PHASE I ENVIRONMENTAL SITE ASSESSMENT

for

SUFFERN INDUSTRIAL PARK
25 Old Mill Road
Suffern, Rockland County, New York

Prepared For:

Treetop Development
The Glenpointe Centre West
500 Frank W Burr Boulevard #47
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Prepared By:

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Commencement Date: 20 March 2020
Final Report Completion: 13 May 2020

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EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. on behalf of Treetop Development to identify current or potential environmental concerns and Recognized Environmental Conditions (RECs) at the ±162 acre proposed development site consisting of the property at 25 Old Mill Road (Block 1, Lots 1 & 31) located in Suffern, New York and Block 1, Lot 1 located in Montebello, New York (see Figures 1 and 2). The ESA included a site inspection, review of historical information, completion of a federal/state/local environmental database search, and interviews with local and state agencies to assess current and past site conditions.

The site is approximately 162 acres, a portion of which is occupied by a former pharmaceutical manufacturing facility (now used by a catering business), associated parking, and a pond. Of the 162 acres, 125.5 acres are located in the Village of Suffern and 36.5 acres are located in the Village of Montebello. The "main campus" of the Subject Property is comprised of 50 acres of buildings, roadways and lawn areas and the remaining property is 112 acres of densely wooded hilly terrain. The four largest buildings are the Head Building, Production Building, Energy Center, and Terminal and Automated Storage / Retrieval System (AS/RS) Building. Other support buildings include a guard house, sewage pump house, waste storage shed, fire pump houses, and landscape shed. The subject property has been used for the production of pharmaceutical products throughout its developed history. The property was developed in 1964 by Geigy, Inc., who then merged with Ciba, Inc. creating Ciba-Geigy, Inc. in 1971. In 1997 Ciba-Geigy, Inc. and Sandoz, Inc. merged creating Novartis Pharmaceuticals Corporation. The pharmaceutical operations we ceased as of 2017. A summary of each of the main subject property buildings is as follows:

- The Head Building (55,000 square feet (sf) is a two-story building, constructed in 1964, and includes laboratories, offices a cafeteria, and a boiler room.
- The Production Building (425,000 sf) is a two-story building, constructed in 1964 and renovated in 1995, This building was formerly used for pharmaceutical solid dosage production including powder blending and granulation, tablet compressing and encapsulation, and bottle and blister packaging, offices; laboratories; and maintenance shop. The production building is currently occupied by a catering business.

- The Terminal and AR/RS Building (74,000 sf) was originally constructed in 1964. This building was formerly used for offices, workshop, and for AS/RS automated warehouse with racking for 10,000 pallet, automated stackers and delivery vehicles. A former solvent storage area was located in the northeastern portion of the Terminal Building. There are five loading docks with hydraulic levelers, two on the east side of the building and three on the west side.
- The Energy Center (24,000 sf) was constructed in 1970 and expanded in 1995. It is a one-story building containing high pressure steam boilers, electric chillers, air compressors, and an electrical substation. Two cooling towers are located east of the building.

Based on information obtained during the visual inspection of the subject property, review of environmental databases and historic information, and contact with federal/state/local official agencies, the following recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), historic recognized environmental conditions (HRECs), de minimis conditions and business environmental risks (BERs) that may impact proposed redevelopment of the site were identified:

Recognized Environmental Conditions

The subject property was used for production of pharmaceutical products from approximately 1964 to 2017. References to investigation and remediation conducted at the site since 1984, including letters to the New York State Department of Environmental Conservation (NYSDEC) and comment letters from NYSDEC regarding various underground storage tank and RCRA issues, and Phase I ESA reports from 2014 and 2019 which summarized areas of concern and referenced Phase II Investigation sampling, were reviewed as part of this ESA. Remedial investigation and remedial action reports documenting the details of work completed and providing figures and tables that would allow for assessment of the completeness of these activities in assessing the extent of remaining impacts to soil and groundwater at the site from former operations, were not available for review as part of this ESA. Additional documentation concerning environmental impacts related to previous operations has been requested from the NYSDEC and the Rockland County Health Department (RCHD).

As detailed reports were not available during completion of this ESA, RECs identified are based on data summaries provided by others and may not be a comprehensive assessment of all environmental concerns at the site.

It is the opinion of the environmental professional that the following represent RECs.

Spill No. 9400436 - Release of Scrubber Water to Antrim Stream

In 1994 a solution holding tank associated with a methylene chloride catalytic oxidizer was inadvertently connected to a storm drain and untreated scrubber water was discharged to the stormwater detention vault which ultimately discharges to Antrim Stream on the west side of the property. The release reportedly occurred over ten events for a total release volume of 9,680 gallons. As documented in the May 2016 Draft Phase I Environmental Assessment – Limited Phase II Investigation Report prepared by Environmental Waste Management Associates (EWMA) advanced two borings (SB-5-1 and SB-5-2, see Figure 3) to a depth of approximately 10-feet below ground surface (bgs) at the stormwater retention basin immediately downstream of the vault in the northeast corner of the property. No visual indications of a release were noted in the borings. One sample was collected from each of the borings for volatile organic compounds (VOCs) analysis, and no exceedances of the NYSDEC criteria applicable to this site were detected. Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the May 2016 EWMA draft report. It is Langan's opinion that the sampling conducted to date is not sufficient to characterize potential impacts from this release, and impacted soil, sediments and / or groundwater could be encountered during the proposed redevelopment. Langan also notes that the environmental database records do not indicate that this spill has been closed; therefore, Spill No. 9400436 constitutes a REC.

Controlled Recognized Environmental Conditions

It is the opinion of the environmental professional that the following represents a CREC:

Energy Center Oil Spill No. 9313236

A No. 2 fuel oil spill of approximately 5,000-gallons was reported at the Energy Center (see Figure 3) in 1994 when a contractor damaged a fuel transfer pipe from the existing 25,000-gallon fuel oil aboveground storage tanks (ASTs) 5 and 6. ASTs 5 and 6 are located south of the Energy Center; however, the spill occurred in the portion of the transfer pipe within the Energy Center building. Oil was released to the secondary containment; however, the integrity of the secondary containment was compromised and an estimated 2,500 to 4,000 gallons of fuel oil was released to the soil and groundwater beneath the Energy Center boiler room. Remedial actions undertaken included excavation of impacted soil[1], installation of seven monitoring wells, and installation / operation of pneumatic skimmer pumps. Oil recovery operations continued from August 1994

1 The total tonnage of impacted soil removed from the site was not identified in the documents provided to Langan.

through April 1997. Approximately 3,382 gallons of oil were recovered. No exceedances of the applicable NYSDEC groundwater quality standards were detected in downgradient well MW-4 during the 31 March 1997 groundwater sampling event. The spill site received a conditional No Further Action (NFA) letter from the NYSDEC on 7 July 1997. The NFA status was granted provided that control measures were implemented. The control measures include the existing building foundation and surrounding asphalt pavement to minimize surface water infiltration that would enhance the migration of free product, and the requirement to conduct monitoring in if excavation and/or dewatering operations occurred in the area. Based on Langan's review of the available information, Energy Center Oil Spill No. 9313236 constitutes a CREC.

Based on Langan's review of the available information, it is likely that residual free product in the unsaturated zone and / or light non-aqueous phase liquid on the groundwater table will be encountered if redevelopment related excavation activities are conducted in this area. The spill area is approximately 3,400 sf. These impacted media would need to be properly monitored and managed during redevelopment, and if off-site disposal is required, proper handling and offsite disposal would be required.

Historic Recognized Environmental Conditions

It is the opinion of the environmental professional that the following represent a HRECs:

Spill No. 9814355 - Sewer Break During Construction Activity

In March 1998 a release of wastewater was reported due to a break in the main sewer pipe leading to the pump house in the central portion of the site, west of the Production Building (see Figure 3) generating NYSDEC Spill No. 9814355. Remedial activities included the recovery of wastewater and excavation of impacted soils. The spill was closed by NYSDEC on 27 December 2004. No information was provided in the documents reviewed by Langan documenting the amount and quality of wastewater generated, the location and dimensions of the excavation, or post-excavation sampling results confirming that impacted soil was removed.

Spill No. 9903055 and Sanitary / Process Sewer Line Integrity

The main sanitary / process sewer line system runs northeast to southwest along the west side of the Head, Production, and Terminal Buildings (see Figure 3). The line receives sanitary and process wastes from laterals to the Head, Production, and Terminal Buildings, and the wastes are discharged to the local municipal sewer system. In the early 1990s groundwater infiltration was reported to have occurred at the main sewer pipeline, generating NYSDEC Spill No. 9903055[2]. The main sanitary / process sewer line was relined in the mid-1990's.

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Spill No. 9903055 was closed by NYSDEC on 16 June 1999. Subsequently, Novartis determined that exfiltration of wastewater into the surrounding soil and groundwater may have occurred prior to the relining during periods of low groundwater elevations, and the potential release of process water from historical operations was identified as an environmental concern. In 2016 EWMA advanced five soil borings (SB-4-1 through SB-4-5, see Figure 3) to a depth of approximately 15-feet bgs along the sewer line in the northern portion of the property. No visual indications of a release were noted in the area. One soil sample was collected from each boring, and a groundwater sample was collected from one temporary well point (SB-4TW). According to the text of the May 2016 EWMA draft report, the soil samples and the groundwater sample was analyzed for VOCs, and no exceedances of the applicable NYSDEC standards were detected. Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the 2016 EWMA draft report. If excavation is completed along the sewer line or removal of the line is required as part of the proposed site development, the potential that contaminant impacts may be encountered should be considered, and potential disposal or reuse of any impacted soil should be addressed in earthwork specifications.

Three Former No. 2 Fuel Oil USTs

In May 1990, two 10,000-gallon No. 2 fuel oil USTs were removed from below the southeast corner of the current Energy Center and a 15,000-gallon No. 2 fuel oil tank was removed from the exterior northeast corner of the Head Building (see Figure 3). During removal of the USTs petroleum impacted soil was encountered and the Rockland County Health Department (RCHD) notified the NYSDEC and Spill No. 9002029 was issued for the release. A total of 343 tons of petroleum impacted soil was removed from the tank excavations. The 10,000-gallon USTs had been installed within a rubber lined concrete vault which was backfilled after removal of the tank. The 10,000-gallon USTs were reportedly intact and no evidence of a release from the tanks was noted. Two post excavation soil samples were collected from the area of the 10,000-gallon tanks and analyzed for TPH. TPH was not detected in the sample collected where a fuel transfer pipe sleeve penetrated the vault. The TPH concentration in the other sample, the location of which was not reported in the historical documentation, was 930 mg/kg. Six final post-excavation samples were collected from the 15,000-gallon UST excavation and analyzed for TPH. TPH was non-detect in the six samples.

NYSDC closed this spill in October 1990. In 2016, EWMA advanced two borings (SB-3-1 and SB-3-2, see Figure 3) to a depth of approximately 15-feet bgs in the area of the former 15,000-gallon UST and two borings (SB-3-3 and SB-3-4) to a depth of approximately 10-feet bgs in the area of the former 10,000-gallon USTs. No visual indications of a release were noted in these borings. One sample was collected from each of the borings and analyzed for the associated compounds

listed in NYSDEC CP 51 Soil Cleanup Guidance Table 3 for fuel oil sites. Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the 2016 EWMA report; however, according to the text of the report, no analytes were detected in the retrieved soil samples. Based on this information and the closure of the spill case in October 1990, the three former No. 2 fuel oil USTs constitute a HREC with respect to the proposed redevelopment.

Former Abandoned Solid Waste Disposal Area and Additional Construction Debris Area

A solid waste disposal area was reported to NYSDEC by Ciba-Geigy in 1989 and Spill No. 8900950 was assigned. The area was located south of the Terminal and AR/RS Building (see Figure 3). In April through June 1990 solid waste materials consisting of trash related waste and construction / demolition debris, was excavated from this area. The source of the waste was undetermined and initial test results identified the waste was non-hazardous. As documented in a letter report prepared by Eckenfelder in 1990, the solid waste was excavated to its limits in all directions resulting in the off-site disposal of approximately 790 tons of waste. The dimensions of the final excavation were approximately 10-feet wide, 7-feet deep, and 100-feet long. Upon completion of excavation activities five confirmatory soil samples (two samples from the bottom of the excavation, two samples along the excavation side walls, and one background sample) were collected and analyzed for VOCs, semivolatile organic compounds (SVOCs), and metals. According to the 2014 Phase I ESA Report prepared by O'Brien & Gere, the detected constituent concentrations were less than the NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs). NYSDEC accepted the corrective action as indicated by the environmental database NYSDEC closure record (Spill No. 8900950) indicating "NFA" determination by the Solid and Hazardous Waste Unit. An additional construction debris area was also excavated in April through June 1990. The construction debris excavation was advanced to the limits of the construction debris in all directions. A total of 114 tons of material was disposed of off-site. Based on the information documents reviewed by Langan, Spill No. 8900950 and the additional construction debris excavation area constitutes a HREC.

Former Drum Burial Area

A buried drum area was previously located in the southwestern area of the site (see Figure 3) within a former soil staging area. In 1997 Novartis discovered five partially buried fiber-board drums containing brownish-green particulate material. In November 1997 Novartis' contractor ICF Kaiser conducted a geophysical survey to determine if additional drums were present in this area. No additional drums were identified. ICF Kaiser also collected drum samples for full Toxic Compound Leachate Procedure (TCLP) and TPH analysis. Based on the sample results, the material was believed to be waste excipient material from the manufacture of pharmaceuticals. The five drums were removed and disposed of off-site. One soil sample was collected from the drum excavation base and analyzed for TPH. This information was summarized in a 15 June 1998 letter from Novartis to NYSDEC.

In subsequent correspondence, NYSDEC stated that samples from the drum waste materials exhibited concentrations of TPH above the regulatory action level of 100 milligrams per kilogram (mg/kg) at the time. As only one soil sample was collected from the excavation base analyzed and for TPH; the area was not adequately assessed for a potential release and further investigation was conducted by EWMA in 2016. Three borings were advanced to a depth of approximately 15-feet bgs (SB-2-1, SB-2-2, and SB-2-5, see Figure 3) and two borings (SB-2-3 and SB-2-4) were advanced to a depth of approximately 20-feet bgs. According to information provided in the text of the May 2016 draft EWMA report, no visual indications of a release were reportedly noted in the area. One sample was collected from each boring and analyzed for VOCs and base neutrals (BNs) and no exceedances of the NYSDEC Part 375 UUSCOs were detected. One of the soil boring samples was also analyzed for polychlorinated biphenyls (PCBs), pesticides, and metals. No exceedances of the NYSDEC Part 375 UUSCOs were detected. One soil boring was converted into a temporary well point and a grab groundwater sample was collected and analyzed for VOCs and BNs.

In 2016 EWMA conducted a geophysical survey over the former drum burial area to the extent that the wooded site conditions permitted. No subsurface anomalies were encountered. The survey did not detect any evidence of subsurface utilities, structures or buried drums.

Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the EWMA report; however, based on the text of the report, no exceedances of the NYSDEC groundwater standards and guidance values were detected.

If disturbance of this area is required during future site redevelopment, the potential for encountering miscellaneous debris and options for disposal of this material should be considered.

Minor Spills

A total of 44 minor spills were documented in the environmental database review. The spills all occurred between 1989 and 2012 and generally consisted of minor quantities (i.e., less than one to two gallons) of substances which were immediately cleaned up by on-site personnel. All of the spills have received regulatory closure with the NYSDEC. Six of the incidents were related to freon and other gas leaks from the facility cooling system. The 38 remaining spills were for minor amounts of petroleum, waste oil, hydraulic oil, lubricating oil, ethanol, methylene chloride, sanitary waste, food grade propylene glycol, brake fluid, or transformer oil. These minor spills will all immediately remediated, and the assigned NYSDEC spill numbers were subsequently closed out. Collectively these spills constitute a HREC.

Business Environmental Risks

It is the opinion of the environmental professional that the following represent BERs:

Potential Mercury Impacted Soils

Letters dated 29 June and 13 August 1990, between Rollins Environmental Services and Ciba-Geigy and between Ciba-Geigy and NYSDEC, respectively, provide limited information concerning three drums containing mercury impacted soil that were present at the site in 1990. The details concerning the source of the mercury impacted soil (i.e., location of the excavation, post-excavation soil sample data, etc.) were not provided in the documents reviewed by Langan. Based on the absence of details regarding the source of the mercury impacts and the potential that mercury impacted soil may remain at the site, this issue is identified as a BER.

Former Hazardous Waste Storage Areas

Three former Resource Conservation and Recovery Act (RCRA) chemical storage areas (CSAs) were located at the site. The areas were designated as CSA-1- Hazardous Waste Storage Shed; CSA-2 - former drum storage pad located southwest of Hazardous Waste Storage Shed; and CSA-3 - former drum storage pad south of Hazardous Waste Storage Shed (see Figure 3). Historic operations conducted under Ciba-Geigy resulted in the classification of the site as a RCRA Treatment, Storage, and Disposal Facility (TSDF). In 1989, PRC Environmental Management, Inc. (PRC) conducted a site visit to confirm information in a preliminary assessment and identify areas of concern. No evidence of discharges was observed during PRC's February 1989 inspection. CSA's-1, -2, and -3 were also inspected during both the O'Brien & Gere and ATC Phase I ESAs and the current Langan Phase I ESA, and no evidence of discharges was observed during those inspections. No records of spills related to these CSAs was identified in the environmental database searches. Based on the documents reviewed by Langan, no environmental impacts were identified in relation to these facilities; however, as documented in the O'Brien & Gere and ATC Phase I ESAs and based on Langan's review of the available documentation, it cannot confirmed that the obligations under the RCRA corrective actions were officially fulfilled by Ciba-Geigy. Therefore, this constitutes a BER with respect to the proposed redevelopment and potential liability associated with regulatory requirements for RCRA closure.

