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May 8, 2017

Harry D. Warner, P.E.
Regional Hazardous Waste Remediation Engineer
NYSDEC Region 7
Division of Environmental Remediation
615 Erie Blvd. West
Syracuse, New York 13204-2400

Subject: Carrier Corporation, Thompson Road Facility, Syracuse, New York
Corrective Action Order — Index CO 7-20051118-4
Site Registry No.: 734043
Potential for Vapor Intrusion Assessment Report

Dear Mr. Warner

On behalf of United Technologies Corporation (UTC), AECOM Technical Services, Inc. (AECOM) is hereby submitting the attached *Potential for Vapor Intrusion Assessment Report* for your review and approval. The report presents an assessment of the potential for vapor intrusion into the various Thompson Road Facility buildings. It also provides recommendations for vapor intrusion investigations for identified buildings, involving both sub-slab and indoor air sampling.

Should NYSDEC/NYSDOH concur with the recommended building selection/rationale and that sub-slab and indoor air sampling be performed, AECOM will prepare a work plan detailing proposed investigation activities.

Please call me at (716) 923-1150 if you have any questions.

Sincerely,

Robert E. Murphy

Robert E. Murphy, PE
Project Manager
Robert.E.Murphy@AECOM.com

cc: Michael Belveg, NYSDEC
Julia M. Kenney, NYSDOH (hard copy)
Maureen Schuck, NYSDOH
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AECOM

POTENTIAL FOR VAPOR INTRUSION ASSESSMENT REPORT

United Technologies Corporation/Carrier Site
Thompson Road, Syracuse, NY

Corrective Action Order – Index CO 7-20051118-4
NYSDEC Site Registry #734043

Project Number: 60528299

May 2017

Prepared for:

United Technologies Corporation
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1. Introduction

United Technologies Corporation (UTC) is performing environmental remediation activities at the Carrier Thompson Road Facility (Site) in Syracuse, Onondaga County, New York. AECOM USA, Inc. (AECOM) has been retained by UTC to provide environmental engineering and investigation support services associated with an assessment to identify and address potential vapor intrusion (VI) issues at the Site. The work is being performed in accordance with the Corrective Action Order on Consent (CO) dated January 4, 2006.

Historically, the Site has been undergoing investigation and remediation activities to address the presence of volatile organic compounds (VOCs) and other contaminants of concern (COCs), in both soil and groundwater. In February 2016, the New York State Department of Environmental Conservation (NYSDEC) requested a meeting with UTC and the New York State Department of Health (NYSDOH) to discuss supplemental investigations regarding potential VI issues across the Site.

In preparation for the meeting, AECOM reviewed existing project documentation regarding activities undertaken to address VI issues at the Site. UTC and AECOM then participated in the meeting with NYSDEC and NYSDOH on February 24, 2016. Among the issues discussed were UTC's plans concerning potential VI issues. During the meeting UTC summarized three near-term goals:

1. Installation of four sub-slab depressurization (SSD) systems (buildings TR-4, TR-6, TR-18S and TR-18);
2. Installation of additional groundwater monitoring wells to fill identified data gaps and aid in evaluating potential VI issues; and
3. Completion of a VI assessment to determine necessary steps to address VI exposure at the Site.

This *Potential for Vapor Intrusion Assessment Report* includes a comparison of Site-wide groundwater results in relation to building locations. In accordance with the NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (2006 – VI Guidance), groundwater analytical data is focused primarily on the seven chlorinated volatile organic compounds (CVOCs) which are assigned to two decision matrices:

Matrix 1	**Matrix 2**
Trichloroethene (TCE)	1,1-dichloroethene (1,1-DCE)
Carbon tetrachloride (CCL4)	cis-1,2-dichloroethene (cis-1,2-DCE)
Vinyl chloride (VC)	tetrachloroethene (PCE)
	1,1,1-trichloroethane (1,1,1-TCA)

Other factors including subsurface utilities, current building use, groundwater flow direction, and previous manufacturing operations are considered in development of a strategy for addressing VI at the Site.

2. Summary of Past Vapor Intrusion Activities

After a series of engineering studies dating back to 2006, UTC compiled significant information about various buildings at the Site. Evaluations included studies of buildings TR-1 (demolished), TR-2 (demolished), TR-3 (demolished), TR-4, TR-5, TR-6, TR-18, and TR-18S. The studies, which included sub-slab soil-gas sampling, indoor air sampling, and SSD pilot testing, resulted in recommendations to install SSD systems in TR-4 (along the western wall near the central portion of the building), TR-6, TR-18, and TR-18S. In March of 2017, UTC authorized AECOM to commence final design and construction of the SSD systems.

