April 206 (RevisedJuly 2016)

Brownfield Cleanup Program

Remedial Investigation Work Plan

Cottage Place Gardens Phase 3A & 3B
8 Cottage Place and
209 Warburton Avenue
City of Yonkers
Westchester County, New York

CPG PHASE III LIMITED PARTNERSHIP
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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)."

DRAFT REMEDIAL INVESTIGATION WORK PLAN
COTTAGE PLACE GARDENS PHASE 3A & 3B
8 COTTAGE PLACE AND 209 WARBURTON AVENUE
CITY OF WESTCHESTER
WESTCHESTER COUNTY, NEW YORK

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1.0 INTRODUCTION & PURPOSE

1.1 Introduction

This document presents the Remedial Investigation Work Plan (RIWP) developed to further assess environmental conditions at the 8 Cottage Place and 209 Warburton Avenue Site (the "Site") in the City of Yonkers, New York (Figure 1, Site Location Map). The Site developer's have submitted an application for entry into the Brownfield Cleanup Program (BCP). Future plans for the Site will involve demolition of the existing buildings and construction of new for residential use (apartments). An existing day care facility is the only building proposed to not be demolished. Although located within the 209 Warburton Avenue parcel, the daycare has an address of 150 Woodworth Avenue.

The party participating in this BCP, CPG Phase III Limited Partnership, is a "Volunteer" and has not been involved with the historic operations of the project Site.

The purpose of this RIWP is to provide specific guidelines and to establish procedures for the remedial investigation. The proposed investigation incorporates the findings of previous Site investigations. As the previous investigations of the Site have been limited, this RIWP is intended to fill in the existing data gaps, define the nature and extent of potential contaminant sources, and evaluate the fate and transport mechanisms applied to any identified contaminants so that an appropriate remedy can be incorporated into the redevelopment plans for the Site.

The proposed investigation includes the advancement of soil borings, collection and analysis of subsurface soil samples, and a vapor intrusion assessment.

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 target goal of this RIWP is to support the development of potential remedial alternatives, as necessary, which will allow the Volunteer to develop a Remedial Work Plan for NYSDEC review.

1.2 Response to NYSDEC Comments

The nine (9) requested modifications in the May 10, 2016 letter are addressed either below and/or within the respective work plan sections herein. The NYSDEC comment letter is included as Exhibit 1 for reference.

Modification 1

If the initial indoor air quality assessment is conducted outside of the heating season (November 15th to March 31st), then a second indoor air quality assessment will be conducted during the heating season.

Modification 2

As discussed in Section 4.3 of this RI Work Plan, a Community Air Monitoring Plan (CAMP) will be used during the RI field activities in accordance with the New York State Department of Health Generic CAMP provided in Appendix C of the HASP.

Modification 3

Figures 2A and 2B have been referenced in Section 2.7 of this RI Work Plan. Figure 2A shows the locations of previous borings completed within the boundaries of the Phase 3A parcel. Figure 2B shows the locations of previous borings completed within the boundaries of the Phase 3B parcel.

Modification 4

Reference is made in Section 2.9 that previous environmental reports are included in Attachment A of this RI Work Plan.

Modification 5

Section 3.2.2 has been amended to indicate that the sub-slab vapor, indoor air and outdoor ambient air samples for the vapor intrusion assessment will be collected over a 24-hour period.

Modification 6

The schedule in Section 5.2 has been updated to reflect the sequencing for Department approval of the RI Work Plan and the 30-day comment period.

Modification 7

The boundaries for the Phase 3A parcel have been more clearly defined on Figure 2A.

Modification 8

Figure 2A has been amended to depict sampling locations within the Phase 3A parcel where constituents have exceeded the unrestricted use soil cleanup objectives (SCOs).

Modification 9

Tables 1, 2 and 3 in the Tables Section of this report have been included to summarize the results of the previous investigations that exceeded the unrestricted use SCOs and groundwater standards. The tables are referenced in Section 2.9 under the Phase 3A Parcel and Phase 3B Parcel headings.

2.0 SITE DESCRIPTION & HISTORY

2.1 Site Description

The project Site in located in the City of Yonkers, Westchester County and consists of two areas identified as Phase 3A and Phase 3B.

The Phase 3A parcel is approximately 1.006 acre in size and occupies the northern portion of the overall Cottage Place Gardens Parcel (Tax Map # 2.-2094-1, 8 Cottage Place). The parcel is bound by Willow Place to the north, the 188 Warburton BCP site (Site# C360138) to the west, and other lands of Cottage Place Gardens to the east and south. The site is located in the City of Yonkers, Westchester County, New York. The parcel is currently occupied by three (3) multi-story residential apartment buildings (Buildings 3, 6 and 7). The buildings are three story brick buildings with flat roofs constructed on crawlspace type basements. The parcel has been used as a portion of an apartment complex since its development in 1948.

The Phase 3B parcel (Tax Map # 2.2098-1, 209 Warburton Avenue) is approximately 0.954 acres in size and occupies the southwestern corner of the intersection of Warburton Avenue and Lamartine Avenue, in the City of Yonkers, Westchester County, New York. The southern portion of the western property line of the Phase 3B parcel is partially bound by Woodworth Avenue. The Phase 3B parcel is currently comprised of a public housing townhouse complex and daycare center since its construction in the early 1970s. The public housing units are located along the entire length of the parcel fronting Warburton Avenue, and the daycare facility, fronting Woodworth Avenue, is located within the southwestern corner of the parcel.

2.2 Adjacent Land Use

The Phase 3A parcel is bound to the east and south by additional buildings of Cottage Place Gardens. The area to the west is occupied by a building under construction which was also once occupied by Cottage Place Gardens' apartment buildings. The area to the north is occupied by single and multi-family dwellings, and a church which are located on the opposite side of Willow Place.

The Phase 3B parcel is bound to the north by Lamartine Avenue followed by multi-family dwellings, to the west by Woodworth Avenue and multi-family dwellings, and

to the east by Warburton Avenue followed by multi-family dwellings. Multi-family dwellings also lie south of the parcel.

2.3 Site History

The Phase 3A parcel is a portion of a public housing apartment complex that was constructed in the late 1940s. Prior to this time, the parcel was developed with multiple dwellings and stores dating to as early as 1886.

The Phase 3B parcel has reportedly consisted of a townhouse complex and daycare center since its construction in the early 1970s. Prior to this time, the parcel was developed with multiple single and multi-family dwellings, stores and a garage since as early as 1886. The garage was located on southwestern portion of the site now containing a daycare center from as early as 1917 to as late as 1971. Specific uses of the garage are not known.

2.4 Site Utilities

Electricity and natural gas are supplied to the Phase 3A and 3B parcels by Con Edison. Municipal water and sewer service are provided by the City of Yonkers. The buildings located on the Phase 3A parcel are heated by hot water radiant heat that is generated from two natural gas fired boilers located in the basement of Building 12 (located off-site). The daycare center on the Phase 3B parcel is reportedly heated by a natural gas fired forced air furnace system located on the third floor of this building. Each townhouse apartment is reportedly heated by its own natural gas fired forced air furnace system.

2.5 Site Drainage Features

Several catch basins were identified in grassy, concrete and asphalt covered areas throughout the Phase 3A parcel. The catch basins discharge to the City of Yonkers storm water sewer system. Staining was not observed in media surrounding the catch basins.

Two catch basins are located in asphalt paved areas on central portions of the Phase 3B parcel. Additionally, circular drains for storm water were noted in the sidewalk areas to the west of the townhouses. Staining or sheens were not observed in or surrounding

the catch basins or storm drains. The catch basins and storm drains discharge to the City of Yonkers storm water sewer system.

2.6 Topographic Description and Nearby Surface Water Bodies

According to the United States Geological Survey (USGS) Topographic Map, the Phase 3A parcel site lies at approximately 90 to 120 feet above Mean Sea Level and the Phase 3B parcel lies at approximately 40 to 50 feet above Mean Sea Level. Generally, the site parcels slope gently to moderately from the east down to the west.

There are no water bodies on either parcel. The Hudson River is located approximately 0.3-miles west of the Phase 3A parcel and 0.2 miles west of the Phase 3B parcel.

2.7 Site Geology

According to the Surficial Geologic Map of New York State, Upper Hudson Sheet, the soil within the site parcels is identified as till with bedrock possibly being within 1-3 meters of the surface. Soils are mapped by the Westchester County Soil Survey as Urban Land (Ur).

A Phase II ESA was conducted in February 2015 to evaluate subsurface conditions and the overall environmental quality at the Cottage Gardens Apartments, inclusive of the Phase 3A parcel. Seven of 16 borings were completed within the Phase 3A parcel identified as MW-C, MW-D, MW-E, MW-F, MW-G, MW-H and MW-O. The boring locations are depicted on Figure 2A.

Test borings MW-C and MW-O were completed within asphalt paved areas of the parcel. The remainder of the borings were completed within vegetated portions of the site. Subsurface conditions at each of the borings generally consisted of brown sand and silt with varying percentages of gravel, or brown sand with varying percentages of silt and gravel. Fill material, consisting primarily of red brick and ash with less frequent occurrences of cinder and coal, was encountered in all of the borings with the exception of boring MW-H. The fill material was primarily encountered from the ground surface to 5 feet below grade. Concrete was encountered at 12 feet below grade at test boring MW-H, which is located adjacent south of Building 3. The following table summarizes the depth intervals where the fill material was encountered and the type of material encountered.

Boring	Depth Interval (ft)	FILL MATERIALS						
		Sand	Silt	Gravel	Red Brick	Cinder	Ash	Coal
B-C	0-5	X	X	X	X		X	
B-D	1-2	X	X	X	X		X	
B-E	3-5	X	X		X	X		
B-F	0-2	X	X	X	X			
B-G	0-5	X	X	X	X		X	
B-O	0-4	X	X	X	X		X	

*Fill materials consisting of red brick, cinders, ash and/or coal were not observed in soils recovered from test boring B-H.

The recovered soils became moist at depths that ranged from 2 feet below grade to 10 feet below grade. Wet soil conditions were not encountered in any of the borings and moist soil conditions were not encountered in boring B-H. Drilling refusal was encountered at each of the test borings at depths ranging from 9.1 feet below grade at test boring B-E to 16.1 feet below grade at test borings B-G and B-H. Based on drilling conditions encountered at the neighboring 33 Ashburton Avenue Brownfields site, refusal was likely related to the presence of large cobbles and boulders at these depths.

A Phase II ESA was conducted in January 2015 to evaluate subsurface conditions and the overall environmental quality at the Phase 3B parcel. Test borings B-1 to B-3 were completed within asphalt pavement areas of the site. Test boring B-4 was completed in a concrete pavement area. Subsurface conditions at all of the borings generally consisted of sand with varying percentages of gravel and silt. Fill material, consisting of red brick, was encountered at the 4 to 6 foot depth interval at test boring B-1 and at the 0.3 to 4 foot depth interval at test boring B-3. The soils became saturated at depths that ranged from 9 feet below grade at test boring B-3 to 11 feet below grade at test borings B-1 and B-2. Groundwater was not encountered in test boring B-4. Refusal was encountered at all of the test borings at depths that ranged from 7 feet below grade at

test boring B-4, 14 feet below grade at test boring B-3, and 14.9 feet below grade at test borings B-1 and B-2. The boring locations are depicted on Figure 2B.

Based on Site and area topography, groundwater movement is anticipated to be from the east to west toward the Hudson River.

According to the map entitled "Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York – Lower Hudson Sheet", the Site is not located within an unconfined aquifer area. According to the USEPA Designated Sole Source Aquifers mapping, the property is not located in the area of a mapped sole source aquifer.

2.8 Environmental Site History

2.8.1 Previous Property Use

The Phase 3A parcel is a portion of a public housing apartment complex that was constructed in the late 1940s. Prior to this time, the site was developed with multiple dwellings and stores dating to as early as 1886.

The Phase 3B parcel has reportedly consisted of a townhouse complex and daycare center since its construction in the early 1970s. Prior to this time, the site was developed with multiple single and multi-family dwellings, stores and a garage since as early as 1886. The garage was located on southwestern portion of the site now containing a daycare center from as early as 1917 to as late as 1971.

2.8.2 Historical Chemical Use

Specific information pertaining to historical chemical use is unknown. Previous operations at the "Garage" structure located on the southwestern portion of the Phase 3B parcel is undocumented. If the garage was used in part for automotive repair, chemicals likely included petroleum fuels, lubricants, degreasing agents, etc. Evidence of a petroleum release was identified in the vicinity of the garage located on the Phase 3B parcel during a prior subsurface assessment.

Laboratory analytical results from previous environmental investigations show elevated levels of SVOCs and metals in the fill materials on the Phase 3A parcel.

Results of the prior investigation on the Phase 3B parcel show elevated levels of metals in the fill materials on the Phase 3B parcel and elevated levels of metals and one SVOC in groundwater.

2.8.3 Environmental Orders, Decrees and Violations Associated with the Site

There are no USEPA or NYSDEC permits relating to the site.

2.9 Previous Environmental Investigations

Environmental reports have been completed for the two Site parcels. The reports are presented in Attachment A and are discussed below.

Phase 3A Parcel

A Phase I ESA was completed for Cottage Place Gardens, inclusive of the subject site in 2014 by C.T. Male (the Phase I ESA excluded Buildings 10 and 11). At the time of the assessment the site was used as a public housing complex. The following Recognized Environmental Conditions (RECs) were identified:

- A leaking fuel oil tank has impacted soils on the Cottage Place Gardens northeast adjoining 26 Willow Place property, which is located hydraulically up-gradient with respect to inferred groundwater flow direction. (This property adjoins the Phase 3A parcel boundaries at the northeastern corner).
- Petroleum impacted soils and groundwater from the 33 Ashburton Avenue Brownfields site have migrated onto Cottage Place Gardens. (This property does not adjoin the boundaries of the Phase 3A parcel, but is located approximately 260 feet south).
- A 1917 historical Sanborn Map has identified a "Garage" structure on southeastern portions of Cottage Place Gardens. (Historic garage is located outside the bounds of the Phase 3A parcel).
- Two out of service, 20,000 gallon underground fuel oil tanks are currently located beneath the site, adjacent east of Building 12. The tanks were taken out of service approximately three years ago when the site boilers were converted to natural gas. (Tanks are located outside the bounds of the Phase 3A parcel).

A Phase II ESA was conducted in February 2015 to evaluate subsurface conditions and the overall environmental quality of soils and groundwater. The Phase II ESA involved the advancement of 17 soil borings of which 16 were converted into monitoring wells to aid in the collection of soil and groundwater samples for subjective screening and laboratory analysis. Advancement of the test borings also aided in evaluating the site's subsurface conditions. Of the 16 monitoring wells, seven (7) fell within the bounds of the site. The boring that was not converted into a monitoring well was advanced outside of the bounds of the site.

One sample from each of the test borings was submitted for laboratory analysis. The selection of the samples for laboratory analysis was based on perceived evidence of subjective impacts and the occurrence of uncontrolled soil/fill materials. The samples were analyzed for the Target Compound List (TCL) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and PCBs, and the Target Analyte List (TAL) for metals including cyanide. Due to the absence of groundwater in the monitoring wells, groundwater samples were not collected from the monitoring wells located within the bounds of the site. The soil analytical results summary for borings completed within the confines of the Phase 3A parcel are presented in Table 1 in the Tables Section of this report.

Subsurface conditions at each of the borings generally consisted of brown sand and silt with varying percentages of gravel, or brown sand with varying percentages of silt and gravel. Fill material, consisting primarily of red brick and ash with less frequent occurrences of cinder and coal, was encountered in most of the borings. Subjective impacts to soils were not encountered at any of the test borings. Photoionization (PID) readings were below 3 parts per million (ppm) and the recovered soil samples did not exhibit staining and/or chemical/petroleum-type odors.

Up to four (4) metals (copper, lead, mercury and zinc) were detected at concentrations exceeding Soil Cleanup Objectives (SCOs) for Unrestricted Use Sites promulgated in 6 NYCRR Part 375 SCOs in the soil samples collected from the site. Additionally, two SVOCs (Chrysene and Benzo(b)fluoranthene) were detected above SCOs in fill materials at the 2.5 to 5 foot depth interval at boring B-E, which was advanced near the southwestern corner of Building 7, within the confines of the Phase 3A parcel.

A Phase I ESA was completed specifically for the Phase 3A parcel in 2015 by C.T. Male. The report, dated November 20, 2015, identified one REC being related to the

identification of impacts to the quality of soils within the site as documented in the previous February 2015 subsurface investigation of the site.

Phase 3B Parcel

A Phase I ESA was conducted on the Phase 3B parcel in August 2014 by C.T. Male Associates. At the time of the assessment the site was used as a public housing complex and day care facility. RECs identified in the Phase I ESA Report included the following:

- The site's southeastern adjoining 188 Warburton Avenue site has recently entered the Brownfields program in relation to this property's past use as a gasoline station, the existence of underground tanks, petroleum impacts in site soils, and the presence of VOCs and metals in groundwater exceeding regulatory groundwater standards and guidance values. The 188 Warburton Avenue site is considered hydraulically up-gradient of the Phase 3B parcel with respect to inferred groundwater flow direction.
- Historic Sanborn maps identified a rectangular structure labeled as a "Garage" on the southwestern portion of the Phase 3B parcel presently developed with a daycare center. The "Garage" structure was identified on the maps from as early as 1917 to as recent as 1971. The historic uses of the garage were not able to be determined.

A Phase II ESA was conducted in November and December 2014 to evaluate subsurface conditions and the environmental quality of site soils and groundwater. The Phase II ESA (dated January 28, 2015) involved a ground penetrating radar (GPR) survey to locate private utilities and evaluate the presence of subsurface anomalies, and the advancement of four soil borings and installation of three monitoring wells to aid in the collection of soil and groundwater samples for subjective screening and laboratory analysis. The analytical results for soils were compared to SCOs for Unrestricted Use Sites promulgated in 6 NYCRR Part 375 and the analytical results for groundwater were compared to NYSDEC groundwater standards and guidance values promulgated in the NYS Division of Water Technical and Operational Guidance Series (TOGS 1.1.1). The soil and groundwater analytical results summary for borings and monitoring wells completed within the confines of the Phase 3B parcel are presented in Table 2 (Soil) and Table 3 (Groundwater) in the Tables Section of this report. The conclusions included the following:

- The GPR survey did not identify anomalies that may be representative of underground storage tanks, septic systems, dry wells or other subsurface disposal systems within the boundaries of the utility mark outs.
- Subjective, petroleum-type impacts were encountered at test boring B-4 in soil samples collected from beneath surface concrete to a depth of 7 feet below grade, where drilling refusal was encountered. This boring was located adjacent west of a former garage structure that was identified in historic mapping and at the entrance to the present daycare center. The soils were stained, emitted a petroleum-type odor and registered PID readings ranging from 164.6 to 438.4 ppm. Based on the subjective petroleum-type impacts, the NYSDEC Spills Hotline was contacted and the site was assigned Spill No. 1408922.

  Analytical results for the soil sample collected from test boring B-4 which exhibited the greatest evidence of petroleum-type impacts, showed analyzed parameters at concentrations below SCOs or below the laboratory's method detection limit.
- Five metals were detected in fill at concentrations exceeding Unrestricted Use SCOs. These metals included chromium, copper, lead, mercury and zinc. Lead was the more persistent metal and was detected at 3 of the 4 test borings and ranged in concentration from 286 to 1,410 ppm as compared to its SCO of 63 ppm. The metals detected in the soils above SCOs, other than lead, chromium and zinc, are considered to be naturally occurring metals in the environment.
- One SVOC (phenol) and five metals (chromium, iron, magnesium, manganese and sodium) were detected at concentrations exceeding their corresponding groundwater standards. Phenol was detected slightly above its corresponding groundwater standard at monitoring well MW-1 and was not detected in any of the other monitoring wells. Iron, magnesium and manganese are typically naturally occurring in the environment. The sodium in groundwater is likely a result of the application of road salt on surrounding roads and parking lots. Chromium (58.3 ppm) was detected slightly above its groundwater standard of 50 ppm at monitoring well MW-2 only.

A Phase I ESA was completed in 2015 for the Phase 3B parcel by C.T. Male. The report, dated November 20, 2015, identified one REC being related to the identification of impacts to the quality of soils within the site as documented in the previous subsurface

investigation of the site. The report also noted that an active spill is listed for the site related to this finding.

3.0 OBJECTIVES, SCOPE & RATIONALE

3.1 Objectives

The objective of this RIWP is to complete an appropriate level of investigation to support the preparation of a Remedial Investigation report that presents the nature and extent of contamination at the site. The intent is to obtain sufficient information to develop a suitable remedy, so as to foster redevelopment of the property.

Potential remedial actions based upon the investigation will be developed and presented in an Alternatives Analysis Report (AAR). The anticipated remedial action will include the excavation and off-site disposal of the uncontrolled fill materials of the foot print of both site parcels, exclusive of the materials located beneath the existing daycare. Post excavation confirmatory soil sampling will be completed as a function of the remedial action.

The proposed RI approach is outlined herein.

3.2 Scope

The scope of work was developed based on site conditions and the existing data collected from previous investigations performed within the site.

The potential chemical parameters of concern were selected based on site history as well as the results from previous sampling efforts at the site. Previous analyses detected elevated levels of metals and semi-volatile organic compounds in site soils and groundwater. Petroleum vapors were also detected in soil samples from one location on the Phase 3B parcel.

The City of Yonkers is provided with public water and sewer. A public and private well survey is not proposed as the site area has been supplied with municipal water for decades.

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:

- Advancement of test borings to characterize the Site's subsurface, and for collection and laboratory analysis of subsurface soil samples; and
- Vapor Intrusion (VI) assessment including collection and laboratory analysis of air and sub-slab soil vapor samples.

Sampling of fill materials is not proposed as a function of this RI. It is anticipated that at a minimum, the fill materials will be removed from the site for proper off-site disposal. Waste characterization sampling will be conducted as a separate function, and will include the excavation of test pits to aid in the collection of grab and composite samples for waste characterization analysis.

An asbestos containing material (ACM) survey has already been completed for the site buildings and is therefore not proposed as a function of this RI.

3.2.1 Subsurface Soil Sampling

Seven (7) Geoprobe soil borings will be completed within the site; four within the Phase 3A parcel and three within the Phase 3B parcel. The approximate locations are depicted on Figures 3A and 3B. The test boring locations may be modified based on buried utility locations.

Three subsurface soil samples will be collected from each test boring to gain an understanding of the environmental quality of subsurface soils and for characterization of the Site's subsurface. From each boring at least three samples will be collected; one of the native soil beneath the uncontrolled fill materials, one at the top of till and one from within the upper five feet of till. Soil sampling procedures are further described in the attached Field Sampling Plan (FSP).

Subsurface soil samples exhibiting evidence of subjective impacts, such as elevated PID headspace readings, odors, or visible staining will also be subjected to laboratory analysis. Samples submitted for laboratory analysis will be analyzed for the full TCL and TAL list of parameters.

3.2.2 Vapor Intrusion Assessment

The VI assessment will be conducted to evaluate the potential for petroleum vapors in subsurface soils to have intruded into the daycare structure located at 150 Woodworth Avenue. The VI assessment will include the collection and laboratory analysis of: sub-slab vapor samples from beneath the ground floor of the building; indoor air quality samples from the interior space of the daycare; and outdoor air quality samples to determine ambient background levels. Each sample will be collected over a 24-hour period. The VI Assessment will be conducted in general accordance with the NYS Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006. Sampling procedures are further described in the attached FSP.

3.2.3 Other Investigative Tasks

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 QA/QC samples for soils will include a blind duplicate sample, a MS/MSD sample and an equipment blank. The QA/QC samples for vapor intrusion will include a blind duplicate sample.

A Data Usability Summary Report (DUSR) of the analytical data developed during this investigation will be prepared to confirm that it is of adequate quality for subsequent decision making purposes. The DUSR will be completed by an independent data validator.

All exploratory locations (i.e. test borings and vapor intrusion survey points etc.) and other pertinent surface features will be surveyed. The locations and features will be amended to the Figure 2 Site Features Maps.

The Site and its surroundings are located in a dense, urban setting. A wetlands delineation will not be performed on the Site. No wetlands were observed on the Site during past investigations.

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

TABLE 1: Proposed Sampling Locations and Analyses

Media[1]	Depth Interval	Proposed Analysis	Sampling Method	Rationale
Subsurface Soil (Test Borings)	One from native soil beneath fill, one from the top of till; and one from within the upper 5 feet of till	Full TCL/TAL Parameters[2]	Obtain samples from the split spoon sampler utilizing new clean nitrile gloves	To gain a better understanding of the Site's subsurface conditions and environmental quality.
Soil Vapor	NA	VOCs	Collect samples in laboratory provided Summa canisters and analyze by EPA Method TO-15	To evaluate potential impacts to indoor air quality and in media beneath the building slab.

(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) Full TCL/TAL Parameters includes TCL VOCs, SVOCs, PCBs and Pesticides, and TAL Metals, including Cyanide.

4.0 SUPPLEMENTAL PLANS

4.1 Field Sampling Plan

The field activities for this project will include collection and laboratory analysis of subsurface soil samples, and a soil vapor intrusion study. The procedures relative to implementation of these field activities are presented in the Field Sampling Plan (FSP) in Appendix A, which also conforms to the Quality Assurance/Quality Control Plan, presented in Appendix B. The FSP describes in detail the various methods and techniques to be followed during the completion of the soil and soil vapor sampling activities, instrument operation and calibration, and chain of custody procedures.

4.2 Quality Assurance/ Quality Control Plan

The Quality Assurance Project Plan (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 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 Site investigation 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 site worker health and safety issues. The HASP is presented as a standalone document. Although the plan addresses all of the planned site activities, subcontractors will be required to develop their own HASP for work they will perform, as well. A Community Air Monitoring Plan (CAMP) will be used during the RI field activities in accordance with the New York State Department of Health Generic CAMP provided in Appendix C of the HASP.

4.4 Citizen Participation (CP) Plan

A project-specific Citizen Participation Plan (CP Plan) will be developed for this project in general accordance with DER 10 and will be submitted to the NYSDEC. The objective of the 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 through direct mailings, email, public notice in local newspapers and other publications, and by having project documents available for review at public 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 as well as any 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

It is currently planned to initiate field work in July/August 2016. It is anticipated that the field investigation work will be completed within three to four weeks thereafter. The Draft RI Report would then be submitted on or about September/October 2016.

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:

- DEC Project Manager
  Jamie Verrigni, P.E.
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- Volunteer
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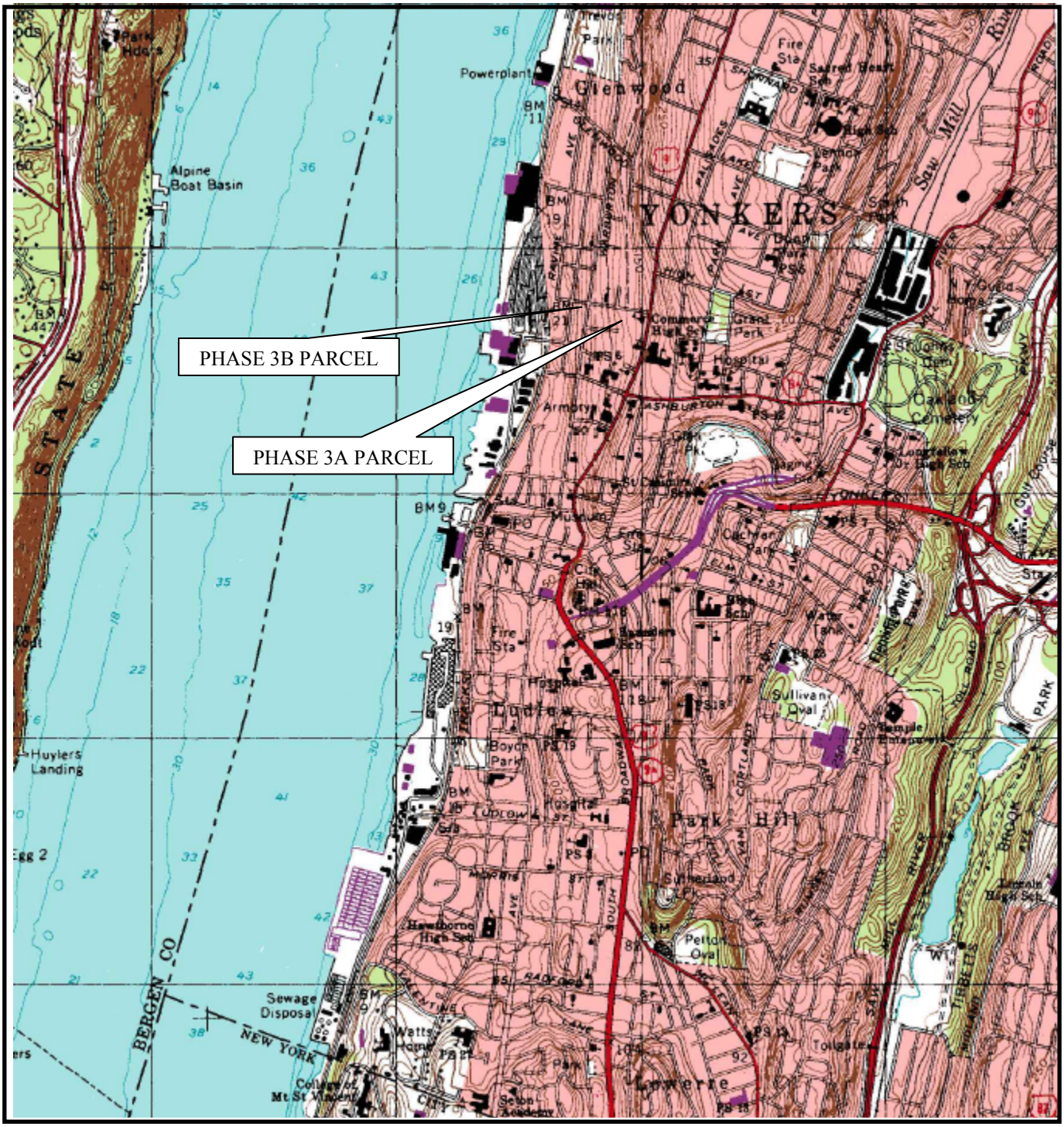
FIGURES

FIGURE 1

SITE LOCATION MAP



MAP REFERENCE
United States Geological Survey
7.5 Minute Series Topographic Map
Quadrangle: Yonkers, NY
Date: 1998

ENGINEERING
ENVIRONMENTAL SERVICES
SURVEYING
PHONE (518)786-7400
FAX (518) 786-7299

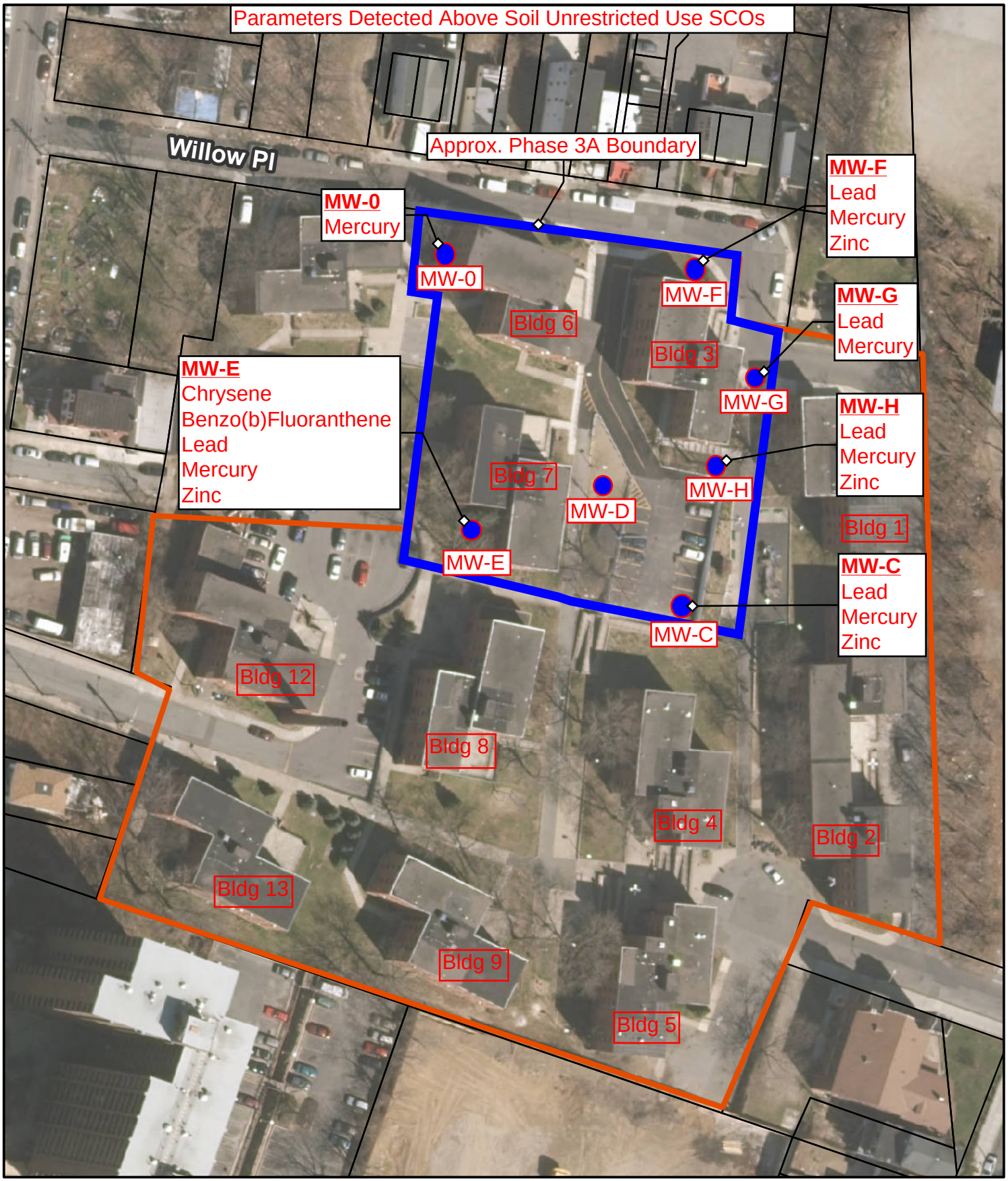
C.T.MALE ASSOCIATES
50 CENTURY HILL DRIVE, LATHAM, NY 12110

FIGURE 1 - SITE LOCATION MAP

CITY OF YONKERS	WESTCHESTER COUNTY, NY
SCALE: 1:2,000±	The locations and features depicted on this map are approximate and do not represent an actual survey.
DRAFTER: ASG	
PROJECT No: 15.5268	

FIGURES 2A and 2B

SITE FEATURES MAPS FOR PHASE 3A & PHASE 3B



0 40 80 Feet

1 inch = 80 feet

Project Number: 14.4452
Data Source: NYSGIS Clearinghouse
Projection: NY State Plane East NAD 83 (ft)
Date: August 19, 2014
File: Fig2_CottagePlaceGardens.mxd
GIS: CHay

Legend

- Cottage Place Gardens
- Tax Parcels
- Approx. Phase 3A Boundary

FIGURE 2A: PHASE 3A PARCEL

City of Yonkers **Westchester County, New York**

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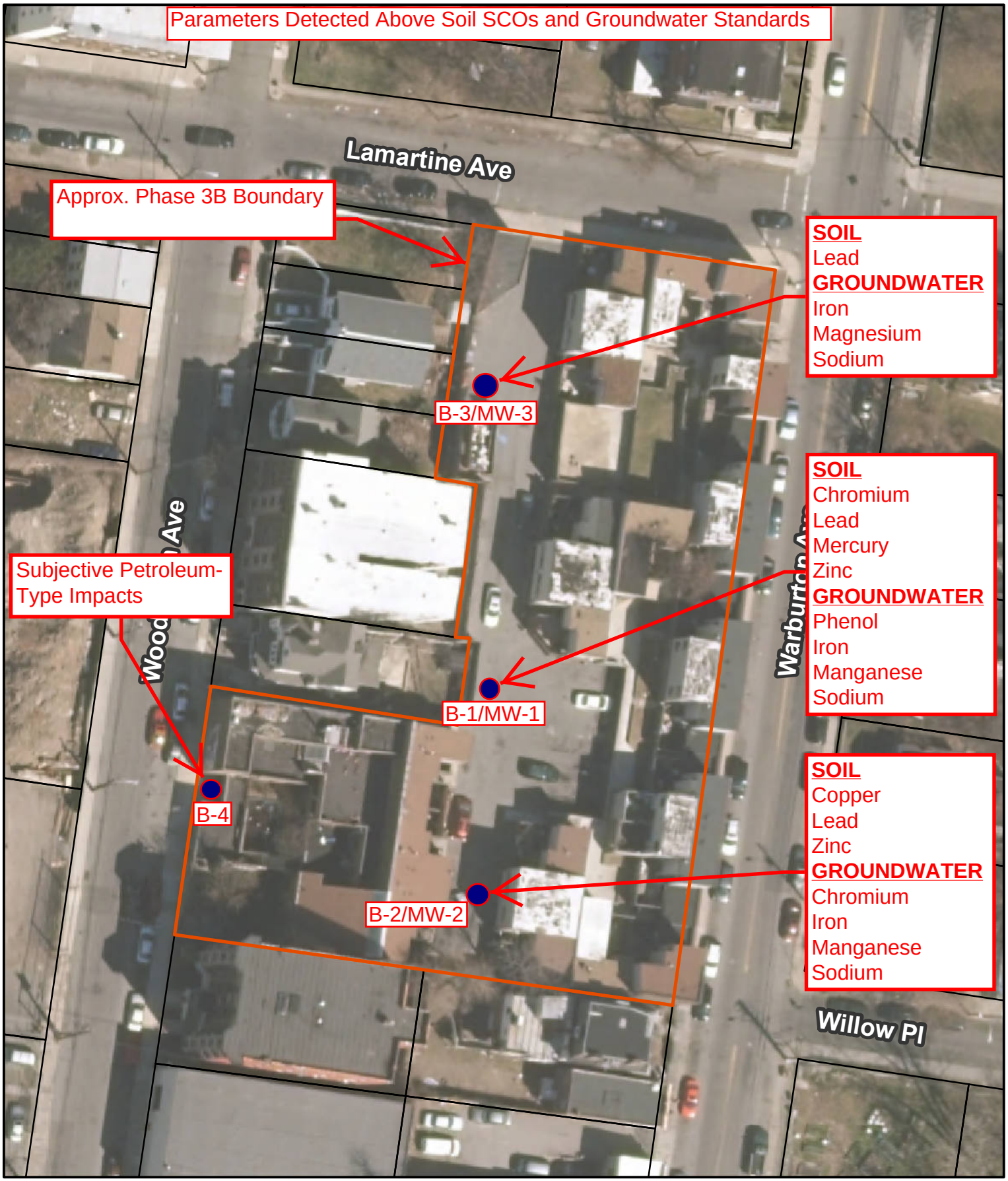
FOUNDED IN 1910



0 25 50 Feet

1 inch = 50 feet

Project Number: 14.4445
Data Source: NYSGIS Clearinghouse
Projection: NY State Plane East NAD 83 (ft)
Date: August 19, 2014
File: Fig2_209Warburton.mxd
GIS: CHay

Legend

- Project Site
  209 Warburton Avenue
- Tax Parcels

FIGURE 2B: PHASE 3B PARCEL

City of Yonkers — **Westchester County, New York**

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(518) 786-7400 * FAX (518) 786-7299 * WWW.CTMALE.COM
FOUNDED IN 1910

FIGURES 3A and 3B

PROPOSED SUBSURFACE INVESTIGATION PLANS FOR PASE 3A & PHASE 3B

CAD DWG. FILE NAME: FIGURE X-SUBSURFACE INV.dwg

NONE :XREFS

PROJECT NUMBER: 15.5268

BENCH MARK
X-CUT ON HYDRANT
ELEV=95.82

BENCH MARK X-CUT
ON HYDRANT
ELEVATION 123.74

WILLOW PLACE
(35' WIDE RIGHT OF WAY)

PROPOERTY LINE

S81°36'05"E 442.00'

S81°36'05"E 203.92'

S81°55'15"E 35.00'

S08°04'45"W 44.95'

S08°04'45"W 44.95'

N08°04'45"E 53.28'

N81°55'15"W 19.59'

N08°04'45"E 149.40'

S08°04'45"W 29.60'

N08°04'45"E 187.22'

N08°04'45"E

S81°36'05"E 184.33'

5 STORY BRICK APARTMENT BUILDING NO. 6

4 STORY BRICK APARTMENT BUILDING NO. 6

4 STORY BRICK APARTMENT BUILDING NO. 3

4 STORY BRICK APARTMENT BUILDING NO. 1

4 STORY BRICK APARTMENT BUILDING NO. 7

4 STORY BRICK APARTMENT BUILDING NO. 8

B-1 B-2 B-3 B-4

MW-O MW-F MW-G MW-H MW-D MW-E MW-C

TP-1 TP-2 TP-5 TP-6 TP-7 TP-9

6" WATER LINE
12" CLAY
4" GAS LINE
UP 4 W/ELEC RISER AND TRANSFORMER
4"VENT
ELECTRIC PANEL
4'x 8' VAULT
4'x 4' VAULT
ELECTRIC PANEL W/RISER
CURB CUT
CONC
12"VCP SS
6"RCP
6"DIP
TRENCH DRAIN
LP BASE ONLY

LEGEND

B-1	Proposed Soil Boring Location
MW	Monitoring Well Existing
TP	Test Pit
	Bollard
CB	Catch Basin
CBCI	Catch Basin Curb Inlet
CBR	Catch Basin Round
CO	Cleanout
EMH	Electric Manhole
FFE	Finished Floor Elevation
GV	Gas Valve
HH	Hand Hole
HYD	Hydrant
LP	Light Pole
SMH	Sanitary Manhole
TPED	Telephone Pedestal
	Unknown Manhole Type
UP	Utility Pole
WV	Water Valve
T	Overhead Telephone Wires
UE	Underground Electric Line Markout
G	Underground Gas Line Markout
UT	Underground Telephone Line Markout
W	Underground Water Line Markout
SS	Underground Sanitary Sewer Line Markout

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BAR SCALE
30 0 15 30 60
1 inch = 30 ft.

