated work area/exclusion zone.

Only OSHA trained individuals who are qualified to do the work and have read and signed this Site specific HASP will be allowed within the work/exclusion zone. The

SHSO or designee will be responsible for limiting access to unauthorized individuals.

The Contamination Reduction Zone (decontamination area), and Support Zone (clean area, everywhere else) will be established outside the Exclusion Zone, as necessary. The exclusion, contamination reduction, and support zone during the RI work have been identified and designated as follows:

Exclusion Zone - The location of the exclusion zone will be determined in the field prior to the start of work and will vary depending on the work activities conducted. For the most part, the exclusion zone is anticipated to be defined with caution tape and cones (see above). Only authorized persons with proper training and protective gear will be allowed to enter the exclusion zone.

Contamination Reduction Zone – If applicable, this zone will generally be a 30'± x 30'± area, marked off with stakes, colored flagging, cones, or equal method, containing the decontamination pad. The location will be determined in the field prior to the start of work and will vary depending on the area(s) the work is being conducted. This zone is where decontamination of personnel and equipment will take place (and decontamination pad), as necessary, on the basis of the work being performed.

Support Zone - Area outside of the contamination reduction zone; not including the exclusion zone. Unauthorized or untrained individuals must remain in this zone.

8.0 PERSONAL PROTECTION

8.1 Level of Protection

Based on an evaluation of the potential hazards, the minimum level of protection to be worn by workers during implementation of the RI activities is defined as Level D protection, and will be controlled by the SHSO or designee.

The minimum level D protective equipment will consist of field clothes, rubber gloves **(NITRILE and/or PVC ONLY)**, hard hats, safety glasses, and safety boots (steel-toe preferred). As appropriate, this level of protection may be modified to include protective suits **(NOT TYVEK)**, coveralls, leg chaps, or face shield for additional protection. Both full-face and half-face air purifying respirators should be readily available. Appropriate combination organic vapor and particulate cartridge filters will be available at the Site to use, if necessary, with the air purifying respirators.

If required, level C protective equipment will consist of the items listed for Level D protection with the added protection of full-face, air purifying (organic vapor and particulate) respirator, chemical resistant clothing **(NOT TYVEK)**, inner and outer chemically resistant gloves (i.e. nitrile and/or PVC), and chemical resistant safety overboots.

Level B is not anticipated, but if required, level B protective equipment will consist of the items listed for Level D protection except a self-contained breathing apparatus (SCBA) will be worn dependent on the level of contaminants present in the work zone, and protective suits **(NOT TYVEK)** will be required. When Site conditions warrant the need for level B protective equipment, work will cease and the project will be re-evaluated to determine the necessity for employing engineering controls to reduce or eliminate the potential contaminants of concern.

8.2 Safety Equipment

Basic emergency and first aid equipment will be available at an area within the Support Zone clearly marked and available or within C.T. Male's company vehicle. This shall include a first aid kit, eye wash bottle, fire extinguisher, supply of potable

water, soap and towels. Extra PPE will also be kept in the Support Zone or within CT Male's company vehicle. The SHSO or designee shall be equipped with a cellular phone in case of emergencies.

9.0 COMMUNICATIONS

The SHSO or designee will be equipped with a cellular phone in case of emergencies. The SHSO or designee shall notify the C.T. Male Project Manager and OSHO as soon as safely possible in the event of an accident, injury or emergency action.

Hand signals for certain work tasks will be employed, as necessary, and the buddy system will be employed, if feasible, during drilling and installation of monitoring wells, test pitting and during open surface water and open water sediment sampling activities.

10.0 DECONTAMINATION PROCEDURES

10.1 Personnel Decontamination Procedures

Decontamination procedures will be carried out by all personnel leaving the Exclusion Zone (except under emergency evacuation). The amount of decontamination performed will be dependent on the level of personal protection currently being worn within the exclusion zone.