Of the buildings studied, the need for an SSD system at TR-5 is still being considered. A portion of building TR-5 was identified as a potential concern due to its proximity to a former degreaser located in TR-3. Four sub-slab and indoor air sampling events were conducted during the 2010 to 2012 heating seasons. TCE concentrations in sub-slab soil gas ranged from 0.5 micrograms per cubic meter (µg/m^3) to 15 µg/m^3. TCE concentrations in indoor air samples ranged from an estimated concentration (i.e., "J" qualifier) of 0.10 µg/m^3 to 0.75 µg/m^3.

3. Potential for Vapor Intrusion

This *Potential for VI Assessment Report* was completed in accordance with the NYSDOH's VI Guidance. The VI Guidance states that subsurface vapors and soil VI should be included in an overall Conceptual Site Model (CSM) as required by the NYSDEC's *Draft DER-10 Technical Guidance for Site Investigation and Remediation* (NYSDEC 2002). The following subsections describe the CSM, current building use at the Site, and how additional groundwater wells were installed to fill data gaps and update the CSM to aid in conducting the VI assessment.

3.1 Conceptual Site Model

The focus of this VI assessment is the portion of the Site which contains buildings. This area is roughly bounded by First Street to the north, Kinne Street to the east, Verizon Service Road to the south, and Thompson Road to the west. The portion of the Site being evaluated represents the majority of the Carrier property where manufacturing buildings were constructed. Although some buildings have been demolished, many still remain and are currently occupied.

The CO for the Site was developed to address environmental issues including contaminated groundwater, contaminated storm sewer bedding, soil VI and migration, and PCBs in Sanders Creek. The CO also included procedures to address additional areas of concern (AOCs), as necessary during the implementation of the requirements of the CO.

In addressing the requirements of the CO, UTC initially installed a Site-wide groundwater monitoring well network consisting of 16 wells. Over time, approximately 90 monitoring points (wells and piezometers) were added across the Site, yielding a total of 106 monitoring locations prior to 2017. In early 2017, an additional 16 supplemental monitoring wells were installed to provide information about the condition of groundwater around the perimeter of the Site, to fill data gaps in areas of the Site that were not the focus of previous CO issues, and to provide groundwater quality information adjacent to select buildings.

Establishing a CSM starts with identifying a source(s) of contamination, impacted media, potential migration pathways, and the potential for human exposure. Suspected sources of contamination at the Site that are relevant to VI are known or suspected releases of solvents. The releases impact underlying soil and groundwater and are a source of vapors that can migrate to indoor spaces.

The presence of CVOCs in shallow groundwater is used as the primary indication of potential source areas and contaminant concentrations in groundwater at sufficient levels would constitute a VI source. Collection and mapping of groundwater elevation and contaminant data is also used to aid in determining contaminant flow direction.

An additional component of the CSM, with respect to VI, consists of potential vapor migration along or within subsurface utilities, including the Site's significant storm water infrastructure network.

Following the identification of a contaminant source and potential migration pathway, locations of potential exposure are assessed. For VI, potential exposure results from the accumulation of contaminant vapors under building sub-slabs and seepage of those vapors into occupied building areas.

3.2 Building Survey

As a preliminary screening tool, the current building use and occupancy status was obtained from Carrier personnel for each building of interest. Data from this assessment are summarized on **Table 1**. For completeness, **Table 1** also includes entries for buildings that have been demolished but may have been discussed in prior Site VI reports.

Based on the survey, 12 of the 21 existing Site buildings have one or more occupants for 8 or more hours per day (hrs/day), five buildings are occupied for substantially less than 8 hrs/day, and four buildings are unoccupied. Of the five buildings occupied less than 8 hrs/day, three are considered unoccupied due to the periodic nature of when they

are accessed by facility personnel and the limited duration of such visits. In summary, the survey indicates that 15 Site buildings are currently occupied by personnel for a sufficient duration that further evaluation is warranted.

As noted above, SSDs are being installed in four of the occupied buildings. Therefore, the following buildings were retained for evaluation to determine the need for further VI assessment: SWTP, TR-4 (portions of the building not influenced by the pending SSD system), TR-5, TR-6A, TR-7, TR-7A, TR-8, TR-10, TR-19, TR-20, TR-21, and TR-23.

3.3 Site-Wide Groundwater

The existing well network at the Site was assessed for groundwater contamination, focusing on the seven CVOCs highlighted in the NYSDOH VI Guidance document. To make this assessment, data from the following reports were used:

- *Corrective Measures Update Site-wide Groundwater Monitoring Report - June 2015*, EnSafe, August 2015 (62 wells)
- *TR-3 North Wall/SWTP Area IRM Pre-Design Investigation Report*, AECOM, July 2016 (5 wells)
- *A&R Building Area AOC Sampling and Analysis Report*, AECOM, July 2016 (8 wells)
- *Southeast Debris/Soil Pile Sampling and Analysis Report*, AECOM, June 2016 (5 wells)
- *Site-wide Groundwater Monitoring, Supplemental Well Installation Sampling and Analysis Report*, AECOM, April 2017 (17 wells)

As discussed, the CSM includes impacted shallow groundwater, which represents a potential source of VI to Site buildings. **Figure 1** shows the locations of all existing Site monitoring wells. Historically, the highest concentrations of CVOCs have been detected in the northwest quadrant of former TR-1 and in the vicinity of the north wall of TR-3. Further discussion regarding the concentrations of CVOCs detected in shallow groundwater is presented later in the report.