Fill Materials

The following areas containing fill materials were identified:

- *Former Pond and Stream Fill Areas.* The review of historical United States Geological Survey (USGS) topographic Maps identified a pond in the northeast portion of the property and the stream running west from that pond in the 1943 and 1945 maps that are not depicted on later maps and that were possibly backfilled with imported fill. The current Head Building and Production Building are currently present in the approximate area of the former pond. There is the potential that impacted fill material could be encountered in this area during redevelopment related excavation and / or grading activities, and if so, this material would need to be managed in accordance with NYSDEC regulations; therefore, the former pond and stream fill areas constitute a BER with respect to the proposed redevelopment.

- *Fill Material / Construction Debris Area Southwest of Former Soil Staging Area.* Fill materials consisting of sporadic mounds of concrete rubble, asphalt, and miscellaneous metal were observed in the area southwest of former soil staging area (see Figure 3). A LSI was conducted in this area by ATC on 25 February 2019. Shallow soil borings SB-04 and SB-05 were advanced in this area. Soil samples from these borings were analyzed for VOCs, SVOCs, TAL metals, and PCBs. Constituents of concern were not identified in excess of laboratory detection limits and/or applicable CSCOs or RSCOs, with the exception of iron, which exceeded the RSCO in both samples. Based on the results of the LSI and the deed restricted commercial use of the property, these materials can remain on the subject property. If off-site disposal of these materials is required by the proposed redevelopment, these soils would need to be disposed of at a permitted and regulated disposal facility due to the exceedance of the RSCO for iron; therefore, Fill Material / Construction Debris Area Southwest of Former Soil Staging Area constitutes a BER with respect to the proposed redevelopment.

- *Fill Material Area Along Southwestern Property Boundary Adjacent to Off-Site Quarry.* An area of fill material is present along the southwestern property boundary opposite the adjacent off-site quarry. As documented in the O'Brien & Gere and ATC Phase I ESA reports and observed by Langan during the site inspection conducted under the current Phase I ESA, fill material of unknown origin was observed extending 30 to 50-feet onto the subject property. ATC conducted a Limited Site Investigation (LSI) in this area on 25 February 2019. Five shallow soil borings were advanced in this area (see Figure 4) and soil samples from the borings were analyzed for VOCs, SVOCs, Target Analyte List (TAL) metals, and PCBs. Constituents of concern were not identified in excess of laboratory detection limits and / or applicable NYSDEC Commercial Soil Cleanup Objectives (CSCOs) or Residential Soil Cleanup Objectives (RCSOs), with the exception of cobalt and iron, which exceeded their RSCOs. Based on the non-residential deed restriction on the property, no further remediation would be required for these soils if they remain on-site; however, if redevelopment results in the need for off-site disposal, these soils would need to be disposed of at a regulated and permitted disposal facility due to the exceedances of the RSCOs for cobalt and iron. Therefore, the fill material along the southwestern property boundary constitutes a BER with respect to the proposed redevelopment.

Former Agricultural Use

Historical USGS Topographic Maps identified the presence of a former orchard in the northwest portion of the property and historical aerial photographs showed former agricultural use in the central portion of the property. Based on the 1952 and 1953 aerial photographs reviewed as part

of this ESA, the site was undeveloped and consisted mostly of cleared farmland (including orchards and furrowed areas) and two ponds during that time period. The text of the May 2016 EWMA draft report documented the results from three borings (SB-1-1 through SB-1-3, see Figure 3) which were installed in the former orchard area and sampled at a depth of 0 to 6-inches below grade for analysis for metals and pesticides. No exceedances of the applicable NYSDEC standards were reportedly detected during this limited sampling. Based on the limited number of samples collected the potential that soils impacted with pesticides, herbicides, and metals related to former agricultural use constitutes a BER with respect to the proposed redevelopment.

Non-ASTM Conditions

It is the opinion of the environmental professional that the following represent Non-ASTM Conditions:

Presence of Hazardous Building Materials

As referenced in the ATC 2019 Phase I ESA report, a Site Wide Asbestos Survey Report was prepared by Environ International Corporation in January 2012[3] which identified numerous building materials that were tested and found to be asbestos containing. Based on information documented in the ATC Phase I ESA Report, approximately 7,000 square feet of spray-on insulation located above the cafeteria in the Head Building was the only asbestos-containing material (ACM) remaining at the property. The potential presence of ACM and other hazardous building materials in the remaining structures constitutes a non-ASTM condition. Abatement of ACM will be required prior to demolition of on-site buildings. In addition, due to the complex nature of pharmaceutical operations dating back to 1969, there is the potential for interior discharges from these operations to have impacted building materials. Interior building materials, such as concrete flooring, building interior walls, etc. will need to be assessed to address disposal options during redevelopment.

Wetlands

In a letter from the United States Army Corp of Engineers (USAOE) to Capital Environmental Consultants, Inc. dated 10 January 2020 USACOE stated that jurisdictional wetlands are present on the subject property. A Preliminary Wetland/Waterway Assessment was not performed as part of this ESA.

3 The January 2012 Environ report was not provided in the documents reviewed by Langan.

1.0 INTRODUCTION

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) has completed a Phase I Environmental Site Assessment (ESA) of a ±162 acre proposed development site consisting of the property at 25 Old Mill Road (Block 1, Lots 1 & 31) located in Suffern, New York and Block 1, Lot 1 located in Montebello, New York. (Figure 1).

This ESA was conducted to identify current or potential environmental concerns and/or Recognized Environmental Conditions (RECs) resulting from past or current activities on the subject property, as well as to evaluate immediately surrounding environs with the potential to impact upon the property. The assessment consisted of a site reconnaissance of all accessible property areas, a review of State and Federal environmental databases as they concern the subject property and surrounding areas, contact with Federal, State and local agencies, a review of Sanborn Fire Insurance Maps of the subject property and surrounding areas, and a review of local/county records.

The ESA was conducted in a manner consistent with industry standard and practice and in accordance with the Standards of the American Society for Testing and Materials (ASTM) E1527-13 Standard Practice for Environmental Site Assessments. Any deviations from this practice are provided in Section 11.0 of this report.

2.0 RELIANCE/LIMITATIONS

This ESA report was prepared for Treetop Development, for the Suffern Industrial Park and for the objectives of due diligence. The report is intended to be used in its entirety. Excerpts taken from this report are not necessarily representative of the assessment findings. Langan cannot assume responsibility for use of this report for any property other than the subject property addressed herein, or by any third party, without a written authorization from Langan.

Langan's scope of services, as described in the proposal dated 20 March 2020, was limited to that agreed to with Treetop Development and no other services beyond those explicitly stated are implied. No exploratory borings, sampling of soil, soil vapor, or groundwater, or laboratory analysis were performed by Langan as part of the scope of services. Reliance on this report is conditioned on agreement to the terms and conditions provided with the 20 March 2020 proposal.

This Phase I ESA was not intended to be a definitive investigation of possible environmental impacts at the subject property. The purpose of this investigation was limited to determining if there is reason to suspect the possibility of Recognized Environmental Conditions (RECs) at the subject property. It should be understood that even the most comprehensive Phase I ESA may fail to detect environmental liabilities at a particular site. Therefore, Langan cannot "insure" or "certify" that the subject property is free of environmental impacts. No expressed or implied representation or warranty is included or intended in this report, except that our services were performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession. The user is cautioned that federal, state, and local laws may impose environmental obligations that are beyond the scope of ASTM Practice E 1527-13.

The conclusions, opinions and recommendations provided in this report are based solely on the following activities:

- Visual observations of the subject property and the immediate vicinity at the time of Langan's site visit;
- Review of relevant available historical information; and,
- Correspondence and/or discussion with personnel knowledgeable about the site.

The conclusions, opinions and recommendations are intended exclusively for the purpose stated herein, at the specified subject property, as it existed at the time of our site visit.

The User is responsible for the review and identification of environmental liens, activity, and use limitations, and for ascertaining reasons for significantly lower purchase property price in accordance with Section 6 of ASTM E 1527-13. A questionnaire covering these above-concerns was provided to Treetop Development and is included as Appendix A. In addition, a similar questionnaire was provided to be completed by the property owner and is included as Appendix B. If any of these above-concerns were uncovered during the course of the Phase I ESA, they are addressed in this report.

The report findings are based in part on information provided by local, county and state officials and environmental databases from Federal and State sources. Langan assumes no responsibility for the accuracy and completeness of this information.

Visual observations discussed in this report represent conditions at the time of the site inspection and may not be representative of the past or future site conditions.

As per ASTM E1527-13, Phase I ESA Report deviations, as well as professional opinions regarding these deviations, are listed in Section 11.0.

This ESA has been prepared for the sole use of Treetop Development. This ESA should not be relied upon by other parties without the express consent of Langan and Treetop Development. In accordance with Section 4.6 of ASTM E 1527-13 and 40 CFR §312.20, a Phase I ESA may be considered valid for one year starting from the commencement date of the assessment listed on the front cover of this report. The formal property acquisition/real estate transaction must take place during this period. However, the following components must be conducted or updated within 180 days (six months) prior to the date of the property acquisition/real estate transaction:

- Interviews with past and present owners, operators and occupants;
- Searches for recorded environmental cleanup liens;
- Review of governmental records;
- Site Reconnaissance of the property and adjoining properties; and,
- The declaration by the Environmental Professional.

3.0 SITE DESCRIPTION

The subject property is designated as Block 1, Lot 1 and 31 in the Village of Suffern and Block 1, Lot 1 in the Village of Montebello. The site is approximately 162 acres, a portion of which is occupied by a former pharmaceutical manufacturing facility, a section of which is now used by a catering business, associated parking, and a pond. In addition, the site has approximately 12 acres of wetlands and approximately 150 feet of grade change.

The site is approximately 162 acres, a portion of which is occupied by a former pharmaceutical manufacturing facility (now used by a catering business), associated parking, and a pond. Of the 162 acres, 125.5 acres are located in the Village of Suffern and 36.5 acres are located in the Village of Montebello. The "main campus" of the Subject Property is comprised of 50 acres of buildings, roadways and lawn areas and the remaining property is 112 acres of densely wooded hilly terrain. The four largest buildings are the Head Building, Production Building, Energy Center, and Terminal and Automated Storage / Retrieval System (AS/RS) Building. Other support buildings include a guard

house, sewage pump house, waste storage shed, fire pump houses, and landscape shed. The subject property has been used for the production of pharmaceutical products throughout its developed history. The property was developed in 1964 by Geigy, Inc., who then merged with Ciba, Inc. creating Ciba-Geigy, Inc. in 1971. In 1997 Ciba-Geigy, Inc. and Sandoz, Inc. merged creating Novartis Pharmaceuticals Corporation. The pharmaceutical operations we ceased as of 2017. A summary of each of the main subject property buildings is as follows:

- The Head Building (55,000 square feet (sf) is a two-story building, constructed in 1964, and includes laboratories, offices a cafeteria, and a boiler room.
- The Production Building (425,000 sf) is a two-story building, constructed in 1964 and renovated in 1995, This building was formerly used for pharmaceutical solid dosage production including powder blending and granulation, tablet compressing and encapsulation, and bottle and blister packaging, offices; laboratories; and maintenance shop. The production building is currently occupied by a catering business.
- The Terminal and AR/RS Building (74,000 sf) was originally constructed in 1964. This building was formerly used for offices, workshop, and for AS/RS automated warehouse with racking for 10,000 pallet, automated stackers and delivery vehicles. A former solvent storage area was located in the northeastern portion of the Terminal Building. There are five loading docks with hydraulic levelers, two on the east side of the building and three on the west side.
- The Energy Center (24,000 sf) was constructed in 1970 and expanded in 1995. It is a one-story building containing high pressure steam boilers, electric chillers, air compressors, and an electrical substation. Two cooling towers are located east of the building.

The subject property is bound to the north by Route 287 – New York State Thruway followed by residential complexes, to the west by the historical Union Hill Quarry, to the south by railroad tracks followed by several residential complexes, a library, a monastery, and convenience store followed by Lafayette Avenue, and to the east by Hemion Road, followed by a furniture distribution center.

4.0 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

For the purpose of report completeness and to better understand the subsurface conditions, the geologic conditions in the general area of the subject property are discussed in this section.

The "Surficial Geologic Map of New York" by the New York State Museum State Geological Survey indicates that the surficial geology at the site consists of till which is generally an impermeable layer comprised of poorly sorted and variably sized clasts, outwash sand and gravel which is generally course to fine gravel with sand, proglacial fluvial depositions, well rounded and stratified, with thickness variable between 2- and 20-meters, and bedrock which is exposed or generally within 1-meter of the surface. The "Bedrock Geologic Map of New York" by the New York State Museum State Geological Survey indicates that the bedrock geology at the site consists of the Hammer Creek Formation which is comprised primarily of conglomerates.

Based on boring logs provided within the Limited Subsurface Investigation performed by ATC dated 8 March 2019, soils from 0- to 2-feet consisted of brown sandy silt with some gravels.

Based on site/area topography, groundwater flow within the overburden material is anticipated to be to the west north-west, towards Lake Antrim and the Mahwah River.

5.0 USER PROVIDED INFORMATION

A questionnaire provided for completion by the User and is included in Appendix A; however, as of the completion date of this report a completed questionnaire has not be provided by the User. If additional information is provided by the User subsequent to the issue date of this report, it will be summarized in a report addendum. Documents provided by the User are discussed in this section.

5.1 Title Records

A Title Search was not provided by the User for this ESA.

5.2 Environmental Liens or Activity and Use Limitations

Reasonably ascertainable recorded land title records and lien records that are filed under federal, tribal, state, or local law should be reviewed to identify environmental liens or activity and use limitations, if any, that are currently

recorded against the property. Any environmental liens or activity and use limitations are required to be reported to the Environmental Professional conducting the ESA per ASTM E1527-13.

No environmental liens or use limitations (engineering or institutional controls) were identified for the subject property in the radius report or by the User.

5.3 Specialized Knowledge

Specialized knowledge is defined by ASTM E 1527-13 as *"any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property*". For example, a User is involved in the same line of business as current or former occupants of the property or adjoining property and has specialized knowledge of the chemicals and processes used in this line of business.

The User did not provide specialized knowledge material related to recognized environmental conditions in connection with the property as part of this ESA.

5.4 Valuation Reduction for Environmental Issues

In a transaction involving the purchase of a parcel of commercial real estate, the User shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The User should try to identify an explanation for a lower price which does not reasonably reflect fair market value if the property were not contaminated.

No information related to a valuation reduction for environmental issues was provided to Langan.

5.5 Commonly Known Information

If the user is aware of any commonly known or reasonably ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, it is the User's responsibility to communicate such information. This information may include past uses of the property, specific chemicals that were used on site, spills or releases or environmental cleanups that have taken place.

No additional information regarding the environmental condition of the subject site was provided to Langan.

5.6 Documentation Provided by the User

The following previous environmental reports pertinent to the property located at 25 Old Mill Road were provided by Treetop Development and reviewed by Langan. The locations of various features referenced below are shown in Figure 3.

8 June 1984 Letter from Ira D. Conklin & Sons Service Station to Ciba-Geigy

A former 1,500-gallon underground storage tank (UST) was referenced in a letter from Ciba-Geigy Corporation to the Rockland County Health Department (RCHD), dated 26 June 1984. The location of this former UST was not provided in the historical documentation. The tank apparently failed a tightness test and was removed. Ira D. Conklin & Sons prepared a letter to Ciba-Geigy stating that this 1,500-gallon tank was inspected and not believed to be leaking. It was stated that trapped air in the tank was believed to have caused the tank to fail the tank tightness tests.

26 June 1984 Letter from Ciba-Geigy to Rockland County Department of Health

Letter was prepared by Ciba-Geigy and sent to the RCHD and stated that the above referenced 1,500-gallon tank had been removed.

29 September 1988 Letter from New York State Department of Environmental Conservation (NYSDEC) to Ciba-Geigy

On 17 November 1980, Ciba-Geigy submitted a Resource Conservation and Recovery Act (RCRA) Part A permit application for its active container storage area. The closure plan for this area was submitted on 8 April 1987, and approved by NYSDEC on 1 February 1988. Ciba-Geigy submitted a closure certification to NYSDEC on 19 September 1988. Wastes generated during closure were shipped off-site on 6 October 1988. NYSDEC accepted the certification via this 29 September 1988 letter, which confirmed that the RCRA facility was closed and that the site's authority to operate as a Treatment, Storage, and Disposal Facility had been terminated.

17 July 1989 Letter from Ciba-Geigy to NYSDEC

A solid waste disposal area was reported to NYSDEC by Ciba-Geigy in 1989 and Spill No. 8900950 was assigned. This areas is identified as the Former Abandoned

Solid Waste Disposal Area on Figure 3. This letter was prepared by Ciba-Geigy for NYSDEC. It summarized previous the hazardous sampling results and included a work plan prepared by Eckenfelder, Inc. for the investigation of an abandoned solid waste disposal site. The work plan involved the installation of test pits and monitoring wells, hydrogeologic slug tests, topographic surveying, and groundwater sampling and analysis.

2 November 1989 Letter from CDM Federal Programs to USEPA

This letter from CDM Federal Programs Corporation included the Final Report describing the required corrective actions prior to the loss of the RCRA interim status for Ciba-Geigy Corporation. This report details the history of Ciba-Geigy's status concerning its application for a RCRA Part A Treatment, Storage, and Disposal Facility (TSDF) permit. Because the facility stored hazardous waste for greater than 90 days it had completed a Part A permit application and was subject to RCRA Corrective Action and closure requirements.

On 17 November 1980, Ciba-Geigy submitted a RCRA Part A permit application for its active container storage area. The closure plan for this area was submitted on 8 April 1987, and approved by NYSDEC on 1 February 1988. Ciba-Geigy submitted a closure certification to NYSDEC on 19 September 1988. Wastes generated during closure were shipped off-site on 6 October 1988. NYSDEC accepted the certification on 29 September 1988.