APPROVED: _____
DRAFTED : GLB
CHECKED :
PROJ. NO : 15.5268
SCALE : 1" = 30'
DATE : JAN. 8, 2016

FIGURE 3A: SUBSURFACE INVESTIGATION PLAN

COTTAGE PLACE GARDENS PHASE 3

8 WILLOW PLACE

CITY OF YONKERS — WESTCHESTER COUNTY, NEW YORK

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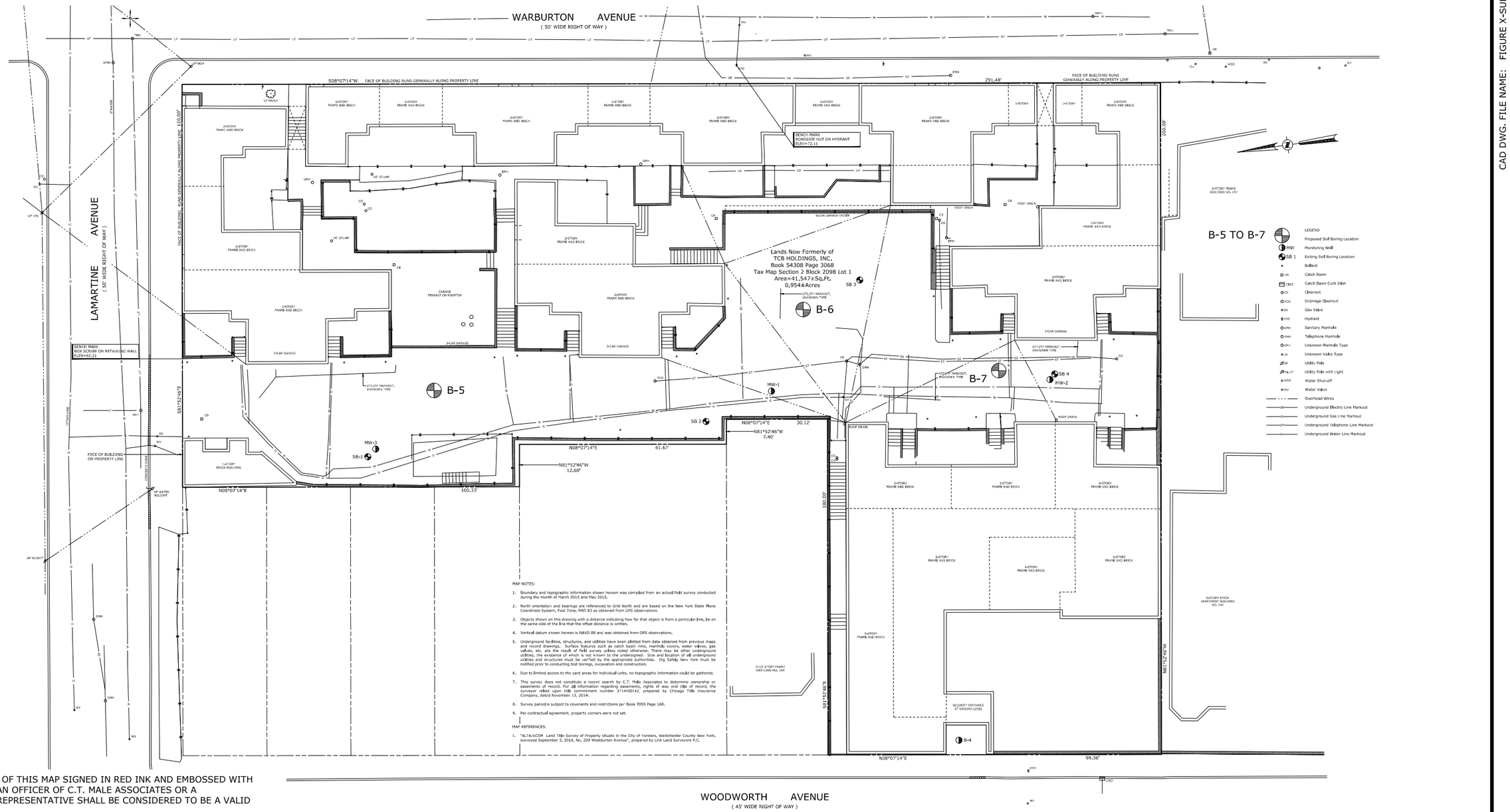
SHEET _ OF 1
DWG. NO:

CAD DWG. FILE NAME: K:\Projects\155268\Env\FIGURE X-SUBSURFACE INV.dwg

XREFS: NONE

PROJECT NUMBER: 15.5268

CAD DWG. FILE NAME: FIGURE X-SUBSURACE INV PH3.dwg



MAP NOTES:

1. Boundary and topographic information shown hereon was compiled from an actual field survey conducted during the month of March 2013 and May 2015.
2. North orientation and bearings are referenced to Grid North and are based on the New York State Plane Coordinate System, East Zone, NAD 83 as obtained from GPS observations
3. Objects shown on this drawing with a distance indicating how far that object is from a particular line, lie on the same side of the line that the offset distance is written.
4. Vertical datum shown hereon is NAVD 88 and was obtained from GPS observations.
5. Underground facilities, structures, and utilities have been plotted from data obtained from previous maps and record drawings. Surface features such as catch basin rims, manhole covers, water valves, gas valves, etc. are the result of field survey unless noted otherwise. There may be other underground utilities, the existence of which is not known to the undersigned. Size and location of all underground utilities and structures must be verified by the appropriate authorities. Dig Safely New York must be notified prior to conducting test borings, excavation and construction.
6. Due to limited access to the yard areas for individual units, no topographic information could be gathered.
7. This survey does not constitute a record search by C.T. Male Associates to determine ownership or easements of record. For all information regarding easements, rights of way and title of record, the surveyor relied upon title commitment number 3714-00142, prepared by Chicago Title Insurance Company, dated November 13, 2014.
8. Survey parcel is subject to covenants and restrictions per Book 7055 Page 168.
9. Per contractual agreement, property corners were not set.

MAP REFERENCES:

1. "ALTA/ACSM Land Title Survey of Property situate in the City of Yonkers, Westchester County New York, surveyed September 3, 2014, No. 209 Westburton Avenue", prepared by Link Land Surveyors P.C.

"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".

DATE	REVISIONS RECORD/DESCRIPTION	DRAFTED	CHECK	APPR.
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			

APPROVED: _____

DRAFTED : GLB

CHECKED : _____

PROJ. NO : 15.5268

SCALE : 1" = 30'

DATE : JAN. 12, 2016

FIGURE 3B: SUBSURFACE INVESTIGATION PLAN

COTTAGE PLACE GARDENS PHASE 3

209 WARBURTON AVENUE

CITY OF YONKERS

WESTCHESTER COUNTY, NEW YORK

C.T. MALE ASSOCIATES

Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.

50 CENTURY HILL DRIVE, LATHAM, NY 12110

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SHEET 1 OF 1

DWG. NO:

TABLES

TABLE 1

PHASE 3A SOIL ANALYTICAL RESULTS SUMMARY

TABLE 1: SOIL ANALYTICAL RESULTS SUMMARY
PHASE 3A COTTAGE PLACE GARDENS SITE
CITY OF YONKERS, WESTCHESTER COUNTY

PARAMETER	CAS #	6 NYCRR 375 UNRESTRICTED USE SCOs	B-C (2.5-5) Soil mg/kg	B-D (2.5-5) Soil mg/kg	B-E (2.5-5) Soil mg/kg	B-F (0-2.5) Soil mg/kg	B-G (2.5-5) Soil mg/kg	B-H (2.5-5) Soil mg/kg	B-O (0-2.5) Soil mg/kg
Volatile Organic Compounds									
Acetone	67-64-1	0.05	0.0324 J	0.0226 U	0.0252 U	0.0361 U	0.0278 U	0.0285 U	0.0103 J
Methylene Chloride	75-09-2	0.05	0.0081	0.0020 J	0.0050 U	0.0041 J	0.0012 J	0.0014 J	0.0026 J
Benzene	71-43-2	0.06	0.0076 U	0.0045 U	0.0050 U	0.0072 U	0.0056 U	0.0057 U	0.0049 U
Semi-Volatile Organic Compounds									
Phenol	108-95-2	0.33	0.0958 J	0.360 U	0.120 J	0.0766 J	0.370 U	0.370 U	0.380 U
Naphthalene	91-20-3	12	0.390 U	0.360 U	0.48	0.380 U	0.370 U	0.370 U	0.380 U
2-Methylnaphthalene	91-57-6	No Standard	0.390 U	0.360 U	0.260 J	0.380 U	0.370 U	0.370 U	0.380 U
1,1-Biphenyl	92-52-4	No Standard	0.390 U	0.360 U	0.370 U	0.380 U	0.370 U	0.370 U	0.380 U
Dimethylphthalate	131-11-3	No Standard	0.310 J	0.260 J	0.0757 J	0.0938 J	0.150 J	0.120 J	0.110 J
Acenaphthylene	208-96-8	100	0.390 U	0.360 U	0.37	0.190 J	0.370 U	0.370 U	0.380 U
Acenaphthene	83-32-9	20	0.390 U	0.360 U	0.370 U	0.110 J	0.370 U	0.370 U	0.380 U
Dibenzofuran	132-64-9	7	0.390 U	0.360 U	0.45	0.380 U	0.370 U	0.370 U	0.380 U
Fluorene	86-73-7	30	0.390 U	0.360 U	0.230 J	0.110 J	0.370 U	0.370 U	0.380 U
Phenanthrene	85-01-8	100	0.390 U	0.360 U	3.90 D	0.92	0.230 J	0.370 U	0.380 U
Anthracene	120-12-7	100	0.390 U	0.360 U	0.120 J	0.250 J	0.370 U	0.370 U	0.380 U
Carbazole	86-74-8	No Standard	0.390 U	0.360 U	0.44	0.100 J	0.370 U	0.370 U	0.380 U
Fluoranthene	206-44-0	100	0.110 J	0.360 U	3.20 D	1.1	0.41	0.370 U	0.380 U
Pyrene	129-00-0	100	0.110 J	0.360 U	2.1	1.1	0.4	0.370 U	0.380 U
Benzo(a)anthracene	56-55-3	1	0.390 U	0.360 U	0.88	0.63	0.230 J	0.370 U	0.380 U
Chrysene	218-01-9	1	0.390 U	0.360 U	**1.2**	0.55	0.220 J	0.370 U	0.380 U
Bis(2-ethylhexyl)phthalate	117-81-7	No Standard	0.390 U	0.360 U	0.370 U	0.130 J	0.370 U	0.370 U	0.380 U
Benzo(b)fluoranthene	205-99-2	1	0.390 U	0.360 U	**1.3**	0.79	0.240 J	0.370 U	0.380 U
Benzo(k)fluoranthene	207-08-9	0.8	0.390 U	0.360 U	0.57	0.170 J	0.370 U	0.370 U	0.380 U
Benzo(a)pyrene	50-32-8	1	0.390 U	0.360 U	0.81	0.58	0.220 J	0.370 U	0.380 U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.390 U	0.360 U	0.45	0.330 J	0.110 J	0.370 U	0.380 U
Dibenzo(a,h)anthracene	53-70-3	0.33	0.390 U	0.360 U	0.140 J	0.0877 J	0.370 U	0.370 U	0.380 U
Benzo(g,h,i)perylene	191-24-2	100	0.390 U	0.360 U	0.42	0.42	0.130 J	0.370 U	0.380 U
Pesticides (None Detected Above the MDL)									
PCBs (None Detected Above the MDL)									

TABLE 1: SOIL ANALYTICAL RESULTS SUMMARY
PHASE 3A COTTAGE PLACE GARDENS SITE
CITY OF YONKERS, WESTCHESTER COUNTY

PARAMETER	CAS #	6 NYCRR 375 UNRESTRICTED USE SCOs	B-C (2.5-5) Soil mg/kg	B-D (2.5-5) Soil mg/kg	B-E (2.5-5) Soil mg/kg	B-F (0-2.5) Soil mg/kg	B-G (2.5-5) Soil mg/kg	B-H (2.5-5) Soil mg/kg	B-O (0-2.5) Soil mg/kg
Metals + Cyanide									
Aluminum	7429-90-5	No Standard	7030	9260	9380	6810	7400	10400	13500
Antimony	7440-36-0	No Standard	2.53 U	2.34 U	2.40 U	2.33 U	0.857 J	2.43 U	2.43 U
Arsenic	7440-38-2	13	3.96	1.59	2.44	3.55	5.07	2.8	2.7
Barium	7440-39-3	350	131	40.4	100	102	65.3	80.2	56.4
Beryllium	7440-41-7	7.2	0.291 J	0.336	0.355	0.348	0.416	0.451	0.537
Calcium	7440-70-2	No Standard	36600	1120	6570	2200	19000	2040	2110
Chromium	7440-47-3	30	18.8	23.4	27.5	14.4	17.5	27.6	19
Cobalt	7440-48-4	No Standard	5.97	8.1	8.86	6.24	6.09	9.29	8.84
Copper	7440-50-8	50	25.7	19.5	27.2	22.8	18.2	17	5.85
Iron	7439-89-6	No Standard	11100	14200	16300	12100	23300	17600	21100
Lead	7439-92-1	63	**379**	26.7	**309**	**321**	**195**	**160**	30.2
Magnesium	7439-95-4	No Standard	6730	3920	2800	2030	2040	2560	2730
Manganese	7439-96-5	1,600	327	282	341	256	230	371	311
Mercury	7439-97-6	0.18	**0.291**	0.03	**0.308**	**0.416**	**0.523**	**0.211**	**0.183**
Nickel	7440-02-0	30	16.6	25.3	20	12.9	13.2	19.7	13.1
Potassium	7440-09-7	No Standard	763	688	872	440	515	517	540
Selenium	7782-49-2	3.9	0.510 J	0.386 J	0.518 J	0.461 J	0.744 J	0.666 J	0.821 J
Silver	7440-22-4	2	0.510 U	0.470 U	0.480 U	0.470 U	0.470 U	0.490 U	0.490 U
Sodium	7440-23-5	No Standard	275	141	196	118	175	686	133
Vanadium	7440-62-2	No Standard	18.1	20.9	21.4	18.9	16.8	24.1	25.4
Zinc	7440-66-6	109	**182**	24.7	**209**	**146**	**111**	**150**	67.8
Cyanide	57-12-5	27	0.192 J	0.0720 J	0.128 J	0.218 J	0.121 J	0.0610 J	0.121 J

Qualifiers and Notes
(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006.
Parameter concentrations in miligrams per kilogram (mg/kg) or parts per million (ppm).
U indicated that the parameter was analyzed but not detected.
J indicates an estimated value.
D indicates that the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
Analytical results in bold and shaded have exceeded Unrestricted Use SCOs.

TABLE 2

PHASE 3B SOIL ANALYTICAL RESULTS SUMMARY

TABLE 2: SOIL ANALYTICAL RESULTS SUMMARY
PHASE 3B COTTAGE PLACE GARDENS SITE
CITY OF YONKERS, WESTECHESTER COUNTY

COMPOUND	6 NYCRR 375 UNRESTRICTED USE SCOs	B-1 (5'-7.5') Soil mg/kg	B-2(2.5'-5') Soil mg/kg	B-3(2.5'-5') Soil mg/kg	B-4(5'-7') Soil mg/kg	FD12214[2] Soil mg/kg
Volatile Organic Compounds						
Acetone	0.05	0.0226 U	0.0239 U	0.0342	0.0207 U	0.0200 U
Carbon Disulfide	No Standard	0.0045 U	0.0048 U	0.0013 J	0.0041 U	0.0040 U
Methylene Chloride	0.05	0.0045 U	0.0026 J	0.0023 J	0.0027 J	0.0016 J
2-Butanone	No Standard	0.0226 U	0.0239 U	0.0081 J	0.0207 U	0.0200 U
Methylcyclohexane	No Standard	0.0045 U	0.0048 U	0.0047 U	0.0039 J	0.0094
Isopropylbenzene	No Standard	0.0045 U	0.0048 U	0.0047 U	0.012	0.018
Semi-Volatile Organic Compounds						
Phenol	0.33	0.0843 J	0.370 U	0.380 U	0.360 U	0.370 U
2-Methylnaphthalene	No Standard	0.400 U	0.370 U	0.380 U	1.3	2.1
1,1-Biphenyl	No Standard	0.400 U	0.370 U	0.380 U	0.170 J	0.45
Dimethylphthalate	No Standard	0.220 J	0.200 J	0.190 J	0.0819 J	0.370 U
Acenaphthene	20	0.400 U	0.370 U	0.380 U	0.270 J	0.41
Fluorene	30	0.400 U	0.370 U	0.380 U	0.49	0.74
Phenanthrene	100	0.400 U	0.370 U	0.380 U	1.2	1.7
Anthracene	100	0.400 U	0.370 U	0.380 U	0.120 J	0.370 U
Pyrene	100	0.400 U	0.370 U	0.380 U	0.0841 J	0.120 J
Pesticides (None Detected Above The Laboratory Method Detection Limit)						
PCBs (None Detected Above The Laboratory Method Detection Limit)						
Metals						
Aluminum	No Standard	6,680	7,420	7,560	7,120	6,020
Antimony	No Standard	0.589 J	0.535 J	2.42 U	2.32 U	2.35 U
Arsenic	13	5.67	2.63	3.54	1.68	1.28
Barium	350	174	181	77.1	46.5	38.5
Beryllium	7.2	0.415	0.476	0.366	0.261 J	0.226 J
Calcium	No Standard	13,900	10,100	3,330	4,080	13,300
Chromium	30	**32.2**	17.5	15.6	27.8	16.3
Cobalt	No Standard	5.87	6.93	6.48	6.14	5.71
Copper	50	32.3	**62.8**	23.5	22.6	18.7
Iron	No Standard	20,400	15,900	14,100	11,500	9,980
Lead	63	**1,410**	**522**	**286**	8.54	4.96
Magnesium	No Standard	6,080	5,460	3,330	3,180	7,060
Manganese	1,600	213	322	335	158	239
Mercury	0.18	**0.2**	0.048	0.145	0.02	0.0090 J
Nickel	30	13.7	18.2	14.8	15.7	14.4
Potassium	No Standard	634	1,770	779	781	934
Selenium	3.9	0.734 J	0.521 J	0.662 J	0.356 J	0.940 U
Sodium	No Standard	524	867	416	518	454
Vanadium	No Standard	25.9	16.4	17.3	27.2	18.5
Zinc	109	**315**	**152**	106	22.2	19.3
Cyanide	27	0.158 J	0.218 J	0.0760 J	0.0420 J	0.0690 J

Qualifiers and Notes

(1) NYSDEC 6 NYCRR PART 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006

(2) FD12214 is a replicate (duplicate) sample of B-4(5'-7')

Concentrations denoted in mg/kg or parts per million (ppm)

U indicates that the compound was analyzed but not detected

J indicates and estimated value

Analytical results in bold and shaded have exceeded their respective SCO

TABLE 3

PHASE 3B GROUNDWATER ANALYTICAL RESULTS SUMMARY

TABLE 3: GROUNDWATER ANALYTICAL RESULTS SUMMARY
PHASE 3B COTTAGE PLACE GARDENS SITE
CITY OF YONKERS, WESTCHESTER COUNTY, NEW YORK

PARAMETER	NYSDEC GROUNDWATER STANDARD OR GUIDANCE VALUE (ug/l)[1]	MW-1 Water ug/l	MW-2 Water ug/l	MW-3 Water ug/l	FD01[2] Water ug/l
Volatile Organic Compounds					
Chloroform	7	5.00 U	1.10 J	1.20 J	5.00 U
Semi-Volatile Organic Compounds					
Phenol	1	**2.30 J**	10.1 U	10.0 U	10.1 U
Acetophenone	NS	10.0 U	10.1 U	10.0 U	10.1 U
Dimethylphthalate	50 (GV)	6.50 J	4.50 J	10.0 U	10.1 U
Pesticides (None Detected Above the Method Detection Limit)					
PCBs (None Detected Above the Method Detection Limit)					
Metals & Cyanide					
Aluminum	NS	9,450	18,700	499	3,330
Arsenic	25	4.49 J	6.02 J	10.0 U	10.0 U
Barium	1,000	177	236	153	119
Calcium	NS	78,000	64,000	113,700	78,400
Chromium	50	19.8	**58.3**	8.1	7.95
Cobalt	NS	7.81 J	14.6 J	15.0 U	15.0 U
Copper	200	31	72.7	2.46 J	13.7
Iron	300	**10,500**	**24,200**	**576**	**4,080**
Lead	25	8.93	15.8	2.78 J	2.73 J
Magnesium	35,000 (GV)	29,000	26,600	**37,000**	27,100
Manganese	300	**514**	**1,110**	216	**322**
Mercury	0.7	0.200 U	0.121 J	0.200 U	0.200 U
Nickel	100	20.0 J	43.5	20.0 U	10.3 J
Potassium	NS	6,630	8,690	6,490	5,450
Sodium	20,000	**162,100**	**132,900**	**192,800**	**172,400**
Vanadium	NS	18.3 J	41.6	20.0 U	8.77 J
Zinc	2,000 (GV)	25.1	55.9	7.02 J	16.2 J
Cyanide	200	10.0 U	10.0 U	10.0 U	10.0 U

Qualifiers

[1] TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, New York State Department of Environmental Conservation, June 1998 and Addendum, April 2000.

[2] FD01 is a replicate (duplicate) sample of MW-1

U denotes that the compound was not detected at the indicated concentration.

J denotes the data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitatio limit but greater than MDL. The concentration given is an approximate value.

Parameter concentrations in bold and shaded have exceeded their corresponding Groundwater Standard/Guidance Value.

APPENDIX A

FIELD SAMPLING PLAN

DRAFT FIELD SAMPLING PLAN

COTTAGE PLACE GARDENS PHASE 3A & 3B
8 COTTAGE PLACE & 209 WARBURTON AVENUE
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

TABLE OF CONTENTS

1.0 INTRODUCTION

This document is the Field Sampling Plan (FSP) for the remedial investigation (RI) to be conducted at the Cottage Place Gardens Phase 3A & 3B Site located at 8 Cottage Place (Phase 3A) and 209 Warburton Avenue (Phase 3B) property ("the Site") in the City of Yonkers, Westchester County, New York. It has been developed in accordance with the RI Work Plan as prepared by C.T. Male Associates. A description of the property, available background information, objectives, and the proposed scope of work, are presented in the referenced RI Work Plan.

This FSP is a supplement to the RI Work Plan 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, penetration of concrete flooring for collection of soil gas samples, decontamination procedures, sampling procedures, field screening and testing procedures, field instrumentation operating procedures, field measurements, sample handling and chain of custody procedures. The applicable portions of the RI Work Plan that coincide with the FSP will be provided to, and followed by, the field team. This FSP is applicable to field sampling activities conducted by C.T. Male Associates and its subcontractors.

The FSP forms an integral part of the Quality Assurance Project Plan (QAPP). The field sampling and data gathering procedures presented in the 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 USEPA and NYSDEC guidance documents:

- Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA/540/G-89/004, USEPA, October 1988.
- A Compendium of Superfund Field Operations Methods, EPA/540/P-87/001, USEPA, December 1987.

- DER-10, Technical Guidance for Site Investigation and Remediation, NYSDEC, May 2010.
- 6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 & 375-6, Effective December 14, 2006.
- NYSDEC Electronic Data Deliverable Manual, NYSDEC EDD Format v.3, April 1, 2013.
- NYSDOH Final Guidance For Evaluating Soil Vapor Intrusion in the State of New York (October 2006) (NYSDOH 2006 Final Guidance)

2.0 SAMPLING LOCATIONS AND FREQUENCY

Sampling will be performed for volatile organic vapor screening, subjective media assessment, laboratory analyses, geologic & hydrogeologic characterization of the project Site and for vapor intrusion (VI). The environmental media to be sampled includes:

- Native subsurface soil located beneath the uncontrolled fill materials;
- Subsurface soil at the top of till;
- Subsurface soil within the upper five feet of till;
- Outdoor ambient air;
- Interior ambient air; and
- Sub-slab soil vapor.

Subsurface soil samples will be collected during the exploratory test boring investigation. The sampling locations and proposed frequencies are discussed in the appropriate work task section and Figure 3 of the RI Work Plan.

TABLE 1
Summary of Sampling Media & Laboratory Analyses

Sample Type	TCL VOCs + 10 TICs (EPA 8260)	TCL SVOCs + 10 TICS (EPA 8270)	TCL Pesticides/PCBs (EPA 8081/8082)	TAL Metals (EPA 6010) (EPA 7471)	Cyanide (EPA 9010)	VOCs (EPA TO-15)
Native Sub-Surface Soil Beneath Fill	X	X	X	X	X	
Subsurface Soil at Top of Till	X	X	X	X	X	
Subsurface Soil from Upper Five Feet of Till	X	X	X	X	X	
Outdoor/Interior Air Quality and Sub-Slab Soil Vapor						X

TCL – Target Compound List
VOCs – Volatile Organic Compounds
SVOCs – Semi-Volatile Organic Compounds
PCBs – Polychlorinated Biphenyls
TAL – Target Analyte List

3.0 SITE INVESTIGATION OVERVIEW

3.1 General

The proposed Site investigations include:

- Advancement of test borings to characterize the Site's subsurface, and for collection and laboratory analysis of subsurface soil samples; and
- Collection and laboratory analysis of air quality and sub-slab soil vapor samples.

3.1.1 Test Borings

Test borings will be advanced at select locations across the Site to evaluate subsurface conditions and depth to native soil & rock, and assess the environmental quality of subsurface soils.

3.1.2 Subsurface Soil Sampling

Three subsurface soil samples will be collected from each test borings to gain an understanding of the environmental quality of subsurface soils and for characterization of the Site's subsurface. From each boring at least three samples will be collected; one of the native soil beneath the uncontrolled fill materials, one at the top of till and one from within the upper five feet of till.

Subsurface soil samples exhibiting evidence of subjective impacts, such as elevated photoionization detector (PID) headspace readings, odors, or visible staining will also be subjected to laboratory analysis. Samples submitted for laboratory analysis will be analyzed for the full TCL and TAL list of parameters and analytes.

3.1.3 Vapor Intrusion Sampling

The VI assessment will be conducted to evaluate the potential for petroleum vapors in subsurface soils to have intruded into the daycare structure located at 150 Woodworth Avenue. The VI assessment will include the collection and laboratory analysis of: sub-slab vapor samples from beneath the ground floor; indoor air quality samples from the interior space of the daycare; and outdoor air quality samples to determine ambient

background levels.

3.2 Observation of Drilling Operations

All drilling and other associated field work involved in the RI to be performed by C.T. Male Associates subcontractors will be observed by an on-site, C.T. Male Associates representative. This representative will be responsible for the collection and field vapor screening of soil samples, characterization of recovered soil samples, recording of drilling and sampling data, recording of groundwater data, deciding on the final drilling depths, and monitoring the decontamination procedures.

Field system audits will be conducted and field reports will be prepared that document the daily activities and their conformance to the work plan (described further in the QAPP). A copy of the forms used by the applicable field team personnel as part of the field quality assurance/quality control (QA/QC) procedures are presented in Appendix A of this FSP.

The project manager will be kept informed of the progress of work and any problems encountered during the RI so that the appropriate corrective action can be implemented and the Client and NYSDEC can be notified.

3.3 Drilling and Sampling of Overburden

The test boreholes will be advanced through the overburden using hollow-stem augers having a minimum 4.25-inch inside diameter (ID). Continuous (every two feet) soil samples will be collected in general accordance with the procedures of ASTM D-1586, Standard Method for Penetration Test and Split Barrel Sampling of Soils. A standard split barrel sampler, which is 24-inches long and 2-inches in diameter, will be used for sampling.

Recovered soils 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 class descriptions, mineralogy, moisture content, color, appearance, odor, behavior of the material and other pertinent observations. This information will be recorded on a Subsurface Exploration Log along with the boring identification, date started and

completed, sampling intervals, length of recovered sample and depth of first groundwater encountered, if applicable. During the drilling, a PID meter will be used to monitor any organic vapors exiting the borehole and soil cuttings, and of all recovered subsurface soil/fill samples. Visual observations and field measurements will be recorded on the Subsurface Exploration Log, a blank copy of which is enclosed in Appendix A. Attempts will be made to collect all samples away from operating or idling equipment and vehicles.

Where sufficient soil is recovered to generate a headspace sample, soil samples will be screened in the field with a PID meter on a daily basis. The samples will be allowed to equilibrate to ambient temperature; the plastic bag will be shaken for 30 seconds and allowed to equilibrate for 1 minute; the bag will be pierced with the tip of the PID meter; and the reading taken. The readings will be recorded on the Organic Vapor Headspace Analysis Log form. A blank copy is enclosed in Appendix A. The PID meter calibration procedures are discussed in Section 5.2. At completion of the field screening of soil samples and soil classification, the recovered soil samples will be placed in a 55-gallon container for characterization and off-site disposal at a permitted facility.

The boreholes will be abandoned by filling it with the bentonite chips/pellets. Soil cuttings from borings will be placed in a 55-gallon container for characterization and off-site disposal at a permitted facility during the remedial action.

3.4 Subsurface Soil Samples from Test Borings

The specific subsurface soil sampling procedures that will be followed for the test borings to be converted to monitoring wells include the following:

1. A cleaned (per Section 3.5) split-spoon sampler will be given to the driller or driller's assistant who will attach it to the sampling rod. Clean disposable gloves will be worn when handling the split-spoon sampler.

2. A soil sample will be collected by advancing the sampler with a 140 pound drive hammer pushing the split-spoon sampler the desired two (2) foot sampling interval per procedure ASTM D-1586.

3. For samples to be collected for laboratory analysis, the sample container label will be completed with the sample location (boring nomenclature), sample interval, sampler's initials, date, and time. The client, project name, Site location, matrix, sample type (grab/composite) and laboratory analyses to be performed will also be recorded on the sample label.

4. The recovered split-spoon sampler will be placed on clean polyethylene sheeting. The end cap will be unscrewed and the sampling spoon opened to expose the sample.

5. Immediately upon opening the sampling spoon, a portion of the soil sample will be retrieved and put directly into pre-cleaned glass jars using a clean (per Section 3.5) stainless steel trowel, scapula, or a new pair of disposable gloves, and the jars will be sealed. Sampling personnel will wear a new pair of disposable gloves for each sample interval retrieved from the sampling spoon. A portion of the remaining soil will be placed in a new plastic zip lock bag, not more than one-half full, and sealed. This sample will be for head space analysis screening in the field for volatile organic compounds (VOCs) using a PID meter.

6. The soil samples will be classified and the test boring log completed as described in Section 3.3.

7. The sampling equipment will be decontaminated per Section 3.5.

All of the split-spoon soil samples, where sufficient sample is recovered to generate a headspace sample, will be screened in the field with a PID meter on a daily basis. The sample will be allowed to equilibrate to ambient temperature; the plastic bag will be shaken for 30 seconds and allowed to equilibrate for 1 minute; the bag will be pierced with the tip of the PID meter; and the reading taken. The readings will be recorded on a C.T. Male Associates Organic Vapor Headspace Analysis Log form. A blank copy is enclosed in Appendix A. The PID meter calibration procedures are discussed in Section 5.2.

At completion of the field screening of soil samples and soil classification, the recovered soil samples will be retained for no more than 90 days.

General Sampling

- Don't remove caps until the actual sampling time and only long enough to fill the container.
- Identify every container by filling out the label with all the required data.
- Fill all containers completely.
- Some bottles may contain a fixative which should not be rinsed out of the bottle. Read the sample label treatment and fixative section to determine if a preservative/fixative has been added. Be careful not to contact fixatives with skin or clothing. If this should occur, rinse liberally with water.
- After the sample is taken, wipe the container with a paper towel and place the container in a cooler with ice packs, to maintain the cooler at 4°C.
- Complete Chain of Custody Record forms.
- Deliver or ship samples to the laboratory within 48 hours.

3.5 Decontamination of Drilling and Sampling Equipment

Drilling equipment including rods, samplers, tools, and any piece of equipment that can come in contact with the formation will be cleaned with a high temperature/high pressure water wash prior to the start of work. The equipment will also be cleaned using the same procedure at completion of the work (before leaving the site) to prevent any contamination from leaving the site. A temporary decontamination station will be constructed on the Site, and will consist of wooden planks and heavy-gauge plastic sheeting to contain the decontamination water. Between each sample interval, and between boring locations, sampling equipment including hand trowels and samplers will be cleaned using the following procedure:

1. Remove any excess soil remaining on the trowel or sampler.
2. Prepare a solution of tap water and non-phosphate detergent (i.e. Alconox) in a wash bucket, and scrub the equipment with a brush to remove any adhering particles.
3. Rinse the equipment with copious amounts of tap water.
4. Place clean equipment on clean polyethylene sheeting.

5. New disposable gloves will be worn when cleaning and handling the equipment to avoid contamination.
6. The water in the wash and rinse buckets will be changed frequently to avoid cross contamination.

The decontamination rinse water will be collected and placed in labeled 55-gallon drums and stored at the project site until laboratory analytical results of the soil samples indicates the proper method of treatment or disposal. Disposable protective clothing such as tyvek suits, gloves, etc. will be placed in a garbage bag and disposed of as a solid waste.

3.6 Vapor Intrusion Sampling

Installation of the sub-slab soil vapor probes will consist of utilizing mechanical methods (i.e., hammer drill) to penetrate through the concrete flooring. The vapor probes will not be installed in the vicinity of any breaches in the concrete flooring. Once the concrete floor has been penetrated, a stainless steel sampling point and attached inert tubing will be installed to a depth of approximately two (2) inches beneath the bottom of the slab. The slab penetration will then be sealed with hydrated bentonite.