1. Do not remove respiratory protection until all steps have been completed.
2. Clean outer protective gloves and outer boots, if worn, with water (preferably with a pressurized washer) over designated wash tubs in the exclusion zone to remove the gross amount of contamination.
3. Deposit equipment used (tools, sampling devices, and containers) at designated drop stations - on plastic drop sheets or in plastic lined containers.
4. Rinse outer boots if worn and gloves with clean water in designated rinse tubs. Remove outer boots if worn and gloves and deposit in designated area to be determined in the field for use the next day or when necessary. If disposable outer boots are worn, remove and discard in designated container.
5. Remove hard hat & safety glasses, rinse with clean water as necessary and deposit in designated area for use the next day or when necessary.
6. Remove protective suit, if worn, and discard in designated container. Remove respirator at this time, if used; wash and rinse with clean water. Organic vapor and particulate cartridges, when used, will be replaced daily. Used cartridges will be discarded in the designated waste container. Remove inner gloves and discard in designated container.

10.2 Equipment and Sample Containers Decontamination

All decontamination will be completed by personnel in protective gear appropriate for the level of protection determined by the site SHSO or designee. Manual sampling equipment including scoops, hand augers, shovels, pick ax, sampling barrel, macro-core sampler, excavation bucket, etc. which come into contact with the Site's soils will be cleaned with a tap water/detergent wash and a bottled water rinse. The sampling equipment will be decontaminated after each sample is collected at the Contaminant Reduction Zone (Decontamination Station). The sampling equipment wash and rinse water will be captured in plastic pails or tubs and ultimately transferred to labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location.

Geoprobe or drill rig and excavation equipment (i.e., casing, drill rods, bits, core) which comes into contact with the Site's soils will be decontaminated with a high pressure/hot water wash and/or other methods within the Contaminant Reduction Area. Equipment decontamination wastes will be transferred to labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location.

Larger equipment (i.e., drill rig, Geoprobe, excavator) which comes into contact with the Site's soils will be decontaminated with a high pressure/hot water wash and/or other methods within a decontamination pad. The decontamination procedure will focus on portions of the equipment that has come into contact with the site's soils such as the tires and tracks. The cleaning will be performed prior to the equipment leaving the site. Equipment decontamination wastes will be transferred to labeled DOT 17H approved 55-gallon open top steel drums and staged on-site at a secure location.

Exterior surfaces of sample containers will be wiped clean with disposable paper towels in the decontamination zone and transferred to a clean cooler for transportation or shipment to the analytical laboratory. Sample identities will be noted and checked off against the chain-of-custody record. The disposable paper towels will be placed in the designated disposal container and disposed of as solid waste.

11.0 EMERGENCY RESPONSE PROCEDURES

THE PROJECT EMERGENCY COORDINATORS ARE:

Office Health and Safety Officer (OSHO)
Nancy Garry (CT Male)

Site Health and Safety Officer (HSO)
Jonathan Dippert (CT Male)

Project Manager
Kirk Moline (CT Male)

The following standard emergency procedures will be used by on-site personnel. The Project Manager and OHSO shall be notified of any on-site emergencies and be responsible for assuring that the appropriate procedures are followed.

11.1 Personal Injury

Emergency first aid shall be administered on-site as deemed necessary and only by a trained individual, if available at the site. If a trained individual is not available on-site, decontaminate, if feasible, and transport individual to nearest medical facility (Albany Medical Center). The SHSO will supply medical data sheets to appropriate medical personnel and be responsible for completing the incident report. If the SHSO is injured or controlling the emergency situation, medical data sheets are available in Attachment A of this Health and Safety Plan. CT Male personnel shall complete a medical data safety sheet prior to working at the Site.

11.2 Personal Exposure

The recommended response to worker exposure from contaminants on-site includes the following:

SKIN CONTACT: Use generous amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention, as necessary.

EYE CONTACT: Wash eyes thoroughly with potable water supply provided on site. Eyes should be rinsed for at least 15 minutes subsequent to chemical contamination. Provide medical attention, as necessary.

INHALATION: Move worker to fresh air and outside of the work zone and/or, if necessary, decontaminate and transport to hospital (Albany Medical Center). If respirator use is implemented at the time of inhalation, worker must not remove respirator until completely away from the work zone.