On 22 February 1989, CDM's subcontractor PRC Environmental Management, Inc. (PRC) conducted a site visit to confirm information in a preliminary assessment and identify areas of concern. As part of this effort PRC identified three Chemical Storage Areas (CSAs), which included the waste storage area in the Hazardous Waste Storage Shed (CSA-1) and two former container storage sheds just south of the Hazardous Waste Storage Shed (CSA-2 and CSA-3). Based on the inspection of these areas, PRC did not observe any signs of release.

22 May 1990 RCHD Hazardous Material Incident Report

In May 1990, two 10,000-gallon No. 2 fuel oil USTs were removed from beneath what is now the southeast corner of the current Energy Center and a 15,000-gallon No. 2 fuel oil tank was removed from the exterior northeast corner of the Head Building (see Figure 3). Impacts from these tanks were addressed under Spill No. 9002029. This 22 May 1990 RCHD Hazardous Material Incident Report

included Hazardous Material Incident Report Forms and Field Inspection Checklist Tank Removal Witness Forms completed for the RCHD.

4 June 1990 Letter from Ciba-Geigy to NYSDEC

This letter summarized above May 1990 UST removal activities including the post-excavation sample results. During removal petroleum impacted soil was encountered and the Rockland County Health Department (RCHD) representative, who was on-site, notified the NYSDEC. A total of 343 tons of petroleum impacted soil was removed from both the 10,000-gallon and 15,000-gallon UST excavations. The 10,000-gallon USTs was sound and intact with no evidence of a release. Two soil samples were collected following the removal of the 10,000-gallon tanks and analyzed for total petroleum hydrocarbons (TPH). One sample was collected where a fuel transfer pipe sleeve penetrated the vault. TPH was not detected in that sample. The TPH concentration in the other sample, the location of which was not reported in the historical documentation, was 930 milligrams per kilogram (mg/kg). Six final post-excavation samples were collected from the 15,000-gallon UST excavation and analyzed for TPH. TPH was non-detect in all six samples.

29 June 1990 Letter from Rollins Environmental Services to Ciba-Geigy

Limited information concerning three drums containing mercury impacted soil that were present at the site in 1990 was reviewed by Langan. The details concerning the source of the mercury impacted soil (i.e., location of the excavation, post-excavation soil sample data, etc.) were not provided in the documents reviewed by Langan. In their 29 June 1990 letter Rollins Environmental Services notified Ciba-Geigy that their New Jersey waste facility could not receive material for incineration.

13 August 1990 Letter from NYSDEC to Ciba-Geigy

NYSDEC prepared a letter to Ciba-Geigy placing their 90-day accumulation limit for three drums of soil contaminated with mercury and one steel control panel on hold until further documentation of efforts to find a disposal facility were presented.

1 November 1990 Letter from Eckenfelder to Ciba-Geigy

This letter was prepared by Eckenfelder to Ciba-Geigy and included the report documenting the removal of waste and restoration of the abandoned waste disposal area at the site relative to Spill No. 8900950. This areas is identified as the Former Abandoned Solid Waste Disposal Area on Figure 3. In April through June 1990 solid waste materials were excavated from this area. The solid waste

materials consisted of general trash related waste and construction / demolition debris. Solid waste was excavated to its limits in all directions resulting in the off-site disposal of approximately 790 tons of waste. Upon completion of excavation activities five confirmatory soil samples (two samples from the bottom trench, two samples along the side walls, and one background sample) were collected and analyzed to assess residual contaminants in soils. The samples analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals. The detected constituent concentrations were less than the NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs).

An additional construction debris area (see Figure 3) was also excavated in April through June 1990. The construction debris excavation was advanced to the limits of the construction debris in all directions. A total of 114 tons of material was disposed of off-site.

28 February 1997 Letter from Novartis to NYSDEC

This letter prepared by Novartis to NYSDEC included the Hazardous Waste Regulatory Fee Information form and the Annual Hazardous Waste Report for the year 1996.

19 May 1997 Spill 9313236 Progress Report for the Month of April 1997

This progress report was prepared by Novartis for the month of April 1997 and described the activities related to the fuel oil remediation project at the Boiler House location. A fuel oil spill of approximately 5,000-gallons was reported at the Energy Center in 1994. A contractor damaged a fuel transfer pipe from the existing 25,000-gallon fuel oil aboveground storage tanks (ASTs) 5 and 6. The spill occurred at the boiler room (see Figure 3). The contractor repaired the outer secondary containment piping, but failed to repair the main pipe. As a result oil was released to the secondary containment; however, the integrity of the secondary containment was compromised and an estimated 2,500 to 4,000 gallons of fuel oil was released to the soil and groundwater beneath the boiler room. Remedial actions undertaken included excavation of impacted soil, installation of monitoring wells MW-1 through MW-7 (see Figure 3), and installation / operation of pneumatic skimmer pumps[4]. Oil recovery operations continued from August 1994 through April 1997. Approximately 3,382 gallons of

4 Information concerning the extent of the soil excavation or the wells where the skimmer pumps were installed was not identified in the documents reviewed by Langan.

oil were recovered. No exceedances of the applicable NYSDEC groundwater quality standards were detected in downgradient well MW-4 during the 31 March 1997 groundwater sampling event.

Subsequent to the 19 May 1997 Spill 9313236 Progress Report the spill site received a No Further Action (NFA) letter from the NYSDEC on 7 July 1997. The NFA status was granted provided that control measures were implemented. The control measures included the building foundation and surrounding asphalt pavement to minimize surface water infiltration that would enhance the migration of free product, and the requirement to conduct monitoring in the event of excavation and/or dewatering operations occurred in the area.

7 July 1997 Letter from NYSDEC to Novartis

This letter was prepared by NYSDEC to notify Novartis that no further action is required at the site in reference to the Energy Center Spill No. 9313236.

15 June 1998 Letter from Novartis to NYSDEC

This letter summarized drum excavation activities of five fiber-board drums containing brownish-green particulate material. A former drum burial areas had been identified in the southwestern area of the site (see Figure 3). The drum burial area was within a former soil staging area. In the fall of 1997 Novartis discovered five partially buried fiber-board drums containing brownish-green particulate material in this area. As documented in a 15 June 1998 letter, Novartis stated that drum samples were submitted for full Toxic Compound Leachate Procedure (TCLP) and total petroleum hydrocarbons (TPH) analysis and based on the results, the material was believed to be waste excipient material from the manufacture of pharmaceuticals. Novartis conducted a geophysical survey in order to determine if additional drums were present in this area, and no additional drums were identified. The drums were removed and disposed of off-site[5].

9 July 1998 Letter from NYSDEC to Novartis

In this letter NYSDEC requested that Novartis perform additional TPH sampling results of the waste material from the unearthed drums and provide additional details concerning the excavation. NYSDEC stated that samples of waste materials exhibited concentrations of TPH above the regulatory action level of 100 milligrams per kilogram (mg/kg) at the time and only one soil sample was

5 The removal date and disposal documentation was no identified in the documents reviewed by Langan.

collected from the excavation base and analyzed for TPH. NYSDEC stated that the area was not adequately assessed for a potential release.

13 August 1998 Letter from Novartis to NYSDEC

This letter to NYSDEC included TPH laboratory results for that was inadvertently omitted from previous reports on the fiber drum removal from the site.

20 November 2002 Letter from NYSDEC to Novartis

This letter responds to Novartis's request concerning the status of RCRA corrective action at the Subject Property, specifically noting: "The Project Manager assigned to your facility accepted a new position. Due to personnel shortages, a new Project Manager has not been assigned to handle corrective measures at your facility. When personnel become available, a Project Manager will be assigned to evaluate what further action, if any, is required. At that time, you will be notified of this decision."

5 March 2009 Letter from Novartis to RCHD

This letter reported oil-like odor discovered in soil when installing a fence (NYSDEC Spill No. 0813037). A caller to RCHD stated that during an installation of a fence they had come across soil that has an odor of petroleum.

10 June 2009 Letter from Spectra to RCHD

This letter summarized the soil investigation performed in response to the reported discovery of adsorbed-phase hydrocarbons (NYSDEC Spill No. 0813037). All soil sample results were non-detect for all parameters and all samples. This spill was later closed on 21 October 2009 (see Section 7.0 below).

1 July 2013 Letter from Novartis to NYSDEC

This letter included the Annual Hazardous Waste Generation Summary and Hazardous Waste Reduction Plan Summary for 2012.

May 2014 Phase I Environmental Site Assessment Report

O'Brien & Gere prepared a Phase I Environmental Site Assessment on behalf of Novartis Pharmaceuticals Corporation dated 9 May 2014 for the subject property. The purpose of the assessment was to identify and provide information on recognized environmental conditions (RECs) as defined in ASTM E1527-13. O'Brien & Gere identified the Energy Center Oil Spill as a controlled recognized environmental condition (CREC). The spill was a result of damaged fuel transfer

piping leading from the existing 25,000-gallon ASTs to the boiler house. It was initially reported that approximately 5,000-gallons of No. 2 fuel oil had been released. The report identified historic recognized environmental conditions (HRECs) including the abandoned solid waste disposal area and closed spill database records. O'Brien & Gere identified the following RECs during the site assessment.

- *Former 10,000-Gallon No. 2 Fuel Oil USTs*. In May 1990, two 10,000-gallon No. 2 fuel oil USTs were removed from beneath what is now the southeast corner of the current Energy Center. The 10,000-gallon USTs was sound and intact with no evidence of a release. Two soil samples were collected following the removal of the 10,000-gallon tanks and analyzed for TPH. One sample was collected where a fuel transfer pipe sleeve penetrated the vault. TPH was not detected in that sample. The TPH concentration in the other sample, the location of which was not reported in the historical documentation, was 930 milligrams per kilogram (mg/kg). O'Brien & Gere noted that soil sample figures detailing original 1990 sample locations and excavation areas were not provided and that the use of TPH analysis to demonstrate clean closure is not currently allowed by NYSDE; therefore, O'Brien & Gere considered the 10,000-gallon No. 2 fuel oil USTs to be a REC.

- *Mercury Spill*. Letters dated 29 June and 13 August 1990, between Rollins Environmental Services and Ciba-Geigy and between Ciba-Geigy and NYSDEC, respectively provide limited information concerning three drums containing mercury impacted soil that were present at the site in 1990. The details concerning the source of the mercury impacted soil (i.e., location of the excavation, post-excavation soil sample data, etc.) were not provided. Based on the lack of documentation concerning the location of the original soil excavations and post-excavation soil data, O'Brien & Gere considered this mercury spill to be a REC.

- *Vapor Intrusion Potential from Energy Center Oil Spill*. O'Brien & Gere noted that while the remaining residual petroleum product present in soil and groundwater beneath the Energy Center is considered to be a CREC, the historical detection of VOCs in groundwater and the associated potential to cause vapor intrusion into nearby buildings is considered to be a REC.

- *Former Drum Burial Area*. O'Brien & Gere considered the former drum burial area in the soil staging area (see Figure 3) to be a REC. As noted in the June and July 1998 correspondence above, Novartis had discovered five partially buried fiber-board drums containing brownish-green particulate material in this area. Drum samples were submitted for full TCLP and TPH analysis and based on the results, the material was believed to be waste excipient material from the manufacture of pharmaceuticals. Novartis conducted a geophysical survey in order to determine if additional drums were present in this area, and no additional drums were identified. The drums were removed and disposed of off-site. In subsequent correspondence, NYSDEC stated that samples of waste materials exhibited concentrations of TPH above the regulatory action level of 100 mg/kg at the time and only one soil sample was collected from the excavation base analyzed for TPH. NYSDEC stated that the area was not adequately assessed for a potential release. As this area had not been fully closed by NYSDEC, O'Brien & Gere considered the former drum disposal area to be a REC[6].

- *Hazardous Waste Storage Areas*. Three RCRA CSAs are located at the site, as follows (see Figure 3 for locations):

  - CSA-1 is the Hazardous Waste Storage Shed;
  - CSA-2 is the former drum storage pad located southwest of Hazardous Waste Storage Shed; and
  - CSA-3 is the former drum storage pad south of Hazardous Waste Storage Shed.

  Historic operations conducted under Ciba-Geigy resulted in the classification of the site as a RCRA TSDF. Based on the 2 November 2002 correspondence from USEPA to Novartis, it could not be determined if the RCRA corrective action requirements had been officially fulfilled. O'Brien & Gere considered this uncertain regulatory status to be a REC.

6 Note that subsequent investigations were conducted in this area as described in the ATC Phase I ESA Report and the ATC Limited Site Investigation Report summarized below.

- *Unknown 1,500-gallon UST Location*. A former 1,500-gallon UST was referenced in a letter from Ciba-Geigy Corporation to the RCHD, dated 26 June 1984. The location of this former UST was not provided in the historical documentation. The tank apparently failed a tightness test and was removed. A letter from Ira Conkin & Sons, Inc. (tightness testing contractor) to Ciba-Geigy indicated that there was no evidence of a release from this tank and that the failed tightness test was likely related to trapped air in the tank. Based on the fact that the location of the former 1,500-gallon UST was not identified, O'Brien & Gere considered this UST to be a REC.

- *Sewer Line Integrity*. The main sanitary / process sewer pipeline (see Figure 3)) was relined in the mid-1990's when it was observed to have groundwater infiltration. Based on this condition, it is possible that exfiltration of process water may have occurred, particularly during low groundwater level periods. The potential release of process water over a long period of time was considered to be a REC by O'Brien & Gere.

- *Sewer Break During Construction Activity*. One spill was identified in relation to main sewer pipe located in the central portion of the site. In March 1998 a release of wastewater was reported due to a break in the main sewer pipe leading to the pump house generating NYSDEC Spill No. 9814355. Remedial activities included the recovery of wastewater and excavation of impacted soils. No information regarding the post excavation samples were reported. Based on the absence of post-excavation samples, O/Brian & Gere considered this spill to be a REC.

- *Removal of 15,000-gallon UST*. In May 1990, a 15,000-gallon No. 2 fuel oil tank was removed from the exterior northeast corner of the Head Building (see Figure 3). Impacts from this tank were addressed under Spill No. 9002029. During removal petroleum impacted soil was encountered and the RCHD representative, who was on-site, notified the NYSDEC. Six final post-excavation samples were collected from the 15,000-gallon UST excavation and analyzed for TPH. TPH was non-detect in all six samples. Based on the facts that soil samples were only analyzed for TPH, which was acceptable at the time, and a report could not be located detailing the

excavation activities, O'Brien & Gere considered the removal of the 15,000-gallon UST to be a REC[7].

- *Uncharacterized Fill Material*. O'Brien & Gere identified fill materials from unknown source(s) in the following areas: imported fill prior to building construction; soil staging / former buried drum area (approximately 2.5 acres); southwest of soil staging area (approximately 1.5 acres); small area of unknown debris in the southwest corner of the property (several empty containers / pails; quarry / Novartis property boundary; east of hazardous waste storage shed; west side of main parking lot, and sporadic locations. O'Brien & Gere considered these uncharacterized fill areas to be a REC.

- *Release of Scrubber Water to Antrim Stream*. In 1994 a solution holding tank associated with a methylene chloride catalytic oxidizer was inadvertently connected to a storm drain and untreated scrubber water was discharged to the stormwater detention vault which ultimately discharges to Antrim Stream on the west side of the property. Based the absence of water quality data pertaining to this spill event, the absence of sediment quality data, and the historical use of solvents on the subject property, O'Brien & Gere considered the potential presence of wastewater constituents in the stream sediments is considered to be a REC.

- *Herbicides/Pesticides*. As shown in a 1952 historical aerial photograph, approximately 50% of the site primarily in the northern and central portions was used for agricultural purposes. Orchards and furrowed areas were noted on the photograph. O'Brien & Gere considered the potential presence of herbicides and pesticides in soils to be a REC.

<u>May 2016 Phase I Environmental Assessment – Limited Phase II Investigation</u>

In May 2016 Environmental Waste Management Associates, Inc. (EWMA) completed a Phase I and Limited Phase II environmental investigation of the subject property. The Limited Phase II environmental investigation included the installation and sampling of 18 soil borings and two groundwater temporary well points (see Figure 3) to address the following potential areas of environmental concern:

7 Note that subsequent investigations were conducted in this area by ATC, as discussed below.

- Spill No. 9400436 - Release of Scrubber Water to Antrim Stream;
- Spill No. 9903055 and Sanitary / Process Sewer Line Integrity;
- Former Drum Burial Area;
- Three Former No. 2 Fuel Oil USTs; and
- Former Agricultural Use.

The results of this investigation are detailed in the appropriate sections of this report.

8 March 2019 Phase I Environmental Assessment

ATC Group Services LLC (ATC) prepared a Phase I Environmental Site Assessment dated 8 March 2019 for the subject property. ATCs identified 31 historic spills as historic recognized environmental conditions (HRECs). ATC identified the following RECs: buried drum area, fill material from unknown sources, the hazardous waste storage areas, and the potential outfall from the stormwater system were identified as business environmental risks. ATC categorized the three former No. 2 fuel oil USTs as a HREC. The details of this report are discussed in the appropriate sections of this report.

8 March 2019 Limited Subsurface Investigation

ATC prepared a Limited Subsurface Investigation Report dated 8 March 2019 on behalf of Sive Paget & Riesel P.C. for the subject property. A geophysical survey and five soil borings were advanced on the property to investigate two uncharacterized fill areas in the southwest corner of the property. Five shallow soil borings were advanced in these areas (see Figure 4) and soil samples from the borings were analyzed for VOCs, SVOCs, Target Analyte List (TAL) metals, and PCBs. Constituents of concern were not identified in excess of laboratory detection limits and/or applicable NYSDEC Commercial Use Soil Cleanup Objectives (CSCOs) or Residential Soil Cleanup Objectives (RSCOs), with the exception of cobalt and iron, which exceeded their RSCOs. Based on the results of the LSI and the deed restricted commercial use of the property, ATC determined that these materials could remain on the subject property.

6.0 REVIEW OF PREVIOUS LAND USE

Historic Sanborn Fire Insurance Maps and City Directory Information were requested from Environmental Data Resources (EDR) of Shelton, Connecticut. Provided are descriptions of the materials provided by these resources.