Prior to VI air monitoring, an assessment of the physical features of the interior of the building will be performed. An inventory will be made of sumps; chemical products; HVAC systems; floor, wall and ceiling staining; pipe and utility penetrations; storage tanks, etc. that could be a vapor source or migration pathway. Any relevant features will be identified in a field sketch and the NYSDOH provided Indoor Air Quality Questionnaire and Building Inventory template will be completed. If standing water is noted in any sumps, a sample will be collected of the water and analyzed for the TCL list for VOCs. A subjective vapor assessment will also be conducted of the building employing a photoionization detector (PID) having the capability of measuring organic vapors in the parts per billion (ppb) range. If organic vapors are measured above background, an attempt will be made to identify the source of the elevated organic vapors and remove it from the premises.

Prior to sampling, one to three air volumes will be purged from each sampling point and tubing. The sub-slab vapor samples will be collected in a laboratory-certified clean 6-liter Summa canister with pre-set air flow regulator. The requisite volume of soil gas

will be collected and the sample forwarded to the laboratory of record for analysis for VOCs by EPA Method TO-15. As a check to ensure that ambient air has not entered the sampling stream, a tracer gas (i.e., helium) will be applied into a ground surface mounted structure overlying the exit point of the sample tubing. The tracer gas will be applied prior to sample collection and at the completion of sampling. The tracer gas will be measured employing a portable field measuring instrument. The soil vapor sampling stream will be considered acceptable if the tracer gas concentration is measured at less than 10 percent. If the tracer gas is measured at concentrations exceeding 10 percent, additional measures will be undertaken to seal the soil vapor sampling apparatus until tracer gas concentrations are less than 10 percent. Upon completion of sampling, the vapor probe will be removed and the floor restored with hydraulic cement.

The indoor air quality sampling canisters will be placed on the first and second floors, approximately three feet above the floor surface. The building does not contain a basement. The indoor air quality samples will be collected in laboratory-certified clean 6-liter Summa canisters with pre-set air flow regulators. The requisite volume of soil gas will be collected and the samples forwarded to the laboratory of record for analysis for VOCs by EPA Method TO-15.

The outdoor air quality sampling location will be determined in the field at the time of sampling and will be selected upwind of the daycare in an area not subject to wind obstructions and away from features and activities that may emit vapors. A field sketch will be developed depicting the sub-slab vapor, indoor air quality and outdoor air quality sampling locations along with site features having the potential to emit vapors.

4.0 QUALITY CONTROL DURING SAMPLING IN THE FIELD

4.1 General

Quality control samples will be taken during the field sampling to monitor sampling technique, sampling equipment cleanliness, sample variability, sample handling and laboratory performance (analytical reproducibility). The quality control samples will include replicate samples, equipment/field blanks and matrix spike/matrix spike duplicate (MS/MSD) samples.

4.2 Field Duplicate

4.2.1 Subsurface Soils

Replicate samples are samples taken from the same location with the same sampling device. Replicate samples are used to check on laboratory reproducibility, sampling technique and sample variability. The replicate samples will be coded so that the laboratory is not biased in performing the analyses (i.e., FD1_2016.06.17, FD2_2016.06.17, etc.). The code that is used will be identified in the field notes and on the sampling logs, but not on laboratory correspondence.

One replicate soil will be taken for every twenty (20) investigative samples submitted to the laboratory for analysis. The replicate soil samples, except for VOC analysis, will be collected after the desired sampling interval is thoroughly mixed in a stainless steel bowl to achieve a homogeneous sample and then equally split into the various analytical containers.

4.2.2 Vapor Intrusion

A field replicate will also be collected and analyzed by EPA Method TO-15. Collection of the QA/QC samples will aid the laboratory in the preparation of an ASP Category B like data deliverable package that will undergo data validation by an independent data validator for preparation of a Data Usability Summary Report (DUSR).

4.3 Equipment/Field Blanks (Subsurface Soils)

Equipment/field blanks are samples taken to monitor sampling equipment cleanliness and decontamination procedures during field sampling. One equipment/field blank will be taken during soil sampling for every twenty (20) investigative samples submitted to the laboratory for analysis of all of the parameters of concern. The equipment/field blank samples will be coded as follows (i.e. EB1_2016.06.17, EB2_2016.06.17, etc.).

The equipment/field blanks will be taken as follows per the environmental media being sampled:

Soil Sampling - After the split spoon sampler has been decontaminated and reassembled, pour deionized water through and over the split spoon sampler and collect it in the sample container(s).

The equipment field blanks will be identified as such and by the location to be sampled (i.e., equipment blank before SB-8, 2 to 4 feet).

The analyses to be performed on the replicate and equipment/field blanks and are presented in Table 2 of the QAPP. Additional QC/QA procedures are discussed in the QAPP.

4.4 Matrix Spike/Matrix Spike Duplicate (Subsurface Soils)

MS/MSD samples are used to check on sample matrix effect and laboratory accuracy and precision.

One MS/MSD soil sample will be taken for every twenty (20) samples submitted to the laboratory for analysis. The MS/MSD samples will be collected by equally splitting the sample into the various analytical containers.

5.0 FIELD INSTRUMENTATION OPERATING PROCEDURES

5.1 General

The field instruments that will be utilized during implementation of the site investigation are: a PID meter for air monitoring of the total organic vapors during drilling, for headspace analysis of soil samples for total organic vapors and to measure volatiles in air prior to VI assessment air sampling. The field instruments used will be calibrated and operated in accordance with the manufacturer's instructions and the procedures identified in the following sections.

5.2 Photoionization Detector Meter

A MiniRae PID meter and data logger with a 10.6 eV lamp will be utilized to measure total VOCs. 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 Pine Environmental Services, Inc. of Hightstown, New Jersey. The calibration value varies by the manufacturer, however, 100 parts per million will be utilized. During use the PID meter will be calibrated at least once every 8 hours. The calibration procedure is contained in the MiniRae PID User's Manual.

Care will be taken when handling and using the PID 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 meter.

6.0 SAMPLE HANDLING AND CHAIN OF CUSTODY PROCEDURES

Just prior to sampling and filling the sample containers, the label on the container will be completed with the required information. After filling the sample containers they will be wiped with a paper towel, and placed in a protective bubble or foam wrap for protection during transport. The containers will be placed in a cooler with double bagged ice packs, to maintain a temperature of 4°C.

A Chain of Custody Record will be completed by the sampler in the field after securing analytical samples. The sampler will be responsible for retaining possession of the samples until they are delivered to the laboratory or until they are delivered to a courier or common carrier for shipment to the laboratory. When the samples are released from the custody of the sampling personnel, the Chain of Custody Record will be signed by both relinquishing and receiving parties with the date and time indicated. A copy of the form will be retained by the sampler for inclusion in the project files and the original form will accompany the shipment. The Chain of Custody Record will then be signed by the relinquishing party and receiving laboratory personnel when the samples are ultimately received at the laboratory.

If samples are shipped, a bill of lading or an air bill will be used and retained in the project files as documentation of sample transportation. Prior to shipment, the cooler will be securely wrapped with clear tape to protect it from tampering. A separate additional Chain of Custody Record will be completed for each cooler of samples. This form will be placed in a plastic bag and taped to the underside of the cooler lid. This form will be used by the laboratory personnel as a check to verify that the containers listed on the form are present in the cooler when they are received at the laboratory. A copy of the signed Chain of Custody Record will accompany the laboratory analysis reports.

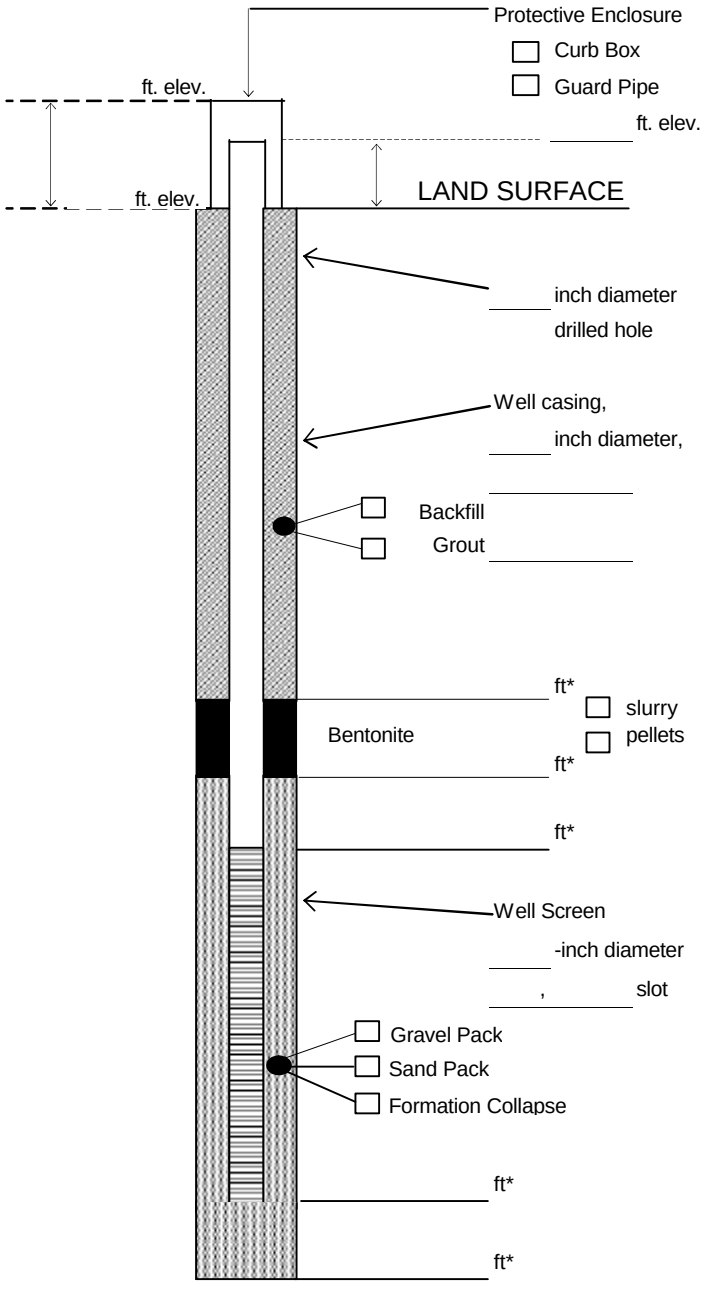
APPENDIX A

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) FORMS and FIELD REPORT FORMS

Well No. _____

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number _____

Project Name _____

Well No. _____ Boring No. _____

Town/City _____

County _____ State _____

Installation Date(s) _____

Drilling Contractor _____

Drilling Method _____

Water Depth From Top of Riser _____ ft _____
Date

C.T. Male Observer _____

Notes:

WELL DEVEOPMENT LOG

Project Name: ______________________ Date Started: __________

Project Number: _____________ Date Finished: _________

Field Parameters		Well Volumes and Corresponding Field Parameters Value									
	Intitial	1	2	3	4	5	6	7	8	9	10
pH											
Conductivity											
EH											
Temperature (C)											
Turbidity											

Monitoring Well: Notes:
Water Level:
Total Depth:
Water Column:
One Well Volume:

Field Parameters		Well Volumes and Corresponding Field Parameters Value									
	Intitial	1	2	3	4	5	6	7	8	9	10
pH											
Conductivity											
EH											
Temperature (C)											
Turbidity											

Monitoring Well: Notes:
Water Level:
Total Depth:
Water Column:
One Well Volume:

Field Parameters		Well Volumes and Corresponding Field Parameters Value									
	Intitial	1	2	3	4	5	6	7	8	9	10
pH											
Conductivity											
EH											
Temperature (C)											
Turbidity											

Monitoring Well: Notes:
Water Level:
Total Depth:
Water Column:
One Well Volume:

Field Parameters		Well Volumes and Corresponding Field Parameters Value									
	Intitial	1	2	3	4	5	6	7	8	9	10
pH											
Conductivity											
EH											
Temperature (C)											
Turbidity											

Monitoring Well: Notes:
Water Level:
Total Depth:
Water Column:
One Well Volume:

C.T. MALE ASSOCIATES, P.C.

WATER LEVEL RECORD

Project Name _____ Project Number _____
Location _____ Measurement Taken By _____
Method or Reading_____ Datum_____

		Date _____		Date_____		Date_____	
Well No.	Ref. Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.

Measuring Point(s) _____

_____

Groundwater Services Field Log

DATE: _____ PROJECT NAME: _____

PROJECT NO.: _____ PROJECT LOCATION: _____

SAMPLING PERSONNEL: _____

MONITORING WELL ID#: _____ NOTES TAKEN BY: _____

DEPTH TO WATER: _____ FROM: _____ BAILER ID: _____

DEPTH TO BOTTOM: _____ FROM: _____ BAILER: LAB CLEANED / FIELD CLEANED

WATER COLUMN HEIGHT: _____ BAILER: STAINLESS STEEL _____

OTHER _____

CONVERSION FACTORS LINEAR FEET TO GALLONS

WELL CASING DIAMETER

1″ = 0.041 GALLONS 3" = 0.38 GALLONS

1.25" = 0.064 GALLONS 4" = 0.66 GALLONS

WELL VOLUME: _____ GALLONS 2" = 0.16 GALLONS 6" = 1.47 GALLONS

VOLUMES PURGED: _____ GALLONS PURGE METHOD: _____

TIME STARTED: _____ ; TIME FINISHED: _____

OBSERVATIONS: COLOR _____ ; ODOR _____

SHEEN _____ ; TURBIDITY _____

OTHER _____ _____

WATER RECOVERY HEIGHT: _____ ; RECOVERY TIME IN MINUTES: _____

FIELD PARAMETERS: pH _____ , TEMPERATURE _____

CONDUCTIVITY _____ UMHO/CM, OTHER _____

SAMPLE COLLECTION TIME: _____

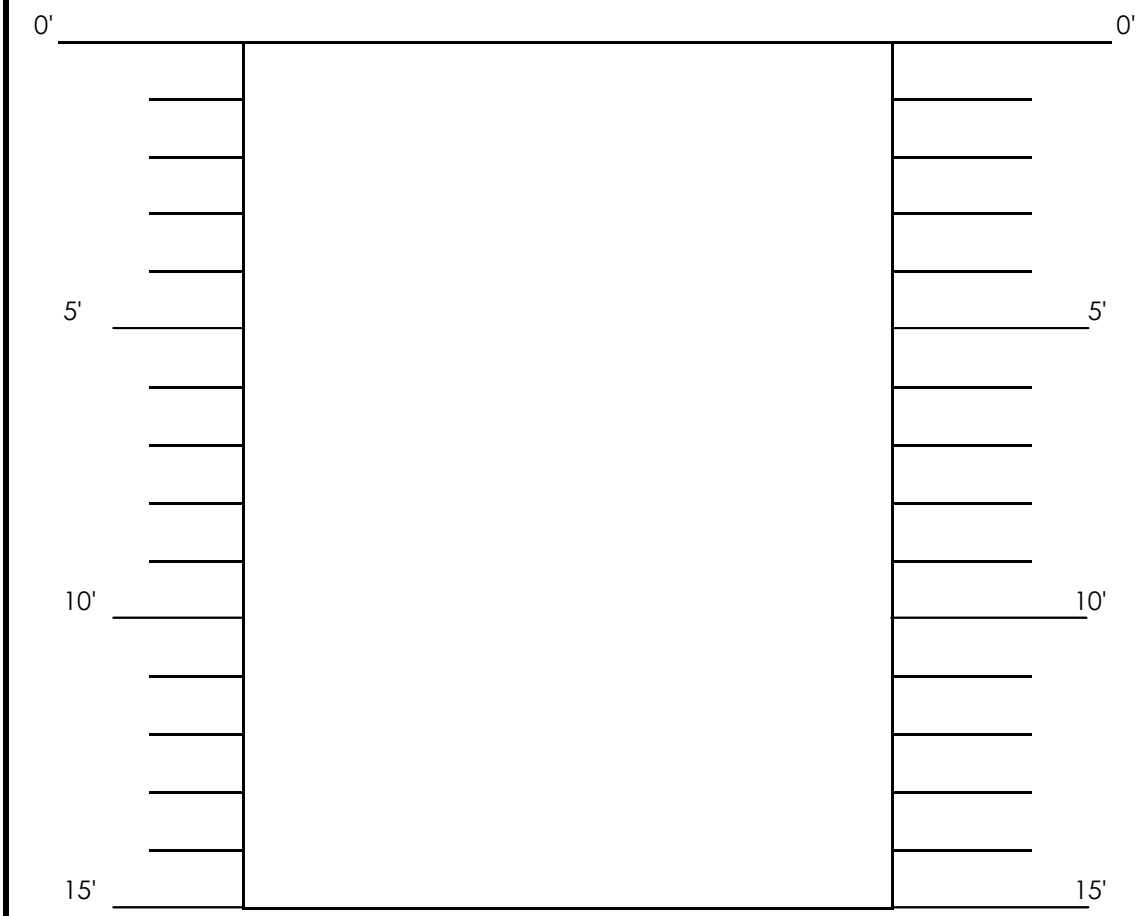
NOTES: _____

TEST PIT LOG

C.T. MALE ASSOCIATES, P.C.
50 Century Hill Drive, P.O. Box 727
Latham, NY 12110-0727
(518) 786-7400 • FAX (518) 786-7299
Building Systems • Engineering • Environmental Services • Land Information Services

PROJECT NAME: _____ EXCAVATOR: _____
PROJECT NUMBER: _____ EQUIPMENT: _____
LOGGED BY: _____ DATE: _____

TEST PIT NO.



TOTAL DEPTH: _____
WATER AT: _____
SIZE OF TEST PIT: _____

NOTES: _____

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.:
ELEV.: **DATUM:**
START DATE: **FINISH DATE:**
SHEET **OF**

PROJECT: _____ CTM PROJECT NO.: _____

LOCATION: _____ CTM INSPECTOR: _____

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
5										
10										
15										
20										
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: _____ DRILL RIG TYPE: _____

METHOD OF INVESTIGATION: _____

GROUNDWATER LEVEL READINGS

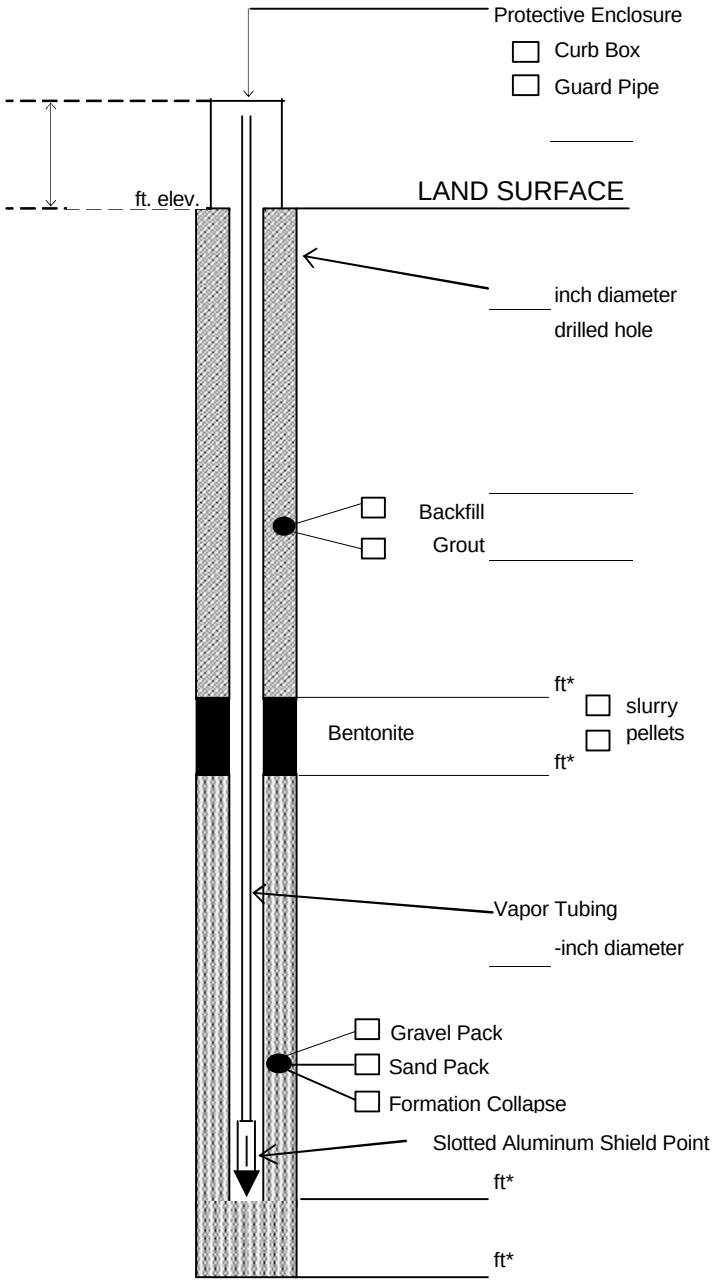
DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY:

Point No. _____

SOIL VAPOR SAMPLING POINT LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number _____

Project Name _____

Point No. _____ Boring No. _____

Town/City _____

County _____ State _____

Installation Date(s) _____

Drilling Contractor _____

Drilling Method _____

C.T. Male Observer _____

Notes:

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT:	**PROJECT #:**	**PAGE 1 OF**
CLIENT:		**DATE**
LOCATION:		**COLLECTED:**
INSTRUMENT USED:	**LAMP eV**	**DATE**
DATE INSTRUMENT CALIBRATED:	**BY:**	**ANALYZED:**
TEMPERATURE OF SOIL:		**ANALYST:**

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)***	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

Environmental Services Field Log

Date: Time On-Site: Time Off-Site:

Project Name: Project No.:

Purpose: Field Report No:

Weather Conditions:

Present at Site:

Observations:

Items to Verify:

List of Attachments:

Field Log Prepared by:

Copies to:

APPENDIX B

QUALITY ASSURANCE PROJECT PLAN

DRAFT QUALITY ASSURANCE PROJECT PLAN
COTTAGE GARDENS PHASE 3A & 3B
8 COTTAGE GARDENS PLACE & 209 WARBURTON AVENUE
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

KEY PERSONNEL AND SIGNATURES

Approved: _____ Date: _____
Project Principal
Dan Reilly, P.E.
Division Manager, Environmental Services
C.T. Male Associates

Approved: _____ Date: _____
Project Manager
Kirk Moline
Managing Geologist
C.T. Male Associates

Approved: _____ Date: _____
Quality Assurance Officer
Jeffery A. Marx, P.E.
Environmental Engineer
C.T. Male Associates

Approved: _____ Date: _____
Project Scientist & Health and Safety Coordinator
Stephen Bieber
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DRAFT QUALITY ASSURANCE PROJECT PLAN
COTTAGE GARDENS PHASE 3A & 3B
8 COTTAGE GARDENS PLACE & 209 WARBURTON AVENUE
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

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APPENDICES

1.0 PROJECT DESCRIPTION

1.1 Introduction

This Quality Assurance Project Plan (QAPP) has been prepared for the implementation of the remedial investigation activities at the Cottage Gardens Phase 3A & 3B Site located at 8 Cottage Place (Phase 3A) and 209 Warburton Avenue (Phase 3B) in the City of Yonkers, Westchester County, New York. It has been developed in conjunction with the Remedial Investigation (RI) Work Plan as prepared by C.T. Male Associates. A description of the Site, available background information, objectives and the remedial investigation scope of work are presented in detail in the referenced RI Work Plan.

This QAPP presents the organizational structure and data quality objectives (DQOs) for the remedial investigation, and the quality assurance (management system) and quality control methods of checks and audits to be implemented to ensure that the quantity and quality of the data required for its intended use is obtained and documented (i.e., that Date Quality Objectives (DQOs) are met). The measurement parameters used to determine the quality of the data are precision, accuracy, completeness, representativeness and comparability, and are discussed further in this QAPP.

A Field Sampling Plan (FSP) has been prepared by C.T. Male Associates as a separate exhibit and forms an integral part of this QAPP. The field sampling and data gathering procedures are presented in the FSP and incorporated into the QAPP by reference. The QAPP and FSP document the laboratory quality assurance/quality control (QA/QC) procedures and field sampling and data gathering procedures that will be followed during implementation of the remedial investigation scope of work so that valid data of a known quality is generated.

The project specific field QA/QC procedures and the project specific laboratory QA/QC procedures are presented in the text of this QAPP. The general internal laboratory QA/QC procedures are presented in the subcontractor laboratory's Quality Manual which is retained at the laboratory's place of business. The subcontract laboratory for this project has not yet been determined. The laboratory certifications will be included in Appendix A upon selection of the laboratory.

The QAPP has been prepared in a manner consistent with the following guidance documents:

- Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA/540/G-89/004, USEPA, October 1988.
- Data Quality Objectives for Remedial Response Activities: Development Process, EPA/540/G-87/003, USEPA, March 1987.
- DER-10 Technical Guidance For Site Investigation and Remediation, NYSDEC, May 2010.
- 6 NYCRR Part 375, Environmental Remediation Programs, Subparts 375-1 to 375-4 and 375-6, Effective December 14, 2006.
- NYSDOH Final Guidance For Evaluating Soil Vapor Intrusion in the State of New York (October 2006) (NYSDOH 2006 Final Guidance)

1.2 Objectives and Scope of Work

It is the objective of the RI and this QAPP to obtain and present representative data of a known quality and sufficient quantity. The primary goal is to perform soil sampling through a variety of investigative tasks to evaluate the quality of the Site's soils and to conduct sub-slab soil gas and indoor air quality sampling. The data will help document overall protection requirements for human health and the environment based on the Site's contemplated use.

To achieve these objectives, the scope of work will include the following items as presented in the RI Work Plan, in this QAPP and in the FSP. The investigative tasks will include the advancement of soil borings, collection and analysis of select sub-surface soil samples, and the collection and analyses of sub-slab soil gas and indoor air quality samples.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

C.T. Male Associates is responsible for providing professional services associated with the quality control/quality assurance of the remedial investigation. These will include project management, coordination and scheduling of activities in-house and with qualified subcontractors. The work tasks that will be performed by a subcontractor to C.T. Male Associates include: advancement of conventional auger drilling for the borings, analytical laboratory testing and data validation.

A project organizational chart listing key individuals of the project and their associated title is presented as Figure 1 at the end of this document. Personnel from C.T. Male Associates, the subcontract laboratory and data validator can be reached at the following addresses:

- C.T. Male Associates
  Contact: Kirk Moline
  50 Century Hill Drive
  Latham, NY 12110
  Phone: 518.786.7502
  Fax No.: 518.786.7299
  Email: k.moline@ctmale.com

- Laboratory: To be determined
  A third party laboratory will be solicited via competitive bidding. Final selection of the independent laboratory will be approved by the DEC Project Manager.

- Data Validator: To be determined
  A third party data validator will be solicited via competitive bidding. Final selection of the independent data validator will be approved by the DEC Project Manager.

A description of the responsibilities by title of the key individuals is presented as follows:

Project Principal is responsible for the review of the RI activities and reports for their technical adequacy and conformance to the scope of work.

Quality Assurance Officer is responsible for the independent review of the RI documents and reports to check that the appropriate project documentation, of the quality control activities performed, exist and are maintained; and for conducting field and sampling audits. Analytical data will also be reviewed by this individual for accuracy and completeness.

Project Manager is responsible for the overall coordination and implementation of the project, the management of staff and resources, the implementation of schedules, the conformance by the technical staff and subcontractors to the scope of work, assessing the adequacy of the work being performed, implementing corrective action as necessary, interaction with the client and regulatory agencies, maintaining complete project documentation, and report preparation.

Health and Safety Coordinator is responsible for implementation of the project specific Health and Safety Plan, and resolution of safety issues which arise during the completion of the work. The Health and Safety Coordinator or designee will be present during the completion of the field work.

Laboratory Quality Assurance Officer is responsible for review of the laboratory data quality control procedures and documentation to determine if the QA objectives are being met; and to report non-conforming events to the laboratory technical staff and Project Manager and implement corrective action as necessary.

Laboratory Director is responsible for all activities within the laboratory, and for the performance of the laboratory work tasks in accordance with the project work plans, interactions with the Project Manager, and the adherence to project schedule.

Project Geologist/Engineer/Scientist is responsible for coordinating and conducting the field activities and subcontractors, the adherence of activities to the QAPP and the FSP, evaluation of the collected data, soil classifications, report preparation and interaction with Project Manager and Project Team.

Project Team is responsible for adequately performing the work tasks in accordance with the project work plans so that the objectives of investigations and the project are achieved, notifying the Project Manager of any non-conformance to the work plan so that corrective actions can be taken as necessary, and notifying the Project

Manager of unforeseen conditions so that modifications to the work plan, if necessary, can be approved and implemented.

Data Validator is responsible for review of all analytical data generated for this project. The data validator will review analytical data in accordance with New York State Department of Environmental Conservation Guidance for the Development of Data Usability Summary Reports 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.

3.0 QUALITY ASSURANCE OBJECTIVES FOR DATA MEASUREMENT

3.1 General

The Quality Assurance (QA) objective for this project is to produce data which is technically valid and of a known quality that meets the needs of its intended use. In this section the data quality objectives (DQOs) are defined by describing the intended use of the data; defining the type of data needed (i.e., physical or analytical); specifying the analytical levels, as established by EPA, appropriate to the data uses; specifying the quality control checks on field and laboratory procedures and frequency of checks; and presenting the quality control acceptance criteria.

Laboratory quality assurance objectives for data measurement are established for each measurement parameter in terms of precision, accuracy, completeness, representativeness and comparability. These terms form an integral part of the laboratory's quality assurance programs in that DQOs are set for each parameter.

3.2 Data Uses and Types

The data to be generated during the proposed work will be completion of Site investigation and health and safety during implementation of the field activities. Both physical data including air monitoring and analytical data from soil will be needed to provide the necessary information to complete the steps in the Site investigation. The specific physical and analytical data proposed and its purposes are presented in the RI Work Plan.

3.3 Data Quality Needs

To support data collection activities in obtaining quality data, EPA has established a series of analytical levels that are appropriate to Site investigation/remediation data uses. The analytical levels are defined as follows:

Level I	Field screening or analysis using portable instruments. Qualitative data.
Level II	Field analyses using more sophisticated portable analytical instruments. Qualitative and quantitative data can be obtained.

Level III	Laboratory analyses using standard EPA approved procedures/methods.
Level IV	Laboratory analyses by NYSDEC ASP (Analytical Services Protocol) - Category B Data Deliverable with QA/QC protocols and documentation.
Level V	Analyses by non-standard methods.

The data collection activities, the environmental media, the intended use of the data and the corresponding analytical levels that will be used to produce the project data are summarized in Table 1.

Table 1
Summary of Work Tasks and Corresponding Analytical Levels

Data Collection Activities	Sample Media & Description	Data Use[(a)]	Analytical Level
PID Monitoring	Soil Vapors	1 & 2	I
Test Borings and Subsurface Soil Sampling	Sub-surface Soil for Laboratory Analyses and Field Instrumentation	1, 3 & 4	I (Field Instrumentation) and IV (Laboratory Analyses)
Vapor Intrusion Assessment	Ambient air and soil vapor	1, 3 & 4	IV (Laboratory Analyses)

Note:
(a) Data Uses Key:
1 - Site Characterization.
2 - Health and Safety and Community Air Monitoring During Implementation of Field Activities.
3 - Risk Assessment.
4 - Evaluation of Remediation Alternatives.

Another consideration besides defining the Data Quality Needs is what level of cleanup will be required for the Site. The applicable or relevant and appropriate requirements (ARARs) are related to defining satisfactory cleanup efforts. In order to be able to evaluate the data generated with respect to potential ARARs, the samples will need to be analyzed by analytical methods that can achieve detection limits below or at existing ARAR values. The analytical methods selected for this project are designed to achieve ARAR values.

3.4 Quality Control Checks and Acceptance Criteria

To monitor and document the integrity of such factors as sample variability, sampling equipment cleanliness, sampling technique, analytical reproducibility and sample handling which can affect data quality, several field quality control checks will be implemented. These will include taking equipment/field blanks after the sampling equipment has been decontaminated to check for cross contamination and equipment cleanliness; taking replicate samples to monitor analytical precision/ reproducibility and sampling technique and taking matrix spike/matrix spike duplicate (MS/MSD) samples to evaluate matrix interference and laboratory accuracy (MS) and precision (MSD). For this project the field Quality Control (QC) checks will consist of one equipment/field blank, one replicate sample and one MS/MSD sample during sampling activities for every twenty (20) analytical samples.

Laboratory quality control checks will be those specified in EPA Methods or in the most recent NYSDEC ASP for the analytical method performed and could consist of some of the following:

- Blanks (method, preparation),
- Initial and continuing calibrations,
- Surrogate spikes,
- Matrix spikes/matrix spike duplicates,
- Duplicate samples, and
- Control samples/matrix spike blanks.

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

4.0 SAMPLING PROCEDURES

Procedures for sampling are presented in the Field Sampling Plan (FSP) and include the following:

- Selection of sampling sites and media to be sampled,
- Specific sampling procedures for each environmental media to be sampled, and for QC samples to be taken,
- Field soil screening procedures,
- A description of the containers, procedures and equipment used for sample collection, preservation, transport and storage,
- Procedures for preparing the sample containers and sampling equipment prior to sampling and decontamination of sampling equipment during sampling,
- Chain of custody procedures and forms, and
- Description of the procedures, forms and notebooks to be used to document sampling activities, sample conditions and field conditions.

5.0 SAMPLE CUSTODY

Proper chain of custody will be established and maintained through a series of steps, beginning in the field and ending with final disposition of the analyzed samples. At the time of the field sampling, an external chain of custody form will be utilized to track sample collection until delivery to the analytical laboratory. An internal or "intra-laboratory" chain of custody will be used by laboratory personnel to track the samples from the point it is received and logged and passed through the laboratory process. Chain of custody procedures are discussed in detail in Section 6.0 of the FSP.

6.0 CALIBRATION PROCEDURES

Calibration procedures for field equipment including the photo-ionization detector (PID) meter, are presented in Section 5.0 of the FSP. Calibration procedures for laboratory equipment and instrumentation consist of the production and use of current certifiable standards and the measurement and adjustment of the instrument response. The laboratory is responsible for maintaining records documenting use of current standards and acceptable instrument responses. The laboratory is required to flag analytical data that has had potential contamination or poor instrument calibration that may have occurred during the analytical process.

7.0 SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

The analytical parameters, sample preparation and analysis methods, acceptable holding times and required method detection limits are presented in Table 2. The analytical methods specified reflect the requirements of the most recent NYSDEC ASP.

Table 2
Analytical Methods and Requirements

Analytical Parameters	EPA Method	Holding Times(1)	Contract Required Quantitative Limits (as noted)(2)
TCL Volatile Organic Compounds (VOCs) in Soil and Groundwater	8260	Soil: 48 hours to freeze, 14 days to analysis. Water: 5 Days Unpreserved to Analysis, 12 Days Preserved (HCl to pH<2) to Analysis.	10-100 ug/kg (Soil) 1 to 10 ug/l (Water)
VOCs in Air	TO-15	30 Days	0.2 to 0.5ppbv
TCL Semi-Volatile Organic Compounds (SVOCs)	8270	5 Days to Extraction, 40 Days to Analyze	330 to 800 ug/kg (Soil) 10-25 ug/l (Water)
TCL Pesticides	8081	5 Days to Extraction, 40 Days to Analyze	1.7 to 170 ug/kg (Soil) 0.05-1 ug/l (Water)
TCL PCBs	8082	5 Days to Extraction, 40 Days to Analyze	33 to 67 ug/kg (Soil) 0.5-1 ug/l (Water)
TAL Metals	6010/7000 Series	180 Days except for Mercury (26 Days)	0.3 to 500 mg/kg (Soil) 3 to 5,000 ug/l (Water)
Cyanide	9010B	14 Days	1 mg/kg (Soil) 10 ug/l (Water)

Note:
1) Holding times are relative to the verifiable time of sample receipt at the laboratory.
2) The listed method detection limits are practical quantitation limits (PQLs). The method detection limit (MDL) is the best possible detection. Laboratories report PQLs which are typically 4 times the MDL for liquids and varies for solids depending on the quantity of contamination present. Efforts will be made to obtain the lowest possible detection limit. When the guidance value or

standard value is below the detection limit, achieving the detection limit will be considered acceptable for meeting that guidance or standard value.

3) As defined in NYCRR Part 360-2.11(d)(6), *Water Quality Analyses Tables*.

Where matrix interference is noted, analytical clean-ups will be required to be performed by the laboratory following the procedures specified in SW-846 or the most current NYSDEC ASP, as applicable. In general, samples shall not be diluted more than 1 to 5.

8.0 DATA REDUCTION, VALIDATION AND REPORTING

The field measurement data and the laboratory analyses results of detected parameters will be compiled and tabulated to facilitate comparison and evaluation, and will be included in the Final RI Report. The tabulated data will include at a minimum:

- Soil analysis results,
- Air and soil gas analysis results, and
- Quality control results (equipment/field blanks, replicates/duplicates, MS/MSD and transport blanks).

Field logs will also be compiled and included, in part, in the text and appendices of the Final RI Report, and will consist of:

- Test boring logs,
- NYSDOH VI Indoor Air Quality Questionnaire and Building Inventory,
- Organic vapor headspace analysis logs, and
- Environmental services field logs.

Any observations or problems encountered during field activities which could affect the quality of the data or its validity will be noted on the appropriate field log.

The laboratory will generate ASP Category B Data Deliverable Package(s) that may be submitted as a separate volume to the RI Report. It will include analytical results and quality control data deliverables as required by the most recent NYSDEC ASP.

Internal data validation will be performed by the laboratory QA officer to ensure that the data package is complete and meets the criteria of the work plan and this QAPP. Any problems encountered in performing the analyses by the laboratory such as out of limits surrogate recoveries, and comments on the quality and limitations of specific data and the validity of the data will be described in the case narrative of the laboratory report.