INGESTION: Decontaminate, if feasible, and transport to hospital (Albany Medical Center).

PUNCTURE WOUND OR
LACERATION: Provide first aid at the site and if wound needs medical attention, decontaminate, if feasible, and transport to hospital (Albany Medical Center).

If the affected worker is exposed to contaminants on-site and the injury or accident prevents decontamination of the individual, the emergency responders must be notified of this condition and the exposure must be kept to a minimum.

11.3 Potential or Actual Fire or Explosion

Immediately evacuate area in the event of a potential or actual fire or explosion. Notify the local Fire and Police Departments, and other appropriate emergency response groups as listed in Section 1.2. Perform off-site decontamination and contain wastes for proper disposal. If a fire or explosion occurs, all on-site personnel must meet in the designated area of the site (established by the SHSO or designee) for an accurate head count.

11.4 Equipment Failure

Should there be any equipment failure, breakdown, etc. the Project Manager, OSHO, and SHSO shall be contacted immediately. The Project Manager, OSHO or SHSO will make every effort to replace or repair the equipment in a timely manner.

11.5 Spill Response

The SHSO or designee shall initiate a corrective action program with the subcontractors in the event of an accidental release of a hazardous material, suspected hazardous material or petroleum. The SHSO or designee will act as the Emergency Coordinator with the subcontractors for the purposes of: spill prevention; identifying releases; implementing clean up measures; and notification of appropriate personnel.

The corrective action program will be implemented by the SHSO and subcontractor to effectively control and minimize any impact accidental releases may have to the environment.

Effective control measures will include:

- Preliminary assessment of the release.
- Control of the release source.
- Containment of the released material.
- Effective clean-up of the released material.

Potential sources of accidental releases include: hydraulic oil spills or petroleum leaks from heavy equipment; cooling oils (potentially PCB containing) for electrical equipment handling and cleaning; and spills from drums, vats, vessels, and tanks. The SHSO/Emergency Coordinator in conjunction with the subcontractor shall respond to an accidental release in the following manner:

- Identify the character, source, amount and area affected by the release.
- Have subcontractor take all reasonable steps to control the release.
- Notify facility personnel.
- Notify the NYSDEC Spill Hotline at 1-800-457-7362 if required.
- Notify Project Manager and OSHO.
- Contain the release with sorbent material which should include speedi-dry, spill socks and sorbent pads.
- Prevent the release from entering sensitive receptors (i.e., catch basins and surface water) using the specified sorbent material or sandbags.
- Coordinate cleanup of the released material.

- Oversee proper handling and storage of contaminated material for disposal.

At no time should personal health or safety be compromised or jeopardized in an attempt to control a release. All health and safety measures as outlined in this HASP should be adhered to.

12.0 ADDITIONAL WORK PRACTICES

Workers will be expected to adhere to the established safety practices. Work on the project will be conducted according to established protocol and guidelines for the safety and health of all involved. The following will be adhered to:

- Employ the buddy system when possible, and for those work tasks which require it. Establish and maintain communications.
- Minimize contact with potentially contaminated soil, sediment, surface water and groundwater.
- Employ disposable items when possible to minimize risks during decontamination and possible cross-contamination during sample handling.
- Smoking, eating, or drinking after entering the work zone and before decontamination will not be allowed.
- Reduce exposure to heat and other work stress related to wearing personal protective equipment. Take breaks as necessary and drink plenty of fluids to prevent dehydration.
- Withdrawal from a suspected or actual hazardous situation to reassess procedures is the preferred course of action. Consult the OSHO and Project Manager to complete the reassessment.
- The removal of facial hair (except mustaches – must be trimmed to not interfere with the proper seal of the respirator) prior to working on-site will be required to allow for a proper respiratory face piece fit.
- The Project Manager, OSHO, SHSO and sampling personnel shall maintain records recording daily activities, meetings, facts, incidents, data, etc. relating to the project. These records will remain at the project site during the full duration of the project so that replacement personnel may add information while maintaining continuity. These daily records will become part of the permanent project file.