6.1 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps of the subject property and surrounding area were not found by Environmental Data Resources. No Sanborn Fire Insurance Maps were identified for the subject property. A copy of the Sanborn Map No-Coverage Report is provided in Appendix C.

6.2 Historical Aerial Photographs

In addition to the information requested from EDR, available records maintained online by Nationwide Environmental Title Research, LLC (NETR) of Tempe, Arizona including historic aerial photographs from 1952 through 2015 were reviewed, including photographs for the years 1952, 1953, 1965, 1966, 1974, 1987, 1995, 2002, 2004, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, and 2014.

1952

The 1952 aerial photograph shows the site as undeveloped and mostly cleared farmland (including orchards and furrowed areas) and two ponds. The site is bounded to the south by a railroad line. The adjacent properties are shown as undeveloped wooded and cleared land with some residential buildings. The adjacent property to the west is appears to be disturbed. Based on review of additional information this is the area of the Union Hill Quarry.

1953

The 1953 aerial photograph shows condition similar to those shown on the 1952 aerial photograph.

1965 and 1966

The 1965 and 1966 aerial photographs show the site containing one building, associated parking area, and forested areas. The adjacent properties are shown in similar conditions to those shown on the 1952 and 1953 aerial photographs with the addition of a highway to the north of the site.

1974

The 1974 aerial photograph shows the site containing an additional building and parking areas. The adjacent properties are shown in similar conditions to those shown on the 1952 and 1953 aerial photographs.

1987

The 1987 aerial photograph shows the site in similar condition to the 1974 aerial photograph. The adjacent property to the north shows additional residential developments, and the adjacent property to the east shows a commercial structure.

1995

The 1995 aerial photograph shows additional structures onsite. The adjacent properties are shown in similar conditions as 1987, with the addition of residential development to the southeast.

2002

The 2002 aerial photograph shows the site and adjacent properties in similar conditions to the 1995 aerial photograph.

The 2004, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, and 2014 aerial photographs show the site in similar condition to the 2002 aerial photograph. The adjacent properties are shown in similar conditions to the 2002 aerial photograph with the addition of water being shown at the quarry location to the west of the subject property.

6.3 Topographic Maps

In addition, available records maintained online by Nationwide Environmental Title Research, LLC (NETR) of Tempe, Arizona for historic topographic maps from 1891 through 2016 were reviewed.

The 1891 topographic map shows a train line south of the subject property and the site area is identified as Union Hill. The 1956 topographic map shows the addition of the New York thruway to the north of the site area. The 1998 topographic map shows the present day subject property buildings. The western portion of the subject property is shown to increase in elevation.

6.4 City Directory Search

City directory information was obtained from EDR in an attempt to identify past uses of the subject property and establishments in the surrounding area. As provided in the City Directory Image Report (Appendix D), business directories including city, cross-reference and telephone directories were reviewed. City directories include the site address for the years 1992 through 2017 including 1992, 1995, 2000, 2005, 2010, 2014, and 2017.

The City Directory Report for the subject property listings consists primarily of commercial and industrial listings including pharmaceutical company, fire protection, and construction companies. The following historic listings refer to businesses of potential concern that were formerly located on the subject property:

Address	Business Name	Listing Date
25 Old Mill Road	Novartis Pharmaceuticals Corp. Ciba-Geigy Corporation	2000-2017 1995-2000

Listings over the years for adjacent properties identified mostly residential and commercial businesses including a hospital, doctor offices, and a library.

7.0 REGULATORY DATABASE SEARCH

A database search report that identifies sites listed on state and federal databases within the ASTM-required radii was obtained for the property from Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. A copy of EDR's complete report is provided as Appendix E.

The report included the following databases specified by the ASTM Phase I protocol as well as non-ASTM databases (not listed):

RECOMMENDED/**REQUIRED** SEARCH DISTANCES
1.0-mile
Federal National Priority List (NPL) Federal RCRA CORRACTS Facilities List State- and Tribal-Equivalent NPL
0.5-mile
Federal Delisted NPL

RECOMMENDED/**REQUIRED** SEARCH DISTANCES
Federal CERCLIS/SEMS**
Federal CERCLIS NFRAP List/SEMS-Archive**
Federal RCRA non-CORRACTS TSD Facilities List
State- and Tribal-Equivalent CERCLIS
State and Tribal Landfill and/or Solid Waste Disposal Site Lists
State and Tribal Leaking Underground Storage Tanks (LUSTs)
State and Tribal Voluntary Cleanup Sites
State and Tribal Brownfields Sites
Subject Property and Adjacent Properties Only
Federal RCRA Generators List
State and Tribal Registered Storage Tanks
Subject Property Only
Federal ERNS List
Federal Institutional Controls/Engineering Controls Registries
State and Tribal Institutional Controls/Engineering Controls Registries

* A description of these databases and a complete listing of sites identified on the above-referenced databases is provided in the EDR Report.

** As of March 2016, SEMS replaced the CERCLIS database and SEMS-Archive replaced the CERCLIS NFRAP database.

The subject property is identified as Ciba Geigy Corp. and Novartis Pharmaceutical located at 25 Old Mill Road in the following databases searched by the EDR radius report:

- NY Spills
- CORRACTS
- RCRA NonGen/NLR
- ICIS,
- US AIRS
- FINDS
- ECHO
- Manifest
- NY UST
- NY Cooling Towers
- NY AST
- NY Tanks
- NY Manifest
- NY Airs

- MINES MRDS (Quarry)
- NY LTANKS

The Subject Property was identified in the NY Spills database. The NY Spills database includes data collected on spills reported to NYSDEC. It includes spills active as of April 1, 1986, as well as spills occurring since this date. The NY Spills for the Subject Property are identified in the table below.

Facility Name	Database	Spill Number	Incident Spill Date	Spill Status Notes
Ciba Geigy Corp.	NY Spills	9404452	1994-06-30	A hydraulic lock cylinder leaked while fixing backhoe. Spill pads used. Contaminated soil was put into drums. Spill was closed on 1994-07-06.
Novartis Pharmaceutical	NY Spills	0911959	2010-02-11	Snowplow hit cleanout pipe to septic tank onsite. Contractor hired to make repairs. Spill was closed on 2010-02-11.
Novartis Facility	NY Spills	0306216	2003-09-11	Saddle tank overflowed causing spill. Spill was being cleaned up. Spill closed 2003-11-13.
Ciba Geigy Corp	NY Spills	9313236	1994-02-08	Oil collected on concrete sump pit at back side of boiler house. IRA Conklin to clean up. Tank and some soil removed but location near building some product remains; unable to remove; DOH agrees to NFA. No dissolved in downgradient well; 07/07/97 letter sent by J. Hardy, NFA; 07/30/98 spill remediated. No further action required by RCHD or DEC.
Ciba Geigy	NY Spills	9409764	1994-10-20	1,200-gallons of #2 fuel oil was spill during cleanup. POTW and Suffern PD personnel on scene. Drain covered and spill cleaned. Spill closed 1994-10-24.
Novartis Pharmaceuticals	NY Spills	9708235	1997-10-14	1-gallon of non PCB oil was released from leak in air conditioning system. Spill closed 1997-10-25.
Novartis Pharmaceuticals	NY Spills	9708608	1997-10-23	Kettle overheated causing spill. Spill of 5-gallons of SD3A alcohol,

Facility Name	Database	Spill Number	Incident Spill Date	Spill Status Notes
				95% ethyl alcohol, and 4.8% methyl alcohol spilled to sanitary sewer and went to waste water treatment plant which was notified. Spill has been cleaned up. Spill closed 1997-11-25.
Novartis Pharmaceuticals	NY Spills	9711867	1998-01-20	Radio interference caused the catalytic oxidizer to go down, spill of .95 pounds of ethanol and .05 pounds of methylene chloride. Refer to air; 1/23/1998 CQ/RCHD referred to R.C.Bur of Air Poll. Spill closed 1998-01-23.
Novartis Pharmacy	NY Spills	0413056	2005-03-15	Leaking drill press and reported to be in process of cleaning up. Spill closed 2005-03-15.
Novartis Pharmaceuticals	NY Spills	0010093	2000-12-07	2-gallons of hydraulic oil was spilled due to equipment failure. 5/11/05 RCDOH recommends NFA at this time. Spill closed 2005-05-11.
25 Old Mill Rd	NY Spills	0105989	2001-09-05	Faulty valve on one of the kennels lead to the spill of SD3A alcohol, approximately 15-20 kilograms all cleaned up. No callback required. Spill closed 2001-09-05.
Novartis	NY Spills	0107334	2001-10-16	Novartis explained that they two 25K A/G tanks. Minor oil was found at fill port area. Cleanup completed, cause of spill is being repaired. No further action. Spill closed 2001-10-17.
Novartis	NY Spills	0200295	2002-04-09	Caller states possible oil leaked from a machine the landscaper was using in the process of being cleaned. Spill closed 2002-04-09.
Novartis Pharmaceuticals	NY Spills	0212914	2003-03-20	A pipe broke to a cooling system. Onyx environmental being contacted for the clean-up. Spill closed 2005-05-11.
Novartis Pharmaceuticals	NY Spills	9708236	1997-10-12	Leak in air conditioning system. Referred to Division of Air. Spill closed 1997-11-25.

Facility Name	Database	Spill Number	Incident Spill Date	Spill Status Notes
Novartis Pharmaceuticals	NY Spills	9708806	1997-10-27	Freon released inside building. Unknown at time of call how system released the Freon. Referred to Air. Spill closed 1997-11-25.
Novartis Pharmaceuticals	NY Spills	9801619	1998-05-02	Leaking valve, Freon release. Referred to Division of Air. Spill closed 1998-05-08.
Novartis Pharmaceuticals	NY Spills	9803876	1998-06-25	Freon R22 has dissipated in the air due to ruptured line in refrigeration unit. Spill closed 1998-06-26.
Novartis Pharmaceuticals	NY Spills	9805005	1998-07-13	Punctured freon tube discovered during routine maintenance. Notified DOA. Tube was repaired. Spill closed 1998-08-22.
Novartis Pharmaceuticals	NY Spills	9814355	1999-02-27	Crack in sewer line caused spill of unknown amount of nonhazardous waste. Spill remediated. Spill closed 2004-12-27.
Novartis Pharmaceuticals	NY Spills	9903055	1999-06-15	Wastewater discharged into waste water treatment center in Suffern. Material diluted with 30-gallons of water before discharge. Spill closed 1999-06-16.
Novartis	NY Spills	0601366	2006-05-05	6-ounces of trichloroethylene (TCE) from air compressor line leaked onto gravel and soil. Spill remediated. Spill closed 2006-05-08.
Novartis Facility	NY Spills	1112222	2012-01-19	Food grade propylene glycol released in wastewater system at facility, but contained to facility. Cleanup is complete. Spill closed 2012-01-20.
Off the Roadway	NY Spills	0605785	2006-08-18	1-pint of brake fluid spilled. Spill remediated. Spill closed 2006-09-02.
Novartis	NY Spills	0508137	2005-10-07	Compactor failed and released hydraulic oil. Spill contained on concrete. Spill closed 2005-10-11.
Novartis	NY Spills	0813037	2009-03-04	Caller stated that during an installation of a fence they came across soil that had an odor of petroleum. Unknown if spill occurred. Caller told to collect soil sample and submit results to DEC.

Facility Name	Database	Spill Number	Incident Spill Date	Spill Status Notes
				Based on closure report and agreement with RCHD NFA. Spill closed 2009-10-21.
Boiler House at Plant	NY Spills	910860	1991-05-16	Open valve was found causing spill of 3-gallons of #2 fuel oil onto soil. Material put into container. Notified RCHD. Spill closed 2004-12-20.
Ciba Geigy	NY Spills	9311535	1993-12-27	Unknown quantity of gasoline spilled on pavement. Sawdust applied and put in plastic. Spill administratively closed due to file review and information received. Spill closed 1993-12-27.
Ciba/Geigy Corp.	NY Spills	9201233	1992-04-30	Suspect seal on crane failed. Small amount of oil leaked to soil area. Spill remediated. Spill Closed 1998-01-15.
Spill Number 8900950	NY Spills	8900950	1989-04-18	Trash and chemical odors found. Consultant took tests, assessment including soil tests. Referred to S.H.W. NFA. Spill closed 1989-05-09.
Ciba Geigy Corp	NY Spills	9002029	1990-05-22	During tank removal of two 10K and one 15K tanks, contaminated soil was found. RCHD notified and will handle. Spill closed 1990-10-30.
Plant	NY Spills	9011572	1991-02-04	Unknown truck leaked waste oil in dirt. Spill remediated. Spill closed 1991-02-06.
100 Old Mill Road	NY Spills	9108711	1991-11-14	Hydraulic oil released due to equipment failure. Sorbents were applied soil was stockpiled for proper disposal. RCHD notified. Spill closed 1992-08-07.
Ciba-Geigy	NY Spills	9109358	1991-12-03	Truck crane was unloading at flatbed truck and had leaked. Very noticeable. RCHD handed in coordination with Ciba Geigy. Spill closed 1991-12-04.
CIB	NY Spills	9007448	1990-10-06	Oil spill occurred while moving a piece of equipment. Notified RCHD. Spill closed 1990-10-18.
Ciba Geigy	NY Spills	9105711	1991-08-26	Feed line to tank broke. Small amount of #2 fuel oil spilled onto

Facility Name	Database	Spill Number	Incident Spill Date	Spill Status Notes
				soil. IRA Conklin to performed cleanup. Spill closed 1991-08-30.
Ciba Geigy	NY Spills	9200737	1992-04-19	Waste oil spilled onto soil. Ciba Geigy personnel put in drum. Spill closed 1992-10-22.
Ciba Geigy	NY Spills	9206307	1992-08-31	Filter gasket leaked waste oil on lawn area. Contaminated soil removed and drummed for disposal by Ciba Geigy. Spill closed 1992-10-23.
Ciba Geigy	NY Spills	9311977	1994-01-11	Line leak resulted in spill of non PCB oil in crushed stone. Sorbents to be applied and picked up. Spill closed 1994-01-12.
Ciba Geigy Inc.	NY Spills	9007694	1990-10-15	Fork lift tipped and spilled fuel on soil area. Soil stockpiled on plastic for off-site disposal. Spill closed 1990-10-30.
Ciba Geigy	NY Spills	9201876	1992-05-15	Lube oil for machine spilled on soil. Shoveled onto plastic. Spill remediated. Spill closed 1992-05-15.
Ciba-Geigy	NY Spills	8908610	1989-11-29	Three-gallons of diesel spilled. Spill contained, cleaned up and packaged. RCHD notified. Spill closed 1989-12-01.
Transformer	NY Spills	1107137	2011-09-07	Transformer oil spilled onto roadway. Cleanup occurred on night of 9/8/2011. Spill closed 2011-09-12.
Ciba Geigy Corp.	NY Spills	9400436	1994-04-08	Pipeline discharged to storm drain instead of sanitary. Water sent out to get tested. Spill closed 1994-04-13.
Ciba-Geigy Co.	NY Spills	9202382	1992-05-28	Hydraulic hose on portable trash compactor failed. Oil leaked to paved street and storm drain to dry well. Sorbent applied to street. Spill remediated. Spill closed 1992-10-20.
Ciba Geigy Lawn	NY Spills	9202902	1992-06-10	Filter on lawn mower leaked. Impacted soil placed in 55-gallon drum. Spill closed 1992-06-11.
Ciba-Geigy Parking Zone	NY Spills	9000276	1990-04-08	Gasoline spill on soil. Ciba crew to do cleaned up. Spill closed 1990-04-25.

The Subject Property was identified in the CORRACTS database with the EPA ID NYD013238480 with NAICS codes for Pharmaceutical Preparation Manufacturing for the following dates: 1997-10-07, 1994-07-19, 1994-02-02, and 1992-09-22.

The Subject Property was identified in the RCRA NonGen/NLR database for forms received by the United States Environmental Protection Agency (USEPA) on 30 October 2017 classifying the site as a non-generator of hazardous waste. The Subject Property was identified as a historical large quantity generator for forms received by the USEPA on 16 February 2016, 5 March 2014, 12 March 2012, 9 March 2010, 3 March 2008, 1 January 2007, 28 February 2006, 27 February 2006, 26 February 2004, 25 February 2002, 1 January 2001, 26 February 1998, 6 February 1997, 5 March 1996, 28 March 1994, 25 February 1992, 1 March 1990, and 31 December 1979 for the generation of waste impacted with hazardous concentrations of arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, carbon tetrachloride, chloroform, methyl ethyl ketone, pyridine, trichloroethylene, halogenated solvents, PCBs, waste oils, discarded commercial chemical wastes, ignitable, corrosive, and reactive waste. The Subject Property was identified historically as not a generator for forms received by the USEPA on 19 November 1980. Two violations were reported for the site in the generator area on 24 July 1996 and 19 May 1986.

The Subject Property was identified in the Integrated Compliance Information System (ICIS) database which supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program. The Subject Property was identified with the FRS ID 110000807422 and for being in the AIR program.

The Subject Property was identified in the US Aerometric Information Retrieval System (AIRS) database which contains compliance data on air pollution point sources regulated by the US EPA and/or state and local air regulatory agencies. The Subject Property was identified in the US AIRS database with the Facility Registry ID 110000807422 for activity reported in 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1995, 1997, 1998, 2006, 2010, 2011, 2012, 2013, 2014, 2015, and 2016.

The Subject Property was identified in the FINDS and ECHO databases for being tracked through the RCRA, TRI, ICIS, and FRS programs as Facility Registry ID 110000807422, tracked through the RCRA program as Facility Registry ID 110008077231, and tracked through the AIR MINOR program as Facility Registry ID 110041556599. No violations were identified for this facility.

The Subject Property was identified in the NJ Manifest and NY Manifest databases for removal of hazardous material for disposal as summarized in the table below.