External data validation will be performed by a contracted third party data validator who will utilize the USEPA National and Regional Validation Guidelines/Procedures and the NYSDEC Guidance in the Development of Data

Usability Summary Reports to determine the applicable qualifications of the data. The validator will then prepare a NYSDEC Data Usability Summary Report (DUSR) in accordance with NYSDEC guidelines. The data validator will not be involved in any other portions of the project. The independent validator's qualifications and work experience, when selected, will be presented in Appendix B. The NYSDEC DUSR guidance is presented in Appendix C for reference.

9.0 INTERNAL QUALITY CONTROL

Field QC will consist of taking equipment/field blanks, MS/MSD samples and replicate samples. Field instrumentation will also be calibrated prior to use and the calibration maintained as discussed in the FSP (Section 5.0).

Internal laboratory QC will generally consist of:

- Method (instrument) blanks,
- Initial and continuing calibrations,
- Surrogate spikes,
- Matrix spikes/matrix spike duplicates,
- Duplicate samples, and
- Laboratory control samples/matrix spike blanks.

The QC samples will be run in accordance with the protocols and frequencies specified in the NYSDEC ASP, SW-846 and EPA Methods as applicable for the analyses being performed.

10.0 PERFORMANCE AND SYSTEMS AUDITS

10.1 Field Audits

Field performance audits will consist of taking replicate samples, MS/MSD samples and equipment/field blanks and analyzing them for the same parameters as other samples.

Field system audits will be conducted during field operation to ensure that the field activities are being conducted correctly and in accordance with the RI Work Plan. The project field supervisor will check that the field instrumentation is calibrated prior to use, that field measurements are taken correctly, that equipment is properly decontaminated, and that the field activities are properly documented. Any deficiencies will be reported to the project manager and discussed with the field staff immediately and corrective action taken. The person conducting the field audits will document the field system audits by use of a field report and submit the report to the project manager for review on a bi-weekly basis at a minimum. The project quality assurance officer, scientist/geologist/engineer or project manager will conduct system audits as appropriate or warranted.

The project manager will review the field system audit reports and the field documentation for completeness and correctness, and check that the work is proceeding on schedule and in accordance with the work plans.

10.2 Laboratory Audits

Laboratory system audits are not required, however, if the laboratory is required to maintain New York State Department of Health (NYSDOH) ELAP certification. A copy of the laboratory NYSDOH ELAP certification documentation will be provided, if requested by the DEC Project Manager. Part of this certification process typically includes periodic performance evaluations and on-site systems audits.

11.0 PREVENTATIVE MAINTENANCE

C.T. Male Associates keeps an inventory of all field equipment and it is kept locked in a designated area. The field equipment is signed out when in use and its condition checked upon its return. The equipment is kept in good working order and frequently checked and calibrated by qualified employees. Additionally, select equipment (i.e., PID) is routinely serviced for cleaning and calibration by an independent repair facility.

The project geologist/engineer/scientist and field sampler are responsible for assuring that the field equipment is tested, cleaned, charged and calibrated in accordance with the manufacturer's instructions prior to taking the equipment out into the field.

12.0 DATA ASSESSMENT PROCEDURES

The field and laboratory generated data will be assessed for precision, accuracy, representativeness, completeness, and comparability (PARCC parameters). Both quantitative and qualitative procedures will be used for these assessments.

The criteria for assessment of field measurements will be that the measurements were taken in accordance with the procedures specified in the FSP using calibrated instruments. Assessment of the sampling data with respect to field performance will be based on the criteria that the samples were properly collected and handled. Field replicate, MS/MSD and equipment/field blank sample results will be used in assessing the sampling technique and representativeness of the samples collected.

The laboratory will calculate and report the precision, accuracy, and completeness of the analytical data. Precision will be expressed as the relative percent difference (RPD) between values of duplicate samples. Accuracy will be expressed as percent difference (PD) for surrogate standards and matrix spike compounds. Completeness is a measure of the amount of valid data derived from a set of samples based on the total amount expected to be derived under normal conditions. The precision and accuracy results will be compared to the QC acceptance criteria specified for each test method in the most recent NYSDEC ASP.

The representativeness of the analysis is dictated primarily by the field sampling technique and sample location, as opposed to laboratory operations. The laboratory will take steps to ensure that the analysis is representative of the sample being submitted. The criteria for ensuring representativeness of the analysis are careful aliquot selection and proper compositing techniques. Laboratory performance will be based on the criteria that the samples were properly handled prior to submission to the laboratory, that the laboratory aliquots taken for analysis are representative (i.e., oversized particles discarded, sample thoroughly mixed except when dealing with volatile organics), that the samples were analyzed within holding times, and that no cross-contamination has occurred based on the method blank results. Data comparability will be assessed based on analyses being performed within required holding times, on consistent units of measure, and that analyses were performed in strict adherence with NYSDEC and EPA analytical methods/protocols.

13.0 CORRECTIVE ACTIONS

The remedial investigation will be performed in accordance with the approved work plan, the contents of the approved FSP and the approved QAPP. Any persons identifying unacceptable conditions or deficiencies in the work being performed such as deviation from or omission of health and safety procedures, sampling procedures or other field procedures, will immediately notify the project field supervisor, where applicable, and the project manager. The unacceptable conditions or deficiencies will be documented and submitted to the project manager. The project manager, with assistance from the technical quality review staff, if necessary, will be responsible for developing and initiating appropriate corrective action, documenting the corrective action and verifying that the corrective action has been effective.

Depending on the significance and potential impact of the problem or deficiency requiring corrective action, the NYSDEC and the Client will be notified, as warranted, as soon as practical after becoming aware of the situation.

14.0 QUALITY ASSURANCE REPORTS TO MANAGEMENT

Field system audit/field reports from the project team, where applicable, will be submitted to the project manager on a bi-weekly basis at a minimum. The field report will include the project name, location, time, date, weather, temperature range, work in progress, conformance with schedule, persons present at the Site (arrival and departure times), observations, work start-up and stoppage, items to verify, information or action required, any attachments identified, and the reporting persons signature. The field report notifies the management as to the progress, conformance with the work plan, and any problems that may affect quality control. Field personnel will also keep log books and field notebooks that will discuss day to day procedures followed, any problems encountered, etc. A copy of the field notes will be given to the project manager at least bi-weekly to keep the project manager informed of the project status and as a quality control check. The project manager will review the reports and field notes to assess the quality of the investigate data gathering efforts to make sure the objectives of the work are being met, to make sure the work is progressing on schedule, that the work is being conducted in accordance with the work plan, and that any problems encountered are addressed. These reports will be utilized in assessing the data quality with respect to field activities and the findings will be discussed in the RI Report where applicable.

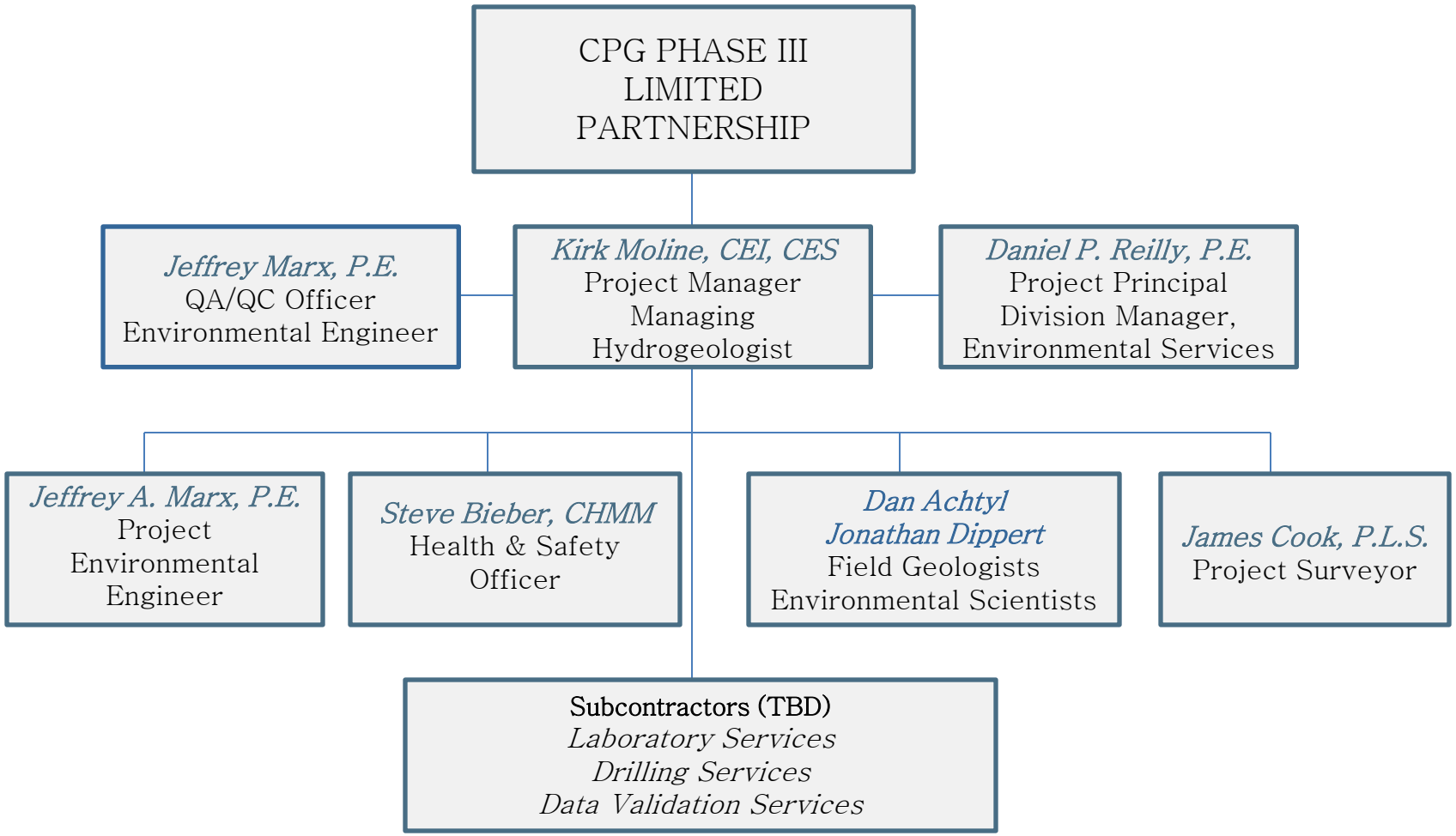
Documentation of each phase of the project and all work tasks performed are kept in the file on the project. The documentation is available at all times for review by the Quality Assurance Officer, who will randomly check files for their completeness.

If any occurrences or conditions are encountered during the course of work that may require a change in the scope of work or departure from the approved work plan, the NYSDEC will be notified and the situation reported as soon as possible.

FIGURE 1

Project Organizational Chart

C.T. MALE PROJECT ORGANIZATION



APPENDIX A

Laboratory Certifications (Pending)

APPENDIX B

Data Validator Qualifications and Experience (Pending)

APPENDIX C

Guidance for the Development of Data Usability Summary Reports

Appendix 2B
Guidance for Data Deliverables and the Development of
Data Usability Summary Reports

1.0 Data Deliverables

(a) DEC Analytical Services Protocol Category A Data Deliverables:

1. A Category A Data Deliverable as described in the most current DEC Analytical Services Protocol (ASP) includes:

i. a Sample Delivery Group Narrative;

ii. contract Lab Sample Information sheets;

iii. DEC Data Package Summary Forms;

iv. chain-of-custody forms; and,

v. test analyses results (including tentatively identified compounds for analysis of volatile and semi-volatile organic compounds)

2. For a DEC Category A Data Deliverable, a data applicability report may be requested, in which case it will be prepared, to the extent possible, in accordance with the DUSR guidance detailed below.

(b) DEC Analytical Services Protocol Category B Data Deliverables

1. A Category B Data Deliverable is includes the information provided for the Category A Data Deliverable, identified in subdivision (a) above, plus related QA/QC information and documentation consisting of:

i. calibration standards;

ii. surrogate recoveries;

iii. blank results;

iv. spike recoveries;

v. duplicate results;

vi. confirmation (lab check/QC) samples;

vii. internal standard area and retention time summary;

viii. chromatograms;

ix. raw data files; and

x. other specific information as described in the most current DEC ASP.

2. A DEC Category B Data Deliverable is required for the development of a Data Usability Summary Report (DUSR).

2.0 Data Usability Summary Reports (DUSRs)

(a) Background. The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data with the primary objective to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use.

1. The development of the DUSR must be carried out by an experienced environmental scientist, such as the project Quality Assurance Officer, who is fully capable of conducting a full data validation. The DUSR is developed from:

i. a DEC ASP Category B Data Deliverable; or

ii. the *USEPA Contract Laboratory Program National Functional Data Validation Standard Operating Procedures for Data Evaluation and Validation*.

2. The DUSR and the data deliverables package will be reviewed by DER staff. If full third party data validation is found to be necessary (e.g. pending litigation) this can be carried out at a later date on the same data package used for the development of the DUSR.

(b) Personnel Requirements. The person preparing the DUSR must be pre-approved by DER. The person must submit their qualifications to DER documenting experience in analysis and data validation. Data validator qualifications are available on DEC's website identified in the table of contents.

(c) Preparation of a DUSR. The DUSR is developed by reviewing and evaluating the analytical data package. In order for the DUSR to be acceptable, during the course of this review the following questions applicable to the analysis being reviewed must be answered in the affirmative.

1. Is the data package complete as defined under the requirements for the most current DEC ASP Category B or USEPA CLP data deliverables?

2. Have all holding times been met?

3. Do all the QC data; blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?

4. Have all of the data been generated using established and agreed upon analytical protocols?

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

6. Have the correct data qualifiers been used and are they consistent with the most current DEC ASP?

7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

(d) Documenting the validation process in the DUSR. Once the data package has been reviewed and the above questions asked and answered the DUSR proceeds to describe the samples and the analytical parameters, including data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data is discussed.

ATTACHMENT A

PREVIOUS INVESTIGATIONS

(CD, in Pocket)

September 2, 2014

Phase I
Environmental Site Assessment
209 Warburton Avenue Site
City of Yonkers
Westchester County, New York

Prepared for:

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PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
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SUMMARY

C.T. Male Associates review of general property information, observation of adjacent properties, research of historical property information, including a review of environmental databases, and a site reconnaissance revealed the following with respect to Recognized Environmental Conditions (RECs), Historical Recognized Environmental Conditions (HRECs), and Controlled Environmental Conditions (CRECs):

	No Further Action	REC	HREC	CREC	Refer to Section
Property Operations	X				2.3
Neighboring Properties	X				2.10
User Provided Information	X				3.0
Regulatory Review - Site	X				4.0
Regulatory Review – Surrounding Properties		X			4.0
Historical Review	X				5.0
Liquid Containing Equipment	X				6.2
Site Drainage	X				6.3
Site Waste Profile	X				6.4
Underground Storage Tanks	X				6.5
Above Ground Storage Tanks	X				6.5
Stressed Vegetation, Staining and Odors	X				6.6

Notes/Recommendations: To understand the subject site and report, the complete report needs to be reviewed. The findings, opinion and conclusions with respect to the subject site are presented in Section 7.0.

1.0 INTRODUCTION

This report presents the findings of a Phase I Environmental Site Assessment (ESA) conducted by C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture, D.P.C. (C.T. Male Associates) at the 209 Warburton Avenue Site which is located in the City of Yonkers, Westchester County, New York. The site assessment was performed at the request of Mr. Jesse Batus of CPG Phase III Limited Partnership.

This site assessment has been performed in general conformance with the scope and limitations as outlined in ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and in accordance with our proposal dated August 5, 2014.

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment was to reasonably identify RECs on the property. A REC is defined as the presence or likely presence of hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis*[1] conditions are not RECs. A Historical Recognized Environmental Condition (HREC) is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria. A Controlled Recognized Environmental Condition (CREC) is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

A finding of no RECs is not a warranty or guarantee that the site remains free from contamination. The purpose of this report is not intended to include *de minimis* conditions. This report is also not intended to serve as a compliance assessment of the subject property. This environmental site assessment is designed to reduce, but

[1] Conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

not eliminate, uncertainty regarding the potential for RECs in connection with the property, within reasonable limits of time and cost.

1.2 Scope of Work

This environmental site assessment consisted of the following scope of work:

- A site reconnaissance, including a walkthrough of the site buildings and site grounds, to identify areas of potential environmental concern;
- Interviews with site representatives knowledgeable of current and former site operations;
- Review of municipal property records and information provided by local government agencies;
- Review of historical information and documents;
- Review of federal and state agency database information for the subject property and neighboring properties to identify potential concerns that could adversely affect the environmental condition of the property; and
- Preparation of a report documenting the findings of the environmental site assessment.

1.3 Significant Assumptions

The following assumptions are made by C.T. Male Associates in this report. C.T. Male Associates relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property owner contact, computer databases and personal interviews. Except as set forth in this report, C.T. Male Associates has made no independent investigation as to the accuracy and completeness of the information derived from secondary sources, and has assumed that such information is accurate and complete. C.T. Male Associates assumes information provided by or obtained from governmental agencies including information obtained from government websites is accurate and complete. Groundwater flow, unless otherwise specified by other data and information, is assumed based on land surface contours depicted on the United States Geological Survey topographic maps. C.T. Male Associates assumes the property has been correctly and accurately identified by the client and property owner contact.

1.4 Limitations and Exceptions of the Assessment

The information presented in this report is limited to the investigation conducted as described in the referenced ASTM guidelines for conducting environmental site assessments, and is not necessarily all inclusive of conditions present at the subject site. Due to inherent limits of time and cost, uncertainty about site conditions remains. The findings, opinion and conclusions stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the site visit. Specific limitations included the following:

- Access Limitations: Several tenant garages and furnace/hot water tank rooms could not be accessed. The site contact did not have keys to these areas.
- Physical Obstructions to Observations: None.
- Outstanding Information Requests: City of Yonkers and New York State Department of Health.
- Historical Data Source Failure: None
- Other: The information presented in the report is based on information gathered in accordance with the Scope of Services defined in Section 1 of this report. Information provided by site contacts and local, State and County officials known to be responsible for regulating and enforcing site area environmental conditions was utilized in assessing the environmental conditions at the site. The accuracy of conclusions drawn from this assessment is therefore dependent upon the accuracy of the information provided.

1.5 Special Terms and Conditions

This Phase I Environmental Site Assessment was prepared in accordance with the stated and agreed upon Scope of Work. No special terms and conditions are applicable to this assessment. This site assessment did not include a review of non-scope issues as identified by ASTM E 1527 including asbestos containing materials, radon, lead in drinking water, lead based paint, wetlands, regulatory compliance, industrial hygiene, health & safety, ecological resources, endangered species, indoor air quality, mold and cultural & historic resources.

1.6 Reliance

This Phase I ESA has been prepared for the sole use of CPG Phase III Limited Partnership, The Community Builders, Inc. and TCB Holdings, Inc. This Phase I ESA may be relied upon by Leviticus 25:23 Alternative Fund, Inc. This Phase I ESA cannot be relied upon by other parties without the express written consent of C.T. Male Associates, CPG Phase III Limited Partnership, The Community Builders, Inc. and TCB Holdings, Inc.

2.0 SITE DESCRIPTION

2.1 Site Location

The subject site is addressed as 209 Warburton Avenue in the City of Yonkers, Westchester County, New York. The subject site was identified on the City of Yonkers tax maps as being within the parcel with section 2, block 2098, lot 1. A site location map is included in Appendix A as Figure 1. A map showing the site property boundaries is included in Appendix A as Figure 2.

2.2 Property/Business Owner

According to assessment records, the current property owner is Warburton Associates of Bronxville, New York.

2.3 Current and Former Site Uses

The site has reportedly consisted of a public housing townhouse complex and daycare center since its construction in the early 1970's. Prior to this time, the site was developed with multiple single and multi-family dwellings, stores and a garage since as late as 1886. The garage was located on southwestern portions of the site now containing a daycare center from as late as 1917 to as early as 1971.

2.4 Total Site Area and Topographic Description

The subject site incorporates approximately 0.95 acres of land. According to the United States Geological Survey (USGS) Topographic Map, the subject site lies at approximately 40 to 50 feet above Mean Sea Level. Generally, the site slopes gently from east to west.

2.5 Site Geology

Soils are mapped by the United States Department of Agriculture Web Soil Survey as Urban Land.

2.6 Site Buildings and Structures

There are currently seven buildings on the site. Five, three-story buildings are dedicated to town house style apartments. Some of these buildings contain private residential garages at the ground level with two levels of living space above. Town houses not containing a private garage contain three levels of living space. The sixth building contains a daycare center on its western side and townhouse apartments on

its eastern side. The seventh building is a small concrete block structure located on the northwestern portion of the site used by maintenance for storage. The buildings reportedly do not contain basements.

2.7 Site Utilities

Electricity and natural gas are supplied to the site by Con Edison. Municipal water and sewer service are provided by the City of Yonkers. The daycare center is reportedly heated by a natural gas fired forced air furnace system located on the third floor of this building. Each townhouse apartment is reportedly heated by its own natural gas fired forced air furnace systems.

2.8 Roadways or Driveways on or Adjoining the Site

The site is accessed from Warburton Avenue (adjacent east of the site), Lamartine Avenue (adjacent north to the site) and Woodworth Avenue (adjacent west to the site). An asphalt paved parking area is located adjacent west of the townhouses and adjacent east of the daycare center.

2.9 Surrounding Land Uses

The surrounding land uses, as identified during the site visit, are described as follows:

North - Lamartine Avenue followed by multi-family dwellings.

West - Woodworth Avenue followed by a parking lot followed by a manufacturing facility.

East - Warburton Avenue followed by multi-family dwellings and the James H. Forrest Lodge.

South - Multi-family dwellings and a store.

3.0 USER PROVIDED INFORMATION

The user (Jesse Batus of The Community Builders, Inc.) was provided a "user questionnaire" along with the proposed scope of services. The user returned a completed questionnaire which is included in Appendix C.

Note: In order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, (the "Brownfields Amendments"), the user must provide the information outlined in this section. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

3.1 Title Records

A chain of title or other title records were not provided by the user for review at the time of this report.

3.2 Environmental Liens or Activity and Use Limitations

According to the response to the user questionnaire, the user is not aware of environmental liens or activity or use limitations for the site.

It is recommended that the user engage a title company or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens or activity and use limitations recorded against or related to the property to satisfy Sections 3.1. and 3.2 of this report.

3.3 Specialized Knowledge

According to the response to the user questionnaire, the user has specialized knowledge of the site. The user is a real estate developer with knowledge of the area from other development initiatives.

3.4 Commonly Known or Reasonably Ascertainable Information

According to the response to the user questionnaire, the user does not have knowledge of commonly known or reasonably ascertainable information concerning the site.

3.5 Valuation Reduction for Environmental Issues

According to the response to the user questionnaire, the purchase price reflects the fair market value of the property.

3.6 Reason for Performing Phase I

The reason for performing this Phase I ESA is for the sale of real estate/financial transaction.

3.7 Other User Provided Information

With the exception of the information presented in Section 3.3, the user did not provide any other additional information concerning the environmental conditions relative to the site.

4.0 STANDARD ENVIRONMENTAL RECORD SOURCES

Federal and state environmental databases were reviewed in accordance with ASTM E-1527 Standards to determine if the site or nearby surrounding properties are listed on these databases. The databases were searched for the areas within the ASTM recommended search distance, unless otherwise noted. Reviewed databases are listed below. A copy of the database report is included in Appendix E.

4.1 Federal National Priorities List (NPL) Facilities (Listed and De-Listed)

The subject site was not listed as a NPL hazardous waste facility. One NPL facility was listed within one mile of the subject site, it being the Hudson River PCBs. Based on area topography, the Hudson River does not appear to be located hydraulically up-gradient relative to the subject site.

4.2 Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Hazardous Waste Facility List

The subject site was not listed as a CERCLA hazardous waste facility. In addition to the Hudson River PCBs, one CERCLA hazardous waste facility was listed within ½ mile of the subject site. The facility is the Patclin Chemical Company, 66 Alexander Street, located approximately 0.36 miles southwest of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.3 Federal Resource Conservation and Recovery Act (RCRA) Treatment, Storage and Disposal (TSD) Facilities List

The subject site was not listed as a RCRA TSD facility. No RCRA TSD facilities were listed within ½ mile of the subject site.

4.4 Federal RCRA Generators List and Corrective Action List

The subject site was not listed on the RCRA generator list. The site's western adjoining Southern New York Enterprises facility was listed as a conditionally exempt small quantity generator of hazardous wastes. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

The subject site was not listed as a RCRA Corrective Action facility. No RCRA Corrective Action facilities were listed within one mile of the subject site.

4.5 Federal Emergency Response Notification System (ERNS) List

The subject site was not listed on the ERNS list.

4.6 Federal Institutional Control and Engineering Control Registries

The subject site was not listed on the Federal Institutional Control or Engineering Control registries.

4.7 State/Tribal Hazardous Waste Facility List

The subject site was not listed as a State or Tribal hazardous waste facility. No State or tribal hazardous waste facilities were listed within one mile of the subject site.

4.8 State/Tribal Solid Waste Facility List

The subject site was not listed on the State or Tribal solid waste facility list. One State listed solid waste facility was listed within ½ mile of the subject site. The facility is Danny's Towing, 98-100 Warburton Avenue, located approximately ¼ mile south of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.9 State Petroleum Bulk Storage (PBS) Tank and Chemical Bulk Storage (CBS) Facilities

The site was not listed on the State PBS or CBS facilities list. The following immediately adjoining properties were listed on the State PBS or CBS facilities list.

Ellador Realty Corporation
156-158 Warburton Ave
Site's northern and western adjoining property

The database report indicates that an in-service 3,000 gallon aboveground fuel oil tank is contained in a vault at this property. Based on area topography, this property does not appear to be located hydraulically up-gradient relative to the subject site.

Woodworth Site
143-151 Woodworth Avenue
Site's western adjoining property

The database report indicates that six underground tanks with capacities ranging from 550 to 2,000 gallons were closed by removal in 2007 and 2008. The database report did not identify the type of product(s) stored in the tanks. Based on area

topography, this property does not appear to be located hydraulically up-gradient relative to the subject site.

4.10 State/Tribal Leaking Storage Tanks List

The site was not listed on the State or Tribal leaking storage tank list. Seventy-six (76) leaking storage tank incidents were listed within ½ mile of the site. Of these, all are listed as closed, except for a leaking tank incident at 26 Willow Place, which is located approximately 500 feet to the east of the site and is considered hydraulically upgradient of the site with respect tom inferred groundwater flow direction. According to the database report and the NYSDEC Spill Record, an unknown quantity of fuel oil has impacted soils at this property. Based on the distance between the subject site and 26 Willow Place, it is not expected that this facility has impacted the site's soils and groundwater.

4.11 State/Tribal Institutional Control and Engineering Control Registries

The subject site was not listed on State or Tribal Institutional Control or Engineering Control registries.

4.12 State/Tribal Voluntary Cleanup Program (VCP) List

The site was not listed on the state or tribal VCP list. Five VCP facilities and two Environmental Restoration Program (ERP) facilities were listed within ½ mile of the site. Based on area topography, these facilities do not appear to be located hydraulically up-gradient relative to the subject site.

4.13 State/Tribal Brownfields List

The site was not listed on the State or Tribal Brownfields list. Nine Brownfields sites were identified within ½ mile of the subject site. Based on area topography, these facilities do not appear to be located hydraulically up-gradient relative to the subject site with the exception of the following facility.

188 Warburton Avenue Site
Adjoins the southeastern corner of the subject site

The 188 Warburton Avenue site has recently entered the Brownfields program in relation to this site's past use as a gasoline station and repair facility, the existence of underground tanks, petroleum-type impacts in site soils, and the presence of volatile

organic compounds and metals in groundwater exceeding regulatory groundwater standards and guidance values.

4.14 Applicable State Lists

The New York State Department of Environmental Conservation (NYSDEC) spills database was reviewed to determine if spills have occurred at the subject site or adjoining parcels. No spills were listed for the subject site.

The following spills were listed for the immediately adjoining parcels.

Woodworth Commercial Property
143-151 Woodworth Avenue
Site's western adjoining property
Spill Status: Closed

188 Warburton Ave. Site
188 Warburton Avenue
Site's SE adjoining property
Spill Status: Closed (entered Brownfields Cleanup Program. See Section 4.13)

Parking Lot
143 Woodworth Avenue
Site's western adjoining property
Spill Status: Closed

Commercial Site
143-151 Woodworth Avenue
Site's western adjoining property
Spill Status: Closed

5.0 RECORDS REVIEW AND INTERVIEWS

5.1 Previous Environmental Site Assessments

No previous environmental site assessments are reported to have been conducted for the subject site.

5.2 Aerial Photographs

Aerial photographs were reviewed for the years 2005 and 2010 from Google Earth and for the years 1954, 1966, 1974, 1989 and 1994 as provided by Environmental Data Resources (EDR). The 1954 and 1966 photos depict several structures on the site. The 1974 and 1989 photos are of poor quality. The 1994, 2005 and 2010 depict structures on the site similar in configuration to present day structures.

The aerial photographs are included in Appendix A as Figures 3A-3G. The boundaries depicted on the photographs are for schematic purposes only and do not represent the actual boundaries of the site.

5.3 Sanborn Fire Insurance Maps and City Directories

Sanborn Maps

Sanborn Fire Insurance Maps were reviewed for the years 1886, 1898, 1917, 1942, 1951, 1956, 1957, 1971, 1978, 1989, 1990, 1991 and 2004. The maps depict the following.

1886 map: Four dwellings are depicted.

1889 map: Dwellings are depicted. An apartment building is depicted on southwestern portions of the site in the approximate location of the current daycare facility.

1917, 1942, 1951, 1956 and 1957 maps: Dwellings, apartments and a store are depicted. A rectangular building identified as a "Garage" is depicted on southwestern portions of the site in the approximate location of the current daycare facility. The Sanborn maps only identify the structure as a garage but do not indicate its specific use.

1971 map: Buildings are identified on northeastern and southwestern portions of the site only. There are no buildings depicted on central eastern and southeastern portions of the site. The rectangular building identified as a "Garage" is depicted on

southwestern portions of the site in the approximate location of the current daycare facility.

1978, 1989, 1990, 1991 and 2004 maps: The site consists of "Warburton Houses" on its eastern portions and a daycare center on its southwestern portion consistent with present day usage.

The Sanborn maps are included in Appendix A as Figures 4A-4M. Boundaries depicted on the maps are for schematic purposes only and do not represent the actual boundaries of the site.

City Directories

City directories were reviewed for the years 1973, 1978, 1983, 1988, 1993, 1999, 2003, 2008 and 2013 by Environmental Data Resources (EDR). The addresses searched were 144-152 Woodworth Avenue, as this was the address range where the "Garage" was identified in the Sanborn Map review. The 1973 directory did not have a listing for the searched addresses. The 1978 to 2013 directories listed a daycare center as the occupant of the searched addresses. City directories prior to 1973 were unavailable through EDR.

5.4 Information From Local Official(s)

A Freedom of Information Law (FOIL) request was submitted to the City of Yonkers Clerk requesting documents from the following departments: Assessment, Building Department, Historian, Engineering, Fire Department and Clerk. At the time of this report a response had not been received from the City of Yonkers. If pertinent information is received, it will be forwarded upon receipt.

Property assessment records were reviewed on-line from Landmax Data Systems.

5.5 Information From Health Department Official(s)

A FOIL request was submitted to the New York State Department of Health to determine if the Department of Health has records concerning soil or groundwater contamination for the subject site. At the time of this report a response had not been received from the Department of Health. If pertinent information is received, it will be forwarded upon receipt.

5.6 Information From Current or Former Property Owner(s)

Site superintendent Oscar Flores was the site contact for this assessment and acted as a representative for the current property owner. Mr. Flores was interviewed during and after the site visit. Mr. Flores provided a tour of the townhouses and grounds. Mr. Flores was not present during the site reconnaissance of the daycare center.

The current property owner representative was not aware of environmental liens or activity/land or use limitations for the site. Other information from Mr. Flores is included in the appropriate sections of this report.

5.7 Information From the Site Manager

Mr. Flores acted as the site manager.

5.8 Information from the Site Occupants

Tenants of 209 Warburton Avenue were not available for interviews.

Records of communication are included in Appendix D.

6.0 SITE RECONNAISSANCE

6.1 Conditions of the Reconnaissance

6.1.1 Site Contact(s)

Oscar Flores was the site contact and was present during the site visit of the townhouses and exterior portions of the site. Mr. Flores was not present during the reconnaissance of the daycare center.

6.1.2 Date of Visit

The site reconnaissance was conducted on Thursday, August 14 (townhouses and exterior portions of the site) and Friday August 15, 2014 (daycare center) by Mr. Steve Bieber of C.T. Male Associates. During the site visit the weather was approximately 80°F with partly cloudy skies.

6.1.3 Areas Observed

The site and surrounding areas were observed from Warburton Avenue, Lamartine Avenue, Woodworth Avenue and the approximate site boundaries. The central areas of the site were traversed and the buildings entered. Photographs taken during the site visit are included in Appendix B.

6.1.4 Limiting Conditions

The site contact did not have access to several of the residential garages and furnace/hot water heater rooms. Two representative townhouse apartments were entered.

6.2 Polychlorinated Biphenyl-Containing (PCB)/Liquid Containing Equipment

Transformers or capacitors were not observed on the subject site during the site walkover. The site contact indicated that there are no transformers or capacitors on the subject site.

6.3 Site Drainage

6.3.1 Site Catch Basins and Discharge Location(s)

Two catch basins were observed in asphalt paved areas on central portions of the site. The southern catch basin did not contain any liquids. Liquid in the northern catch basin did not contain a sheen and did not emit petroleum/chemical type odors.

Staining was not observed on the asphalt surrounding the catch basins. According to the site contact, the catch basins discharge to the City of Yonkers storm water sewer system.

Storm drains that discharge into the catch basins, were observed in concrete patios and walkways surrounding the site buildings. Staining was not observed on the concrete surrounding the drains.

6.3.2 Site Surface Water Bodies/Areas

No surface water bodies were identified on the site during the site visit.

6.3.3 Building Floor Drains and Discharge Location(s)

A floor drain was observed in the third floor furnace room in the daycare center. The floor drain appears to accept condensate from the furnace. The floor drain did not emit chemical and/or petroleum type odors and staining was not observed on flooring surrounding the floor drain. According to the site contact, all floor drains discharge to the City of Yonkers sanitary sewer system.

6.3.4 Dry Wells and Sumps

No dry wells or sumps were identified on the site during the site visit. According to the site contact, no dry wells or sumps are located on the site.

6.4 Site Waste Profile

6.4.1 Solid Wastes/Waste Deposits (Piles/Pits/Landfills/Lagoons)

No solid wastes were identified on the site during the site visit. According to the site contact, no solid wastes are generated, stored or disposed of on the site. Refuse generated by the site tenants is temporarily stored in a dumpster located atop asphalt paved areas on northern portions of the site.

No waste deposits were identified on the site during the site visit. The site contact was not aware of waste deposits being located on the site.

6.4.2 Sludges (Generation/Storage/Disposal)

No sludge wastes were identified on the site during the site visit. According to the site contact, no sludges are generated, stored or disposed of on the site.

6.4.3 Liquids (Generation/Storage/Disposal)

No liquid wastes were identified on the site during the site visit. According to the site contact, no liquid wastes are generated, stored or disposed of on the site.

6.4.4 Wastewater Discharge(s)

No wastewater discharges were identified on the site during the site visit. According to the site contact, no wastewater is generated on the site.

6.4.5 Waste Lagoons or Disposal Pits (Current and Historic)

No waste lagoons or disposal pits were identified on the site during the site visit. According to the site contact, no current or historic waste lagoons or disposal pits are located on the site.

6.4.6 On-site Septic Systems

No septic systems were identified on the site during the site visit. The site is reportedly connected to the City of Yonkers municipal sewer system.

6.4.7 Drums/Containers

No drums of waste were identified on the site during the site visit. According to the site contact, no drums of waste are stored on the site.

Five gallon containers of paint were observed in the storage building on the northwestern portion of the site. The containers did not appear to be leaking and staining was not observed on surrounding concrete flooring. Floor drains were not observed in the storage building.

6.5 Underground Storage Tanks (USTs) and/or Above Ground Storage Tanks (ASTs)

No underground or above ground storage tanks were identified on the site during the site visit. According to the site contact, no tanks are located on the site.

6.6 Observed Evidence of Potential or Known Site Contamination

6.6.1 Evidence of Soil Contamination/Liquid Discharges

Evidence of soil contamination or liquid discharges was not identified on the site during the site visit. Stressed vegetation was not identified on the site during the site

visit. The site contact was not aware of soil or groundwater contamination from either on-site or off-site sources.

6.6.2 Soil or Surface Disturbances

No soil or surface disturbances were identified on the site during the site visit.

7.0 FINDINGS, OPINION AND CONCLUSIONS

7.1 Findings

The site has reportedly consisted of a public housing townhouse complex and daycare center since its construction in the early 1970's. Prior to this time, the site was developed with multiple single and multi-family dwellings, stores and a garage since as late as 1886. The garage was located on southwestern portions of the site from as late as 1917 to as recent as 1971, and now containing a daycare center.

The site was not identified in the searched environmental databases.

The site's southeastern adjoining 188 Warburton Avenue site has recently entered the Brownfields program in relation to this site's past use as a gasoline station and repair facility, the existence of underground tanks, petroleum-type impacts in site soils, and the presence of volatile organic compounds and metals in groundwater exceeding regulatory groundwater standards and guidance values. The 188 Warburton Avenue site is considered hydraulically upgradient of the site with respect to inferred groundwater flow direction.

Historic Sanborn maps identified a rectangular structure labeled as a "Garage" on southwestern portions of the site presently developed with a daycare center. The "Garage" structure was identified on the maps from as late as 1917 to as recent as 1971.