13.0 AUTHORIZATIONS

Personnel authorized to enter the exclusion zone at the First Prize Center Site at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York while operations are being conducted must be certified by the OHSO or SHSO. Authorization will involve completion of appropriate training courses and review and sign off of this HASP.

C.T. Male personnel identified below will be authorized to perform work on the Site after they have read and signed this HASP, as per Section 15.0.

1. Kirk Moline C.T. Male

3. Steve Bieber C.T. Male

4. Jeff Marx C.T. Male

5. Rosaura Andujar-McNeil C.T. Male

6. Jon Dippert C.T. Male

7. Dan Achtyl C.T. Male

8. Austin Lewandowski C.T. Male

9. Dan King C.T. Male

10. Nancy Garry C.T. Male

11. Cliff Bondi C.T. Male

12. Robert Koslosky C.T. Male

13. Chris Ormsby C.T. Male

14. Brittany Winslow C.T. Male

15. Ryan Hubbard C.T. Male

16.

14.0 MEDICAL DATA SHEET

This medical data sheet will be completed by all on-site personnel and will be kept on-site during the duration of the project. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

PROJECT: Remedial Investigation to be conducted at the First Prize Center Site at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York.

Name _____ Home Telephone _____

Address _____

Emergency Contact _____

Drug or Other Allergies _____

Particular Sensitivities _____

Do You Wear Contact Lenses _____

Provide a Checklist of Previous Illness or Exposure to Hazardous Chemicals

_____

What Medications Are You Presently Using _____

_____

Do You Have Any Physical or Medical Restrictions _____

_____

Are You Qualified to Wear Respirator (Provide Fit Test Results)_____

Name, Address, and Telephone Number of Personal Physician:

_____

_____

_____

15.0 FIELD TEAM REVIEW

Each field team member shall sign this section after site specific training is completed and before being permitted to work on-site.

I have read and understood this Site Specific Health and Safety Plan, and I will comply with the provisions contained therein.

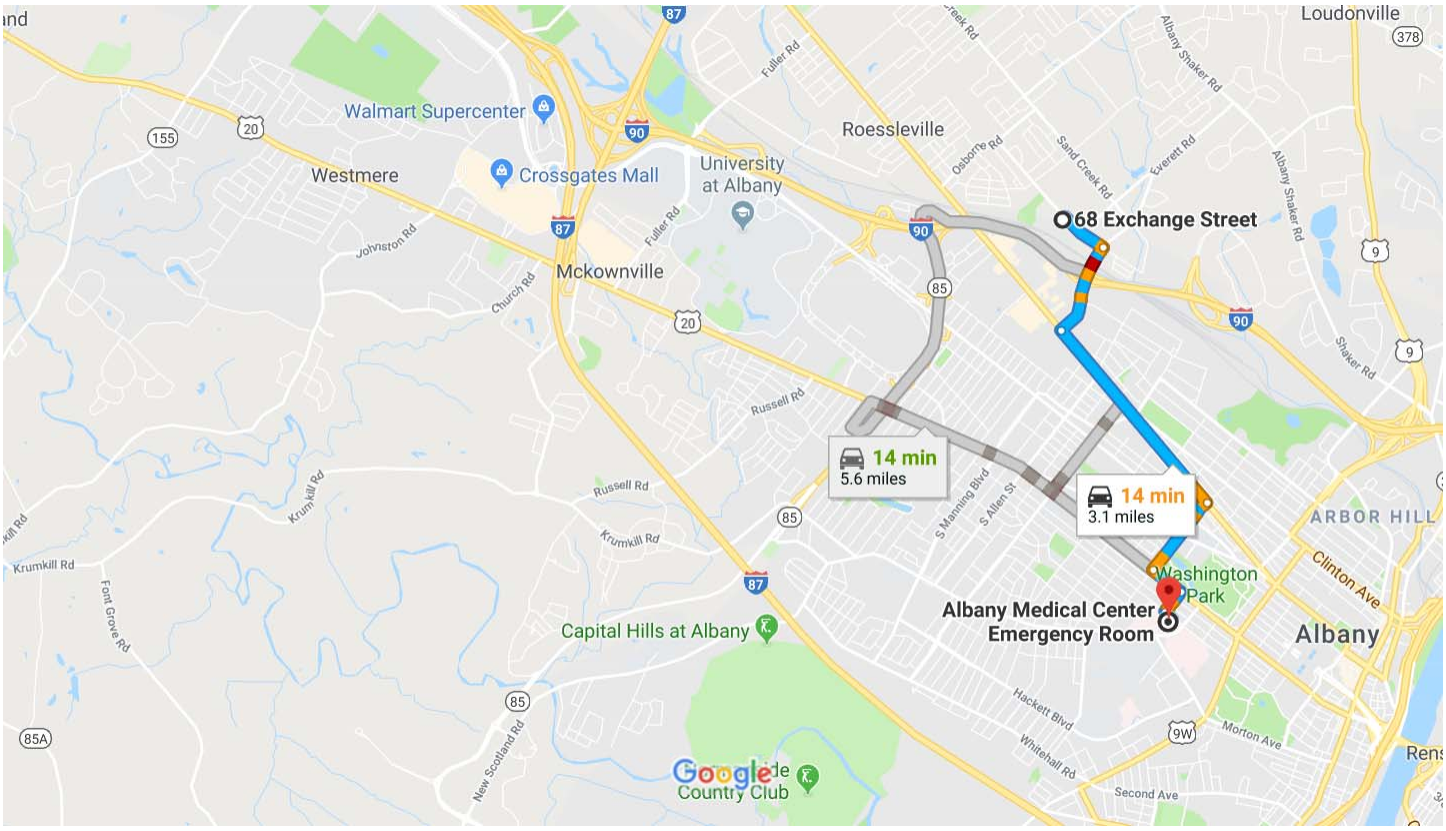
PROJECT: Remedial Investigation
First Prize Center Site
68 Exchange Street
City of Albany and Town of Colonie, Albany County, New York