Ship Date	Material Description	Quantity	Database
11/9/2011	D003, F003	9,700 lbs	NJ Manifest
2/24/2016	Not Reported	Not Reported	NJ Manifest
10/10/2007	D001, F003, F002, D002, D003, U134, U088, P012	430 lbs	NJ Manifest
12/13/2005	Not Reported	Not Reported	NJ Manifest
8/22/2013	F003, D001, F005, D003, D002	8,065 lbs	NJ Manifest
8/20/2004	Not Reported	Not Reported	NJ Manifest
11/17/2004	Not Reported	Not Reported	NJ Manifest
8/19/2010	D001, D002, D003, D010, U080, U123, U218, U138, F003	137 lbs	NJ Manifest
3/16/2004	Not Reported	Not Reported	NJ Manifest
8/11/2011	D001, D002, D003, U138, F005, U134, U218	1, 025 lbs	NJ Manifest
9/23/2005	Not Reported	Not Reported	NJ Manifest
6/20/2011	D003	160 lbs	NJ Manifest
8/19/2010	F003, D001, D002	9,015 lbs	NJ Manifest
10/18/2005	Not Reported	Not Reported	NJ Manifest
2/23/2011	D001	400 lbs	NJ Manifest
3/18/2009	D001, F003	9,890 lbs	NJ Manifest
10/09/2007	D001, F003	10,850 lbs	NJ Manifest
4/2/2008	F003, D001	14,320 lbs	NJ Manifest
10/16/2007	D001, F003, F005	12,900 lbs	NJ Manifest
8/6/2009	D001, D009, U228, D002, U088, F003, U123	286 lbs	NJ Manifest
6/3/2016	F003, U002, U077, F005, U019	25 lbs	NY Manifest

The Subject Property was identified in the NY UST databases with Facility ID 3-990100 for one 15,000-gallon No. 1, 2, or 4 fuel oil underground storage tank (UST) that was installed on 1 January 1965 and closed 16 May 1990 and two 10,000-gallon No 1, 2, or 4 fuel oil UST that were installed on 1 January 1970 and closed 16 May 1990.

The Subject Property was identified in the NY Cooling Tower database which includes the locations of cooling towers registered with New York State. The Subject Property was identified for cooling towers installed on 1 June 2015 and 5 June 1995.

The Subject Property was identified in the Aboveground Storage Tank (AST) database as summarized in the table below.

Tank Size	Tank Product	Install Date	Tank Status	Closed Date
320-gallon	No. 1, 2, or 4 fuel oil	6/1/1995	In-Service	NA
275-gallon	No. 1, 2, or 4 fuel oil	9/1/2009	In-Service	NA
25-gallon	Diesel	1/1/1970	Closed/Removed	Not Reported
25,000-gallon	No. 1, 2, or 4 fuel oil	1/1/1973	In-Service	NA
250-gallon	No. 1, 2, or 4 fuel oil	1/1/1970	In-Service	NA
275-gallon	No. 1, 2, or 4 fuel oil	1/1/1964	Closed/Removed	1/8/2009
250-gallon	No. 1, 2, or 4 fuel oil	1/1/1984	Closed/Removed	Not Reported
25,000-gallon	No. 1, 2, or 4 fuel oil	1/1/1973	In-Service	NA
10,000-gallon	No. 1, 2, or 4 fuel oil	10/1/1990	Closed/Removed	5/1/1999
185-gallon	No. 1, 2, or 4 fuel oil	1/1/1986	In-Service	NA
275-gallon	No. 1, 2, or 4 fuel oil	10/1/1998	In-Service	NA
120-gallon	No. 1, 2, or 4 fuel oil	10/1/1998	In-Service	NA

The Subject Property was identified in the NY Tanks database in the Petroleum Bulk Storage Program with Facility ID 3-990100.

The Subject Property was identified in the NY Leaking Storage Tank Incident Reports (LTANKS) for the incidents summarized in the table below.

Spill Number	Spill Date	Spill Cause	Spill Closed Date
8600085	4/3/1986	Tank Test Failure	3/11/1987
9315137	3/24/1994	Tank Overfill	3/28/1994
8908610	11/29/1989	Tank Overfill	12/1/1989

The Subject Property was identified in the NY AIRS database with DEC ID 3392600013 for ASF permits issued on 16 September 2009, 18 August 1997, and 3 August 2016. All permits have expired.

As discussed in Section 5.6, subsurface investigations and removal/closure reports reviewed by Langan documented that the USTs are properly closed in accordance with city and state regulations and residual impacts in the subsurface are not present.

Surrounding Properties

Based on the large number of database records identified within one mile of the subject property (135), Langan limited the review of surrounding properties to adjacent sites and sites within 1/4-mile from the subject property. It is the environmental professional's opinion that based on the dense development of the site area, and former, current and proposed use of the site that the review of the database pertaining to this more limited area is appropriate.

Langan evaluated the following to determine whether additional environmental records with respect to these facilities, including the orphan sites, should be reviewed:

- Case status (i.e., whether a No Further Action letter has been issued or a case has been closed);
- Type of database and whether the presence of soil or ground water contamination is known;
- Distance of the site from the subject property; and,
- Whether the site is upgradient or downgradient of the subject property based on local topography and the anticipated west to northwest groundwater flow direction.

Database	No. of Sites within 1-mile	Adjacent sites (Y/N)	No. of Adjacent Sites
NPL	0	N	--

Database	No. of Sites within 1/2-mile	Adjacent sites (Y/N)	No. of Adjacent Sites
RCRA-TSDF	0	N	--

Database	No. of Sites Reported	Adjacent sites (Y/N)	No. of Adjacent Sites
SEMS-ARCHIVE	1	N	--
RCRA-LQG	2	N	--
RCRA-SQG	1	Y	1
NY SHWS	2	N	--
NJ SHWS	11	N	--
NY LTANKS	29	Y	2
NY UST	11	Y	5
NY CBS	1	N	--
NY AST	6	Y	4
NY CBS AST	1	N	--
NY TANKS	2	Y	1
NY SPILLS	9	Y	6
RCRA NonGen/NLR	4	Y	1
FINDS	1	Y	1
ECHO	1	Y	1
ROD	1	N	--
CONSENT	1	N	--
US MINES	1	Y	1
NY DRYCLEANERS	1	N	--
NY MANIFEST	5	Y	1
NJ MANIFEST	1	N	--
PA MANIFEST	1	N	--
MINES MRDS	1	Y	1
EDR MGP	1	N	--
EDR Hist Cleaner	1	N	--

Database	No. of Sites within 1/8-mile	No. Cases Open/Closed	Open Upgradient Cases	No of Adjacent Sites
LTANKS	5	0 / 5	0	2
NY Spills	9	0 / 9	0	6

Langan reviewed the information provided using the above criteria and the findings for adjacent and notable records are discussed below.

RCRA Small Quantity Generators (RCRA SQG)

The RCRA SQG database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource

Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

According to EDR, there is one RCRA SQG site located within 1/8-mile of the subject property at Tilcon New York, Inc. (Tilcon), 1 Tilton Road. 1 Tilton Road is located west and downgradient of the subject property and is identified in the RCRA SQG database for forms received on 1 July 2007 classifying the site as a SQG for the generation of waste impacted with hazardous concentrations of PCB. Historical generator information includes forms received by the USEPA on 3 March 2006 classifying the site as a Conditionally Exempt Small Quantity Generator (CESQG), 2 March 2006 classifying the site as a SQG, 24 February 2006 classifying the site as a LQG, 3 April 1995 classifying the site as not a generator, and 3 April 1990 classifying the site as a LQG. There are no violations reported for the facility.

NY LTANKS

The NY LTANKS database contains an inventory of reported leaking storage tank incidents from April 1986 to the present. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents identified within this database are either tank test failures, tank failures or tank overfills.

According to the Radius Report provided by EDR, there are five NY LTANKS sites located within 1/8-mile of the subject property; each of the spill cases associated with these sites was administratively closed between 1986 and 2000. There are two NY LTANKS sites located adjacent to the subject property.

- Spill Number 0005019 – 186 Lafayette Ave
- Tilcon New York, Inc. – 1 Tilton Road. Tilcon New York, Inc. is identified in the LTANKS database for a tank test failure spill which was reportedly closed on 1 August 1986.

Each of these sites is located over 250-feet from the subject property and the associated spill cases have been administratively closed by NYSDEC. Offsite impacts were not identified in any of the spill cases.

NY UST

The UST database contains USTs registered with the NYSDEC under the PBS division. These USTs are regulated under Subtitle I of RCRA. The data comes from the NYSDEC PBS Database.

According to the Radius Report provided by EDR, there are eleven NY UST sites located within 1/4-mile of the subject property. There are five NY UST sites located adjacent to the subject property.

- 30 Hemion Road – RCSD Union Hill Pump Station
- 22 Hemion Road – AT&T Ramapo MDC
- 1 Tilton Road – Suffern Quarry
- 174 Lafayette Avenue – Verizon New York, Inc.
- 250 Lafayette Avenue – Former Rockrest Estate

The RCSD Union Hill Pump station located at 30 Hemion Road adjacent to the east and upgradient of the subject property is identified in the NY UST database for a 1,000-gallon diesel UST which is reportedly closed and removed. No closure date is reported.

The AT&T Ramapo MDC site located at 22 Hemion Road is adjacent to the east and upgradient of the subject property is identified in the NY UST database for two 30,000-gallon No. 1, 2, or 4 fuel oil tanks which were reportedly closed and removed on 1 October 1993.

The Suffern Quarry located at 1 Tilton Road adjacent to the west and downgradient of the subject property is identified in the NY UST database for a 1,000-gallon unleaded gasoline UST which was reportedly closed and removed on 1 May 1999.

The Verizon New York, Inc. located at 174 Lafayette Ave located adjacent to the south and cross gradient of the subject property is identified in the NY UST database for a 1,000-gallon diesel UST that was reportedly closed and removed on 1 June 1990.

The Former Rockrest Estate located at 250 Lafayette Avenue located adjacent to the south and cross gradient of the subject property is identified in the NY UST database for two 2,500-gallon empty USTs that were reportedly closed and removed with no closure dates reported.

NY AST

The UST database contains USTs registered with the NYSDEC under the PBS division.

According to the Radius Report provided by EDR, there are six NY AST sites located within 1/4-mile of the subject property. There are four NY UST sites located adjacent to the subject property.

- 30 Hemion Road – RCSD Union Hill Pump Station
- 22 Hemion Road – AT&T Ramapo MDC
- 1 Tilton Road – Suffern Quarry
- 174 Lafayette Avenue – Verizon New York, Inc.

The RCSD Union Hill Pump station located at 30 Hemion Road is adjacent to the east and upgradient of the subject property is identified in the NY AST database for a 1,000-galllon diesel AST which is reportedly in service.

The AT&T Ramapo MDC site located at 22 Hemion Road is adjacent to the east and upgradient of the subject property is identified in the NY AST database for a 550-gallon diesel AST which is reportedly in service.

The Suffern Quarry located at 1 Tilton Road adjacent to the west and downgradient of the subject property is identified in the NY AST database for a 1,000-gallon waste oil AST which was reportedly closed and removed on 4 August 2003, a 500-gallon diesel AST which was reportedly closed and removed on 1 November 2006, two 3,000-gallon lubricating and cutting oil ASTs that were reportedly closed and removed on 4 August 2003, a 30,000-gallon No. 1, 2, or 4 fuel oil AST that was reportedly closed and removed on 1 February 1998, a 30,000-gallon diesel AST that was reportedly closed and removed on 1 February 1998, two 15,000-gallon diesel ASTs that were reportedly closed and removed with no closure date reported, a 25,000-gallon No. 1, 2, or 4 fuel oil AST that was reportedly closed and removed with no closure date reported, a 15,000-gallon No. 1, 2, or 4 fuel oil AST that was reportedly closed and removed with no closure date reported, a 275-gallon No. 1, 2, or 4 fuel oil AST that was reportedly closed and removed on 1 November 2006, and two 275-gallon empty ASTs that were reportedly closed and removed with no closure dates reported.

The Verizon New York, Inc. located at 174 Lafayette Ave located adjacent to the south and cross gradient of the subject property is identified in the NY AST database for a 1,500-gallon diesel AST reportedly in service.

NY TANKS

The Verizon New York, Inc. located at 174 Lafayette Ave located adjacent to the south and cross gradient of the subject property is identified in the NY TANKS database which contains records of facilities that are or have been regulated under the NYSDEC PBS program for being active in the PBS program with an expiration date of 23 June 2022.

NY Spills

The NY Spills database includes data collected on spills reported to NYSDEC. It includes spills active as of April 1, 1986, as well as spills occurring since this date.

According to the Radius Report provided by EDR, there are nine NY Spills sites located within 1/8-mile of the subject property; each of the NY Spills cases were reportedly closed between 1989 and 2019. The following NY Spills six sites are located adjacent to the subject property:

- Plaza Materials Company – Tilton Road
- Spill Number 0206259 – 30 Hemion Road
- O&R Spill – 7 Hemion Road
- Unknown – 513 Jumano Court
- Salvation Army School – 210 Lafayette Ave
- Pad Mount Transformer – 499 Jumano Court
- Residence/Apt Complex – 555 Lanape Court

The Plaza Materials Company located at 1 Tilton Road was also identified in the NY SPILLS for an unknown amount of #2 fuel oil located in a test pit. Spill was reportedly closed on 21 October 2009.

Spill Number 0206259 located at 30 Hemion Road adjacent to the east and upgradient of the subject property is identified in the NY SPILLS database for two spills, each spilling raw sewage and both reportedly closed on 17 September 2002 and 14 January 2013, respectively.

O&R Spill located at 7 Hemion Road adjacent to the southeast and upgradient of the subject property is identified in the NY SPILLS database for an unknown quantity of transformer oil. Spill was cleaned up and reportedly closed on 7 October 2019.

The Unknown spill located at 513 Jumano Court located adjacent to the north and cross gradient of the subject property is identified in the NY SPILLS database for an unknown amount of transformer oil spilled onto transformer pad. Cleanup was completed and spill was reportedly closed on 2 October 2013.

Salvation Army School located at 210 Lafayette Avenue adjacent to the south and upgradient of the subject property is identified in the NY SPILLS database for 1-gallon gasoline used to clean up tar on carpet. Spill was reportedly closed on 22 June 1997.

Pad Mount Transformer located at 499 Jumano Court adjacent to the north and cross gradient of the subject property is identified in the NY SPILLS database for 1-gallon of transformer oil that leaked to soil and grass from pad mount transformer. Cleanup completed and spill reportedly closed on 9 August 2010.

Residence/Apt Complex located at 555 Lenape Court located adjacent to the north and cross gradient of the subject property is identified in the NY SPILLS database for an unknown quantity of transformer oil spilled on pad mount. Spill reportedly cleaned up and closed on 29 July 2015.

RCRA NonGen/NLR

The RCRA NonGen/NLR database includes selective information on sites which do not presently generate, transport, store, treat and/or dispose of hazardous waste. According to the Radius Report provided by EDR, there are four RCRA NonGen/NLR sites located within 1/4-mile of the subject property. There is one RCRA NonGen/NLR site located adjacent to the subject property.

Con Edison located at 542 Kensinco Court site is adjacent to the north and cross gradient of the subject property. The site was identified in the RCRA NonGen/NLR database for forms received by the United States Environmental Protection Agency (USEPA) on 30 July 2015 classifying the site as a non-generator of hazardous waste. The site was identified as a historical conditionally exempt small quantity generator for forms received by the USEPA on 30 July 2015. No violations were reported. The Con Edison site was also identified in the FINDS and ECHO database with the Registry ID 110069696136 for being tracked through the RCRA program.

US MINES

Tilcon is listed on the US MINES database with the Mine ID 3000286.

MINES MRDS

The MINES MRDS is a listing of mineral resources within the search radii from the subject property. The Suffern Quarry is identified in the MINES MRDS with the deposit identification number 10224248 and was a producer of crushed/broken stone.

NY MANIFEST

The NY Manifest database lists and tracks hazardous waste from the generator through transporters to a TSD facility. According to the Radius Report provided by EDR, there are five NY Manifest sites located within 1/4-mile of the subject property. There is one NY Manifest site located adjacent to the subject property. The Plaza Materials Company is listed on the NY Manifest database for materials shipped on 9 May 2007. The quantity and nature of the materials shipped was not reported.

Government Databases Review Conclusions

Based on Langan's review of the sites identified above, environmental impacts to the subject property from the above identified sites are not anticipated. However, it should be noted that 135 sites were identified in the radius report and the potential exists that these urban sites may have a cumulative impact on regional groundwater or soil vapor quality. It is the opinion of the environmental profession that this represents a business environmental risk.

Additionally, the potential for vapor intrusion impacts to the subject property from onsite or nearby sources was evaluated. No specific potential vapor intrusion concerns (pVICs) were identified as part of this Phase I ESA; however, it should be noted that due to the number of spill sites identified in the area of the subject property and the associated potential for groundwater impacts in the site area, vapor intrusion issues at the site may exist. These conditions are consistent with the urban setting in which the subject property is located and do not present a specific or unique concern for the subject property.

8.0 GOVERNMENT AGENCY RECORDS REVIEW

Federal, state and local agencies were contacted via written correspondence, telephone interviews and/or personnel interviews regarding records of environmental concerns, violations, and/or permits, or any other potentially environmentally-relevant records on the subject property. In additional, government information that was readily available online

on government websites was also reviewed. A listing of agencies/individuals contacted by Langan as part of this ESA is provided in Table 1. Copies of government correspondence are provided in Appendix F.

US Environmental Protection Agency (USEPA)

Langan reviewed the online USEPA MyProperty database (https://enviro.epa.gov/facts/myproperty/). According to the USEPA database, the subject property was identified under the following Registry ID 110000807422. The subject property was identified in the USEPA database for being active in the AIRS, ICIS, FIS, NCDB, RCRA, and TRIS programs. These listings are discussed above.