Two catch basins were observed in asphalt paved areas on central portions of the site. The southern catch basin did not contain any liquids. Liquid in the northern catch basin did not contain a sheen and did not emit petroleum/chemical type odors. Staining was not observed on the asphalt surrounding the catch basins. According to the site contact, the catch basins discharge to the City of Yonkers storm water sewer system. Storm drains that discharge into the catch basins, were observed in concrete patios and walkways surrounding the site buildings. Staining was not observed on the concrete surrounding the drains.

A floor drain was observed in the third floor furnace room in the daycare center. The floor drain appears to accept condensate from the furnace. The floor drain did not emit chemical and/or petroleum type odors and staining was not observed on flooring surrounding the floor drain. According to the site contact, all floor drains discharge to the City of Yonkers sanitary sewer system.

Five gallon containers of paint were observed in the storage building on the northwestern portion of the site. The containers did not appear to be leaking and staining was not observed on surrounding concrete flooring. Floor drains were not observed in the storage building.

7.2 Opinion

It is our opinion that the information and data collected during this Phase I ESA indicates the possible presence of hazardous substances or petroleum product within the site under conditions which indicate an existing release, past release or material threat of a release.

7.3 Conclusions

C.T. Male Associates has completed a Phase I Environmental Site Assessment for the Cottage Place Gardens Site in general conformance with the scope and limitations of ASTM Practice E 1527. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

The site's southeastern adjoining 188 Warburton Avenue site has recently entered the Brownfields program in relation to this site's past use as a gasoline station and repair facility, the existence of underground tanks, petroleum-type impacts in site soils, and the presence of volatile organic compounds and metals in groundwater exceeding regulatory groundwater standards and guidance values. The 188 Warburton Avenue site is considered hydraulically upgradient of the site with respect to inferred groundwater flow direction.

7.4 Opinion Regarding Further Inquiry

Based on the findings of this ESA, further inquiry would be necessary, as follows.

Conduct a subsurface investigation to aid in the collection of soil and groundwater samples for subjective and laboratory analysis to determine potential site impacts from off-site sources.

8.0 DEVIATIONS AND ADDITIONAL SERVICES

Deletions or deviations from the ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, are described in Section 1.0 of this report.

No additional services beyond the scope of ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process were completed in conjunction with this Phase I ESA.

9.0 SIGNATURES

We declare that, to the best of our professional knowledge and belief we meet the definition of Environmental Professional as defined in 312.21 of 40 CFR Part 312. And we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Respectfully submitted,
C.T. MALE ASSOCIATES

Steve Bieber
Environmental Scientist

Reviewed and Approved By:

Kirk Moline
Project Manager

CTMA Project No. 14.4445
September 2, 2014
T:\14.4445\Submissions and Presentations\R 209 Warburton Phase I ESA_FINAL_9.2.2014.doc

10.0 REFERENCES

PEOPLE AND AGENCIES CONTACTED

- Jesse Batus, The Community Builders, Inc.
- Oscar Flores, Site Superintendent.
- City of Yonkers Historian.
- City of Yonkers Building Department.
- City of Yonkers Assessor's Office.
- City of Yonkers Fire Department.
- City of Yonkers Clerk's Office.
- City of Yonkers Engineer's Office.
- New York State Department of Health.

DOCUMENTS REVIEWED

- Aerial Photographs of the Yonkers Quadrangle for the years: 1954, 1966, 1974, 1989 and 1994 courtesy of Environmental Data Resources, Inc. Aerial Photographs of the Yonkers Quadrangle for the years: 2005 and 2010 courtesy of Google Earth.
- Environmental Database Report provided by Environmental Data Resources, Inc.
- Fire Insurance Maps from the Sanborn Map Company Archives. Late 19th Century to 1990: New York University Publications of America. Bethesda, Maryland (New York State Library).
- On-line assessment records provided by Landmax Data Systems.
- United States Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey.
- United States Geological Survey Topographic Map of the Yonkers, NY Quadrangle, 1998, 7.5 Minute Series.

November 20, 2015

Phase I
Environmental Site Assessment
209 Warburton Avenue Site
City of Yonkers
Westchester County, New York

Prepared for:
CPG PHASE III LIMITED PARTNERSHIP
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Certified to:
NEW YORK STATE HOMES & COMMUNITY RENEWAL

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PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
209 WARBURTON AVENUE SITE

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LIST OF APPENDICES

SUMMARY

C.T. Male Associates review of general property information, observation of adjacent properties, research of historical property information, including a review of environmental databases, and a site reconnaissance revealed the following with respect to Recognized Environmental Conditions (RECs), Historical Recognized Environmental Conditions (HRECs), and Controlled Environmental Conditions (CRECs):

	No Further Action	REC	HREC	CREC	Refer to Section
Property Operations	X				2.3
Neighboring Properties	X				2.10
User Provided Information	X				3.0
Regulatory Review - Site		X			4.0
Regulatory Review – Surrounding Properties			X		4.0
Historical Review	X				5.0
Liquid Containing Equipment	X				6.2
Site Drainage	X				6.3
Site Waste Profile	X				6.4
Underground Storage Tanks	X				6.5
Above Ground Storage Tanks	X				6.5
Stressed Vegetation, Staining and Odors		X			6.6

Notes/Recommendations: To understand the subject site and report, the complete report needs to be reviewed. The findings, opinion and conclusions with respect to the subject site are presented in Section 7.0.

1.0 INTRODUCTION

This report presents the findings of a Phase I Environmental Site Assessment (ESA) conducted by C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture, D.P.C. (C.T. Male Associates) at the 209 Warburton Avenue Site which is located in the City of Yonkers, Westchester County, New York. The site assessment was performed at the request of Mr. Jesse Batus of CPG Phase III Limited Partnership.

This site assessment has been performed in general conformance with the scope and limitations as outlined in ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and in accordance with our proposal dated November 4, 2015.

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment was to reasonably identify RECs on the property. A REC is defined as the presence or likely presence of hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis*[1] conditions are not RECs. A Historical Recognized Environmental Condition (HREC) is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria. A Controlled Recognized Environmental Condition (CREC) is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

A finding of no RECs is not a warranty or guarantee that the site remains free from contamination. The purpose of this report is not intended to include *de minimis* conditions. This report is also not intended to serve as a compliance assessment of the subject property. This environmental site assessment is designed to reduce, but

[1] Conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

not eliminate, uncertainty regarding the potential for RECs in connection with the property, within reasonable limits of time and cost.

1.2 Scope of Work

This environmental site assessment consisted of the following scope of work:

- A site reconnaissance, including a walkthrough of the site buildings and site grounds, to identify areas of potential environmental concern;
- Interviews with site representatives knowledgeable of current and former site operations;
- Review of municipal property records and information provided by local government agencies;
- Review of historical information and documents;
- Review of federal and state agency database information for the subject property and neighboring properties to identify potential concerns that could adversely affect the environmental condition of the property; and
- Preparation of a report documenting the findings of the environmental site assessment.

1.3 Significant Assumptions

The following assumptions are made by C.T. Male Associates in this report. C.T. Male Associates relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property owner contact, computer databases and personal interviews. Except as set forth in this report, C.T. Male Associates has made no independent investigation as to the accuracy and completeness of the information derived from secondary sources, and has assumed that such information is accurate and complete. C.T. Male Associates assumes information provided by or obtained from governmental agencies including information obtained from government websites is accurate and complete. Groundwater flow, unless otherwise specified by other data and information, is assumed based on land surface contours depicted on the United States Geological Survey topographic maps. C.T. Male Associates assumes the property has been correctly and accurately identified by the client and property owner contact.

1.4 Limitations and Exceptions of the Assessment

The information presented in this report is limited to the investigation conducted as described in the referenced ASTM guidelines for conducting environmental site assessments, and is not necessarily all inclusive of conditions present at the subject site. Due to inherent limits of time and cost, uncertainty about site conditions remains. The findings, opinion and conclusions stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the site visit. Specific limitations included the following:

- Access Limitations: None
- Physical Obstructions to Observations: None
- Outstanding Information Requests: City of Yonkers and New York State Department of Health.
- Historical Data Source Failure: None
- Other: The information presented in the report is based on information gathered in accordance with the Scope of Services defined in Section 1 of this report. Information provided by site contacts and local, State and County officials known to be responsible for regulating and enforcing site area environmental conditions was utilized in assessing the environmental conditions at the site. The accuracy of conclusions drawn from this assessment is therefore dependent upon the accuracy of the information provided.

1.5 Special Terms and Conditions

This Phase I Environmental Site Assessment was prepared in accordance with the stated and agreed upon Scope of Work. No special terms and conditions are applicable to this assessment. This site assessment did not include a review of non-scope issues as identified by ASTM E 1527 including asbestos containing materials, radon, lead in drinking water, lead based paint, wetlands, regulatory compliance, industrial hygiene, health & safety, ecological resources, endangered species, indoor air quality, mold and cultural & historic resources.

1.6 Reliance

This Phase I ESA has been prepared for the use of CPG Phase III Limited Partnership and New York State Homes & Community Renewal (HCR). This Phase I ESA cannot

be relied upon by other parties without the express written consent of C.T. Male Associates and CPG Phase III Limited Partnership.

2.0 SITE DESCRIPTION

2.1 Site Location

The subject site is addressed as 209 Warburton Avenue in the City of Yonkers, Westchester County, New York. The subject site was identified on the City of Yonkers tax maps as being within the parcel with section 2, block 2098, lot 1. A site location map is included in Appendix A as Figure 1. A map showing the site property boundaries is included in Appendix A as Figure 2.

2.2 Property/Business Owner

According to assessment records, the current property owner is TCB Holdings of Boston, MA.

2.3 Current and Former Site Uses

The site has reportedly consisted of a townhouse complex and daycare center since its construction in the early 1970s. Prior to this time, the site was developed with multiple single and multi-family dwellings, stores and a garage since as early as 1886. The garage was located on southwestern portion of the site now containing a daycare center from as early as 1917 to as late as 1971.

2.4 Total Site Area and Topographic Description

The subject site incorporates approximately 0.954 acres of land. According to the United States Geological Survey (USGS) Topographic Map, the subject site lies at approximately 40 to 50 feet above Mean Sea Level. Generally, the site slopes gently to moderately from the east down to the west.

2.5 Site Geology

Soils are mapped by the United States Department of Agriculture Web Soil Survey as Urban Land.

2.6 Site Buildings and Structures

There are currently seven buildings on the site. Five (5) three-story, wood frame, split-level style townhouse style apartments are located within the site. Some of the units have a one car garage at the ground level. The sixth building contains a multi-level/split level daycare center on its western side and townhouse apartments on its eastern side. The seventh building is a small concrete block structure located on the

northwestern portion of the site used by maintenance for storage. The buildings reportedly do not contain basements.

2.7 Site Utilities

Electricity and natural gas are supplied to the site by Con Edison. Municipal water and sewer service are provided by the City of Yonkers. The daycare center is reportedly heated by a natural gas fired forced air furnace system located on the third floor of this building. Each townhouse apartment is reportedly heated by its own natural gas fired forced air furnace system.

2.8 Roadways or Driveways on or Adjoining the Site

The site is accessed from Warburton Avenue (adjacent east of the site), Lamartine Avenue (adjacent north to the site) and Woodworth Avenue (adjacent west to the site). The site is accessed via a paved driveway from Lamartine Avenue providing access to paved parking areas.

2.9 Surrounding Land Uses

The surrounding land uses, as identified during the site visit, are described as follows:

North - Lamartine Avenue followed by multi-family dwellings.

West - Woodworth Avenue followed by European Beauty Concepts.

East - Warburton Avenue followed by multi-family dwellings.

South - Multi-family dwellings.

3.0 USER PROVIDED INFORMATION

The user (Jesse Batus of The Community Builders, Inc.) was provided a "user questionnaire" along with the proposed scope of services. The user returned a completed questionnaire which is included in Appendix C.

Note: In order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, (the "Brownfields Amendments"), the user must provide the information outlined in this section. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

3.1 Title Records

A chain of title or other title records were not provided by the user for review at the time of this report.

3.2 Environmental Liens or Activity and Use Limitations

According to the response to the user questionnaire, the user is not aware of environmental liens or activity or use limitations for the site.

It is recommended that the user engage a title company or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens or activity and use limitations recorded against or related to the property to satisfy Sections 3.1 and 3.2 of this report.

3.3 Specialized Knowledge

According to the response to the user questionnaire, the user has specialized knowledge of the site. The user is a real estate developer with knowledge of the area from other development initiatives.

3.4 Commonly Known or Reasonably Ascertainable Information

According to the response to the user questionnaire, the user does not have knowledge of commonly known or reasonably ascertainable information concerning the site.

3.5 Valuation Reduction for Environmental Issues

According to the response to the user questionnaire, the purchase price reflects the fair market value of the property.

3.6 Reason for Performing Phase I

The reason for performing this Phase I ESA is for the sale of real estate/financial transaction.

3.7 Other User Provided Information

Phase I and II ESAs were previously conducted for the site on behalf of the user. These reports are discussed in Section 5.1.

4.0 STANDARD ENVIRONMENTAL RECORD SOURCES

Federal and state environmental databases were reviewed in accordance with ASTM E-1527 Standards to determine if the site or nearby surrounding properties are listed on these databases. The databases were searched for the areas within the ASTM recommended search distance, unless otherwise noted. Reviewed databases are listed below. A copy of the database report is included in Appendix E.

4.1 Federal National Priorities List (NPL) Facilities (Listed and De-Listed)

The subject site was not listed as a NPL hazardous waste facility. No NPL facilities were listed within one mile of the subject site.

4.2 Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Hazardous Waste Facility List

The subject site was not listed as a CERCLA hazardous waste facility. One CERCLA hazardous waste facility was listed within ½ mile of the subject site. The facility is the Patclin Chemical Company, 66 Alexander Street, located approximately 0.36 miles southwest of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.3 Federal Resource Conservation and Recovery Act (RCRA) Treatment, Storage and Disposal (TSD) Facilities List

The subject site was not listed as a RCRA TSD facility. No RCRA TSD facilities were listed within ½ mile of the subject site.

4.4 Federal RCRA Generators List and Corrective Action List

The subject site was not listed on the RCRA generator list. One immediately adjoining property was listed on the RCRA generator list. The property is Southern New York Enterprises, 143-151 Woodworth Avenue, located west of the site (conditionally exempt small quantity generator). Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

The subject site was not listed as a RCRA Corrective Action facility. No RCRA Corrective Action facilities were listed within one mile of the subject site.

4.5 Federal Emergency Response Notification System (ERNS) List

The subject site was not listed on the ERNS list.

4.6 Federal Institutional Control and Engineering Control Registries

The subject site was not listed on the Federal Institutional Control or Engineering Control registries.

4.7 State/Tribal Hazardous Waste Facility List

The subject site was not listed as a State or Tribal hazardous waste facility. No State or tribal hazardous waste facilities were listed within one mile of the subject site.

4.8 State/Tribal Solid Waste Facility List

The subject site was not listed on the State or Tribal solid waste facility list. One State listed solid waste facility was listed within ½ mile of the subject site. The facility is Danny's Towing, 98-100 Warburton Avenue, located approximately 0.3 miles south of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.9 State Petroleum Bulk Storage (PBS) Tank and Chemical Bulk Storage (CBS) Facilities

The site was not listed on the State PBS or CBS facilities list. The following immediately adjoining properties were listed on the State PBS list:

Ellador Realty Corporation
156-158 Warburton Ave
Site's western adjoining property

The database report indicates that an in-service 3,000 gallon aboveground fuel oil tank is contained in a vault at this property. Based on area topography, this property does not appear to be located hydraulically up-gradient relative to the subject site.

Woodworth Site
143-151 Woodworth Avenue
Site's western adjoining property

The database report indicates that six underground tanks with capacities ranging from 550 to 2,000 gallons were closed by removal in 2007 and 2008. The database report did not identify the type of product(s) stored in the tanks. Based on area topography, this property does not appear to be located hydraulically up-gradient relative to the subject site.

188 Warburton Avenue Site
188 Warburton Avenue
Site's southeastern adjoining property

The database report indicates that four (4) 500 gallon underground gasoline storage tanks are temporarily out of service. This facility is also listed as a Brownfield facility.

4.10 State/Tribal Leaking Storage Tanks List

The site was not listed on the State or Tribal leaking storage tank list. Seventy-four (74) leaking storage tank incidents were listed within ½ mile of the site. The leaking tank incidents are listed as closed. Of the 74, none are listed for facilities which immediately adjoin the site.

4.11 State/Tribal Institutional Control and Engineering Control Registries

The subject site was not listed on State or Tribal Institutional Control or Engineering Control registries.

4.12 State/Tribal Voluntary Cleanup Program (VCP) List

The site was not listed on the state or tribal VCP list. Five VCP facilities and two Environmental Restoration Program (ERP) facilities were listed within ½ mile of the site. Based on area topography, these facilities do not appear to be located hydraulically up-gradient relative to the subject site.

4.13 State/Tribal Brownfields List

The site is a portion of the New York State Brownfield Cleanup Program under the name Cottage Place Gardens Phase 3. The site is identified as Phase 3B; and a non-contiguous parcel, located approximately 300 feet east of the site at 8 Willow Place, is identified as Phase 3A. Contaminates within site soils and groundwater have been identified as metals. Subjective evidence of petroleum related impacts were also identified in soils. These contaminates were identified during the completion of a Phase II ESA of the site as further discussed in Section 5.1. (The site was not listed in the database report as the Cottage Place Gardens Phase 3 project was recently submitted to the NYSDEC.)

Eighteen Brownfields facilities were listed within ½ mile of the subject site. One of the Brownfields facilities is located across Warburton Avenue, to the southeast of the

site. The facility is the 188 Warburton Avenue Site which adjoins the site to the southeast. 188 Warburton Avenue Site was used in part as a gasoline station and repair facility. Although this facility is considered hydraulically up-gradient relative to the subject site, the 188 Warburton Avenue Site is in the process of receiving a certificate of completion as remediation has been completed.

4.14 Applicable State Lists

The New York State Department of Environmental Conservation (NYSDEC) spills database was reviewed to determine if spills have occurred at the subject site or adjoining parcels. One spill was listed for the subject site. Spill No. 1408922 is listed under the name Apt Complex at 209 Warburton Avenue. The spill was reported during the completion of a Phase II ESA at the site. Subjective, petroleum-type impacts were encountered in one of the test borings completed on the southwestern portion of the site. Based on the subjective petroleum-type impacts, the NYSDEC Spills Hotline was contacted. The spill is listed as active and will be addressed as part of the BCP. The 2015 Phase II ESA is discussed in Section 5.1.

The following spills were listed for the immediately adjoining parcels:

Woodworth Commercial Property
143-151 Woodworth Avenue
Site's western adjoining property
Spill Status: Closed

188 Warburton Ave. Site
188 Warburton Avenue
Site's SE adjoining property
Spill Status: Closed (entered Brownfields Cleanup Program. See Section 4.13)

Parking Lot
143 Woodworth Avenue
Site's western adjoining property
Spill Status: Closed

Commercial Site
143-151 Woodworth Avenue
Site's western adjoining property
Spill Status: Closed

5.0 RECORDS REVIEW AND INTERVIEWS

5.1 Previous Environmental Site Assessments

A Phase I ESA conducted on the site in August 2014 by C.T. Male Associates. At the time of the assessment the site was used as a public housing complex and day care facility. RECs identified in the Phase I ESA Report included the following.

- The site's southeastern adjoining 188 Warburton Avenue site has recently entered the Brownfields program in relation to this property's past use as a gasoline station, the existence of underground tanks, petroleum impacts in site soils, and the presence of volatile organic compounds and metals in groundwater exceeding regulatory groundwater standards and guidance values. The 188 Warburton Avenue site is considered hydraulically up-gradient of the site with respect to inferred groundwater flow direction.
- Historic Sanborn maps identified a rectangular structure labeled as a "Garage" on southwestern portion of the site presently developed with a daycare center. The "Garage" structure was identified on the maps from as early as 1917 to as recent as 1971. The historic uses of the garage were not able to be determined.

A Phase II ESA was conducted in November and December 2014 to evaluate subsurface conditions and the environmental quality of site soils and groundwater. The Phase II ESA (dated January 28, 2015) involved the advancement of four soil borings and installation of three monitoring wells to aid in the collection of soil and groundwater samples for subjective screening and laboratory analysis. The analytical results for soils were compared to Soil Cleanup Objectives (SCOs) for Unrestricted Use Sites promulgated in 6 NYCRR Part 375 and the analytical results for groundwater were compared to NYSDEC groundwater standards and guidance values promulgated in the NYS Division of Water Technical and Operational Guidance Series (TOGS 1.1.1). The conclusions included the following:

- The GPR survey did not identify anomalies that may be representative of underground storage tanks, septic systems, dry wells or other subsurface disposal systems within the boundaries of the utility mark outs.
- Subjective, petroleum-type impacts were encountered at test boring B-4 in soil samples collected from beneath surface concrete to a depth of 7 feet below grade, where drilling refusal was encountered. This boring was located

adjacent west of a former garage structure that was identified in historic mapping. The soils were stained, emitted a petroleum-type odor and registered Photoionization (PID) readings ranging from 164.6 to 438.4 parts per million (ppm). Based on the subjective petroleum-type impacts, the NYSDEC Spills Hotline was contacted and the site was assigned Spill No. 1408922.

Analytical results for the soil sample collected from test boring B-4 which exhibited the greatest evidence of petroleum-type impacts, showed analyzed parameters at concentrations below SCOs or below the laboratory's method detection limit.

- Five metals were detected in fill at concentrations exceeding Unrestricted Use SCOs. These metals included chromium, copper, lead, mercury and zinc. Lead was the more persistent metal and was detected at 3 of the 4 test borings and ranged in concentration from 286 to 1,410 ppm as compared to its SCO of 63 ppm. The metals detected in the soils above SCOs, other than lead, chromium and zinc are considered to be naturally occurring metals in the environment.
- One SVOC (phenol) and five metals (chromium, iron, magnesium, manganese and sodium) were detected at concentrations exceeding their corresponding groundwater standards. Phenol was detected slightly above its corresponding groundwater standard at monitoring well MW-1 and was not detected in any of the other monitoring wells. Iron, magnesium and manganese are typically naturally occurring in the environment. The sodium in groundwater is likely a result of the application of road salt on surrounding roads and parking lots. Chromium (58.3 ppm) was detected slightly above its groundwater standard of 50 ppm at monitoring well MW-2 only.

The text portions of the previous ESA reports are included in Appendix D.

5.2 Aerial Photographs

Aerial photographs were reviewed for the years 2005 and 2010 from Google Earth and for the years 1954, 1966, 1974, 1989 and 1994 as provided by Environmental Data Resources (EDR). The 1954 and 1966 photos depict several structures on the site. The 1974 and 1989 photos are of poor quality. The 1994, 2005 and 2010 depict structures on the site similar in configuration to present day structures.

The aerial photographs are included in Appendix A as Figures 3A-3G. The boundaries depicted on the photographs are for schematic purposes only and do not represent the actual boundaries of the site.

5.3 Sanborn Fire Insurance Maps and City Directories

Sanborn Maps

Sanborn Fire Insurance Maps were reviewed for the years 1886, 1898, 1917, 1942, 1951, 1956, 1957, 1971, 1978, 1989, 1990, 1991 and 2004. The maps depict the following.

1886 map: Four dwellings are depicted.

1889 map: Dwellings are depicted. An apartment building is depicted on southwestern portion of the site in the approximate location of the current daycare facility.

1917, 1942, 1951, 1956 and 1957 maps: Dwellings, apartments and a store are depicted. A rectangular building identified as a "Garage" is depicted on southwestern portion of the site in the approximate location of the current daycare facility. The Sanborn maps only identify the structure as a garage but do not indicate its specific use.

1971 map: Buildings are identified on northeastern and southwestern portions of the site only. There are no buildings depicted on central eastern and southeastern portions of the site. The rectangular building identified as a "Garage" is depicted on southwestern portion of the site in the approximate location of the current daycare facility.

1978, 1989, 1990, 1991 and 2004 maps: The site consists of "Warburton Houses" on its eastern portions and a daycare center on its southwestern portion consistent with present day usage.

The Sanborn maps are included in Appendix A as Figures 4A-4M. Boundaries depicted on the maps are for schematic purposes only and do not represent the actual boundaries of the site.

City Directories

City directories were reviewed for the years 1973, 1978, 1983, 1988, 1993, 1999, 2003, 2008 and 2013 by Environmental Data Resources (EDR). The addresses searched

were 144-152 Woodworth Avenue, as this was the address range where the "Garage" was identified in the Sanborn Map review. The 1973 directory did not have a listing for the searched addresses. The 1978 to 2013 directories listed a daycare center as the occupant. City directories prior to 1973 were unavailable through EDR.

5.4 Information From Local Official(s)

A Freedom of Information Law (FOIL) request was submitted to the City of Yonkers Clerk requesting documents from the following departments: Assessment, Building Department, Historian, Engineering, Fire Department and Clerk. At the time of this report a response had not been received from the City of Yonkers. If pertinent information is received, it will be forwarded upon receipt.

Property assessment records were reviewed on-line from Landmax Data Systems. Site use is noted as apartments on the on-line records and public water and sewer are noted as being provided to the site. On-line assessment records from the City of Yonkers note site use as apartments. Historic property record cards indicate the site buildings were constructed in 1972.

5.5 Information From Health Department Official(s)

A FOIL request was submitted to the New York State Department of Health to determine if the Department of Health has records concerning soil or groundwater contamination for the subject site. At the time of this report a response had not been received from the Department of Health. If pertinent information is received, it will be forwarded upon receipt.

5.6 Information From Current or Former Property Owner(s)/Site Manager

Site Service Manager Donald Kranker was the site contact for this assessment and acted as a representative for the current property owner. Mr. Kranker was interviewed at the time of the site visit and provided a tour of the site building and grounds. Information from Mr. Kranker is included in the appropriate sections of this report.

5.7 Information from the Site Occupants

As the occupants of the site buildings are residential tenants, they were not interviewed as a function of this assessment.

Records of communication are included in Appendix D.

6.0 SITE RECONNAISSANCE

6.1 Conditions of the Reconnaissance

6.1.1 Site Contact(s)

Mr. Donald Kranker, Service Manager for the site, was the site contact and was present during the site visit.

6.1.2 Date of Visit

The site reconnaissance was conducted on Wednesday, November 18, 2015 by Ms. Aimee Gates of C.T. Male Associates. During the site visit the weather was approximately 55°F with overcast skies.

6.1.3 Areas Observed

The site and surrounding areas were observed from Warburton Avenue, Lamartine Avenue, Woodworth Avenue and the approximate site boundaries. The central areas of the site were traversed and the buildings entered including the daycare center, two representative townhomes and the former laundry room. Photographs taken during the site visit are included in Appendix B.

6.1.4 Limiting Conditions

There were no limiting conditions during the site visit.

6.2 Polychlorinated Biphenyl-Containing (PCB)/Liquid Containing Equipment

Transformers or capacitors were not observed on the subject site during the site walkover. The site contact indicated that there are no transformers or capacitors on the subject site.

6.3 Site Drainage

6.3.1 Site Catch Basins and Discharge Location(s)

Two catch basins were observed in asphalt paved areas on central portions of the site. Additionally, circular drains for storm water were noted in the sidewalk areas to the east of the townhouses. Staining or sheens were not observed in or surrounding the catch basins or storm drains. According to the site contact, the catch basins and storm drains discharge to the City of Yonkers storm water sewer system.

6.3.2 Site Surface Water Bodies/Areas

No surface water bodies were identified on the site during the site visit.

6.3.3 Building Floor Drains and Discharge Location(s)

A floor drain was observed in the third floor furnace room in the daycare center. The floor drain appears to accept condensate from the furnace. The floor drain did not emit chemical and/or petroleum type odors and staining was not observed on flooring surrounding the floor drain. According to the site contact, all floor drains discharge to the City of Yonkers sanitary sewer system.

6.3.4 Dry Wells and Sumps

No dry wells or sumps were identified on the site during the site visit. According to the site contact, no dry wells or sumps are located on the site.

6.4 Site Waste Profile

6.4.1 Solid Wastes/Waste Deposits (Piles/Pits/Landfills/Lagoons)

Refuse generated by the site tenants is temporarily stored in a dumpster located in the paved area on northwestern portion of the site. No other solid wastes were identified on the site during the site visit. According to the site contact, no solid wastes are generated, stored or disposed of on the site.

No waste deposits were identified on the site during the site visit. The site contact was not aware of waste deposits being located on the site.

6.4.2 Sludges (Generation/Storage/Disposal)

No sludge wastes were identified on the site during the site visit. According to the site contact, no sludges are generated, stored or disposed of on the site.

6.4.3 Liquids (Generation/Storage/Disposal)

No liquid wastes were identified on the site during the site visit. According to the site contact, no liquid wastes are generated, stored or disposed of on the site.

6.4.4 Wastewater Discharge(s)

No wastewater discharges were identified on the site during the site visit. According to the site contact, no wastewater is generated on the site.

6.4.5 Waste Lagoons or Disposal Pits (Current and Historic)

No waste lagoons or disposal pits were identified on the site during the site visit. According to the site contact, no current or historic waste lagoons or disposal pits are located on the site.

6.4.6 On-site Septic Systems

No septic systems were identified on the site during the site visit. The site is reportedly connected to the City of Yonkers municipal sewer system.

6.4.7 Drums/Containers

No drums of waste were identified on the site during the site visit. According to the site contact, no drums of waste are stored on the site.

Five gallon containers of paint were observed in the storage building on the northwestern portion of the site. The containers did not appear to be leaking and staining was not observed on surrounding concrete flooring. Floor drains were not observed in the storage building.

6.5 Underground Storage Tanks (USTs) and/or Above Ground Storage Tanks (ASTs)

No underground or above ground storage tanks were identified on the site during the site visit. According to the site contact, no tanks are located on the site.

6.6 Observed Evidence of Potential or Known Site Contamination

6.6.1 Evidence of Soil Contamination/Liquid Discharges

Evidence of soil contamination or liquid discharges was not identified on the site during the site visit. Stressed vegetation was not identified on the site during the site visit. The site contact was not aware of soil or groundwater contamination from either on-site or off-site sources.

6.6.2 Soil or Surface Disturbances

Numerous patched pavement cuts were noted within the site which are related to the replacement of natural gas service lines. Some of the excavated materials during the replacement of the lines were found to be hazardous on the basis of lead. These soils were ultimately removed from the site for proper disposal.

7.0 FINDINGS, OPINION AND CONCLUSIONS

7.1 Findings

The site has reportedly consisted of a public housing townhouse complex and daycare center since its construction in the early 1970s. Prior to this time, the site was developed with multiple single and multi-family dwellings, stores and a garage. The garage was located on southwestern portion of the site from at least 1917 to as recent as 1971, and now containing a daycare center.

The site was listed in the environmental database report. An active spill is listed for the site. Additionally, although not identified in the database report, the site is a portion of a known NYS Brownfield known as Cottage Place Gardens Phase 3. The spill was reported during the completion of a Phase II ESA of the site in 2014. During the field activities subjective, petroleum-type impacts were encountered at test boring B-4, advanced in an area adjacent of the former garage. Based on the subjective petroleum-type impacts, the NYSDEC Spills Hotline was contacted and the site was assigned Spill No. 1408922.

Analytical results for the soil sample collected from test boring B-4 which exhibited the greatest evidence of petroleum-type impacts, showed analyzed parameters at concentrations below SCOs or below the laboratory's method detection limit.

Five metals were detected in site soils (fill) at concentrations exceeding Unrestricted Use SCOs. These metals included chromium, copper, lead, mercury and zinc. One SVOC (phenol) and five metals (chromium, iron, magnesium, manganese and sodium) were detected at concentrations exceeding their corresponding groundwater standards. Phenol was detected slightly above its corresponding groundwater standard at monitoring well MW-1 and was not detected in any of the other monitoring wells. Iron, magnesium and manganese are typically naturally occurring in the environment. The sodium in groundwater is likely a result of the application of road salt on surrounding roads and parking lots. Chromium (58.3 ppm) was detected slightly above its groundwater standard of 50 ppm at monitoring well MW-2 only. Hazardous levels of lead were detected in site materials excavated during the replacement of various natural gas lines within the site. The excavated soils were properly managed and removed from the site.

A number of facilities were listed in the environmental database report within the specified search radii.

7.2 Opinion

It is our opinion that the information and data collected during this Phase I ESA indicates the possible presence of hazardous substances or petroleum product within the site under conditions which indicate an existing release, past release or material threat of a release. This opinion is based on the findings of the previous Phase II ESA which identified subjective petroleum-type impacts within site soils on the southwestern portion of the site. An active spill is listed for the site based on this finding. Additionally, elevated levels of metals were identified within site soils and groundwater. Based on these findings the site was accepted in the New York State Brownfield Cleanup Program and will be addressed accordingly.

It is our opinion that the listing of multiple facilities within the database report in proximity to the site is considered an HREC as impacts from off-site sources were not identified during the completion of the Phase II ESA.

7.3 Conclusions

C.T. Male Associates has completed a Phase I Environmental Site Assessment for the Cottage Place Gardens Site in general conformance with the scope and limitations of ASTM Practice E 1527. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

A previous subsurface investigation of the site identified impacts to the quality of soils and groundwater within the site. Subjective evidence of petroleum impacts were identified during the subsurface investigation. An active spill is listed for the site related to this finding.

7.4 Opinion Regarding Further Inquiry

Based on the findings of this ESA, further inquiry of the site is not recommended at this time. It is our understanding that the contaminated soils and groundwater at the site will be addressed under the purview of the NYSDEC as it relates to its listing in the Brownfield Cleanup Program.

8.0 DEVIATIONS AND ADDITIONAL SERVICES

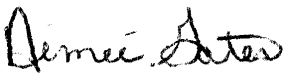
Deletions or deviations from the ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, are described in Section 1.0 of this report.

No additional services beyond the scope of ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process were completed in conjunction with this Phase I ESA.

9.0 SIGNATURES

We declare that, to the best of our professional knowledge and belief we meet the definition of Environmental Professional as defined in 312.21 of 40 CFR Part 312. And we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Respectfully submitted,
C.T. MALE ASSOCIATES



Aimee Gates
Environmental Scientist

Reviewed and Approved By:

Kirk Moline
Project Manager

ASG
November 20, 2015
K:\Projects\155268\Env\ESA Update 209 Warburton\R 209 Warburton Phase I ESA 2015.doc

10.0 REFERENCES

PEOPLE AND AGENCIES CONTACTED

- Jesse Batus, The Community Builders, Inc.
- Donald Kranker, Site Service Manager.
- City of Yonkers Historian.
- City of Yonkers Building Department.
- City of Yonkers Assessor's Office.
- City of Yonkers Fire Department.
- City of Yonkers Clerk's Office.
- City of Yonkers Engineer's Office.
- New York State Department of Health.

DOCUMENTS REVIEWED

- Aerial Photographs of the Yonkers Quadrangle for the years: 1954, 1966, 1974, 1989 and 1994 courtesy of Environmental Data Resources, Inc.
- Aerial Photographs of the Yonkers Quadrangle for the years: 2005 and 2010 courtesy of Google Earth.
- Environmental Database Report provided by Environmental Data Resources, Inc.
- Fire Insurance Maps from the Sanborn Map Company Archives. Late 19th Century to 1990: New York University Publications of America. Bethesda, Maryland.
- On-line assessment records provided by Landmax Data Systems.
- Phase I Environmental Site Assessment for the 209 Warburton Avenue Site, prepared by C.T. Male Associated, dated September 2, 2014.
- Phase II Environmental Site Assessment for the 209 Warburton Avenue Site, prepared by C.T. Male Associates, dated January 28, 2015.
- United States Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey.
- United States Geological Survey Topographic Map of the Yonkers, NY Quadrangle, 1998, 7.5 Minute Series.

C.T. MALE ASSOCIATES
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January 28, 2015

Mr. Jesse Batus
The Community Builders, Inc.
744 Broadway
Albany, NY 12207

Re: Phase II Environmental Site Assessment (ESA)
209 Warburton Avenue Site
City of Yonkers, Westchester County, New York
C.T. Male Project No. 14.4445

Dear Mr. Batus:

C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture, D.P.C. (C.T. Male Associates) has competed a Phase II Environmental Site Assessment (ESA) for the above listed site. The Phase II ESA was conducted to evaluate recognized environmental conditions (RECs) identified during the course of a Phase I ESA conducted on the site in August 2014 and documented in C.T. Male Associates' Phase I ESA Report, dated September 2, 2014. RECs identified in the Phase I ESA Report included the following.

- The site's southeastern adjoining 188 Warburton Avenue site has recently entered the Brownfields program in relation to this site's past use as a gasoline station, the existence of underground tanks, petroleum impacts in site soils, and the presence of volatile organic compounds and metals in groundwater exceeding regulatory groundwater standards and guidance values. The 188 Warburton Avenue site is considered hydraulically upgradient of the site with respect to inferred groundwater flow direction.
- Historic Sanborn maps identified a rectangular structure labeled as a "Garage" on southwestern portions of the site presently developed with a daycare center. The "Garage" structure was identified on the maps from as late as 1917 to as recent as 1971. The historic uses of the garage were not able to be determined.

The Phase II ESA was conducted to evaluate subsurface conditions and the environmental quality of site soils and groundwater. The Phase II ESA involved the

advancement of four soil borings and installation of three monitoring wells to aid in the collection of soil and groundwater samples for subjective screening and laboratory analysis. Advancement of the test borings also aided in evaluating the site's subsurface conditions. Site Location and Site Features Maps are attached as Figures 1 and 2, respectively in Attachment A.

Method of Investigation

Ground Penetrating Radar Survey

Prior to the commencement of the test boring activities, a Ground Penetrating Radar (GPR) survey was conducted at the site on November 21, 2014 by New York Leak Detectors, Inc. (NYLD) to primarily aid in identifying the presence of underground utilities and also to evaluate the presence of anomalies that may be representative of underground storage tanks, septic systems, dry wells or other subsurface disposal systems within the boundaries of the utility mark outs. Note that the GPR survey is a field method used to identify anomalies which may or may not represent underground storage tanks, utility lines or other buried structures/vessels, and further, if anomalies are not identified such a result is not a guarantee that underground storage tanks or other features do not exist beneath the site.