Name: Printed	Signature	Date

FIGURE 1

MAP SHOWING ROUTE TO ALBANY MEDICAL CENTER

Google Maps 68 Exchange Street, Albany, NY to Albany Medical Center Emergency Room, 43 New Scotland Ave, Albany, NY 12208 Drive 3.1 miles, 14 min



68 Exchange St

Albany, NY 12205

Take Central Ave to N Lake Ave in Albany

8 min (2.2 mi)

1. Head southeast on Exchange St toward Russell Rd

0.3 mi

2. Turn right onto Everett Rd Ext

0.6 mi

3. Use the left 2 lanes to turn left onto Central Ave

Pass by Family Dollar (on the right in 0.8 mi)

1.3 mi

4. Turn right onto N Lake Ave

3 min (0.5 mi)

5. Turn left onto Madison Ave

38 s (0.2 mi)

Continue on Robin St to your destination

2 min (0.2 mi)

6. Turn right onto Robin St

0.1 mi

7. Continue straight

344 ft

8. Turn right

Destination will be on the right

49 ft

ATTACHMENT A

MEDICAL DATA SHEETS

14.0 MEDICAL DATA SHEET

This medical data sheet will be completed by all on-site personnel and will be kept on-site during the duration of the project. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

PROJECT: Remedial Investigation to be conducted at the First Prize Center Site at 68 Exchange Street in the City of Albany and Town of Colonie, Albany County, New York.

Name _____ Home Telephone _____

Address _____

Emergency Contact _____

Drug or Other Allergies _____

Particular Sensitivities _____

Do You Wear Contact Lenses _____

Provide a Checklist of Previous Illness or Exposure to Hazardous Chemicals

_____

What Medications Are You Presently Using _____

_____

Do You Have Any Physical or Medical Restrictions _____

_____

Are You Qualified to Wear Respirator (Provide Fit Test Results)_____

Name, Address, and Telephone Number of Personal Physician:

_____

_____

_____

ATTACHMENT B

COMMUNITY AIR MONITORING PLAN

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. APeriodic@ monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009