US Fish and Wildlife Service (US FWS)

Information regarding critical habitats or endangered species with the vicinity of the subject property was obtained from the US FWS Information Service Information for Planning and Conservation online database (https://ecos.fws.gov/ipac/). The federally-listed threatened mammal species the northern long-eared bat and the federally-listed threatened reptile species the bog turtle are known to exist in the vicinity of the subject property.

New York State Department of Environmental Conservation Region 2

The NYSDEC Region 2 office was contacted by Langan on 30 March 2020 and online file review requests were submitted for the subject property. In an email dated 30 March 2020 Langan received a response acknowledging receipt of the request. If any additional pertinent information is provided subsequent to issuance of this report, it will be provided as an addendum. Langan also reviewed records maintained online by the NYSDEC which identified the subject property once held status as a RCRA interim status facility, and 23 spills were identified which have been discussed above in the radius report.

NYSDEC Division of Fish, Wildlife, & Marine Resources

Langan reviewed records maintained online on the NYSDEC Environmental Resource Mapper (http://www.dec.ny.gov/gis/erm/) which revealed that significant natural communities and rare plants and animals are found in the vicinity of the subject property. The NYSDEC Division of Fish, Wildlife, & Marine Resources, Natural Heritage Program was contacted by Langan and an online file review request was submitted for the subject property. To date, no response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance of this report that will change the conclusions of this report, it will be provided as an addendum.

New York State Department of Health (NYSDOH)

The NYSDOH Records Access Officer was contacted by Langan and an online form for a file review request was submitted for the subject property. In an email dated 30 March 2020, Langan received acknowledgement from the NYSDOH of the records request. To date, no response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance of this report that will change the conclusions of this report, it will be provided as an addendum.

Rockland County

Rockland County was contacted by Langan and an online file review request was submitted for the subject property. To date, no response has been received by Langan regarding this request.

Village of Suffern

The Village of Suffern was contacted by Langan and an online file review request was submitted for the subject property. To date, no response has been received by Langan regarding this request.

9.0 SITE RECONNAISSANCE

Langan conducted an inspection of the site on 9 and 17 April 2020. The inspection included a walk-through inspection of the entire site for the purposes of identifying Recognized Environmental Conditions (RECs). Typical RECs may include:

Drum storage	Dumpsters	Aboveground storage tanks	Stained areas
Drains and Sumps	Wells	Underground storage tanks	Pump stations
Waste piles	Landfills	Loading and transfer areas	Boiler rooms
Pits, Ponds, Lagoons	Swales	Process air vents	Process sinks
Storm sewers	Trenches	Detention ponds	PCBs
Impoundments	Lagoons	Floor drains and piping	Transformers
Septic systems	Dry wells	Waste treatment areas	Capacitors
Rail spurs	Incinerators	Compressor discharges	Odors
Pools of liquid	Wastewater	Stressed vegetation	Surface waters

Limiting conditions encountered during the inspection of the site included the following:

- Elevator mechanical room doors were locked and inaccessible;
- Solvent storage and dispensing room within Terminal Building was locked and inaccessible;

- Other unlabeled doors throughout Head Building and Production Building were locked;
- Current space occupied by a catering business tenant was not inspected due to health and safety concerns related to COVID-19;
- Debris and building materials covered portions of the floor in the Production Building and prevented inspection of the floor; and,
- Adjacent properties were inspected from the sidewalks along roadway, no closer access due to health and safety concerns related to COVID-19.

Photographs of the subject property taken during the site inspection are provided in Appendix G. Langan was not accompanied by anyone during the site inspection. A questionnaire was not completed by the property owner, operator, or site manager. A blank owner / operator / site manager questionnaire is provided in Appendix B, and if additional information is provided subsequent to the issue date of this report, it will be provided as an addendum. The inspection included a walk-through inspection of the entire site for the purposes of identifying RECs as detailed below

The subject property includes a vacant one and two-story former pharmaceutical building, two storage sheds, an Energy Center building, two fire protection pump houses, associated parking, and a pond. The remainder of the site is forested land.

A fire protection pump house is located in the parking lot to the west of the Production Building. A 275-gallon #2 fuel oil tank and secondary containment was observed within the pump house. No evidence of a release was observed around the secondary containment. Standing water and staining was observed on the concrete floor of the pump house around the pipework; however, the concrete floor was observed to be in-tact with no evidence of crack or breaches.

The forested areas to the west of the vacant building contained a stream and several piles of fill material and construction debris. No staining or evidence of a release was observed in those areas. The construction debris included concrete piping and concrete debris. Remnant stone building foundations were observed. A broken drum was observed in the area of unknown fill material on the southwest portion of the site, no staining or evidence of release was observed. Household trash and debris was observed in the southwest portion of the site.

The three buildings in the southern portion of the site include the sewage pump house, former landscaping storage shed, and former hazardous waste storage shed. The sewage

pump house showed no staining or evidence of release. Standing water was observed on the lower floors. A 550-gallon propane tank is located behind the sewage pump house. No staining or evidence of release was observed in the vicinity of the tank. The former hazardous waste storage shed contained household trash. The concrete floor appeared in good condition, and no staining or evidence of release was observed on the floor. Dry-type electrical transformers, one large electrical transformer, extra parts, and general trash were stored in the former landscaping storage shed. The portions of the concrete floor that were visible were in good condition and showed no signs of staining or release.

A second fire protection pump house is located to the west of the main building. A 275-gallon #2 fuel oil aboveground storage tank was observed. No staining or evidence of release was observed in vicinity of tank. Staining of concrete and standing water was observed around pipework.

Two 25,000-gallon #2 fuel oil aboveground storage tanks and associated secondary containment were observed to the south of the Energy Center Building. No staining or evidence of release was observed in vicinity of 25,000-gallon tanks. The secondary containment was observed to be filled with water.

Transformers were observed on concrete pads to the south and east of the Terminal Building and AS/RS structure. No staining or evidence of release was observed.

The Energy Center Building contains boilers, former brine and acid tanks, and associated equipment. Staining of concrete and standing water was observed throughout the Energy Center Building. Concrete floors were observed to be in good condition. Two 55-gallon drums labeled non-hazardous waste was observed. No staining or evidence of release observed around the drums. Lubricants and waste oil was observed stored on secondary containment. Cleaning chemicals and supplies were observed on a cleaning cart; no evidence of a release was observed related to the cleaning chemicals. Storage of water treatment chemicals, spare parts and 55-gallon drums of heat transfer fluid was observed, no staining in the vicinity of the storage areas was observed. A 55-gallon drum labeled hazardous waste - boiler water test was observed on mobile secondary containment. No evidence of a release was observed in the vicinity of the drum.

In the electrical transformer room within the Energy Center staining was observed on the concrete floor. The staining appeared to be related to dripping from the overhead piping. A mobile 120-gallon #2 fuel oil tank was observed within the Energy Center, no evidence of release was observed. A fuel oil pump room was observed within the Energy Center,

and the concrete secondary containment showed staining; however, the concrete floor was in-tact with no evidence of discharge to the exterior. An emergency generator was observed on a mezzanine level within the Energy Center Building. A 250-gallon #2 fuel oil aboveground storage tank was located next to the emergency generator. Several external batteries were observed connected to the emergency generator. Staining and evidence of a release was observed on the concrete floor; however, no evidence of discharge to the exterior environment was observed. Three flush-mount monitoring wells were observed within the Energy Center Building, and two stick-up monitoring wells were observed around the exterior of the Energy Center Building.

Two cooling towers to the east of the Energy Center Building were observed. Gas cylinder storage area was observed to contain three liquefied petroleum gas cylinders. A 1,000-gallon aboveground propane tank was observed to the northeast of the Energy Center Building. No staining or evidence of release was observed in this area.

The AS/RS and Terminal buildings contained large equipment. A variety of materials including air filters, general household trash, extra parts, and ski bindings are stored in these areas. A shelf of batteries was observed within the Terminal building. General cleaning chemicals were observed in the Terminal Building. A solvent storage and dispensing room was observed within the Terminal Building but was locked preventing inspection of this space. No evidence of discharges to the exterior environment was observed in the inspected areas of the AS/RS and Terminal buildings.

The Head Building contained two floors consisting of former office space, lab space, a cafeteria, and mechanical rooms. The Head Building boiler room contained three boilers and a 185-gallon #2 fuel oil aboveground storage tank. No staining or evidence of a release was observed in the vicinity of the boilers or AST. Several fiber drums of Ionac C-249 resin were observed in the storage area within the boiler room. The upper level within the boiler room contained a tank with asbestos warning stickers. Several mechanical rooms on the second floor of the Head Building contained air handler equipment.

The Production Building contained two floors consisting of lab spaces, office spaces, mechanical rooms, and open production space. Standing water was observed on the floor of the open production space on the first floor of the building. Lab spaces within the Production Building were labeled cleaned and decontaminated. Mechanical spaces within the Production Building consisted of air handler systems, electrical panels, and transformers. Some staining was observed on the concrete of second floor mechanical rooms. A room labeled elevator machine room was observed but was locked preventing

inspection. Fluorescent lightbulbs were observed throughout the Production Building and many bulbs were observed stored within the Production Building. No evidence of discharges to the exterior environment was observed in the inspected areas of the Production Building

Two dumpster areas were observed around the exterior of the Head and Production Buildings. A pond was observed located to the south of the Terminal Building. Remnant stone building foundations were observed in the northeast corner of the property.

Adjacent Properties

Limiting conditions encountered during the inspection of adjoining properties were encountered due to the dense urban nature of the surrounding areas which only allowed for limited line of sight that did not extend to areas where hazardous materials or substances might be stored.

Properties located adjacent to the subject property consist of commercial and residential buildings. No other visual evidence of hazardous material storage, treatment, handling, or disposal areas was observed at adjacent properties.

10.0 ADDITIONAL ISSUES

The following items fall outside the scope of ASTM 1527-13, however Langan can and often does provide these services to its clients if specifically requested and included in the proposed scope of work or are issues that may impact current or proposed site use.

10.1 Wetlands/Floodplain Designation

Langan reviewed United States Fish and Wildlife National Wetland Inventory (NWI) and New York State Freshwater Wetlands maps. Based on these documents there are mapped wetlands listed on the subject property. In a letter from the United States Army Corps of Engineers (USACOE) to Capital Environmental Consultants, Inc. USACOE stated that jurisdictional wetlands are present on the subject property. A map showing the limits of the jurisdictional wetlands was not identified in the documents reviewed by Langan. A Preliminary Wetland/Waterway Assessment was not performed as part of this ESA.

10.2 Protected Endangered Species / Critical Habitats

A determination regarding the potential presence of protected or endangered species and critical habitats on or near the subject property was conducted as part of this ESA. This determination is often required in order to receive state or federal grants, loans, and/or permits. A request for information regarding T&E species on the site was provided to New York State Division of Fish, Wildlife and Marine Resources (NYSDFWMR) and to the United States Fish and Wildlife Service (USFWS). This correspondence is discussed in detail in Section 8.0.

10.3 Asbestos

In 1973, use of sprayed on fireproofing on structural building components was prohibited by the EPA. On July 12, 1989, EPA issued a final rule banning most friable asbestos-containing products. The following specific asbestos-containing products remain banned: flooring felt, roll board, and corrugated, commercial, or specialty paper. In addition, the regulation continues to ban the use of asbestos in products that have not historically contained asbestos, otherwise referred to as "new uses" of asbestos. Use of asbestos in textured paint and in patching compounds used on wall and ceiling joints was banned in 1977.

An asbestos survey of the existing building was not conducted as part of this ESA. However, based on the building's age (constructed circa 1965) there is potential for asbestos-containing material to be present. The upper level within the Head Building boiler room contained a tank with asbestos warning stickers posted on the tank. All building materials generally appeared to be in good condition, with little damage or cracking.

10.4 Lead-based Paint

In 1977, the Consumer Product Safety Commission (CPSC) banned the use of lead based paint (LBP) in housing and restricted maximum levels in lead in new residential paint to less than 0.05% by weight. A lead-based paint inspection was not conducted as part of this ESA. Based on the age of the onsite building (constructed circa 1965), there is a potential that LBP is present in the onsite building. Interior painted surfaces generally appeared to be in good condition, with little paint peeling and cracking.

10.5 Lead in Drinking Water

A lead in drinking water survey of the existing building was not conducted as part of this ESA.

10.6 Indoor Air / Microbial Assessment (Mold)

A mold survey of the existing building was not conducted as part of this ESA.

10.7 Radon

The subject property is located in a Tier 3 Zone as identified by USEPA based on sampling conducted of buildings within the site area. The Tier 3 Zone is considered an area of low radon gas intrusion potential with typically concentrations less than 2 pCi/liter. A radon survey of the existing building was not conducted as part of this ESA. Radon test results from adjacent or surrounding properties are not necessarily indicative of radon conditions on the subject property. As no building specific radon survey documentation was provided to Langan, no opinion regarding potential risks associated with radon gas exposure can be made.

As per USEPA guidelines, the only way to assess potential radon gas exposure risks is to conduct a radon assessment. In addition, the US EPA recommends that follow-up tests on large buildings should be conducted when major modifications are made either to the building structure or HVAC system or the HVAC system's operation settings.

10.8 Historical and Archaeological Review

A determination regarding the potential presence of historical landmark buildings and/or archaeologically valuable sites on or near the subject property was not conducted as part of this ESA. This determination is often required to receive state or federal grants, loans, and/or permits.

10.9 Universal Waste

A universal waste survey was not conducted as part of this ESA.

11.0 DEVIATIONS

This Phase I ESA conforms with ASTM with the following deviations noted:

1. Information concerning the amount and quality of wastewater generated, the location and dimensions of the excavation, and post-excavation sampling results for Spill No. 9814355 - Sewer Break During Construction Activity was not provided.
2. Property use was only determined back to 1952, not to first development, as historical property records were not reasonably available;
3. Data gaps in excess of 5 years were encountered during the review of historic resources;
4. Government agencies that have not responded to record review inquiries are listed above - additional pertinent information provided to Langan subsequent to the issuance of this report will be provided in an addendum;
5. Limited access was provided to the existing buildings as part of this ESA access as identified in Section 9.0;
6. Based on the large number of database records identified within one mile of the subject property (135), Langan limited the review of surrounding properties to adjacent sites and sites within 1/4-mile from the subject property.
7. An assessment of the current property value versus the proposed sale price of the property was not completed as this information was not provided by the User;
8. Interviews of former business operators were not conducted;
9. Interviews of property owners were not conducted; and
10. Questionnaires were not completed by the User and the property owner, operator, or site manager.

It is the opinion of the reviewing Environmental Professional that Deficiencies Nos. 1 through 10 above will not detrimentally affect the identification of potential RECs. This opinion is based on the following factors:

1. Based on the historic topographic maps and aerial photographs, the site use was determined to be agricultural at least as early as 1952, and the first buildings were constructed on the site circa 1965. Based on this information, it is not anticipated that RECs in addition to those which are otherwise identified in this report would have occurred prior to 1952.

2. Based on the Sanborn Maps and the City Directory information reviewed, the use of the property is consistent between the five year data gaps. Therefore, operations on the site between these data gaps will not detrimentally affect the identification potential RECs.
3. Government agency responses are not anticipated to yield evidence of RECs beyond those otherwise noted in this report. If additional information from government agencies is received subsequent to the issue date of this report, it will be provided in an addendum.
4. Based on the locations of the inaccessible areas within the buildings, it is not anticipated that discharges in these areas would result in an actual release to the exterior environment.
5. Langan limited the database review to adjacent sites and sites within 1/4-mile from the subject property. It is the environmental professional's opinion that based on the dense development of the site area, and former, current and proposed use of the site that the review of the database pertaining to this more limited area is appropriate and will not detrimentally affect the identification of potential recognized environmental conditions.
6. It is not anticipated that information regarding the property value or derived from interviews with business owners or operators, or provided via the questionnaires would result in the identification of RECs beyond those otherwise noted herein.

12.0 FINDINGS/OPINIONS

Based on information obtained during the visual inspection of the subject property, review of environmental databases and historic information, and contact with federal/state/local official agencies, the RECs, controlled recognized environmental conditions (CRECs), HRECs, de minimis conditions and business environmental risks (BERs) listed below that may impact proposed redevelopment of the site were identified.

RECs

- *Historic Site Use and Documentation*. The subject property was used for production of pharmaceutical products from approximately 1964 to 2017. Due to the complex nature of pharmaceutical operations which have been conducted at the subject property, and as detailed reports were not available during completion of this ESA, RECs identified are based on data summaries provided by others and may not be a comprehensive assessment of all environmental concerns at the

site. As such, it is our opinion that review of reports that will be subsequently available from NYSDEC and RCHD, is required to assess the historic use REC in accordance with ASTM requirements. Remedial investigation and remedial action reports documenting the details of work completed and providing figures and tables that would allow for assessment of the completeness of these activities in assessing the extent of remaining impacts to soil and groundwater at the site from former operations, were not available for review as part of this ESA. Additional documentation concerning environmental impacts related to previous operations has been requested from the NYSDEC and the Rockland County Health Department (RCHD). As detailed reports were not available during completion of this ESA, RECs identified are based on data summaries provided by others and may not be a comprehensive assessment of all environmental concerns at the site. This condition is considered to be a REC.

- *Spill No. 9400436 - Release of Scrubber Water to Antrim Stream*. In 1994 a solution holding tank associated with a methylene chloride catalytic oxidizer was inadvertently connected to a storm drain and untreated scrubber water was discharged to the stormwater detention vault which ultimately discharges to Antrim Stream on the west side of the property. It is Langan's opinion that the sampling conducted to date is not sufficient to characterize potential impacts from this release, and impacted soil, sediments and / or groundwater could be encountered during the proposed redevelopment. Langan also notes that the environmental database records do not indicate that this spill has been closed; therefore, Spill No. 9400436 constitutes a REC.