Test Borings

Four borings depicted as B-1 to B-4 were completed at the approximate locations depicted on Figure 2. The borings were completed on December 2, 2014 by Aquifer Drilling & Testing, Inc. (ADT) employing direct-push methods utilizing a track-mounted Geoprobe unit. A C.T. Male representative was on-site for observing the drilling activities, collection of data, screening of recovered samples and selecting samples for laboratory analysis.

As depicted on Figure 2, borings B-1 to B-3 were completed in asphalt paved areas within central portions of the site. Boring B-4 was completed at the entranceway to a building addressed as 150 Woodworth Avenue currently occupied by the Lanza Learning Center. Boring B-4 was also completed adjacent west of a former garage structure that previously occupied the southwestern portion of the site. Samples were collected at 2.5-foot intervals and visually classified in the field by a C.T. Male

environmental scientist. The soil classifications for each boring are presented on the Subsurface Exploration Logs in Attachment C.

The recovered samples were subjectively screened in the field for potential impacts employing headspace analysis for organic vapors utilizing a photo ionization detector (PID) and organoleptic (sight and smell) perception. Field screening results are presented on the Organic Vapor Headspace Analysis Logs in Attachment D. One sample was submitted for laboratory analysis from each of the test borings. The selection of the samples for laboratory analysis was based on evidence of subjective impacts and the occurrence of fill materials. The samples were analyzed for the Target Compound List (TCL) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and PCBs, the Target Analyte List (TAL) for metals including cyanide. Quality Assurance/Quality Control (QA/QC) samples consisting of a matrix spike (MS), matrix spike duplicate (MSD), duplicate and equipment blank were also submitted for laboratory analysis. The laboratory analysis was performed by Chemtech of Mountainside, New Jersey.

Monitoring Well Installation and Groundwater Sampling

Borings B-1 to B-3 were converted to one (1)-inch diameter PVC monitoring wells that were protected with flush mounted curb boxes. Monitoring well construction logs are provided in Attachment E. Soil boring B-4 was not converted to a monitoring well due to shallow refusal (7 feet below grade) and the absence of groundwater within the boring. Groundwater samples were collected from the monitoring wells on December 22, 2014. Prior to collection of groundwater samples, each well was purged dry using a peristaltic pump with dedicated tubing to restore the hydraulic connection between the wells and aquifer materials. The wells were then sampled employing standard sampling protocols and forwarded to Chemtech for analysis for the TCL VOCs, SVOCs, pesticides, and PCBs, the TAL for metals, and cyanide. QA/QC samples (MS, MSD, duplicate and equipment blank) were also submitted for laboratory analysis. Field parameters (pH, conductivity, temperature and turbidity) were logged during collection of the groundwater samples.

Findings

GPR Survey

Anomalies that may be representative of underground storage tanks, septic systems, dry wells or other subsurface disposal systems were not encountered within the boundaries of the utility mark outs. The NYLD Report is presented in Attachment F.

Subsurface Conditions

Test borings B-1 to B-3 were completed within asphalt pavement areas of the site. Test boring B-4 was completed in a concrete pavement area. Subsurface conditions at all of the borings generally consisted of sand with varying percentages of gravel and silt. Fill material, consisting of red brick, was encountered at the 4 to 6 foot depth interval at test boring B-1 and at the 0.3 to 4 foot depth interval at test boring B-3. The soils became saturated at depths that ranged from 9 feet below grade at test boring B-3 to 11 feet below grade at test borings B-1 and B-2. Groundwater was not encountered in test boring B-4. Refusal was encountered at all of the test borings at depths that ranged from 7 feet below grade at test boring B-4, 14 feet below grade at test boring B-3, and 14.9 feet below grade at test borings B-1 and B-2.

Groundwater Conditions

As groundwater was only intercepted at borings/wells B-1/ MW-1, B-2/MW-2 and B-3/MW-3 and these monitoring wells were installed in the north- south lineation across the site preventing triangulation of groundwater levels in the wells; groundwater flow direction was not specifically defined. However, based on the soil types encountered and knowledge relating to groundwater movement on the 188 Warburton Avenue site, and in consideration of the site and area topography, groundwater movement within the site is expected to be generally from the southeast to the northwest.

Subjective Analysis of Soil/Fill Samples

As presented in the Organic Vapor Headspace Analysis Logs (Attachment D), subjective impacts to soils were encountered at test boring B-4, which is located in the entranceway of the building addressed as 150 Woodworth Avenue and is located adjacent west of a former garage structure that once occupied the southwestern portion

of the site. PID readings ranging from 164.6 to 438.4 parts per million were encountered in samples collected from beneath the concrete to a depth of 7 feet below grade. Dark staining and petroleum-type odors were also encountered in samples collected from the 2.5 to 7 foot depth interval. Based on the subjective petroleum-type impacts at test boring B-4, the NYS Department of Environmental Conservation Spills Hotline was contacted and the site was assigned Spill No. 1408922.

Subjective impacts were not observed in samples collected from borings B-1, B-2 and B-3. All PID readings were below 1 ppm at these borings and there was no evidence of staining and/or chemical type odors in the recovered soils.

Soil Sampling Laboratory Analytical Results

Analytical summary results for the samples are presented in Table 1 in Attachment B. The full analytical results are presented in Attachment G. The analytical results were compared to Soil Cleanup Objectives (SCOs) for Unrestricted Use Sites promulgated in 6 NYCRR Part 375.

The samples for laboratory analysis from borings B-1 to B-3 contained fill materials consisting of sand with varying percentages of silt, gravel and red brick. These samples were collected at depth intervals that ranged from 2.5 to 5 feet below grade at borings B-2 and B-3 and 5 to 7.5 feet below grade at boring B-1. The sample for laboratory analysis from boring B-4 was collected at the 5 to 7 foot depth interval and consisted of sand with varying percentages of silt and gravel that exhibited the most elevated PID reading (438.4 ppm) with staining and a petroleum-type odor.

As depicted in Table 1, 6 VOCs and 9 SVOCs were detected at concentrations below SCOs. Pesticides and PCBs were not detected above the laboratory's method detection limit. Twenty-one metals were detected above the laboratory's method detection limit with 5 metals detected at concentrations exceeding SCOs. Chromium was detected above its SCO of 30 parts per million (ppm) at test boring B-1 (32.2 ppm), copper was detected above its SCO of 50 ppm at test boring B-2 (62.8 ppm), lead was detected above its SCO of 63 ppm at test borings B-1 (1,410 ppm), B-2 (522 ppm) and B-3 (286 ppm), mercury was detected above its SCO of 0.18 ppm at test boring B-1 (0.2 ppm), and zinc was detected above its SCO of 109 ppm at test borings B-1 (315 ppm) and B-2 (152 ppm).

Analytical results for the soil sample collected from test boring B-4 which exhibited evidence of petroleum-type impacts, revealed the detection of several VOCs and SVOCs; however, all analyzed parameters are at concentrations below SCOs.

Groundwater Sampling Laboratory Analytical Results

Analytical summary results for the groundwater samples are presented in Table 2 in Attachment B. The full analytical results are presented in Attachment H. The analytical results were compared to NYSDEC groundwater standards and guidance values promulgated in the NYS Division of Water Technical and Operational Guidance Series (TOGS 1.1.1), dated June 1998.

As depicted in Table 2, 1 VOC was detected above the laboratory's method detection limit, but below its corresponding groundwater standard, 3 SVOCs were detected above the laboratory's method detection limit with phenol detected above its corresponding groundwater standard of 1 part per billion (ppb) at monitoring well MW-1 (2.30 ppb). Eighteen metals were detected above the laboratory's method detection limit with 5 metals detected at concentrations exceeding their corresponding groundwater standards. Chromium was detected above its groundwater standard of 50 ppb at monitoring well MW-2 (58.3 ppb), iron was detected above its groundwater standard of 300 ppb at monitoring wells MW-1 (10,500 ppb), MW-2 (24,200 ppb) and MW-3 (576 ppb), magnesium was detected above its groundwater guidance value of 35,000 ppb at monitoring well MW-3 (37,000 ppb), manganese was detected above its groundwater standard of 300 ppb at monitoring wells MW-1 (514 ppb) and MW-2 (1,110 ppm), and sodium was detected above its groundwater standard of 20,000 ppb at monitoring wells MW-1 (162,100 ppb), MW-2 (132,900 ppb) and MW-3 (192,800 ppb).

Field parameters (pH, conductivity, temperature and turbidity) were logged in the field during collection of the groundwater samples and are presented in the following table.

MW ID	pH	Conductivity	Temperature	Turbidity
MW-1	8.05 SU	1,299 us	7.9 ^{0}C	>1,000 NTU
MW-2	8.15 SU	976 us	7.7 ^{0}C	> 1,000 NTU
MW-3	7.82 SU	1,660 us	10.3 ^{0}C	> 1,000 NTU

As depicted in the table, elevated turbidity readings were logged at each of the wells due to the infiltration of silt into each of the monitoring wells during sampling. Infiltration of silt into the wells is common after recent installation of monitoring wells.

Conclusions

C.T. Male Associates has completed its Phase II ESA of the 209 Warburton Avenue site. The following conclusions are made based on the findings of the investigations completed.

- The GPR survey did not identify anomalies that may be representative of underground storage tanks, septic systems, dry wells or other subsurface disposal systems within the boundaries of the utility mark outs.
- Subsurface conditions at all of the borings generally consisted of sand with varying percentages of gravel and silt. Red brick was encountered at the 4 to 6 foot depth interval at test boring B-1 and at the 0.3 to 4 foot depth interval at test boring B-3. The soils became saturated at depths that ranged from 9 feet below grade at test boring B-3 to 11 feet below grade at test borings B-1 and B-2. Groundwater was not encountered in test boring B-4. Refusal was encountered at all of the test borings at depths that ranged from 7 feet below grade at test boring B-4, 14 feet below grade at test boring B-3, and 14.9 feet below grade at test borings B-1 and B-2.
- Based on the soil types encountered in the borings and knowledge relating to groundwater movement on the 188 Warburton Avenue site, and in consideration of the site and area topography, groundwater movement within the site is expected to be generally from the southeast to the northwest.
- Subjective, petroleum-type impacts were encountered at test boring B-4 in soil samples collected from beneath surface concrete to a depth of 7 feet below grade, where drilling refusal was encountered. This boring is located adjacent west of a former garage structure that was identified in historic mapping reviewed as part of the Phase I ESA conducted on the site (see Phase I ESA summary on page 1 of this report). The soils were stained, emitted a petroleum-type odor and registered PID readings ranging from 164.6 to 438.4 ppm. Based on the

subjective petroleum-type impacts, the NYSDEC Spills Hotline was contacted and the site was assigned Spill No. 1408922.

Analytical results for the soil sample collected from test boring B-4 which exhibited the greatest evidence of petroleum-type impacts, showed all analyzed parameters at concentrations below SCOs or below the laboratory's method detection limit. This may be attributed to the weathering (breaking down) over time of the primary chemical constituents affiliated with the contamination.

- Five metals were detected in fill at concentrations exceeding Unrestricted Use SCOs. These metals included chromium, copper, lead, mercury and zinc. Lead was the more persistent metal and was detected at 3 of the 4 test borings and ranged in concentration from 286 to 1,410 ppm as compared to its SCO of 63 ppm. The metals detected in the soils above SCOs, other than lead, chromium and zinc are considered to be naturally occurring metals in the environment.
- One SVOC (phenol) and five metals (chromium, iron, magnesium, manganese and sodium) were detected at concentrations exceeding their corresponding groundwater standards. Phenol was detected slightly above its corresponding groundwater standard at monitoring well MW-1 and was not detected in any of the other monitoring wells. Iron, magnesium and manganese are typically naturally occurring in the environment. The sodium in groundwater is likely a result of the application of road salt on surrounding roads and parking lots. Chromium (58.3 ppm) was detected slightly above its groundwater standard of 50 ppm at monitoring well MW-2 only.

As the site is now designated as a NYSDEC Spill site, this report should be provided to the Region 3 Spills Section for review and comment.

Do not hesitate to contact the undersigned at 518.786.7400, s.bieber@ctmale.com or k.moline@ctmale.com should you have any questions regarding this Phase II ESA report.

Respectfully,

C.T. MALE ASSOCIATES

Steve Bieber
Environmental Scientist

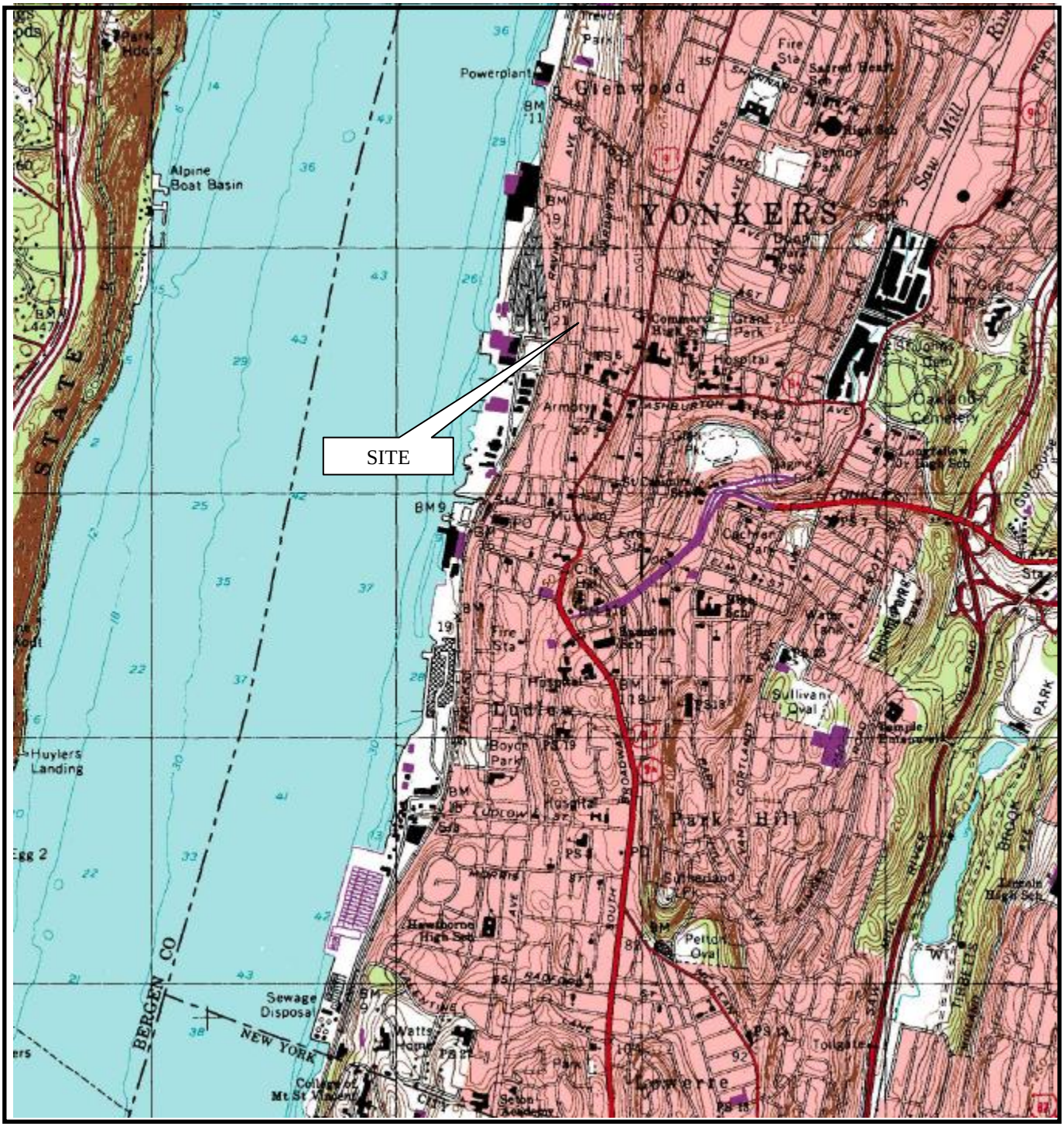
Kirk Moline
Managing Geologist

Attachments

Attachment A:	Figures
Attachment B:	Tables
Attachment C:	Subsurface Exploration Logs
Attachment D:	Organic Vapor Headspace Analysis Logs
Attachment E:	Monitoring Well Construction Logs
Attachment F:	NYLD Report
Attachment G:	Full Analytical Results – Soils
Attachment H:	Full Analytical Results - Groundwater

ATTACHMENT A

FIGURES



MAP REFERENCE
United States Geological Survey
7.5 Minute Series Topographic Map
Quadrangle: Yonkers, NY
Date: 1998

ENGINEERING
ENVIRONMENTAL SERVICES
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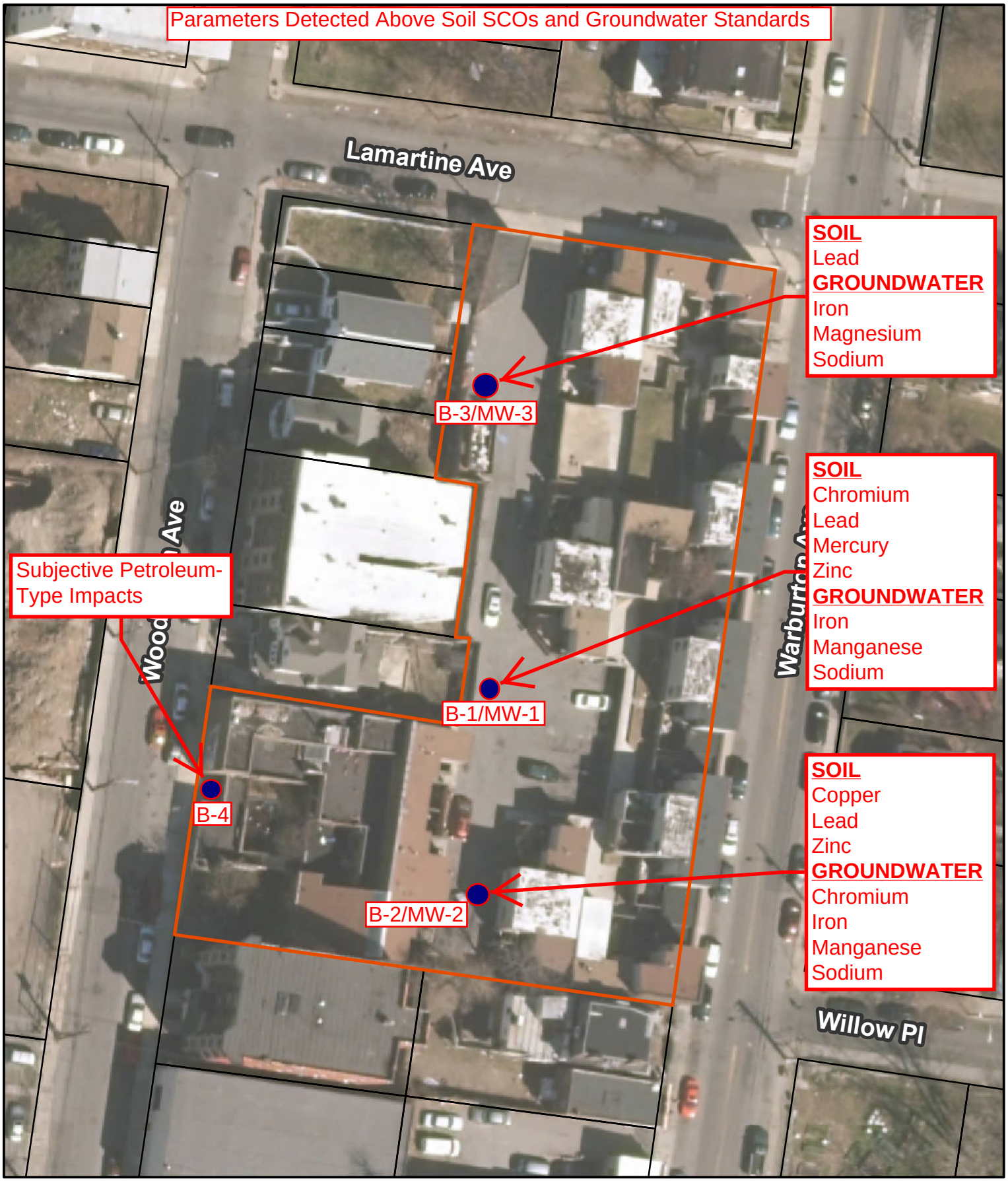
50 CENTURY HILL DRIVE, LATHAM, NY 12110

FIGURE 1 - SITE LOCATION MAP

CITY OF YONKERS	WESTCHESTER COUNTY, NY
SCALE: 1:2,000±	The locations and features depicted on this map are approximate and do not represent an actual survey.
DRAFTER: ASG	
PROJECT No: 13.3591	



0 25 50 Feet

1 inch = 50 feet

Project Number: 14.4445
Data Source: NYSGIS Clearinghouse
Projection: NY State Plane East NAD 83 (ft)
Date: August 19, 2014
File: Fig2_209Warburton.mxd
GIS: CHay

Legend

Project Site
209 Warburton Avenue

Tax Parcels

Figure 2: Site Features Map

City of Yonkers — **Westchester County, New York**

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FOUNDED IN 1910

August 27, 2014

Phase I
Environmental Site Assessment
Cottage Place Gardens Site
8 Cottage Place
City of Yonkers
Westchester County, New York

Prepared for:

THE COMMUNITY BUILDERS, INC.
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Prepared by:

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C.T. Male Project No: 14.4452

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
COTTAGE PLACE GARDENS SITE

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PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
COTTAGE PLACE GARDENS SITE

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PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
COTTAGE PLACE GARDENS SITE

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LIST OF APPENDICES

SUMMARY

C.T. Male Associates review of general property information, observation of adjacent properties, research of historical property information, including a review of environmental databases, and a site reconnaissance revealed the following with respect to Recognized Environmental Conditions (RECs), Historical Recognized Environmental Conditions (HRECs), and Controlled Environmental Conditions (CRECs):

	No Further Action	REC	HREC	CREC	Refer to Section
Property Operations	X				2.3
Neighboring Properties	X				2.10
User Provided Information	X				3.0
Regulatory Review - Site	X				4.0
Regulatory Review – Surrounding Properties		X			4.0
Historical Review		X			5.0
Liquid Containing Equipment	X				6.2
Site Drainage	X				6.3
Site Waste Profile	X				6.4
Underground Storage Tanks		X			6.5
Above Ground Storage Tanks	X				6.5
Stressed Vegetation, Staining and Odors	X				6.6

Notes/Recommendations: To understand the subject site and report, the complete report needs to be reviewed. The findings, opinion and conclusions with respect to the subject site are presented in Section 7.0.

1.0 INTRODUCTION

This report presents the findings of a Phase I Environmental Site Assessment (ESA) conducted by C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture, D.P.C. (C.T. Male Associates) at the Cottage Place Gardens Site which is located in the City of Yonkers, Westchester County, New York. The site assessment was performed at the request of Mr. Jesse Batus of The Community Builders, Inc.

This site assessment has been performed in general conformance with the scope and limitations as outlined in ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and in accordance with our contract dated August 5, 2014.

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment was to reasonably identify RECs on the property. A REC is defined as the presence or likely presence of hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis*[1] conditions are not RECs. A Historical Recognized Environmental Condition (HREC) is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria. A Controlled Recognized Environmental Condition (CREC) is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

A finding of no RECs is not a warranty or guarantee that the site remains free from contamination. The purpose of this report is not intended to include *de minimis* conditions. This report is also not intended to serve as a compliance assessment of the subject property. This environmental site assessment is designed to reduce, but

[1] Conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

not eliminate, uncertainty regarding the potential for RECs in connection with the property, within reasonable limits of time and cost.

1.2 Scope of Work

This environmental site assessment consisted of the following scope of work:

- A site reconnaissance, including a walkthrough of the site buildings and site grounds, to identify areas of potential environmental concern;
- Interviews with site representatives knowledgeable of current and former site operations;
- Review of municipal property records and information provided by local government agencies;
- Review of historical information and documents;
- Review of federal and state agency database information for the subject property and neighboring properties to identify potential concerns that could adversely affect the environmental condition of the property; and
- Preparation of a report documenting the findings of the environmental site assessment.

1.3 Significant Assumptions

The following assumptions are made by C.T. Male Associates in this report. C.T. Male Associates relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property owner contact, computer databases and personal interviews. Except as set forth in this report, C.T. Male Associates has made no independent investigation as to the accuracy and completeness of the information derived from secondary sources, and has assumed that such information is accurate and complete. C.T. Male Associates assumes information provided by or obtained from governmental agencies including information obtained from government websites is accurate and complete. Groundwater flow, unless otherwise specified by other data and information, is assumed based on land surface contours depicted on the United States Geological Survey topographic maps. C.T. Male Associates assumes the property has been correctly and accurately identified by the client and property owner contact.

1.4 Limitations and Exceptions of the Assessment

The information presented in this report is limited to the investigation conducted as described in the referenced ASTM guidelines for conducting environmental site assessments, and is not necessarily all inclusive of conditions present at the subject site. Due to inherent limits of time and cost, uncertainty about site conditions remains. The findings, opinion and conclusions stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the site visit. Specific limitations included the following:

- Access Limitations: None
- Physical Obstructions to Observations: Lack of lighting in the crawl spaces beneath the site buildings limited a clear view of these areas.
- Outstanding Information Requests: City of Yonkers and New York State Department of Health.
- Historical Data Source Failure: None
- Other: The information presented in the report is based on information gathered in accordance with the Scope of Services defined in Section 1 of this report. Information provided by site contacts and local, State and County officials known to be responsible for regulating and enforcing site area environmental conditions was utilized in assessing the environmental conditions at the site. The accuracy of conclusions drawn from this assessment is therefore dependent upon the accuracy of the information provided.

1.5 Special Terms and Conditions

This Phase I Environmental Site Assessment was prepared in accordance with the stated and agreed upon Scope of Work. No special terms and conditions are applicable to this assessment. This site assessment did not include a review of non-scope issues as identified by ASTM E 1527 including asbestos containing materials, radon, lead in drinking water, lead based paint, wetlands, regulatory compliance, industrial hygiene, health & safety, ecological resources, endangered species, indoor air quality, mold and cultural & historic resources.

1.6 Reliance

This Phase I ESA has been prepared for the sole use of The Community Builders, Inc. The Municipal Housing Authority for the City of Yonkers may rely on this report. This Phase I ESA cannot be relied upon by other parties without the express written consent of C.T. Male Associates and The Community Builders, Inc.

2.0 SITE DESCRIPTION

2.1 Site Location

The subject site is addressed as 8 Cottage Place in the City of Yonkers, Westchester County, New York. The subject site was identified on the City of Yonkers tax maps as being within the parcel with section 2, block 2094, lot 1. A site location map is included in Appendix A as Figure 1. A map showing the site property boundaries is included in Appendix A as Figure 2.

2.2 Property/Business Owner

According to assessment records, the current property owner is the Municipal Housing Authority of the City of Yonkers (MHACY) of Yonkers, New York.

2.3 Current and Former Site Uses

The site has consisted of a public housing apartment complex since its construction in the late 1940's. Prior to this time, the site was developed with multiple single and multi-family dwellings, stores and a garage since as late as 1886.

2.4 Total Site Area and Topographic Description

The subject site incorporates approximately 4.59 acres of land. The northwestern portion of the site containing buildings 10 and 11 and surrounding lands (see Figure 2) is not part of the site. According to the United States Geological Survey (USGS) Topographic Map, the subject site lies at approximately 90 to 130 feet above Mean Sea Level. Generally, the site slopes moderately from east to west.

2.5 Site Geology

Soils are mapped by the United States Department of Agriculture Web Soil Survey as Urban Land.

2.6 Site Buildings and Structures

There are currently 11 apartment buildings on the site. The buildings are numbered 1 to 9, 12 and 13, as depicted on Figure 2. The buildings have red brick exteriors and flat roofs. Interior portions of the building consist of plaster walls and ceilings with tiled and concrete flooring. A summary of the buildings is provided in the following table.

Bldg No's	Description
1 & 2	Each building contains a main ground floor level plus three additional stories. A boiler room, utility room and compactor room are located on the main level in each building. Each building contains a crawl space type basement that is used for utility access. Building 1 contains a public laundry room on the main level. The buildings are not equipped with elevators.
3 - 9 & 13	Each building contains a main ground floor level plus three additional stories. A hot water/utility room and compactor room are located on the main level in each building. Each building contains a crawl space type basement that is used for utility access. Building 5 contains a public laundry room on the main level. Buildings 4 and 5 are each equipped with elevators as these buildings are delegated to senior citizens. Building 8 contains the complex management office and recreation room on the main floor. Building 4 contains a community room on the main floor.
12	Building 12 contains a main ground floor level plus three additional stories. The northern ground level of the building contains a utility room, compactor room and maintenance shop for the site's maintenance personnel. The southern side of the building contains a full basement housing the site's main boiler room. A smoke stack is located at the southeast exterior of the building.

2.7 Site Utilities

Electricity and natural gas are supplied to the site by Con Edison. Municipal water and sewer service are provided by the City of Yonkers. Site buildings 3 to 9, 12 and 13 are heated by hot water radiant heat that is generated from two natural gas fired boilers located in the basement of Building 12. According to the site contact, the boilers were converted to natural gas approximately three years ago. Prior to this, the boilers were fueled by fuel oil stored in underground storage tanks. Buildings 1 and 2 are each heated by hot water radiant heat that is generated from natural gas fired boilers located on the main level of each building. According to the site contact, Buildings 1 and 2 originally obtained their hot water radiant heat from the main boilers in Building 12. Individual boilers were reportedly installed in Buildings 1 and 2 approximately 3 years ago as a result of a faulty hot water supply line into these buildings from the main boiler in Building 12.

2.8 Roadways or Driveways on or Adjoining the Site

The site is accessed from Warburton Avenue (west of the site), Willow Place (adjacent north to the site) and Bishop WM Walls Place (adjacent southeast to the site). Irving Place originates along the eastern side of Warburton Avenue and traverses southern portions of the site. Cottage Place traverses eastern portions of the site and originates at the eastern end of Willow Place and along the northern side of Bishop WM Walls Place.

2.9 Surrounding Land Uses

The surrounding land uses, as identified during the site visit, are described as follows:

North - Willow Place followed by single and multi-family dwellings, and a Church.

West - Buildings 10 and 11 of Cottage Place Gardens, former community gardens, multi-family dwellings, Wood Place, vacant land and an automotive repair facility.

East - Old Croton Aqueduct easement and a Church followed by multi-family dwellings.

South - High rise apartment complex with parking lot and former Public School 6 currently being developed into multi-family housing.

3.0 USER PROVIDED INFORMATION

The user (Jesse Batus of The Community Builders) was provided a "user questionnaire" along with the proposed scope of services. The user returned a completed questionnaire which is included in Appendix C.

Note: In order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, (the "Brownfields Amendments"), the user must provide the information outlined in this section. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

3.1 Title Records

A chain of title or other title records were not provided by the user for review at the time of this report.

3.2 Environmental Liens or Activity and Use Limitations

According to the response to the user questionnaire, the user is not aware of environmental liens or activity or use limitations for the site.

It is recommended that the user engage a title company or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens or activity and use limitations recorded against or related to the property to satisfy Sections 3.1. and 3.2 of this report.

3.3 Specialized Knowledge

According to the response to the user questionnaire, the user has specialized knowledge of the site. The user is a real estate developer with knowledge of the area from other development initiatives.

3.4 Commonly Known or Reasonably Ascertainable Information

According to the response to the user questionnaire, the user has knowledge of commonly known or reasonably ascertainable information concerning the site. The user indicated that the existing buildings are known to have asbestos-containing materials. Abatement is known to have occurred in some buildings, related to removal of pipe wrap located within some crawl spaces.

3.5 Valuation Reduction for Environmental Issues

Not applicable, this ESA is not being prepared pursuant to the sale of the property.

3.6 Reason for Performing Phase I

The reason for performing this Phase I ESA is for financial transactions/development initiative.

3.7 Other User Provided Information

User provided information was highlighted in Sections 3.3 and 3.4.

4.0 STANDARD ENVIRONMENTAL RECORD SOURCES

Federal and state environmental databases were reviewed in accordance with ASTM E-1527 Standards to determine if the site or nearby surrounding properties are listed on these databases. The databases were searched for the areas within the ASTM recommended search distance, unless otherwise noted. Reviewed databases are listed below. A copy of the database report is included in Appendix E.

4.1 Federal National Priorities List (NPL) Facilities (Listed and De-Listed)

The subject site was not listed as a NPL hazardous waste facility. One NPL facility was listed within one mile of the subject site, it being the Hudson River PCBs. Based on area topography, the Hudson River does not appear to be located hydraulically up-gradient relative to the subject site.

4.2 Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Hazardous Waste Facility List

The subject site was not listed as a CERCLA hazardous waste facility. In addition to the Hudson River PCBs, one CERCLA hazardous waste facility was listed within ½ mile of the subject site. The facility is the Patclin Chemical Company, 66 Alexander Street, located approximately 0.36 miles southwest of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.3 Federal Resource Conservation and Recovery Act (RCRA) Treatment, Storage and Disposal (TSD) Facilities List

The subject site was not listed as a RCRA TSD facility. No RCRA TSD facilities were listed within ½ mile of the subject site.

4.4 Federal RCRA Generators List and Corrective Action List

The subject site was not listed on the RCRA generator list. The site's south adjoining Public School 6 property was listed as a large quantity generator of hazardous levels of lead in relation to remedial activities conducted at this site as part of its inclusion in the NYS Brownfields Cleanup Program.

The subject site was not listed as a RCRA Corrective Action facility. No RCRA Corrective Action facilities were listed within one mile of the subject site.

4.5 Federal Emergency Response Notification System (ERNS) List

The subject site was not listed on the ERNS list.

4.6 Federal Institutional Control and Engineering Control Registries

The subject site was not listed on the Federal Institutional Control or Engineering Control registries.

4.7 State/Tribal Hazardous Waste Facility List

The subject site was not listed as a State or Tribal hazardous waste facility. No State or tribal hazardous waste facilities were listed within one mile of the subject site.

4.8 State/Tribal Solid Waste Facility List

The subject site was not listed on the State or Tribal solid waste facility list. One State listed solid waste facility was listed within ½ mile of the subject site. The facility is Danny's Towing, 98-100 Warburton Avenue, located approximately ¼ mile south of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.9 State Petroleum Bulk Storage (PBS) Tank and Chemical Bulk Storage (CBS) Facilities

The site was not listed on the State PBS or CBS facilities list. However, two underground tanks are known to exist at the site.

NYSDEC Reg. #	Type (AST/UST)	Capacity (Gallons)	Date Installed	Date Removed	Content	Location
NA	UST	20,000	Late 1940's	Not Removed	Fuel Oil	East of Building 12
NA	UST	20,000	Late 1940's	Not Removed	Fuel Oil	East of Building 12

The following immediately adjoining properties were listed on the State PBS or CBS facilities list.

All County Homes Corp. (Former Scott Station)
178 Warburton Ave
Site's western adjoining property

The database report indicates that 11 underground tanks were closed by removal at this facility. The tanks ranged in capacity from 750 to 3,000 gallons.

Yonkers Public School No. 6
33 Ashburton Avenue
Site's southern adjoining property

The database report indicates that a 5,000-gallon underground tank and a 20,000-gallon underground tank were closed by removal at this facility.

4.10 State/Tribal Leaking Storage Tanks List

The site was not listed on the State or Tribal leaking storage tank list. Seventy-six (76) leaking storage tank incidents were listed within ½ mile of the site. Of these all are listed as closed, except for a leaking tank incident at 26 Willow Place, which is the site's northeastern adjoining property and is considered hydraulically upgradient of the site with respect to inferred groundwater flow direction. According to the database report and the NYSDEC Spill Record, an unknown quantity of fuel oil has impacted soils at this property.

4.11 State/Tribal Institutional Control and Engineering Control Registries

The subject site was not listed on State or Tribal Institutional Control or Engineering Control registries.

4.12 State/Tribal Voluntary Cleanup Program (VCP) List

The site was not listed on the state or tribal VCP list. Five VCP facilities and two Environmental Restoration Program (ERP) facilities were listed within ½ mile of the site. Based on area topography, these facilities do not appear to be located hydraulically up-gradient relative to the subject site.

4.13 State/Tribal Brownfields List

The site was not listed on the State or Tribal Brownfields list. Nine Brownfields sites were identified within ½ mile of the subject site. Two of the Brownfields sites adjoin the subject site.

The 188 Warburton Avenue site constitutes the site's northwestern adjoining property. This site has recently entered the Brownfields program and is considered hydraulically downgadient of the site with respect to inferred groundwater flow direction.

The 33 Ashburton Avenue site constitutes the site's southeastern adjoining property. C.T. Male Associates was the environmental consultant during all phases of remediation. The 33 Ashburton Avenue site received a Certificate of Completion from NYSDEC in 2013. During the course of the remedial activities, it was discovered that petroleum impacted soils and groundwater were present at the northern property boundary of the 33 Ashburton Avenue site and that these contaminants had migrated onto the subject site. The source of the petroleum contamination on the 33 Ashburton Avenue site was determined to be from an off-site former gasoline station located immediately east of the 33 Ashburton Avenue site. Contaminants extending beyond the 33 Ashburton Avenue site boundaries were not remediated as a function of the brownfields cleanup.

4.14 Applicable State Lists

The New York State Department of Environmental Conservation (NYSDEC) spills database was reviewed to determine if spills have occurred at the subject site or adjoining parcels. No spills were listed for the subject site.

The following spills were listed for the immediately adjoining parcels.

Fisher
26 Willow Place
Site's NE adjoining property
Spill Status: Closed

Habitat for Humanity
27 Willow Place
Site's northern adjoining property
Spill Status: Closed

188 Warburton Ave. Site
188 Warburton Avenue
Site's NW adjoining property
Spill Status: Closed

Ame Zion Church
42 Bishop Walls Place
Site's SE adjoining property
Spill Status: Closed

5.0 RECORDS REVIEW AND INTERVIEWS

5.1 Previous Environmental Site Assessments

No previous environmental site assessments are reported to have been conducted for the subject site.