CRECs

- *Energy Center Oil Spill No. 9313236*. A No. 2 fuel oil spill of approximately 5,000-gallons was reported at the Energy Center (see Figure 3) in 1994 when a contractor damaged a fuel transfer pipe from the existing 25,000-gallon fuel oil aboveground storage tanks (ASTs) 5 and 6. ASTs 5 and 6 are located south of the Energy Center; however, the spill occurred in the portion of the transfer pipe within the Energy Center building. Oil was released to the secondary containment; however, the integrity of the secondary containment was compromised and an estimated 2,500 to 4,000 gallons of fuel oil was released to the soil and groundwater beneath the Energy Center boiler room. Remedial actions undertaken through March 1997, and the spill site received a conditional No Further Action (NFA) letter from the NYSDEC on 7 July 1997. The NFA status was granted provided that control measures were implemented. The control measures include the existing building foundation and surrounding asphalt pavement to minimize surface water infiltration that would enhance the migration of free product, and the requirement to conduct monitoring in if excavation and/or dewatering operations occurred in the area. Based on Langan's review of the available information, Energy Center Oil Spill No. 9313236 constitutes a CREC.

  It is likely that residual free product in the unsaturated zone and / or light non-aqueous phase liquid on the groundwater table will be encountered if redevelopment related excavation activities are conducted in this area. The spill area is approximately 3,400 sf. These impacted media would need to be properly monitored and managed during redevelopment, and if off-site disposal is required, proper handling and offsite disposal would be required.

<u>*HRECs*</u>

- *Three Former No. 2 Fuel Oil USTs*. In May 1990, two 10,000-gallon No. 2 fuel oil USTs were removed from below the southeast corner of the current Energy Center and a 15,000-gallon No. 2 fuel oil tank was removed from the exterior northeast corner of the Head Building (see Figure 3). During removal of the USTs petroleum impacted soil was encountered and the Rockland County Health Department (RCHD) notified the NYSDEC and Spill No. 9002029 was issued for the release. NYSDEC closed this spill in October 1990. Additional investigations were conducted by EWMA in 2016, and no evidence of environmental impacts was detected. Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the 2016 EWMA report; however, according to the text of the report, no analytes were detected in the retrieved soil samples. Based on this information and the closure

of the spill case in October 1990, the three former No. 2 fuel oil USTs constitute a HREC with respect to the proposed redevelopment.

- *Spill No. 9814355 - Sewer Break During Construction Activity.* In March 1998 a release of wastewater was reported due to a break in the main sewer pipe leading to the pump house in the central portion of the site, west of the Production Building (see Figure 3) generating NYSDEC Spill No. 9814355. Remedial activities included the recovery of wastewater and excavation of impacted soils. The spill was closed by NYSDEC on 27 December 2004. No information was provided in the documents reviewed by Langan documenting the amount and quality of wastewater generated, the location and dimensions of the excavation, or post-excavation sampling results confirming that impacted soil was removed..

- *Spill No. 9903055 and Sanitary / Process Sewer Line Integrity*. The main sanitary / process sewer line system runs northeast to southwest along the west side of the Head, Production, and Terminal Buildings (see Figure 3). The line receives sanitary and process wastes from laterals to the Head, Production, and Terminal Buildings, and the wastes are discharged to the local municipal sewer system. In the early 1990s groundwater infiltration was reported to have occurred at the main sewer pipeline, generating NYSDEC Spill No. 99030558. The main sanitary / process sewer line was relined in the mid-1990's. Spill No. 9903055 was closed by NYSDEC on 16 June 1999. Subsequent investigations were conducted by EWMA in 2016. According to the text of the May 2016 EWMA draft report, the soil samples and the groundwater sample was analyzed for VOCs, and no exceedances of the applicable NYSDEC standards were detected. Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the 2016 EWMA draft report reviewed by Langan. If disturbance or removal of the sanitary line is required during any subsequent site redevelopment, the potential to encounter contaminated soil and options for disposal or reuse of this material should be considered as part of earthwork specifications

8 Based on the documents reviewed by Langan, it is not clear why infiltration into the sewer line from the exterior would have constituted a spill.

- *Former Abandoned Solid Waste Disposal Area and Additional Construction Debris Area.* A solid waste disposal area was reported to NYSDEC by Ciba-Geigy in 1989 and Spill No. 8900950 was assigned. The area was located south of the Terminal and AR/RS Building (see Figure 3). In April through June 1990 solid waste materials consisting of trash related waste and construction / demolition debris, was excavated from this area. NYSDEC accepted the corrective action as indicated by the environmental database NYSDEC closure record (Spill No. 8900950) indicating "NFA" determination by the Solid and Hazardous Waste Unit. An additional construction debris area was also excavated in April through June 1990. The construction debris excavation was advanced to the limits of the construction debris in all directions. A total of 114 tons of material was disposed of off-site. Based on the information documents reviewed by Langan, Spill No. 8900950 and the additional construction debris excavation area constitutes a HREC.

- *Former Drum Burial Area*. A buried drum area was previously located in the southwestern area of the site (see Figure 3) within a former soil staging area. In 1997 Novartis discovered five partially buried fiber-board drums containing brownish-green particulate material and investigated the area. NYSDEC determined that this area had not been adequately assessed for a potential release and further investigation was conducted by EWMA in 2016. EWMA conducted a geophysical survey over the former drum burial area to the extent that the wooded site conditions permitted. No subsurface anomalies were encountered. The survey did not detect any evidence of subsurface utilities, structures or buried drums.

  Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the EWMA report; however, based on the text of the report, no exceedances of the NYSDEC groundwater standards and guidance values were detected. The potential that debris may be encountered and may require disposal if this area is disturbed during future site redevelopment should be considered.

- *Minor Spills.* A total of 44 minor spills were documented in the environmental database review. The spills all occurred between 1989 and 2012 and generally consisted of minor quantities (i.e., less than one to two gallons) of substances which were immediately cleaned up by on-site personnel. All of the spills have received regulatory closure with the NYSDEC. Six of the incidents were related to freon and other gas leaks from the facility cooling system. The 38 remaining spills were for minor amounts of petroleum, waste oil, hydraulic oil, lubricating oil, ethanol, methylene chloride, sanitary waste, food grade propylene glycol, brake fluid, or transformer oil. These minor spills will all immediately remediated, and the assigned NYSDEC spill numbers were subsequently closed out. Collectively these spills constitute a HREC.

<u>*BERs*</u>

- *Potential Mercury Impacted Soils*. Letters dated 29 June and 13 August 1990, between Rollins Environmental Services and Ciba-Geigy and between Ciba-Geigy and NYSDEC, respectively, provide limited information concerning three drums containing mercury impacted soil that were present at the site in 1990. The details concerning the source of the mercury impacted soil (i.e., location of the excavation, post-excavation soil sample data, etc.) were not provided in the documents reviewed by Langan. Based on the absence of details regarding the source of the mercury impacts and the potential that mercury impacted soil may remain at the site, this issue is identified as a BER.

- *Former Hazardous Waste Storage Areas*. Three former Resource Conservation and Recovery Act (RCRA) chemical storage areas (CSAs) were located at the site. The areas were designated as CSA-1- Hazardous Waste Storage Shed; CSA-2 - former drum storage pad located southwest of Hazardous Waste Storage Shed; and CSA-3 - former drum storage pad south of Hazardous Waste Storage Shed (see Figure 3). Historic operations conducted under Ciba-Geigy resulted in the classification of the site as a RCRA Treatment, Storage, and Disposal Facility (TSDF). Based on the documents reviewed by Langan, no environmental impacts were identified in relation to these facilities; however, as documented in the O'Brien & Gere and ATC Phase I ESAs and based on Langan's review of the available documentation, it cannot confirmed that the obligations under the RCRA corrective actions were officially fulfilled by Ciba-Geigy. Therefore, this constitutes a BER with respect to the proposed redevelopment and potential liability associated with regulatory requirements for RCRA closure.

- *Fill Materials*. The following areas containing fill materials were identified

  - *Former Pond and Stream Fill Areas*. The review of historical United States Geological Survey (USGS) topographic Maps identified a pond in the northeast portion of the property and the stream running west from that pond in the 1943 and 1945 maps that are not depicted on later maps and that were possibly backfilled with imported fill. The current Head Building and Production Building are currently present in the approximate area of the former pond. There is the potential that impacted fill material could be encountered in this area during redevelopment related excavation and / or grading activities, and if so, this material would need to be managed in accordance with NYSDEC regulations; therefore, the former pond and stream fill areas constitute a BER with respect to the proposed redevelopment.

  - *Fill Material / Construction Debris Area Southwest of Former Soil Staging Area*. Fill materials consisting of sporadic mounds of concrete rubble, asphalt, and miscellaneous metal were observed in the area southwest of former soil staging area (see Figure 3). A LSI was conducted in this area by ATC on 25 February 2019. Shallow soil borings SB-04 and SB-05 were advanced in this area. Soil samples from these borings were analyzed for VOCs, SVOCs, TAL metals, and PCBs. Constituents of concern were not identified in excess of laboratory detection limits and/or applicable CSCOs or RSCOs, with the exception of iron, which exceeded the RSCO in both samples. Based on the results of the LSI and the deed restricted commercial use of the property, these materials can remain on the subject property. If off-site disposal of these materials is required by the proposed redevelopment, these soils would need to be disposed of at a permitted and regulated disposal facility due to the exceedance of the RSCO for iron; therefore, Fill Material / Construction Debris Area Southwest of Former Soil Staging Area constitutes a BER with respect to the proposed redevelopment.

  - *Fill Material Area Along Southwestern Property Boundary Adjacent to Off-Site Quarry*. An area of fill material is present along the southwestern property boundary opposite the adjacent off-site quarry. As documented in the O'Brien & Gere and ATC Phase I ESA reports and observed by Langan during the site inspection conducted under the current Phase I ESA, fill material of unknown origin was observed extending 30 to 50-feet onto the subject

property. ATC conducted a Limited Site Investigation (LSI) in this area on 25 February 2019. Five shallow soil borings were advanced in this area (see Figure 4) and soil samples from the borings were analyzed for VOCs, SVOCs, Target Analyte List (TAL) metals, and PCBs. Constituents of concern were not identified in excess of laboratory detection limits and / or applicable NYSDEC Commercial Soil Cleanup Objectives (CSCOs) or Residential Soil Cleanup Objectives (RCSOs), with the exception of cobalt and iron, which exceeded their RSCOs. Based on the non-residential deed restriction on the property, no further remediation would be required for these soils if they remain on-site; however, if redevelopment results in the need for off-site disposal, these soils would need to be disposed of at a regulated and permitted disposal facility due to the exceedances of the RSCOs for cobalt and iron. Therefore, the fill material along the southwestern property boundary constitutes a BER with respect to the proposed redevelopment.

- *Former Agricultural* Use. Historical USGS Topographic Maps identified the presence of a former orchard in the northwest portion of the property and historical aerial photographs showed former agricultural use in the central portion of the property. Based on the 1952 and 1953 aerial photographs reviewed as part of this ESA, the site was undeveloped and consisted mostly of cleared farmland (including orchards and furrowed areas) and two ponds during that time period. The 2016 EWMA Report reportedly documented the results from three borings which were installed in the former orchard area and sampled at a depth of 0 to 6-inches below grade for analysis for metals and pesticides. No exceedances of the applicable NYSDEC standards were reportedly detected during this limited sampling. Based on the limited number of samples and the lack of detailed investigation information, including the boring logs, sampling depths, actual soil data, etc., the conclusions of the report cannot be verified. The potential that soils impacted with pesticides, herbicides, and metals related to former agricultural use constitutes a BER with respect to the proposed redevelopment.

Non- ASTM Conditions

- *Presence of Hazardous Building Materials*. As referenced in the ATC 2019 Phase I ESA report, a Site Wide Asbestos Survey Report was prepared by Environ International Corporation in January 20129 which identified numerous building materials that were tested and found to be asbestos containing. Based on information documented in the ATC Phase I ESA Report, approximately 7,000 square feet of spray-on insulation located above the cafeteria in the Head Building was the only asbestos-containing material (ACM) remaining at the property. The potential presence of ACM and other hazardous building materials in the remaining structures constitutes a non-ASTM condition. Abatement of ACM will be required prior to demolition of on-site buildings. In addition, due to the complex nature of pharmaceutical operations dating back to 1969, there is the potential for interior discharges from these operations to have impacted building materials. Interior building materials, such as concrete flooring, building interior walls, etc. will need to be assessed to address disposal options during redevelopment.

- *Wetlands*. In a letter from the United States Army Corp of Engineers (USAOE) to Capital Environmental Consultants, Inc. dated 10 January 2020 USACOE stated that jurisdictional wetlands are present on the subject property. A Preliminary Wetland/Waterway Assessment was not performed as part of this ESA.

13.0 CONCLUSIONS

This Phase I Environmental Site Assessment (ESA) was prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. on behalf of Treetop Development to identify current or potential environmental concerns and Recognized Environmental Conditions (RECs) at the ±162 acre proposed development site consisting of the property at 25 Old Mill Road (Block 1, Lots 1 & 31) located in Suffern, New York and Block 1, Lot 1 located in Montebello, New York (see Figures 1 and 2). The ESA included a site inspection, review of historical information, completion of a federal/state/local environmental database search, and interviews with local and state agencies to assess current and past site conditions.

The site is approximately 162 acres, a portion of which is occupied by a former pharmaceutical manufacturing facility (now used by a catering business), associated parking, and a pond. Of the 162 acres, 125.5 acres are located in the Village of Suffern

9 The January 2012 Environ report was not provided in the documents reviewed by Langan.

and 36.5 acres are located in the Village of Montebello. The "main campus" of the Subject Property is comprised of 50 acres of buildings, roadways and lawn areas and the remaining property is 112 acres of densely wooded hilly terrain. The four largest buildings are the Head Building, Production Building, Energy Center, and Terminal and Automated Storage / Retrieval System (AS/RS) Building. Other support buildings include a guard house, sewage pump house, waste storage shed, fire pump houses, and landscape shed. The subject property has been used for the production of pharmaceutical products throughout its developed history. The property was developed in 1964 by Geigy, Inc., who then merged with Ciba, Inc. creating Ciba-Geigy, Inc. in 1971. In 1997 Ciba-Geigy, Inc. and Sandoz, Inc. merged creating Novartis Pharmaceuticals Corporation. The pharmaceutical operations we ceased as of 2017. A summary of each of the main subject property buildings is as follows:

- The Head Building (55,000 square feet (sf) is a two-story building, constructed in 1964, and includes laboratories, offices a cafeteria, and a boiler room.

- The Production Building (425,000 sf) is a two-story building, constructed in 1964 and renovated in 1995, This building was formerly used for pharmaceutical solid dosage production including powder blending and granulation, tablet compressing and encapsulation, and bottle and blister packaging, offices; laboratories; and maintenance shop. The production building is currently occupied by a catering business.
- The Terminal and AR/RS Building (74,000 sf) was originally constructed in 1964. This building was formerly used for offices, workshop, and for AS/RS automated warehouse with racking for 10,000 pallet, automated stackers and delivery vehicles. A former solvent storage area was located in the northeastern portion of the Terminal Building. There are five loading docks with hydraulic levelers, two on the east side of the building and three on the west side.
- The Energy Center (24,000 sf) was constructed in 1970 and expanded in 1995. It is a one-story building containing high pressure steam boilers, electric chillers, air compressors, and an electrical substation. Two cooling towers are located east of the building.

Based on information obtained during the visual inspection of the subject property, review of environmental databases and historic information, and contact with federal/state/local

official agencies, the following recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), historic recognized environmental conditions (HRECs), de minimis conditions and business environmental risks (BERs) that may impact proposed redevelopment of the site were identified:

Recognized Environmental Conditions

It is the opinion of the environmental professional that the following represent RECs.

Historic Site Use and Documentation

The subject property was used for production of pharmaceutical products from approximately 1964 to 2017. References to investigation and remediation conducted at the site since 1984, including letters to the New York State Department of Environmental Conservation (NYSDEC) and comment letters from NYSDEC regarding various underground storage tank and RCRA issues, and Phase I ESA reports from 2014 and 2019 which summarized areas of concern and referenced Phase II Investigation sampling, were reviewed as part of this ESA. Remedial investigation and remedial action reports documenting the details of work completed and providing figures and tables that would allow for assessment of the completeness of these activities in assessing the extent of remaining impacts to soil and groundwater at the site from former operations, were not available for review as part of this ESA. Additional documentation concerning environmental impacts related to previous operations has been requested from the NYSDEC and the Rockland County Health Department (RCHD).

As detailed reports were not available during completion of this ESA, RECs identified are based on data summaries provided by others and may not be a comprehensive assessment of all environmental concerns at the site.

Spill No. 9400436 - Release of Scrubber Water to Antrim Stream

In 1994 a solution holding tank associated with a methylene chloride catalytic oxidizer was inadvertently connected to a storm drain and untreated scrubber water was discharged to the stormwater detention vault which ultimately discharges to Antrim Stream on the west side of the property. The release reportedly occurred over ten events for a total release volume of 9,680 gallons. As documented in the May 2016 Draft Phase I Environmental Assessment – Limited Phase II Investigation Report prepared by Environmental Waste Management Associates (EWMA) advanced two borings (SB-5-1 and SB-5-2, see Figure 3) to a depth of approximately 10-feet below ground surface (bgs) at the stormwater retention basin immediately downstream of the vault in the northeast corner of the property. No visual indications of a release were noted in the borings. One sample was collected from each of the borings for volatile organic compounds (VOCs) analysis, and no exceedances of the NYSDEC criteria applicable to this site were detected. Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the May 2016 EWMA draft report. It is Langan's opinion that the sampling conducted to date is not sufficient to characterize potential impacts from this release, and impacted soil, sediments and / or groundwater could be encountered during the proposed redevelopment. Langan also notes that the environmental database records do not indicate that this spill has been closed; therefore, Spill No. 9400436 constitutes a REC.

Spill No. 9814355 - Sewer Break During Construction Activity

In March 1998 a release of wastewater was reported due to a break in the main sewer pipe leading to the pump house in the central portion of the site, west of the Production Building (see Figure 3) generating NYSDEC Spill No. 9814355. Remedial activities included the recovery of wastewater and excavation of impacted soils. The spill was closed by NYSDEC on 27 December 2004; however, as no information was provided in the documents reviewed by Langan documenting the amount and quality of wastewater generated, the location and dimensions of the excavation, post-excavation sampling results confirming that impacted soil was removed, Spill No. 9814355 is identified as a REC.

Spill No. 9903055 and Sanitary / Process Sewer Line Integrity

The main sanitary / process sewer line system runs northeast to southwest along the west side of the Head, Production, and Terminal Buildings (see Figure 3). The line receives sanitary and process wastes from laterals to the Head, Production, and Terminal Buildings, and the wastes are discharged to the local municipal sewer system. In the early 1990s groundwater infiltration was reported to have occurred at

the main sewer pipeline, generating NYSDEC Spill No. 9903055[10]. The main sanitary / process sewer line was relined in the mid-1990's. Spill No. 9903055 was closed by NYSDEC on 16 June 1999. Subsequently, Novartis determined that exfiltration of wastewater into the surrounding soil and groundwater may have occurred prior to the relining during periods of low groundwater elevations, and the potential release of process water from historical operations was identified as an environmental concern. In 2016 EWMA advanced five soil borings (SB-4-1 through SB-4-5, see Figure 3) to a depth of approximately 15-feet bgs along the sewer line in the northern portion of the property. No visual indications of a release were noted in the area. One soil sample was collected from each boring, and a groundwater sample was collected from one temporary well point (SB-4TW). According to the text of the May 2016 EWMA draft report, the soil samples and the groundwater sample was analyzed for VOCs, and no exceedances of the applicable NYSDEC standards were detected; however, detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the 2016 EWMA draft report. It is Langan's opinion that the sampling conducted to date is not sufficient to characterize potential impacts from this release, and impacted soil and / or groundwater could be encountered during the proposed redevelopment. As such, the sanitary / process sewer line integrity is considered to be a REC.

Former Drum Burial Area

A buried drum area was previously located in the southwestern area of the site (see Figure 3) within a former soil staging area. In 1997 Novartis discovered five partially buried fiber-board drums containing brownish-green particulate material. In November 1997 Novartis' contractor ICF Kaiser conducted a geophysical survey to determine if additional drums were present in this area. No additional drums were identified. ICF Kaiser also collected drum samples for full Toxic Compound Leachate Procedure (TCLP) and TPH analysis. Based on the sample results, the material was believed to be waste excipient material from the manufacture of pharmaceuticals. The five drums were removed and disposed of off-site. One soil sample was collected from the drum excavation base and analyzed for TPH. This information was summarized in a 15 June 1998 letter from Novartis to NYSDEC.

In subsequent correspondence, NYSDEC stated that samples from the drum waste materials exhibited concentrations of TPH above the regulatory action level of 100 milligrams per kilogram (mg/kg) at the time. As only one soil sample was collected from

10 Based on the documents reviewed by Langan, it is not clear why infiltration into the sewer line from the exterior would have constituted a spill.

the excavation base analyzed and for TPH; the area was not adequately assessed for a potential release and further investigation was conducted by EWMA in 2016. Three borings were advanced to a depth of approximately 15-feet bgs (SB-2-1, SB-2-2, and SB-2-5, see Figure 3) and two borings (SB-2-3 and SB-2-4) were advanced to a depth of approximately 20-feet bgs. According to information provided in the text of the May 2016 draft EWMA report, no visual indications of a release were reportedly noted in the area. One sample was collected from each boring and analyzed for VOCs and base neutrals (BNs) and no exceedances of the NYSDEC Part 375 UUSCOs were detected. One of the soil boring samples was also analyzed for polychlorinated biphenyls (PCBs), pesticides, and metals. No exceedances of the NYSDEC Part 375 UUSCOs were detected. One soil boring was converted into a temporary well point and a grab groundwater sample was collected and analyzed for VOCs and BNs.

In 2016 EWMA conducted a geophysical survey over the former drum burial area to the extent that the wooded site conditions permitted. No subsurface anomalies were encountered. The survey did not detect any evidence of subsurface utilities, structures or buried drums.

Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the EWMA report; however, based on the text of the report, no exceedances of the NYSDEC groundwater standards and guidance values were detected. Due to the limited sampling conducted in this area, the potential that impacted soils may be encountered during future redevelopment related excavations in this area is identified as an environmental concern and constitutes a REC.

Controlled Recognized Environmental Conditions

It is the opinion of the environmental professional that the following represents a CREC:

Energy Center Oil Spill No. 9313236

A No. 2 fuel oil spill of approximately 5,000-gallons was reported at the Energy Center (see Figure 3) in 1994 when a contractor damaged a fuel transfer pipe from the existing 25,000-gallon fuel oil aboveground storage tanks (ASTs) 5 and 6. ASTs 5 and 6 are located south of the Energy Center; however, the spill occurred in the portion of the transfer pipe within the Energy Center building. Oil was released to the secondary containment; however, the integrity of the secondary containment was compromised and an estimated 2,500 to 4,000 gallons of fuel oil was released to the soil and groundwater beneath the Energy Center boiler room. Remedial actions undertaken included excavation of impacted

soil[11], installation of seven monitoring wells, and installation / operation of pneumatic skimmer pumps. Oil recovery operations continued from August 1994 through April 1997. Approximately 3,382 gallons of oil were recovered. No exceedances of the applicable NYSDEC groundwater quality standards were detected in downgradient well MW-4 during the 31 March 1997 groundwater sampling event. The spill site received a conditional No Further Action (NFA) letter from the NYSDEC on 7 July 1997. The NFA status was granted provided that control measures were implemented. The control measures include the existing building foundation and surrounding asphalt pavement to minimize surface water infiltration that would enhance the migration of free product, and the requirement to conduct monitoring in if excavation and/or dewatering operations occurred in the area. Based on Langan's review of the available information, Energy Center Oil Spill No. 9313236 constitutes a CREC.

Based on Langan's review of the available information, it is likely that residual free product in the unsaturated zone and / or light non-aqueous phase liquid on the groundwater table will be encountered if redevelopment related excavation activities are conducted in this area. The spill area is approximately 3,400 sf. These impacted media would need to be properly monitored and managed during redevelopment, and if off-site disposal is required, proper handling and offsite disposal would be required.

Historic Recognized Environmental Conditions

It is the opinion of the environmental professional that the following represent a HRECs:

Three Former No. 2 Fuel Oil USTs

In May 1990, two 10,000-gallon No. 2 fuel oil USTs were removed from below the southeast corner of the current Energy Center and a 15,000-gallon No. 2 fuel oil tank was removed from the exterior northeast corner of the Head Building (see Figure 3). During removal of the USTs petroleum impacted soil was encountered and the Rockland County Health Department (RCHD) notified the NYSDEC and Spill No. 9002029 was issued for the release. A total of 343 tons of petroleum impacted soil was removed from the tank excavations. The 10,000-gallon USTs had been installed within a rubber lined concrete vault which was backfilled after removal of the tank. The 10,000-gallon USTs were reportedly intact and no evidence of a release from the tanks was noted. Two post excavation soil samples were collected from the area of the 10,000-gallon tanks and analyzed for TPH. TPH was not detected in the sample collected where a fuel transfer pipe sleeve penetrated the vault. The TPH concentration in the other sample, the location

11 The total tonnage of impacted soil removed from the site was not identified in the documents provided to Langan.

of which was not reported in the historical documentation, was 930 mg/kg. Six final post-excavation samples were collected from the 15,000-gallon UST excavation and analyzed for TPH. TPH was non-detect in the six samples.

NYSDC closed this spill in October 1990. In 2016, EWMA advanced two borings (SB-3-1 and SB-3-2, see Figure 3) to a depth of approximately 15-feet bgs in the area of the former 15,000-gallon UST and two borings (SB-3-3 and SB-3-4) to a depth of approximately 10-feet bgs in the area of the former 10,000-gallon USTs. No visual indications of a release were noted in these borings. One sample was collected from each of the borings and analyzed for the associated compounds listed in NYSDEC CP 51 Soil Cleanup Guidance Table 3 for fuel oil sites. Detailed investigation information, including the boring logs, sampling depths, actual soil and groundwater data, etc., were not provided in the 2016 EWMA report; however, according to the text of the report, no analytes were detected in the retrieved soil samples. Based on this information and the closure of the spill case in October 1990, the three former No. 2 fuel oil USTs constitute a HREC with respect to the proposed redevelopment.

Former Abandoned Solid Waste Disposal Area and Additional Construction Debris Area

A solid waste disposal area was reported to NYSDEC by Ciba-Geigy in 1989 and Spill No. 8900950 was assigned. The area was located south of the Terminal and AR/RS Building (see Figure 3). In April through June 1990 solid waste materials consisting of trash related waste and construction / demolition debris, was excavated from this area. The source of the waste was undetermined and initial test results identified the waste was non-hazardous. As documented in a letter report prepared by Eckenfelder in 1990, the solid waste was excavated to its limits in all directions resulting in the off-site disposal of approximately 790 tons of waste. The dimensions of the final excavation were approximately 10-feet wide, 7-feet deep, and 100-feet long. Upon completion of excavation activities five confirmatory soil samples (two samples from the bottom of the excavation, two samples along the excavation side walls, and one background sample) were collected and analyzed for VOCs, semivolatile organic compounds (SVOCs), and metals. According to the 2014 Phase I ESA Report prepared by O'Brien & Gere, the detected constituent concentrations were less than the NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs). NYSDEC accepted the corrective action as indicated by the environmental database NYSDEC closure record (Spill No. 8900950) indicating "NFA" determination by the Solid and Hazardous Waste Unit. An additional construction debris area was also excavated in April through June 1990. The construction debris excavation was advanced to the limits of the construction debris in all directions. A total of 114 tons

of material was disposed of off-site. Based on the information documents reviewed by Langan, Spill No. 8900950 and the additional construction debris excavation area constitutes a HREC.

Minor Spills

A total of 44 minor spills were documented in the environmental database review. The spills all occurred between 1989 and 2012 and generally consisted of minor quantities (i.e., less than one to two gallons) of substances which were immediately cleaned up by on-site personnel. All of the spills have received regulatory closure with the NYSDEC. Six of the incidents were related to freon and other gas leaks from the facility cooling system. The 38 remaining spills were for minor amounts of petroleum, waste oil, hydraulic oil, lubricating oil, ethanol, methylene chloride, sanitary waste, food grade propylene glycol, brake fluid, or transformer oil. These minor spills will all immediately remediated, and the assigned NYSDEC spill numbers were subsequently closed out. Collectively these spills constitute a HREC.

Business Environmental Risks

It is the opinion of the environmental professional that the following represent BERs:

Potential Mercury Impacted Soils

Letters dated 29 June and 13 August 1990, between Rollins Environmental Services and Ciba-Geigy and between Ciba-Geigy and NYSDEC, respectively, provide limited information concerning three drums containing mercury impacted soil that were present at the site in 1990. The details concerning the source of the mercury impacted soil (i.e., location of the excavation, post-excavation soil sample data, etc.) were not provided in the documents reviewed by Langan. Based on the absence of details regarding the source of the mercury impacts and the potential that mercury impacted soil may remain at the site, this issue is identified as a BER.

Former Hazardous Waste Storage Areas

Three former Resource Conservation and Recovery Act (RCRA) chemical storage areas (CSAs) were located at the site. The areas were designated as CSA-1- Hazardous Waste Storage Shed; CSA-2 - former drum storage pad located southwest of Hazardous Waste Storage Shed; and CSA-3 - former drum storage pad south of Hazardous Waste Storage Shed (see Figure 3). Historic operations conducted under Ciba-Geigy resulted in the classification of the site as a RCRA Treatment, Storage, and Disposal Facility (TSDF). In 1989, PRC Environmental Management, Inc. (PRC) conducted a site visit to confirm information in a preliminary assessment and identify areas of concern. No evidence of discharges was observed during PRC's February 1989 inspection. CSA's-1, -2, and -3 were also inspected during both the O'Brien & Gere and ATC Phase I ESAs and the current Langan Phase I ESA, and no evidence of discharges was observed during those inspections. No records of spills related to these CSAs was identified in the environmental database searches. Based on the documents reviewed by Langan, no environmental impacts were identified in relation to these facilities; however, as documented in the O'Brien & Gere and ATC Phase I ESAs and based on Langan's review of the available documentation, it cannot confirmed that the obligations under the RCRA corrective actions were officially fulfilled by Ciba-Geigy. Therefore, this constitutes a BER with respect to the proposed redevelopment and potential liability associated with regulatory requirements for RCRA closure.

Fill Materials

The following areas containing fill materials were identified:

- *Former Pond and Stream Fill Areas.* The review of historical United States Geological Survey (USGS) topographic Maps identified a pond in the northeast portion of the property and the stream running west from that pond in the 1943 and 1945 maps that are not depicted on later maps and that were possibly backfilled with imported fill. The current Head Building and Production Building are currently present in the approximate area of the former pond. There is the potential that impacted fill material could be encountered in this area during redevelopment related excavation and / or grading activities, and if so, this material would need to be managed in accordance with NYSDEC regulations; therefore, the former pond and stream fill areas constitute a BER with respect to the proposed redevelopment.

- *Fill Material / Construction Debris Area Southwest of Former Soil Staging Area.* Fill materials consisting of sporadic mounds of concrete rubble, asphalt, and miscellaneous metal were observed in the area southwest of former soil staging

area (see Figure 3). A LSI was conducted in this area by ATC on 25 February 2019. Shallow soil borings SB-04 and SB-05 were advanced in this area. Soil samples from these borings were analyzed for VOCs, SVOCs, TAL metals, and PCBs. Constituents of concern were not identified in excess of laboratory detection limits and/or applicable CSCOs or RSCOs, with the exception of iron, which exceeded the RSCO in both samples. Based on the results of the LSI and the deed restricted commercial use of the property, these materials can remain on the subject property. If off-site disposal of these materials is required by the proposed redevelopment, these soils would need to be disposed of at a permitted and regulated disposal facility due to the exceedance of the RSCO for iron; therefore, Fill Material / Construction Debris Area Southwest of Former Soil Staging Area constitutes a BER with respect to the proposed redevelopment.

- *Fill Material Area Along Southwestern Property Boundary Adjacent to Off-Site Quarry.* An area of fill material is present along the southwestern property boundary opposite the adjacent off-site quarry. As documented in the O'Brien & Gere and ATC Phase I ESA reports and observed by Langan during the site inspection conducted under the current Phase I ESA, fill material of unknown origin was observed extending 30 to 50-feet onto the subject property. ATC conducted a Limited Site Investigation (LSI) in this area on 25 February 2019. Five shallow soil borings were advanced in this area (see Figure 4) and soil samples from the borings were analyzed for VOCs, SVOCs, Target Analyte List (TAL) metals, and PCBs. Constituents of concern were not identified in excess of laboratory detection limits and / or applicable NYSDEC Commercial Soil Cleanup Objectives (CSCOs) or Residential Soil Cleanup Objectives (RCSOs), with the exception of cobalt and iron, which exceeded their RSCOs. Based on the non-residential deed restriction on the property, no further remediation would be required for these soils if they remain on-site; however, if redevelopment results in the need for off-site disposal, these soils would need to be disposed of at a regulated and permitted disposal facility due to the exceedances of the RSCOs for cobalt and iron. Therefore, the fill material along the southwestern property boundary constitutes a BER with respect to the proposed redevelopment.

Former Agricultural Use

Historical USGS Topographic Maps identified the presence of a former orchard in the northwest portion of the property and historical aerial photographs showed former agricultural use in the central portion of the property. Based on the 1952 and 1953 aerial photographs reviewed as part of this ESA, the site was undeveloped and consisted

mostly of cleared farmland (including orchards and furrowed areas) and two ponds during that time period. The text of the May 2016 EWMA draft report documented the results from three borings (SB-1-1 through SB-1-3, see Figure 3) which were installed in the former orchard area and sampled at a depth of 0 to 6-inches below grade for analysis for metals and pesticides. No exceedances of the applicable NYSDEC standards were reportedly detected during this limited sampling. Based on the limited number of samples and the lack of detailed investigation information, including the boring logs, sampling depths, actual soil data, etc., the conclusions of the report cannot be verified. The potential that soils impacted with pesticides, herbicides, and metals related to former agricultural use constitutes a BER with respect to the proposed redevelopment.

Non-ASTM Conditions

It is the opinion of the environmental professional that the following represent Non-ASTM Conditions:

Presence of Hazardous Building Materials

As referenced in the ATC 2019 Phase I ESA report, a Site Wide Asbestos Survey Report was prepared by Environ International Corporation in January 2012[12] which identified numerous building materials that were tested and found to be asbestos containing. Based on information documented in the ATC Phase I ESA Report, approximately 7,000 square feet of spray-on insulation located above the cafeteria in the Head Building was the only asbestos-containing material (ACM) remaining at the property. The potential presence of ACM and other hazardous building materials in the remaining structures constitutes a non-ASTM condition. Abatement of ACM will be required prior to demolition of on-site buildings. In addition, due to the complex nature of pharmaceutical operations dating back to 1969, there is the potential for interior discharges from these operations to have impacted building materials. Interior building materials, such as concrete flooring, building interior walls, etc. will need to be assessed to address disposal options during redevelopment.

Wetlands

In a letter from the United States Army Corp of Engineers (USAOE) to Capital Environmental Consultants, Inc. dated 10 January 2020 USACOE stated that jurisdictional wetlands are present on the subject property. A Preliminary Wetland/Waterway Assessment was not performed as part of this ESA.

12 The January 2012 Environ report was not provided in the documents reviewed by Langan.

14.0 QUALIFICATIONS / CERTIFICATION

We, the undersigned, declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 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 as documented in Appendix H. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Site Inspection and Report Written By:

Molly Gutelius
Staff Scientist

Report Reviewed By:

Kenneth C. Tyson, P.G., L.S.R.P.
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Principal / Vice President

NJ Certificate of Authorization No. 24GA27996400
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