5.2 Aerial Photographs

Aerial photographs were reviewed for the years 2005 and 2010 from Google Earth and for the years 1954, 1966, 1974, 1989 and 1994 as provided by Environmental Data Resources (EDR). All of the reviewed photos depict multiple buildings on the subject site consistent with present day usage.

The aerial photographs are included in Appendix A as Figures 3A-3G. The boundaries depicted on the photographs are for schematic purposes only and do not represent the actual boundaries of the site.

5.3 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps were reviewed for the years 1886, 1898, 1917, 1942, 1951, 1956, 1957, 1971, 1978, 1989, 1990, 1991 and 2004. The maps depict the following:

1886, 1898, 1917 and 1942 maps: These maps show the site developed with multiple structures used as single and multi-family dwellings and as stores. Three roads transect the site; Irving Place, Wood Place and Cottage Place. A structure identified as a "Garage" is depicted on the 1917 map on southeastern portions of the site.

1951, 1956, 1957, 1971, 1978, 1989, 1990, 1991 and 2004 maps: These maps show the site developed with multiple apartment buildings consistent with present day conditions.

The Sanborn maps are included in Appendix A as Figures 4A-4M. Boundaries depicted on the maps are for schematic purposes only and do not represent the actual boundaries of the site.

5.4 Information From Local Official(s)

A Freedom of Information Law (FOIL) request was submitted to the City of Yonkers Clerk requesting documents from the following departments: Assessment, Building Department, Historian, Engineering, Fire Department and Clerk. At the time of this

report a response had not been received from the City of Yonkers. If pertinent information is received, it will be forwarded upon receipt.

Property assessment records were reviewed on-line from Landmax Data Systems.

5.5 Information From Health Department Official(s)

A FOIL request was submitted to the New York State Department of Health to determine if the Department of Health has records concerning soil or groundwater contamination for the subject site. At the time of this report a response had not been received from the Department of Health. If pertinent information is received, it will be forwarded upon receipt.

5.6 Information From Current or Former Property Owner(s)

Juaquin Padilla, Deputy Director of Field Operations Maintenance for MHACY was the site contact for this assessment and acted as a representative of the current property owner. Mr. Padilla was interviewed after the site visit. MHACY maintenance personnel provided a tour of the site buildings and grounds.

The current property owner representative was not aware of environmental liens or activity/land or use limitations for the site. Other information from Mr. Padilla is included in the appropriate sections of this report.

5.7 Information From the Site Manager

Mr. Padilla acted as the site manager.

5.8 Information from the Site Occupants

Tenants of Cottage Place Gardens were not available for interviews.

Records of communication are included in Appendix D.

6.0 SITE RECONNAISSANCE

6.1 Conditions of the Reconnaissance

6.1.1 Site Contact(s)

Juaquin Padilla and John VanNostrand (Maintenance Director) of MHACY were the site contacts and were present during the site visit. MHACY maintenance personnel provided access to the buildings.

6.1.2 Date of Visit

The site reconnaissance was conducted on Thursday, August 14, 2014 by Mr. Steve Bieber of C.T. Male Associates. During the site visit the weather was approximately 80°F with partly cloudy skies.

6.1.3 Areas Observed

The site and surrounding areas were observed from Warburton Avenue, Irving Place, Willow Place, Cottage Place and the approximate site boundaries. The central areas of the site were traversed and the buildings entered. Photographs taken during the site visit are included in Appendix B.

6.1.4 Limiting Conditions

Maintenance personnel did not have access to a storage room in Building 3. Limited lighting in the basement crawlspaces beneath the buildings limited a clear view of conditions within these areas.

6.2 Polychlorinated Biphenyl-Containing (PCB)/Liquid Containing Equipment

One pole-mounted transformer was identified on the site along the south side of Irving Place. The transformer did not appear to be leaking and grasses, asphalt and concrete beneath the transformer did not appear to be stained.

The site contact indicated that there are no transformers or capacitors on the subject site.

6.3 Site Drainage

6.3.1 Site Catch Basins and Discharge Location(s)

Several catch basins were identified in grassy, concrete and asphalt covered areas throughout the site. According to the site contact, the catch basins discharge to the

City of Yonkers storm water sewer system. Staining was not observed in media surrounding the catch basins.

6.3.2 Site Surface Water Bodies/Areas

No surface water bodies were identified on the site during the site visit.

6.3.3 Building Floor Drains and Discharge Location(s)

Floor drains were observed in concrete flooring in the utility rooms, compactor rooms and hot water rooms located on the main floors within all of the buildings, and in the boiler rooms in Buildings 1, 2 and 12. According to the site contact, all floor drains discharge to the City of Yonkers sanitary sewer system. Floor drains observed during the site reconnaissance did not emit chemical and/or petroleum type odors and staining was not observed on flooring surrounding the floor drains.

6.3.4 Dry Wells and Sumps

No dry wells or sumps were identified on the site during the site visit. According to the site contact, no dry wells or sumps are located on the site.

6.4 Site Waste Profile

6.4.1 Solid Wastes/Waste Deposits (Piles/Pits/Landfills/Lagoons)

No solid wastes were identified on the site during the site visit. According to the site contact, no solid wastes are generated, stored or disposed of on the site. Refuse generated by the site tenants is temporarily stored in garbage compactors located in each of the site buildings.

No waste deposits were identified on the site during the site visit. The site contact was not aware of waste deposits being located on the site.

6.4.2 Sludges (Generation/Storage/Disposal)

No sludge wastes were identified on the site during the site visit. According to the site contact, no sludges are generated, stored or disposed of on the site.

6.4.3 Liquids (Generation/Storage/Disposal)

No liquid wastes were identified on the site during the site visit. According to the site contact, no liquid wastes are generated, stored or disposed of on the site.

6.4.4 Wastewater Discharge(s)

No wastewater discharges were identified on the site during the site visit. According to the site contact, no wastewater is generated on the site.

6.4.5 Waste Lagoons or Disposal Pits (Current and Historic)

No waste lagoons or disposal pits were identified on the site during the site visit. According to the site contact, no current or historic waste lagoons or disposal pits are located on the site.

6.4.6 On-site Septic Systems

No septic systems were identified on the site during the site visit. The site is reportedly connected to the City of Yonkers municipal sewer system.

6.4.7 Drums/Containers

No drums of waste were identified on the site during the site visit. According to the site contact, no drums of waste are stored on the site.

55-gallon drums of boiler treatment solution and cleaning detergents were observed in the boiler room and maintenance shop in Building 12. The drums were not observed to be leaking and staining was not observed on surrounding flooring. Floor drains were not observed in the vicinity of the drums.

Containers of floor stripper and cleaning products were observed in the maintenance shop in Building 12. The containers ranged in size from less than one quart to five gallons. The containers were not observed to be leaking and staining was not observed on surrounding flooring. Floor drains were not observed in the vicinity of the drums.

6.5 Underground Storage Tanks (USTs) and/or Above Ground Storage Tanks (ASTs)

Two, 20,000-gallon underground fuel oil tanks are located on the site adjacent east of Building 12. The site contact indicated that the tanks were installed in 1948 and have been used to store fuel oil for the boilers up until approximately three years ago, when the boilers were converted to accept natural gas as a fuel. The site contact indicated that the tanks have been emptied out and that the tanks have passed all tank tightness testing. The most recent tank tightness testing conducted in July 2014

is included in Appendix D. The site contact indicated that there are no other underground and aboveground tanks on the site.

Small, approximate five to 10 gallon aboveground steel tanks containing hydraulic oil are located in the trash compactor rooms in each of the site buildings and in the elevator rooms in Buildings 4 and 5. The tanks did not appear to be leaking and liquids and heavy staining was not observed on flooring surrounding the tanks.

6.6 Observed Evidence of Potential or Known Site Contamination

6.6.1 Evidence of Soil Contamination/Liquid Discharges

Evidence of soil contamination or liquid discharges was not identified on the site during the site visit. Stressed vegetation was not identified on the site during the site visit. The site contact was not aware of soil or groundwater contamination from either on-site or off-site sources.

6.6.2 Soil or Surface Disturbances

No soil or surface disturbances were identified on the site during the site visit.

7.0 FINDINGS, OPINION AND CONCLUSIONS

7.1 Findings

The site has consisted of a public housing apartment complex since its construction in the late 1940's. Prior to this time, the site was developed with multiple single and multi-family dwellings, stores and a garage since as late as 1886.

The site was not identified in the searched environmental databases.

The site's northeast adjoining 26 Willow Place property was identified in the searched environmental databases as a Leaking Tanks site. According to the database report and the NYSDEC Spill Record, an unknown quantity of fuel oil has impacted soils at this property. The 26 Willow Place property is considered hydraulically upgradient of the site with respect tom inferred groundwater flow direction.

Petroleum impacted groundwater that has migrated through the 33 Ashburton Avenue Brownfields site from an off-site upgradient source has impacted the subject site.

A 1917 historic Sanborn map identified a structure labeled as a "Garage" on southeastern portions of the site.

One pole-mounted transformer was identified on the site along the south side of Irving Place. The transformer did not appear to be leaking and grasses, asphalt and concrete beneath the transformer did not appear to be stained.

Floor drains were observed in concrete flooring in the utility rooms, compactor rooms and hot water rooms located on the main floors within all of the buildings, and in the boiler rooms in Buildings 1, 2 and 12. According to the site contact, all floor drains discharge to the City of Yonkers sanitary sewer system. Floor drains observed during the site reconnaissance did not emit chemical and/or petroleum type odors and staining was not observed on flooring surrounding the floor drains.

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Containers of floor stripper and cleaning products were observed in the maintenance shop in Building 12. The containers ranged in size from less than one quart to five

gallons. The containers were not observed to be leaking and staining was not observed on surrounding flooring. Floor drains were not observed in the vicinity of the drums.

Two, 20,000-gallon underground fuel oil tanks are located on the site adjacent east of Building 12. The site contact indicated that the tanks were installed in 1948 and have been used to store fuel oil for the boilers up until approximately three years ago, when the boilers were converted to accept natural gas as a fuel. The site contact indicated that the tanks have been emptied out and that the tanks have passed all tank tightness testing. The site contact indicated that there are no other underground and aboveground tanks on the site.

Small, approximate five to 10 gallon aboveground steel tanks containing hydraulic oil are located in the trash compactor rooms in each of the site buildings and in the elevator rooms in Buildings 4 and 5. The tanks did not appear to be leaking and liquids and heavy staining was not observed on flooring surrounding the tanks.

7.2 Opinion

It is our opinion that the information and data collected during this Phase I ESA indicates the possible presence of hazardous substances or petroleum product within the site under conditions which indicate an existing release, past release or material threat of a release.

7.3 Conclusions

C.T. Male Associates has completed a Phase I Environmental Site Assessment for the Cottage Place Gardens Site in general conformance with the scope and limitations of ASTM Practice E 1527. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

A leaking fuel oil tank has impacted soils on the site's northeast adjoining 26 Willow Place property, which is located hydraulically upgradient of the subject site with respect to inferred groundwater flow direction.

Petroleum impacted soils and groundwater from the 33 Ashburton Avenue Brownfields site have migrated onto the subject site.

A 1917 historical Sanborn Map has identified a "Garage" structure on southeastern portions of the site.

Two, out of service, 20,000 gallon underground fuel oil tanks are currently located beneath the site, adjacent east of Building 12. The tanks were taken out of service approximately three years ago when the site boilers were converted to natural gas.

7.4 Opinion Regarding Further Inquiry

Based on the findings of this ESA, further inquiry would be necessary, as follows.

Conduct a subsurface investigation to aid in the collection of soil/fill and groundwater samples for subjective and laboratory analysis to determine potential site impacts from off-site sources (26 Willow Place Leaking Tanks site and 33 Ashburton Avenue Brownfields site), from the historic on-site garage structure, from the existing on-site underground storage tanks and supply line, and the fill materials used in the development of the site in the 1940s.

8.0 DEVIATIONS AND ADDITIONAL SERVICES

Deletions or deviations from the ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, are described in Section 1.0 of this report.

No additional services beyond the scope of ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process were completed in conjunction with this Phase I ESA.

9.0 SIGNATURES

We declare that, to the best of our professional knowledge and belief we meet the definition of Environmental Professional as defined in 312.21 of 40 CFR Part 312. And we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Respectfully submitted,
C.T. MALE ASSOCIATES

Steve Bieber
Environmental Scientist

Reviewed and Approved By:

Kirk Moline
Project Manager

CTMA Project No. 14.4452
August 27, 2014
T:\14.4452\Submissions and Presentations\R Cottage Place Phase I ESA_FINAL_8.27.2014.pdf

10.0 REFERENCES

PEOPLE AND AGENCIES CONTACTED

- Jesse Batus, The Community Builders, Inc.
- Juaquin Padilla, The Municipal Housing Authority for the City of Yonkers.
- John VanNostrand, The Municipal Housing Authority for the City of Yonkers.
- City of Yonkers Historian.
- City of Yonkers Building Department.
- City of Yonkers Assessor's Office.
- City of Yonkers Fire Department.
- City of Yonkers Clerk's Office.
- City of Yonkers Engineer's Office.
- New York State Department of Health.

DOCUMENTS REVIEWED

- Aerial Photographs of the Yonkers Quadrangle for the years: 1954, 1966, 1974, 1989 and 1994 courtesy of Environmental Data Resources, Inc. Aerial Photographs of the Yonkers Quadrangle for the years: 2005 and 2010 courtesy of Google Earth.
- Environmental Database Report provided by Environmental Data Resources, Inc.
- Fire Insurance Maps from the Sanborn Map Company Archives. Late 19th Century to 1990: New York University Publications of America. Bethesda, Maryland (New York State Library).
- On-line assessment records provided by Landmax Data Systems.
- United States Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey.
- United States Geological Survey Topographic Map of the Yonkers, NY Quadrangle, 1998, 7.5 Minute Series.

November 20, 2015

Phase I
Environmental Site Assessment
Cottage Place Gardens Site
Buildings 3, 6 and 7
8 Cottage Place
City of Yonkers
Westchester County, New York

Prepared for:
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PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
COTTAGE PLACE GARDENS SITE

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LIST OF APPENDICES

SUMMARY

C.T. Male Associates review of general property information, observation of adjacent properties, research of historical property information, including a review of environmental databases, and a site reconnaissance revealed the following with respect to Recognized Environmental Conditions (RECs), Historical Recognized Environmental Conditions (HRECs), and Controlled Environmental Conditions (CRECs):

	No Further Action	REC	HREC	CREC	Refer to Section
Property Operations	X				2.3
Neighboring Properties	X				2.10
User Provided Information	X				3.0
Regulatory Review - Site		X			4.0
Regulatory Review – Surrounding Properties			X		4.0
Historical Review	X				5.0
Liquid Containing Equipment	X				6.2
Site Drainage	X				6.3
Site Waste Profile	X				6.4
Underground Storage Tanks	X				6.5
Above Ground Storage Tanks	X				6.5
Stressed Vegetation, Staining and Odors	X				6.6

Notes/Recommendations: To understand the subject site and report, the complete report needs to be reviewed. The findings, opinion and conclusions with respect to the subject site are presented in Section 7.0.

1.0 INTRODUCTION

This report presents the findings of a Phase I Environmental Site Assessment (ESA) conducted by C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture, D.P.C. (C.T. Male Associates) at the Cottage Place Gardens Site which is located in the City of Yonkers, Westchester County, New York. The site assessment was performed at the request of Mr. Jesse Batus of CPG Phase III Limited Partnership.

This site assessment has been performed in general conformance with the scope and limitations as outlined in ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and in accordance with our proposal dated November 4, 2015.

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment was to reasonably identify RECs on the property. A REC is defined as the presence or likely presence of hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis*[1] conditions are not RECs. A Historical Recognized Environmental Condition (HREC) is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria. A Controlled Recognized Environmental Condition (CREC) is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

A finding of no RECs is not a warranty or guarantee that the site remains free from contamination. The purpose of this report is not intended to include *de minimis* conditions. This report is also not intended to serve as a compliance assessment of the subject property. This environmental site assessment is designed to reduce, but

[1] Conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

not eliminate, uncertainty regarding the potential for RECs in connection with the property, within reasonable limits of time and cost.

1.2 Scope of Work

This environmental site assessment consisted of the following scope of work:

- A site reconnaissance, including a walkthrough of the site buildings and site grounds, to identify areas of potential environmental concern;
- Interviews with site representatives knowledgeable of current and former site operations;
- Review of municipal property records and information provided by local government agencies;
- Review of historical information and documents;
- Review of federal and state agency database information for the subject property and neighboring properties to identify potential concerns that could adversely affect the environmental condition of the property; and
- Preparation of a report documenting the findings of the environmental site assessment.

1.3 Significant Assumptions

The following assumptions are made by C.T. Male Associates in this report. C.T. Male Associates relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property owner contact, computer databases and personal interviews. Except as set forth in this report, C.T. Male Associates has made no independent investigation as to the accuracy and completeness of the information derived from secondary sources, and has assumed that such information is accurate and complete. C.T. Male Associates assumes information provided by or obtained from governmental agencies including information obtained from government websites is accurate and complete. Groundwater flow, unless otherwise specified by other data and information, is assumed based on land surface contours depicted on the United States Geological Survey topographic maps. C.T. Male Associates assumes the property has been correctly and accurately identified by the client and property owner contact.

1.4 Limitations and Exceptions of the Assessment

The information presented in this report is limited to the investigation conducted as described in the referenced ASTM guidelines for conducting environmental site assessments, and is not necessarily all inclusive of conditions present at the subject site. Due to inherent limits of time and cost, uncertainty about site conditions remains. The findings, opinion and conclusions stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the site visit. Specific limitations included the following:

- Access Limitations: None
- Physical Obstructions to Observations: Crawl spaces were not entered as a function of this assessment, but were viewed from the main ground floor level. Lack of lighting in the crawl spaces beneath the site buildings limited a clear view of these areas.
- Outstanding Information Requests: City of Yonkers and New York State Department of Health
- Historical Data Source Failure: None
- Other: The information presented in the report is based on information gathered in accordance with the Scope of Services defined in Section 1 of this report. Information provided by site contacts and local, State and County officials known to be responsible for regulating and enforcing site area environmental conditions was utilized in assessing the environmental conditions at the site. The accuracy of conclusions drawn from this assessment is therefore dependent upon the accuracy of the information provided.

1.5 Special Terms and Conditions

This Phase I Environmental Site Assessment was prepared in accordance with the stated and agreed upon Scope of Work. No special terms and conditions are applicable to this assessment. This site assessment did not include a review of non-scope issues as identified by ASTM E 1527 including asbestos containing materials, radon, lead in drinking water, lead based paint, wetlands, regulatory compliance, industrial hygiene, health & safety, ecological resources, endangered species, indoor air quality, mold and cultural & historic resources.

1.6 Reliance

This Phase I ESA has been prepared for the use of CPG Phase III Limited Partnership and New York State Homes & Community Renewal (HCR). This Phase I ESA cannot be relied upon by other parties without the express written consent of C.T. Male Associates and CPG Phase III Limited Partnership.

2.0 SITE DESCRIPTION

2.1 Site Location

The subject site is addressed as 8 Cottage Place in the City of Yonkers, Westchester County, New York. The subject site was identified on the City of Yonkers tax maps as being a portion of the parcel with section 2, block 2094, lot 1. A site location map is included in Appendix A as Figure 1. A map showing the site property boundaries is included in Appendix A as Figure 2.

2.2 Property/Business Owner

According to assessment records, the current property owner is the Municipal Housing Authority of the City of Yonkers (MHACY) of Yonkers, New York.

2.3 Current and Former Site Uses

The site is a portion of a public housing apartment complex that was constructed in the late 1940s. Prior to this time, the site was developed with multiple dwellings and stores dating to as early as 1886.

2.4 Total Site Area and Topographic Description

The subject site incorporates approximately 1.006 acres of land. According to the United States Geological Survey (USGS) Topographic Map, the subject site lies at approximately 90 to 120 feet above Mean Sea Level. Generally, the site slopes moderately from the east down to the west.

2.5 Site Geology

Soils are mapped by the United States Department of Agriculture Web Soil Survey as Urban Land.

2.6 Site Buildings and Structures

There are currently three (3) apartment buildings on the site. The buildings are identified as Building 3, Building 6 and Building 7, as depicted on Figure 2. The buildings are of masonry and brick construction with flat roofs and reportedly date to 1948.

Buildings 3 and 7 contain a main ground floor level plus three additional stories and Building 6 has four additional stories. A hot water/utility room and trash compactor room are located on the main ground floor level along with some apartments in each

building with apartments occupying the remaining floors. Each building contains a crawl space type basement that is used for utility access. A janitor's closet is present in each building; in Buildings 3 and 4 the closet was located on the first floor and in Building 6 the closet was noted on the ground floor level. Interior portions of the building consist of plaster walls and ceilings with tiled and concrete flooring.

2.7 Site Utilities

Electricity and natural gas are supplied to the site by Con Edison. Municipal water and sewer service are provided by the City of Yonkers. The buildings are heated by hot water radiant heat that is generated from two natural gas fired boilers located in the basement of Building 12 (located off-site). According to the site contact, the boilers were converted to natural gas approximately three years ago. Prior to this, the boilers were fueled by fuel oil stored in underground storage tanks (also located off-site).

2.8 Roadways or Driveways on or Adjoining the Site

The site is accessed via a paved driveway from Willow Place (adjacent north to the site). The driveway provides access to a paved parking area which occupies the southeastern portion of the site.

2.9 Surrounding Land Uses

The surrounding land uses, as identified during the site visit, are described as follows:

North - Willow Place followed by single and multi-family dwellings, and a church.

West - A building currently under construction (Cottage Gardens Phase 2). This area was formerly occupied by Buildings 10 and 11 of Cottage Place Gardens.

East - Buildings 1 and 2 of Cottage Place Gardens.

South - Buildings 4, 8 and 12 of Cottage Place Gardens.

3.0 USER PROVIDED INFORMATION

The user (Jesse Batus of The Community Builders) was provided a "user questionnaire" along with the proposed scope of services. The user returned a completed questionnaire which is included in Appendix C.

Note: In order to qualify for one of the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, (the "Brownfields Amendments"), the user must provide the information outlined in this section. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

3.1 Title Records

A chain of title or other title records were not provided by the user for review at the time of this report.

3.2 Environmental Liens or Activity and Use Limitations

According to the response to the user questionnaire, the user is not aware of environmental liens or activity or use limitations for the site.

It is recommended that the user engage a title company or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens or activity and use limitations recorded against or related to the property to satisfy Sections 3.1 and 3.2 of this report.

3.3 Specialized Knowledge

According to the response to the user questionnaire, the user has specialized knowledge of the site. The user is a real estate developer with knowledge of the area from other development initiatives.

3.4 Commonly Known or Reasonably Ascertainable Information

According to the response to the user questionnaire, the user has knowledge of commonly known or reasonably ascertainable information concerning the site. The user indicated that the existing buildings are known to have asbestos-containing materials. Abatement is known to have occurred in some buildings, related to removal of pipe wrap located within some crawl spaces.

3.5 Valuation Reduction for Environmental Issues

Not applicable, this ESA is not being prepared pursuant to the sale of the property.

3.6 Reason for Performing Phase I

The reason for performing this Phase I ESA is for financial transactions/development initiative.

3.7 Other User Provided Information

Phase I and II ESAs were previously conducted for the site on behalf of the user. These reports are discussed in Section 5.1.

4.0 STANDARD ENVIRONMENTAL RECORD SOURCES

Federal and state environmental databases were reviewed in accordance with ASTM E-1527 Standards to determine if the site or nearby surrounding properties are listed on these databases. The databases were searched for the areas within the ASTM recommended search distance, unless otherwise noted. Reviewed databases are listed below. A copy of the database report is included in Appendix E.

4.1 Federal National Priorities List (NPL) Facilities (Listed and De-Listed)

The subject site was not listed as a NPL hazardous waste facility. No NPL facilities were listed within one mile of the subject site.

4.2 Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Hazardous Waste Facility List

The subject site was not listed as a CERCLA hazardous waste facility. In addition to the Hudson River PCBs, one CERCLA hazardous waste facility was listed within ½ mile of the subject site. The facility is the Patclin Chemical Company, 66 Alexander Street, located approximately 0.38 miles southwest of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.3 Federal Resource Conservation and Recovery Act (RCRA) Treatment, Storage and Disposal (TSD) Facilities List

The subject site was not listed as a RCRA TSD facility. No RCRA TSD facilities were listed within ½ mile of the subject site.

4.4 Federal RCRA Generators List and Corrective Action List

The subject site was not listed on the RCRA generator list. No immediately adjoining parcels were listed on the RCRA generator list.

The subject site was not listed as a RCRA Corrective Action facility. No RCRA Corrective Action facilities were listed within one mile of the subject site.

4.5 Federal Emergency Response Notification System (ERNS) List

The subject site was not listed on the ERNS list.

4.6 Federal Institutional Control and Engineering Control Registries

The subject site was not listed on the Federal Institutional Control or Engineering Control registries.

4.7 State/Tribal Hazardous Waste Facility List

The subject site was not listed as a State or Tribal hazardous waste facility. No State or tribal hazardous waste facilities were listed within one mile of the subject site.

4.8 State/Tribal Solid Waste Facility List

The subject site was not listed on the State or Tribal solid waste facility list. One State listed solid waste facility was listed within ½ mile of the subject site. The facility is Danny's Towing, 98-100 Warburton Avenue, located approximately ¼ mile south of the site. Based on area topography, this facility does not appear to be located hydraulically up-gradient relative to the subject site.

4.9 State Petroleum Bulk Storage (PBS) Tank and Chemical Bulk Storage (CBS) Facilities

The site was not listed on the State PBS or CBS facilities list.

One immediately adjoining property was listed on the State PBS facilities list. The facility is the 188 Warburton Avenue Site, 188 Warburton Avenue, located west of the site. Although this facility adjoins the site to the west, the tanks associated with this facility were located near the corner of Willow Place and Warburton Avenue and are not located hydraulically up-gradient relative to the subject site.

4.10 State/Tribal Leaking Storage Tanks List

The site was not listed on the State or Tribal leaking storage tank list. Eighty-six (86) leaking storage tank incidents were listed within ½ mile of the site. Of these one of the leaking tank incidents is listed for an immediately adjoining property. Spill No. 0413255 is listed for "Fisher" at 26 Willow Place, which is the site's northeastern adjoining property and is considered hydraulically up-gradient of the site with respect to inferred groundwater flow direction. According to the database report and the NYSDEC Spill Record, an unknown quantity of fuel oil has impacted soils at this property. The spill was issued a closed status on March 16, 2015.

The remaining leaking tank incidents are also listed as closed.

4.11 State/Tribal Institutional Control and Engineering Control Registries

The subject site was not listed on State or Tribal Institutional Control or Engineering Control registries.

4.12 State/Tribal Voluntary Cleanup Program (VCP) List

The site was not listed on the state or tribal VCP list. Five VCP facilities and two Environmental Restoration Program (ERP) facilities were listed within ½ mile of the site. Based on area topography, these facilities do not appear to be located hydraulically up-gradient relative to the subject site.

4.13 State/Tribal Brownfields List

The site is a portion of the New York State Brownfield Cleanup Program under the name Cottage Place Gardens Phase 3. The site is identified as Phase 3A; and a non-contiguous parcel, located approximately 300 feet west of the site at 209 Warburton Avenue, is identified as Phase 3B. Contaminates within site soils have been identified as metals and semi-volatile organic compounds. These contaminates were identified during the completion of a Phase II ESA of the site as further discussed in Section 5.1. (The site was not listed in the database report as the Cottage Place Gardens Phase 3 project was recently submitted to the NYSDEC.)

Nineteen Brownfields facilities were listed within ½ mile of the subject site. One of the Brownfields facilities adjoins the subject site. The facility is the 188 Warburton Avenue Site which adjoins the site to the west. The 188 Warburton Avenue Site is in the process of receiving a certificate of completion as remediation has been completed. This brownfield is considered hydraulically down-gradient of the site with respect to inferred groundwater flow direction.

4.14 Applicable State Lists

The New York State Department of Environmental Conservation (NYSDEC) spills database was reviewed to determine if spills have occurred at the subject site or adjoining parcels. No spills were listed for the subject site.

The following spills were listed for the immediately adjoining parcels:

- Spill No. 0412121, Fisher, 26 Willow Place, located east of the northern portion of the site. Spill closed on February 17, 2005.

- Spill No. 0508589, Habitat for Humanity, 27 Willow Place, located north of the site. Spill closed on January 20, 2011.
- Spill No. 1308669, 188 Warburton Avenue, located west of the site. Spill closed on March 17, 2014.

The 188 Warburton Avenue spill is considered down-gradient relative to the subject site and 27 Willow Place appears to be located cross-gradient relative to the subject site. Although 26 Willow Place appears to be located up-gradient relative to the site, petroleum related impacts were not identified in boring locations proximate to the spill completed in as a function of the 2014 Phase II ESA assessment. (See Section 5.1.)

5.0 RECORDS REVIEW AND INTERVIEWS

5.1 Previous Environmental Site Assessments

A Phase I ESA was completed for Cottage Place Gardens, inclusive of the subject site in 2014 by C.T. Male: (The Phase I ESA excluded Buildings 10 and 11). At the time of the assessment the site was used as a public housing complex. The following RECs were identified:

- A leaking fuel oil tank has impacted soils on the site's northeast adjoining 26 Willow Place property, which is located hydraulically up-gradient of the subject site with respect to inferred groundwater flow direction. (This property adjoins the current site boundaries at the northeastern corner).
- Petroleum impacted soils and groundwater from the 33 Ashburton Avenue Brownfields site have migrated onto the subject site. (This property does not adjoin the boundaries of the current site, but is located approximately 260 feet south of the site).
- A 1917 historical Sanborn Map has identified a "Garage" structure on southeastern portions of the site. (Historic garage is located outside the bounds of the site).
- Two, out of service, 20,000 gallon underground fuel oil tanks are currently located beneath the site, adjacent east of Building 12. The tanks were taken out of service approximately three years ago when the site boilers were converted to natural gas. (Tanks are located outside the bounds of the site).

A Phase II ESA was conducted in February 2015 to evaluate subsurface conditions and the overall environmental quality of site soils and groundwater. The Phase II ESA involved the advancement of 17 soil borings of which 16 were converted into monitoring wells to aid in the collection of soil and groundwater samples for subjective screening and laboratory analysis. Advancement of the test borings also aided in evaluating the site's subsurface conditions. Of the 16 monitoring wells, seven (7) fell within the bounds of the site. The boring that was not converted into a monitoring well was advanced outside of the bounds of the site.

One sample from each of the test boring was submitted for laboratory analysis. The selection of the samples for laboratory analysis was based on perceived evidence of subjective impacts and the occurrence of uncontrolled soil/fill materials. The

samples were analyzed for the Target Compound List (TCL) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and PCBs, and the Target Analyte List (TAL) for metals including cyanide. Due to the absence of groundwater in the monitoring wells, groundwater samples were not collected from the monitoring wells located within the bounds of the site.

Subsurface conditions at each of the borings generally consisted of brown sand and silt with varying percentages of gravel, or brown sand with varying percentages of silt and gravel. Fill material, consisting primarily of red brick and ash with less frequent occurrences of cinder and coal, was encountered in most of the borings. Subjective impacts to soils were not encountered at any of the test borings. Photoionization (PID) readings were below 3 parts per million (ppm) and the recovered soil samples did not exhibit staining and/or chemical/petroleum-type odors.

Up to four (4) metals (copper, lead, mercury and zinc) were detected at concentrations exceeding Soil Cleanup Objectives (SCOs) for Unrestricted Use Sites promulgated in 6 NYCRR Part 375 SCOs in the soil samples collected from the site. Additionally, two SVOCs (Chrysene and Benzo(b)fluoranthene) were detected above SCOs in fill materials at the 2.5 to 5 foot depth interval at boring B-E, which was advanced near the southwestern corner of Building 7.

The text portions of the previous ESA reports are included in Appendix D.

5.2 Aerial Photographs

Aerial photographs were reviewed for the years 1954, 1966, 1974, 1989 and 1994 as provided by Environmental Data Resources (EDR). The photos depict three buildings on the subject site consistent with present day conditions. Aerial photographs were reviewed for the years 2005 and 2010 from Google Earth. The site appears similar to current conditions on these photographs with the exception that the parking area located on the southeastern portion of the site is a basketball court on the photographs. The aerial photographs are included in Appendix A as Figures 3A-3G. The boundaries depicted on the photographs are for schematic purposes only and do not represent the actual boundaries of the site.

5.3 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps were reviewed for the years 1886, 1898, 1917, 1942, 1951, 1956, 1957, 1971, 1978, 1989, 1990, 1991 and 2004. The maps depict the following:

1886, 1898, 1917 and 1942 maps: These maps show the site developed with multiple structures labeled as dwellings and as stores. Two roads transect the site; Wood Place and Cottage Place.

1951, 1956, 1957, 1971, 1978, 1989, 1990, 1991 and 2004 maps: These maps show the site developed with the three current apartment buildings consistent with present day conditions.

The Sanborn maps are included in Appendix A as Figures 4A-4M. Boundaries depicted on the maps are for schematic purposes only and do not represent the actual boundaries of the site.

5.4 Information From Local Official(s)

A Freedom of Information Law (FOIL) request was submitted to the City of Yonkers Clerk requesting documents from the following departments: Assessment, Building Department, Historian, Engineering, Fire Department and Clerk. At the time of this report a response had not been received from the City of Yonkers. If pertinent information is received, it will be forwarded upon receipt.

Property assessment records were reviewed on-line from Landmax Data Systems. Site use is noted as apartments on the on-line records. On-line assessment records from the City of Yonkers note site use as apartments/public housing. Historic property record cards indicate the site buildings were constructed in 1948.

5.5 Information From Health Department Official(s)

A FOIL request was submitted to the New York State Department of Health to determine if the Department of Health has records concerning soil or groundwater contamination for the subject site. At the time of this report a response had not been received from the Department of Health. If pertinent information is received, it will be forwarded upon receipt.

5.6 Information From Current or Former Property Owner(s)/Site Manager

Mr. Mike Hardy, with the Maintenance Department for MHACY, was the site contact for this assessment and acted as a representative of the current property owner. Mr. Hardy was interviewed after the site visit and provided a tour of the site buildings and grounds. Information from Mr. Hardy is included in the appropriate sections of this report.

5.7 Information from the Site Occupants

As the occupants of the site buildings are residential tenants, they were not interviewed as a function of this assessment.

Records of communication are included in Appendix D.

6.0 SITE RECONNAISSANCE

6.1 Conditions of the Reconnaissance

6.1.1 Site Contact(s)

Mr. Mike Hardy (Maintenance Department) of MHACY was the site contact and was present during the site visit.

6.1.2 Date of Visit

The site reconnaissance was conducted on Wednesday, November 18, 2015 by Ms. Aimee Gates of C.T. Male Associates. During the site visit the weather was approximately 55°F with partly sunny skies.

6.1.3 Areas Observed

The site and surrounding areas were observed from Willow Place, Cottage Place and the approximate site boundaries. The central areas of the site were traversed and the buildings were entered including the ground level utility rooms and one representative apartment per building. Photographs taken during the site visit are included in Appendix B.

6.1.4 Limiting Conditions

Crawl spaces were not entered as a function of this assessment, but were viewed from the main ground floor level. Limited lighting in the basement crawlspaces beneath the buildings limited a clear view of conditions within these areas.

6.2 Polychlorinated Biphenyl-Containing (PCB)/Liquid Containing Equipment

No transformers or capacitors were identified on the site during the site visit.

Hydraulic oil reservoirs are located in the trash compactor rooms in each of the site buildings. Oil type staining was not observed on the concrete floor surface beneath the reservoirs.

6.3 Site Drainage

6.3.1 Site Catch Basins and Discharge Location(s)

Several catch basins were identified in grassy, concrete and asphalt covered areas throughout the site. According to the site contact, the catch basins discharge to the

City of Yonkers storm water sewer system. Staining was not observed in media surrounding the catch basins.

6.3.2 Site Surface Water Bodies/Areas

No surface water bodies were identified on the site during the site visit.

6.3.3 Building Floor Drains and Discharge Location(s)

Floor drains were observed in concrete flooring in the utility rooms, compactor rooms and hot water rooms located on the main ground floors within the site buildings. According to the site contact, all floor drains discharge to the City of Yonkers sanitary sewer system. Floor drains observed during the site reconnaissance did not emit chemical and/or petroleum type odors and staining was not observed on flooring surrounding the drains.

6.3.4 Dry Wells and Sumps

No dry wells or sumps were identified on the site during the site visit. According to the site contact, no dry wells or sumps are located on the site.

6.4 Site Waste Profile

6.4.1 Solid Wastes/Waste Deposits (Piles/Pits/Landfills/Lagoons)

Refuse generated by the site tenants is temporarily stored in garbage compactors located on the ground floor of each site buildings. No other solid wastes were identified on the site during the site visit. According to the site contact, no other solid wastes are generated, stored or disposed of on the site.

No waste deposits were identified on the site during the site visit. The site contact was not aware of waste deposits being located on the site.

6.4.2 Sludges (Generation/Storage/Disposal)

No sludge wastes were identified on the site during the site visit. According to the site contact, no sludges are generated, stored or disposed of on the site.

6.4.3 Liquids (Generation/Storage/Disposal)

No liquid wastes were identified on the site during the site visit. According to the site contact, no liquid wastes are generated, stored or disposed of on the site.

6.4.4 Wastewater Discharge(s)

No wastewater discharges were identified on the site during the site visit. According to the site contact, no wastewater is generated on the site.

6.4.5 Waste Lagoons or Disposal Pits (Current and Historic)

No waste lagoons or disposal pits were identified on the site during the site visit. According to the site contact, no current or historic waste lagoons or disposal pits are located on the site.

6.4.6 On-site Septic Systems

No septic systems were identified on the site during the site visit. The site is reportedly connected to the City of Yonkers municipal sewer system.

6.4.7 Drums/Containers

No drums of waste were identified on the site during the site visit. According to the site contact, no drums of waste are stored on the site. Smaller containers (five gallons or less) were noted within the main ground level utility rooms including floor finishes, paints, sheetrock compound and related maintenance materials. Evidence of leakage from the containers was not identified at the time of the site visit. Janitor's closets were noted to have wall mounted dispensers of cleaners.

6.5 Underground Storage Tanks (USTs) and/or Above Ground Storage Tanks (ASTs)

No underground or above ground storage tanks were identified on the site during the site visit. According to the site contact, no tanks are located within the site.

6.6 Observed Evidence of Potential or Known Site Contamination

6.6.1 Evidence of Soil Contamination/Liquid Discharges

Evidence of soil contamination or liquid discharges was not identified on the site during the site visit. Stressed vegetation was not identified on the site during the site visit. The site contact was not aware of soil or groundwater contamination from either on-site or off-site sources.

6.6.2 Soil or Surface Disturbances

No soil or surface disturbances were identified on the site during the site visit.

7.0 FINDINGS, OPINION AND CONCLUSIONS

7.1 Findings

The site has been a portion of a public housing apartment complex since its construction in the late 1940s. Prior to this time, the site was developed with multiple single and multi-family dwellings and stores since as early as 1886.

The site was not listed in the environmental database report; however, the site is a portion of a known NYS Brownfield known as Cottage Place Gardens Phase 3. The site is identified as Phase 3A; and a non-contiguous parcel, located approximately 300 feet west of the site at 209 Warburton Avenue, is identified as Phase 3B. Contaminates within site soils have been identified as metals and semi-volatile organic compounds. These contaminates were identified during the completion of a Phase II ESA of the site. Up to four (4) metals (copper, lead, mercury and zinc) were detected at concentrations exceeding SCOs for Unrestricted Use Sites promulgated in 6 NYCRR Part 375. Additionally, two SVOCs were detected above SCOs in fill materials at boring B-E, which was advanced near the southwestern corner of Building 7.

A number of facilities were listed in the environmental database report within the specified search radii.

Floor drains were observed in concrete flooring in the utility rooms and compactor rooms within the site buildings. The floor drains are reported to discharge to the City of Yonkers sanitary sewer system. Floor drains observed during the site reconnaissance did not emit chemical and/or petroleum type odors and staining was not observed on flooring surrounding the floor drains.

Containers of various maintenance products (paint, sheetrock compound, floor finish etc.) were observed in the utility rooms on the ground floor levels of the site buildings. The containers were not observed to be leaking and staining was not observed on surrounding flooring.

7.2 Opinion

It is our opinion that the information and data collected during this Phase I ESA indicates the possible presence of hazardous substances or petroleum product within the site under conditions which indicate an existing release, past release or material threat of a release. This opinion is based on the findings of the previous Phase II ESA

which identified elevated levels of metals and SVOCs within soils. Based on these findings the site was accepted in the New York State Brownfield Cleanup Program.

It is our opinion that the listing of multiple facilities within the database report in proximity to the site is considered an HREC as impacts from off-site sources were not identified during the completion of the Phase II ESA.

7.3 Conclusions

C.T. Male Associates has completed a Phase I Environmental Site Assessment for the Cottage Place Gardens Site in general conformance with the scope and limitations of ASTM Practice E 1527. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

A previous subsurface investigation of the site identified impacts to the quality of soils within the site.

7.4 Opinion Regarding Further Inquiry

Based on the findings of this ESA, further inquiry of the site is not recommended at this time. It is our understanding that the contaminated soils at the site will be addressed under the purview of the NYSDEC as it relates to its listing in the Brownfield Cleanup Program.

8.0 DEVIATIONS AND ADDITIONAL SERVICES

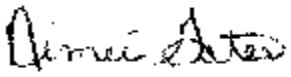
Deletions or deviations from the ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, are described in Section 1.0 of this report.

No additional services beyond the scope of ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process were completed in conjunction with this Phase I ESA.

9.0 SIGNATURES

We declare that, to the best of our professional knowledge and belief we meet the definition of Environmental Professional as defined in 312.21 of 40 CFR Part 312. And we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Respectfully submitted,
C.T. MALE ASSOCIATES



Aimee Gates
Environmental Scientist

Reviewed and Approved By:

Kirk Moline
Project Manager

ASG
November 20, 2015
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10.0 REFERENCES

PEOPLE AND AGENCIES CONTACTED

- Jesse Batus, The Community Builders, Inc.
- Mike Hardy, The Municipal Housing Authority for the City of Yonkers.
- City of Yonkers Historian.
- City of Yonkers Building Department.
- City of Yonkers Assessor's Office.
- City of Yonkers Fire Department.
- City of Yonkers Clerk's Office.
- City of Yonkers Engineer's Office.
- New York State Department of Health.

DOCUMENTS REVIEWED

- Aerial Photographs of the Yonkers Quadrangle for the years: 1954, 1966, 1974, 1989 and 1994 courtesy of Environmental Data Resources, Inc.
- Aerial Photographs of the Yonkers Quadrangle for the years: 2005 and 2010 courtesy of Google Earth.
- Environmental Database Report provided by Environmental Data Resources, Inc.
- Fire Insurance Maps from the Sanborn Map Company Archives. Late 19th Century to 1990: New York University Publications of America. Bethesda, Maryland.
- On-line assessment records provided by Landmax Data Systems.
- Phase I Environmental Site Assessment Report – Cottage Place Gardens Site, Prepared by C.T. Male, dated August 27, 2014.
- Phase II Environmental Site Assessment Report – Cottage Place Gardens Site, Prepared by C.T. Male, dated February 24, 2015.
- United States Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey.
- United States Geological Survey Topographic Map of the Yonkers, NY Quadrangle, 1998, 7.5 Minute Series.

C.T. MALE ASSOCIATES
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February 24, 2015

Mr. Jesse Batus
The Community Builders, Inc.
744 Broadway
Albany, NY 12207

Re: Phase II Environmental Site Assessment (ESA)
Cottage Place Gardens Site
City of Yonkers, Westchester County, New York
C.T. Male Project No. 14.4452

Dear Mr. Batus:

C.T. Male Associates Engineering, Surveying, Architecture & Landscape Architecture, D.P.C. (C.T. Male Associates) has competed a Phase II Environmental Site Assessment (ESA) for the above listed site. The Phase II ESA was conducted to evaluate recognized environmental conditions (RECs) identified during the course of a Phase I ESA conducted on the site in August 2014 and documented in C.T. Male Associates' Phase I ESA Report, dated August 27, 2014. RECs identified in the Phase I ESA Report included the following.

- A leaking fuel oil tank has impacted soils on the site's northeast adjoining 26 Willow Place property, which is located hydraulically upgradient of the subject site with respect to inferred groundwater flow direction to the west.
- Petroleum impacted soils and groundwater identified on the site's southeast adjoining 33 Ashburton Avenue Brownfields site were documented to have extended onto the subject site.
- A 1917 historical Sanborn Map has identified a "Garage" structure on southeastern portions of the site.
- Two, out of service, 20,000 gallon underground fuel oil tanks are currently located beneath the site, adjacent east of Building 12. The tanks were taken out of service approximately three years ago when the site boilers were converted to natural gas.

The Phase II ESA was conducted to evaluate subsurface conditions and the overall environmental quality of site soils and groundwater. The Phase II ESA involved the advancement of 17 soil borings and installation of 16 monitoring wells to aid in the collection of soil and groundwater samples for subjective screening and laboratory analysis. Advancement of the test borings also aided in evaluating the site's subsurface conditions. Site Location and Site Features Maps are attached as Figures 1 and 2, respectively in Attachment A.

Method of Investigation

Ground Penetrating Radar Survey

Prior to the commencement of the test boring activities, a Ground Penetrating Radar (GPR) survey was conducted at the site on November 21 and December 3, 2014 by New York Leak Detectors, Inc. (NYLD). The GPR was conducted to primarily aid in identifying the presence of underground utilities at the boring locations. It was also performed to evaluate for the presence of anomalies that may be representative of underground storage tanks, septic systems, dry wells or other subsurface disposal systems within the boundaries of the utility mark outs. Note that the GPR survey is a field method used to identify anomalies which may or may not represent underground storage tanks, utility lines or other buried structures/vessels, and further, if anomalies are not identified such a result is not a guarantee that underground storage tanks or other features do not exist beneath the site.

Test Borings

Seventeen borings depicted as B-A to B-Q were completed at the approximate locations depicted on Figure 2. The borings were completed on December 3, 4 and 5, 2014 by Aquifer Drilling & Testing, Inc. (ADT) employing direct-push methods utilizing a track-mounted Geoprobe unit. A C.T. Male representative was on-site for observing the drilling activities, collection of data, screening of recovered samples and selecting samples for laboratory analysis.

As depicted on Figure 2, 7 of the 17 borings were completed in the vicinity of Buildings 3, 6 and 7; which is the area of the site that will reportedly undergo the next phase of

redevelopment. Borings B-C, B-K, B-L and B-Q were completed in asphalt paved areas of the site and the remaining borings were completed within vegetated portions of the site. Borings B-F and B-G were completed in areas of the site assumed to be hydraulically downgradient of the spill identified at 26 Willow Place in the Phase I ESA. Borings B-L, B-M and B-N were completed in areas of the site assumed to be hydraulically downgradient of known petroleum contaminants in soil and groundwater identified at the 33 Ashburton Avenue site in the Phase I ESA report. Boring B-K was completed in the approximate location of a former garage identified on the southeastern portion of the site in the Phase I ESA report. Boring B-Q was completed in the vicinity of two existing 20,000-gallon underground tanks that once contained fuel oil for the apartment complex heating system.

Samples were collected at 2.5-foot intervals and visually classified in the field by a C.T. Male environmental scientist. The soil classifications for each boring are presented on the Subsurface Exploration Logs in Attachment C.

The recovered samples were subjectively screened in the field for potential impacts employing headspace analysis for organic vapors utilizing a photo ionization detector (PID) and organoleptic (sight and smell) perception. Field screening results are presented on the Organic Vapor Headspace Analysis Logs in Attachment D. One sample from each of the test boring was submitted for laboratory analysis. The selection of the samples for laboratory analysis was based on perceived evidence of subjective impacts and the occurrence of uncontrolled soil/fill materials. The samples were analyzed for the Target Compound List (TCL) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and PCBs, and the Target Analyte List (TAL) for metals including cyanide. Quality Assurance/Quality Control (QA/QC) samples consisting of a matrix spike (MS), matrix spike duplicate (MSD), duplicate and equipment blank were also submitted for laboratory analysis. The laboratory analysis was performed by Chemtech of Mountainside, New Jersey.

Monitoring Well Installation and Groundwater Sampling

Borings B-B to B-Q were converted to one (1)-inch diameter PVC monitoring wells that were protected with flush mounted curb boxes. Monitoring well construction logs are

provided in Attachment E. Soil boring B-A was not converted to a monitoring well due to shallow refusal (9.6 feet below grade) and the absence of moisture (groundwater) within the soils. Groundwater samples were collected from select monitoring wells on January 13 and 14, 2015. Due to the absence of groundwater in the monitoring wells, groundwater samples were not collected from monitoring wells MW-C to MW-K, MW-O and MW-Q. Sufficient groundwater for sample collection was present in monitoring wells MW-B, MW-L, MW-M, MW-N and MW-P. Prior to collection of groundwater samples, the monitoring wells containing sufficient groundwater were purged dry using a peristaltic pump with dedicated tubing. The wells were then sampled employing standard groundwater sampling protocols and forwarded to Chemtech for laboratory analysis. Due to limited volume of groundwater, monitoring wells MW-B, MW-L and MW-M were analyzed for TCL VOCs and TAL metals only, and monitoring well MW-P was analyzed for TCL VOCs, TCL SVOCs and TAL metals only. Monitoring well MW-N produced sufficient groundwater volume for analysis for the TCL VOCs, SVOCs, pesticides, and PCBs, the TAL for metals, and cyanide. QA/QC samples (MS, MSD, duplicate and equipment blank) were also submitted for laboratory analysis. Due to the limited volume of groundwater within the sampled wells, field parameters (pH, conductivity, temperature and turbidity) were not logged during collection of the groundwater samples.

Findings

GPR Survey

Anomalies that may be representative of unknown underground storage tanks, septic systems, dry wells or other subsurface disposal systems were not identified within the GPR survey boundaries for the utility mark out at boring locations. The GPR survey identified the southern boundary of the known underground fuel tanks at the east exterior of Building 12 to aid in determining the field location of boring B-Q. The NYLD Report is presented in Attachment F.

Subsurface Conditions

Test borings B-C, B-K, B-L, B-O and B-Q were completed within asphalt paved areas of the site. The remainder of the borings were completed within vegetated portions of the site. Subsurface conditions at each of the borings generally consisted of brown sand and silt with varying percentages of gravel, or brown sand with varying percentages of silt and gravel. Fill material, consisting primarily of red brick and ash with less frequent occurrences of cinder and coal, was encountered in all of the borings with the exception of borings B-H, B-M and B-P. The fill material was primarily encountered from the ground surface to 5 feet below grade and extended as deep as 8 feet below grade at 1 boring location (B-J). Concrete was encountered at 12 feet below grade at test boring B-H, which is located adjacent south of Building 3. The following table summarizes the depth intervals where the fill material was encountered and the type of material encountered.

Boring	Depth Interval (ft)	FILL MATERIALS						
		Sand	Silt	Gravel	Red Brick	Cinder	Ash	Coal
B-A	2.5-5	X	X	X	X		X	
B-B	2-3	X	X	X	X			
B-C	0-5	X	X	X	X		X	
B-D	1-2	X	X	X	X		X	
B-E	3-5	X	X		X	X		
B-F	0-2	X	X	X	X			
B-G	0-5	X	X	X	X		X	
B-I	2-5	X	X	X		X		X
B-J	2-8	X	X		X		X	
B-K	2-5	X	X	X	X			
B-L	0-2	X			X		X	

Boring	Depth Interval (ft)	FILL MATERIALS						
		Sand	Silt	Gravel	Red Brick	Cinder	Ash	Coal
B-N	1-3	X	X	X	X		X	X
B-O	0-4	X	X	X	X		X	
B-Q	0-0.5	X	X		X			

Fill materials consisting of red brick, cinders, ash and/or coal were not observed in soils recovered from test borings B-H, B-M and B-P.

The recovered soils became moist at depths that ranged from 2 feet below grade at test boring B-M to 10 feet below grade at test borings B-B and B-C. Wet soil conditions were not encountered in any of the borings and moist soil conditions were not encountered in borings B-H, B-M and B-P. Drilling refusal was encountered at each of the test borings at depths ranging from 9.1 feet below grade at test boring B-E to 16.1 feet below grade at test borings B-G and B-H. Based on drilling conditions encountered at the site's southeast adjoining 33 Ashburton Avenue Brownfields site, refusal was likely related to the presence of large cobbles and boulders at these depths.

Groundwater Conditions

The site slopes moderately to steeply from east to west towards the Hudson River. Based on the soil types encountered and knowledge relating to groundwater movement on both the 188 Warburton Avenue site (site's west adjoining property) and 33 Ashburton Avenue site (site's southeast adjoining property), and in consideration of the site and area topography, groundwater movement within the site is expected to be generally from the southeast to the northwest.

Subjective Analysis of Soil/Fill Samples

As presented in the Organic Vapor Headspace Analysis Logs (Attachment D), subjective impacts to soils were not encountered at any of the test borings. All PID readings were below 3 parts per million (ppm) and the recovered soil samples did not exhibit staining and/or chemical/petroleum-type odors.

Soil Sampling Laboratory Analytical Results

Analytical summary results for the samples are presented in Table 1 in Attachment B. The full analytical results are presented in Attachment G. The analytical results were compared to Soil Cleanup Objectives (SCOs) for Unrestricted Use Sites promulgated in 6 NYCRR Part 375. Parameters exceeding SCOs are highlighted in Table 1 and presented graphically in Figure 3 (Soil Exceedences) in Attachment A.

The following table summarizes the depth intervals the soil/fill were collected from for laboratory analysis. As shown, the samples collected for laboratory analysis were generally representative of fill materials, with the exception of samples collected from borings B-H, B-M and B-P, where fill materials were not encountered.

Boring	Fill Depth Interval (ft)	Sampling Depth Interval (ft)	FILL MATERIALS						
			Sand	Silt	Gravel	Red Brick	Cinder	Ash	Coal
B-A	2.5-5	2.5-5	X	X	X	X		X	
B-B	2-3	2.5-5	X	X	X	X			
B-C	0-5	2.5-5	X	X	X	X		X	
B-D	1-2	2.5-5	X	X	X	X		X	
B-E	3-5	2.5-5	X	X		X	X		
B-F	0-2	0-2.5	X	X	X	X			
B-G	0-5	2.5-5	X	X	X	X		X	
B-H	None	2.5-5							
B-I	2-5	2.5-5	X	X	X		X		X
B-J	2-8	5-7.5	X	X		X		X	
B-K	2-5	2.5-5	X	X	X	X			
B-L	0-2	0-2.5	X			X		X	
B-M	None	5-7.5							

Boring	Fill Depth Interval (ft)	Sampling Depth Interval (ft)	FILL MATERIALS						
			Sand	Silt	Gravel	Red Brick	Cinder	Ash	Coal
B-N	1-3	0-2.5	X	X	X	X		X	X
B-O	0-4	0-2.5	X	X	X	X		X	
B-P	None	7.5-9.2							
B-Q	0-0.5	0.5-2.5	X	X		X			

Fill materials consisting of red brick, cinders, ash and/or coal were not observed in soils recovered from test borings B-H, B-M and B-P.

As depicted in Table 1 in Attachment B, 3 VOCs, 2 pesticides and 1 PCB congener were detected at concentrations above the laboratory's method detection limit, but below Unrestricted Use SCOs. The VOCs were detected in several of the samples. The pesticides and PCBs were detected in select samples.

Twenty-three SVOCs were detected above the laboratory's method detection limit, with 7 SVOCs (Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene) detected above SCOs. All 7 SVOCs were detected above SCOs in fill materials at the 2.5 to 5 foot depth interval at boring B-K, which is located beneath asphalt-paved areas in the southeastern portion of the site in the vicinity of the historic garage structure identified in the Phase I ESA. Two SVOCs (Chrysene and Benzo(b)fluoranthene) were detected above SCOs in fill materials at the 2.5 to 5 foot depth interval at boring B-E, which is located at the southwestern corner of Building 7.

Twenty-two (22) metals were detected above the laboratory's method detection limit with 4 metals (copper, lead, mercury and zinc) detected at concentrations exceeding SCOs. Copper was detected above its SCO of 50 ppm at 2 of 17 sampling locations with a concentration range of 52.9 to 71.2 ppm. Lead was detected above its SCO of 63 ppm at 12 of 17 sampling locations with a concentration range of 82.3 to 1,410 ppm. Mercury was detected above its SCO of 0.18 ppm at 11 of 17 sampling locations with a concentration range of 0.183 to 0.820 ppm. Zinc was detected above its SCO of 109 ppm at 11 of 17 sampling locations with a concentration range of 111 to 521 ppm.

Groundwater Sampling Laboratory Analytical Results

Analytical summary results for the groundwater samples are presented in Table 2 in Attachment B. The full analytical results are presented in Attachment H. The analytical results were compared to NYSDEC groundwater standards and guidance values promulgated in the NYS Division of Water Technical and Operational Guidance Series (TOGS 1.1.1), dated June 1998. Parameters exceeding groundwater standards and guidance values are highlighted in Table 2 and presented graphically in Figure 4 (Groundwater Exceedences) in Attachment A.

As discussed in the previous section entitled "Monitoring Well Installation and Groundwater Sampling", due to limited groundwater volume, monitoring wells MW-B, MW-L and MW-M were analyzed for TCL VOCs and TAL metals only, monitoring well MW-P was analyzed for TCL VOCs, TCL SVOCs and TAL metals only, and monitoring well MW-N contained sufficient groundwater volume for analysis for the TCL VOCs, SVOCs, pesticides, and PCBs, the TAL for metals, and cyanide. Due to the absence or insufficient groundwater volume, groundwater samples were not collected from monitoring wells MW-C to MW-K, MW-O and MW-Q.

Pesticides and PCBs were not detected above the laboratory's method detection limit.

Three VOCs were detected above the laboratory's method detection limit with 2 VOCs detected above groundwater standards and guidance values. Acetone was detected above its guidance value of 50 parts per billion (ppb) at monitoring well MW-P (100 ppb), which is located in the vicinity of Building 12. 1,2-Dichloropropane was detected above its standard of 1 ppb at monitoring well MW-L (1.6 ppb), which is located hydraulically downgradient to the 33 Ashburton Avenue Brownfields site.

Three SVOCs were detected above the laboratory's method detection limit with 1 SVOC detected above groundwater standards and guidance values. Phenol was detected above its standard of 1 ppb ay monitoring well MW-P (2 ppb), which is located in the vicinity of Building 12.

Twenty-one metals were detected above the laboratory's method detection limit with 7 metals (Chromium, Iron, Lead, Magnesium, Manganese, Mercury and Sodium) detected above standards and guidance values. Chromium was detected above its

groundwater standard of 50 ppb at 3 of 5 sampling locations within a concentration range of 66.5 to 119 ppb. Iron was detected above its groundwater standard of 300 ppb at 5 of 5 sampling locations within a concentration range of 2,210 to 48,100 ppb. Lead was detected above its groundwater standard of 25 ppb at 3 of 5 sampling locations within a concentration range of 76.8 to 459 ppb. Magnesium was detected above its groundwater guidance value of 35,000 ppb at 1 of 5 sampling locations at a concentration of 45,000 ppb. Manganese was detected above its groundwater standard of 300 ppb at 4 of 5 sampling locations within a concentration range of 772 to 7,370 ppb. Mercury was detected above its groundwater standard of 0.7 ppb at 1 of 5 sampling locations at a concentration of 4.76 ppb. Sodium was detected above its groundwater standard of 20,000 ppb at 5 of 5 sampling locations with a concentration range of 32,000 to 1,198,700 ppb.

Conclusions

C.T. Male Associates has completed its Phase II ESA of the Cottage Place Gardens site. The following conclusions are made based on the findings of the investigations completed.

- The GPR survey did not identify anomalies that may be representative of unknown underground storage tanks, septic systems, dry wells or other subsurface disposal systems within the boundaries of the utility mark outs at the selected boring locations.
- Subsurface conditions at all of the borings generally consisted of brown sand and silt with varying percentages of gravel, or brown sand with varying percentages of silt and gravel. Fill material, consisting primarily of red brick and ash with less frequent occurrences of cinder and coal, was encountered in all of the borings with the exception of borings B-H, B-M and B-P. The fill material was generally encountered from the ground surface to 5 feet below grade and extended as deep as 8 feet below grade at 1 boring location (B-J).
- The site slopes moderately to steeply from east to west towards the Hudson River. Based on the soil types encountered and knowledge relating to

groundwater movement on both the 188 Warburton Avenue site (site's west adjoining property) and 33 Ashburton Avenue site (site's southeast adjoining property), and in consideration of the site and area topography, groundwater movement within the site is expected to be generally from the southeast to the northwest.

- Subjective impacts to soils were not encountered at any of the test borings. All PID readings were below 3 parts per million (ppm) and the recovered soil samples did not exhibit staining and/or chemical/petroleum-type odors.
- Seven SVOCs were detected above SCOs in soil/fill materials at the 2.5 to 5 foot depth interval at test boring B-K, which is located in the southeastern portion of the site. Two SVOCs were detected above SCOs in soil/fill materials at the 2.5 to 5 foot depth interval at test boring B-E, which is located in the vicinity of Building 7.
- Four metals were detected above SCOs in samples collected from the test borings. Copper was detected above its SCO at 2 of 17 test borings. Lead was detected above its SCO at 12 of 17 test borings. Mercury was detected above its SCO at 11 of 17 test borings. Zinc was detected above its SCO at 11 of 17 test borings. Based on the foregoing, lead, mercury and zinc above SCOs appear to be widespread across the site. Copper is isolated to two locations in the central (test boring B-A) and southeastern (test boring B-K) portion of the site.
- Two VOCs were detected above groundwater standards and guidance values at 2 monitoring wells. Acetone was detected above its guidance value at monitoring well MW-P, which is located in the vicinity of Building 12. 1,2-Dichloropropane was detected above its groundwater standard at monitoring well MW-L, which is located at the southeastern corner of the site.
- One SVOC (Phenol) was detected above its groundwater standard at monitoring well MW-P, which is located in the vicinity of Building 12.
- Seven metals were detected in groundwater above standards and guidance values. Chromium was detected at 3 of 5 monitoring wells, Iron was detected at 5 of 5 monitoring wells, Lead was detected at 3 of 5 monitoring wells,

Magnesium was detected at 1 of 5 monitoring wells, Manganese was detected at 4 of 5 monitoring wells, Mercury was detected at 1 of 5 monitoring wells, and Sodium was detected at 5 of 5 monitoring wells. Iron, magnesium and manganese are viewed as naturally occurring metals. Sodium detections are attributed to the application of road salt on nearby roads and roads that transect the site.

Do not hesitate to contact the undersigned at 518.786.7400, s.bieber@ctmale.com or k.moline@ctmale.com should you have any questions regarding this Phase II ESA report.

Respectfully,

C.T. MALE ASSOCIATES

Steve Bieber
Environmental Scientist

Kirk Moline
Managing Geologist

Attachments

Attachment A:	Figures
Attachment B:	Tables
Attachment C:	Subsurface Exploration Logs
Attachment D:	Organic Vapor Headspace Analysis Logs
Attachment E:	Monitoring Well Construction Logs
Attachment F:	NYLD Report
Attachment G:	Full Analytical Results – Soils
Attachment H:	Full Analytical Results - Groundwater

ATTACHMENT A

FIGURES

Image Provided By ESRI Street Map

COTTAGE PLACE GARDENS
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

N

Not to Scale

Figure 1

Site Location Map
2/9/2015
Drawn By: S. Bieber

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1 inch = 80 feet

Project Number: 14.4452
Data Source: NYSGIS Clearinghouse
Projection: NY State Plane East NAD 83 (ft)
Date: August 19, 2014
File: Fig2_CottagePlaceGardens.mxd
GIS: CHay

Legend

Project Site
Cottage Place Gardens

Tax Parcels

Figure 2: Site Features Map

City of Yonkers **Westchester County, New York**

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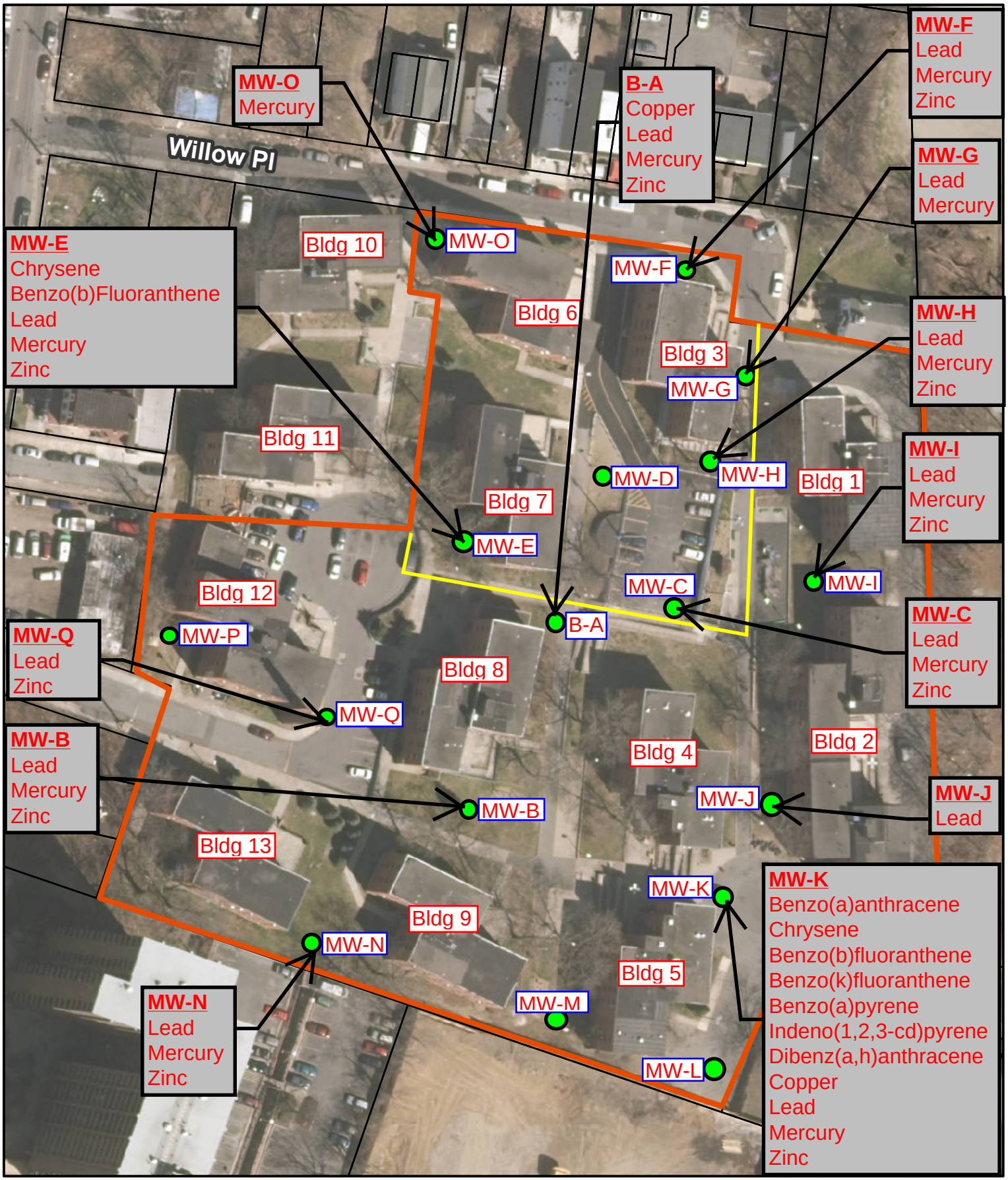
(518) 786-7400 * FAX (518) 786-7299 * WWW.CTMALE.COM
FOUNDED IN 1910



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1 inch = 80 feet

Project Number: 14.4452
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Date: August 19, 2014
File: Fig2_CottagePlaceGardens.mxd
GIS: CHay

Legend

Project Site
Cottage Place Gardens

Tax Parcels

Figure 3: Soils Exceeding Unrestricted Use SCOs

City of Yonkers **Westchester County, New York**

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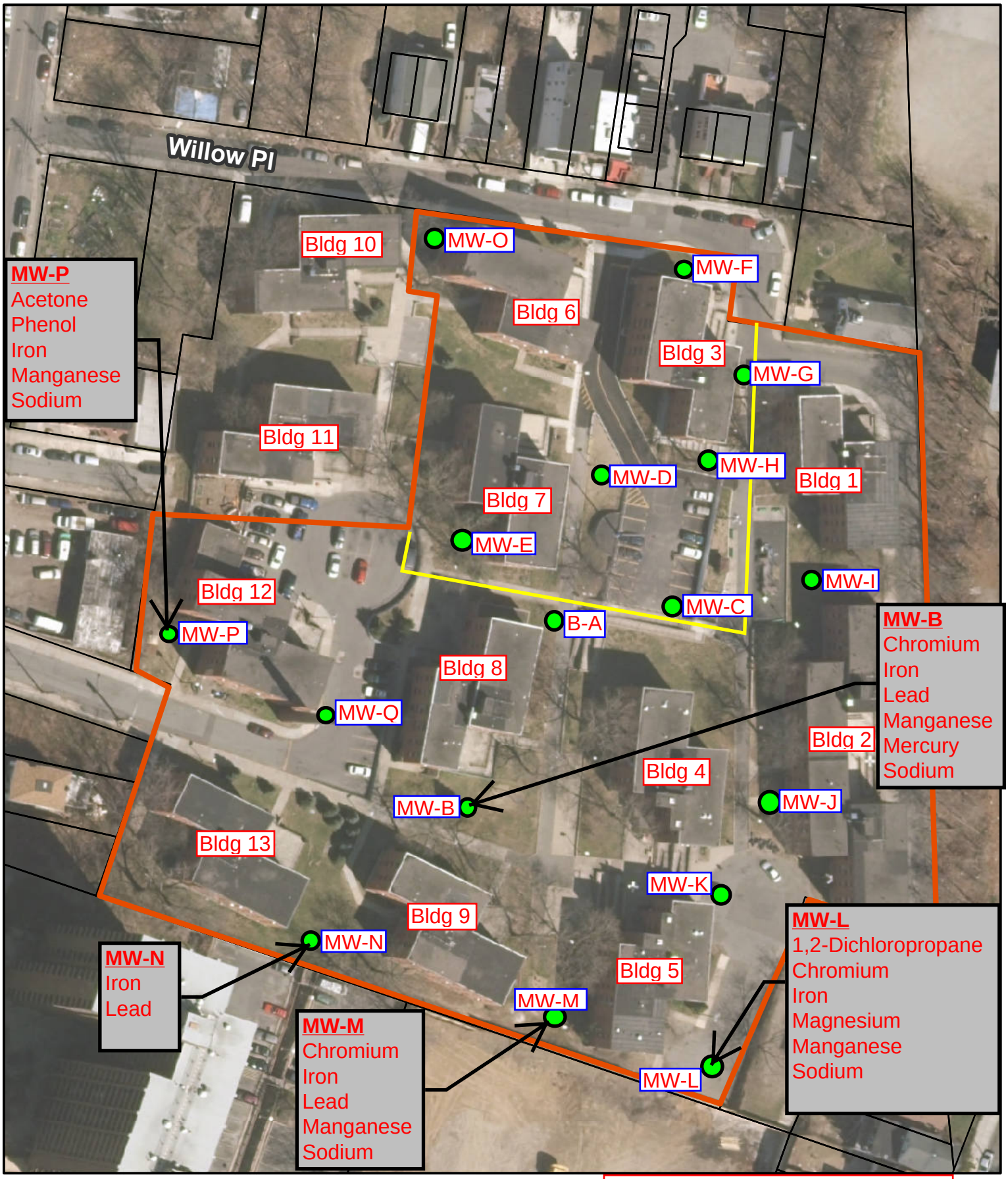
FOUNDED IN 1910



0 40 80 Feet

1 inch = 80 feet

Project Number: 14.4452
Data Source: NYSGIS Clearinghouse
Projection: NY State Plane East NAD 83 (ft)
Date: August 19, 2014
File: Fig2_CottagePlaceGardens.mxd
GIS: CHay

Legend

Project Site
Cottage Place Gardens

Tax Parcels

Figure 4: Groundwater Exceeding Standards and Guidance Values

City of Yonkers **Westchester County, New York**

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FOUNDED IN 1910

EXHIBIT 1

NYSDEC Comment Letter to the Draft RI Work Plan

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 11th Floor, Albany, NY 12233-7014
P: (518) 402-9662 I F: (518) 402-9679
www.dec.ny.gov

May 10, 2016

CPG Phase III Limited Partnership
Susan McCann
744 Broadway
Albany, NY 12207

Re: Cottage Place Gardens Phase 3 Site
Site ID No. C360150
Yonkers, Westchester County
Remedial Investigation Work Plan

Dear Ms. McCann:

The New York State Department of Environmental Conservation (the Department) has reviewed the Draft Remedial Investigation (RI) Work Plan for the Cottage Place Gardens Phase 3 Site, dated April 2016, which was prepared by C.T. Male Associates on behalf of CPG Phase III Limited Partnership. The following modifications are requested:

1) Please note that since the sub-slab vapor and indoor air samples are being collected outside the heating season (November 15th to March 31st) another round of samples will be required during the next heating season.

2) It should be stated in the RI work plan that a community air monitoring plan (CAMP) will be used during field activities and the details of the CAMP for this site should be provided or the New York State Department of Health Generic Community Air Monitoring Plan provided in Appendix C of the Health and Safety Plan should be referenced in Section 4.3.

3) Section 2.7 Site Geology:

    a. In the last sentence of the second paragraph please reference figure 2A as this figure shows the locations of the borings referenced here.

    b. In the second sentence of the fifth paragraph please reference figure 2B as this figure shows the locations of the borings referenced here.

4) Section 2.9 Previous Environmental Investigations: It should be referenced here that a copy of the Environmental reports that have been completed for the two parcels are provided in Attachment A of the RI work plan.

5) The proposed sampling duration (i.e., 8 hour vs 24 hour) of the sub-slab vapor, indoor air and outdoor air samples should be stated in the RI work plan.

6) Please ensure that the schedule in Section 5.2 is updated accordingly. Please keep in mind that work cannot begin until the Department approves the RI work plan following the 30-day comment period for the site.

7) The site boundaries of the Phase 3A parcel should be clearly identified on Figure 2A.

8) Constituents exceeding the unrestricted use soil cleanup objectives (SCOs) for the Phase 3A parcel should be provided on Figure 2A.

9) A table should be provided and referenced in the RI work plan that summarizes the results of the previous investigations that exceeded the unrestricted use SCOs and groundwater standards.

Please note that additional comments may be forthcoming from the New York State Department of Health (NYSDOH) and following the close of the public comment period.

In accordance with the Brownfield Cleanup Agreement and 6NYCRR 375-1.6(d), please indicate within 15 days whether you will modify the document, and submit the modified document within 30 days. The modified document should be submitted to the parties and in the formats specified in the Brownfield Cleanup Agreement.

If you have any questions or comments please feel free to contact me at (518) 402-9662 or jamie.verrigni@dec.ny.gov.

Sincerely,

Jamie Verrigni

Jamie Verrigni, P.E.
Project Manager
Remedial Bureau C
Division of Environmental Remediation

ec: Amen Omorogbe
Jamie Verrigni
Ed Moore
Maureen Schuck – NYSDOH
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