In addition to delineating the presence of CVOCs, groundwater monitoring data was used to evaluate the flow of groundwater to identify areas of the Site that are potentially downgradient of CVOCs. **Figure 2** presents a groundwater contour map drawn based on groundwater elevations measured following installation of the supplemental monitoring wells. Overall, flow is generally to the north-northwest across the Site, which is generally consistent with prior interpretations of shallow groundwater flow.

The groundwater data were compared to NYS Ambient Water Quality Standards [AWQS] and Guidance Values in Technical & Operational Guidance Series [TOGS] Version 1.1.1., June 1998, with June 2004 Addendum. Figures showing the groundwater results compared to TOGS criteria are presented in Appendix A. The figures use colored dots to show the historically detected concentrations of NYSDOH Matrix 1 chemicals (TCE, CCL4, and VC) and Matrix 2 chemicals (1,1-DCE, cis-1,2-DCE, PCE, and 1,1,1-TCA):

- Blue dot indicates that no Matrix 1 or Matrix 2 chemicals were detected.
- Green dot indicates that one or more of these chemicals were detected, but below the respective groundwater criteria.
- Red dot indicates that one or more of these chemicals were detected above the groundwater criteria.

The areas where groundwater exceedences exist near Site buildings warrant further evaluation as discussed below.

3.4 Evaluation

This VI assessment uses calculated risk-based groundwater screening levels (SLs) to identify locations (e.g., buildings) that may potentially pose a health concern through the VI pathway. Generally, when groundwater concentrations of vapor-forming compounds fall below SLs, no further action or study is warranted, so long as the exposure assumptions match those taken into account by the calculations and the Site fulfills the conditions and assumptions of the generic conceptual model underlying the SLs. In this manner, the results of risk-based screening

can help identify buildings that can be eliminated from further assessment. However, exceeding the groundwater SL generally suggests that further evaluation of the VI pathway is appropriate.

3.4.1 Screening Level Calculation

AECOM used the United States Environmental Protection Agency (USEPA) Vapor Intrusion Screening Level (VISL) tool to calculate the SLs. Two methods were used calculate the SLs. One method calculated the SLs using the VISL tool for calculating commercial and residential scenarios using USEPA risk values (i.e., the lessor of the 1E-06 cancer risk or a non-cancer hazard of HQ=1). A commercial exposure scenario is applicable for the majority of the Site, but the more conservative residential exposure scenario was assumed for the eastern portion of the Site which has residences along and east of Kinne Street.

The second method employed similar calculations, but for endpoint indoor air target concentrations developed by the NYSDOH. The NY indoor air target concentrations are applicable to any exposure scenario, including both commercial and residential scenarios.

The calculations used given values for Henry's Law constants, an assumed attenuation factor (α) of 0.03 (the VISL tool default value), and an assumed groundwater temperature of 25 °C (77 °F), which is very conservative for this Site.

The USEPA VISL tool was employed for all compounds except cis-1,2-DCE. For that compound, the calculation was performed using the USEPA Excel spreadsheets that incorporate the Johnson & Ettinger model. A groundwater concentration of 20 µg/L of cis-1,2-DCE at 25 °C was found to give a soil gas concentration of 3,330 µg/m^3 immediately above the water. Using the assumed attenuation factor of 0.03, the estimated indoor air concentration would be 100 µg/m^3 (i.e., the NY indoor air target concentration).

The lowest applicable groundwater SL was used for the evaluation. For commercial scenarios, this is the NY indoor air target value, except VC and CCL4. For residential scenarios, this is the NY value except for TCE, CCL4, VC, and PCE.

Resulting Groundwater SLs are summarized in the following table.

Compound	NY Indoor Air Target Conc. (µg/m3)	Groundwater Screening Level (µg/L)		
		Based on NY Indoor Air Targets	USEPA VISL Commercial	USEPA VISL Residential
Trichloroethene (TCE)	2	**4.9**	7.4	**1.1**
Vinyl Chloride (VC)	5	4.4	**2.4**	**0.14**
Carbon Tetrachloride (CCL4)	5	4.4	**1.8**	**0.41**
Tetrachloroethene (PCE)	30	**41**	65	**14**
1,1-Dichloroethene (1,1-DCE)	100	**94**	820	195
cis-1,2-Dichloroethene (cis-1,2-DCE)	100	**20**	n/a	n/a
1,1,1-Trichloroethane (1,1,1-TCA)	100	**142**	31,100	7,400

Bolded values are the screening levels selected for this assessment. Residential screening levels are used for wells along the eastern side of the Site.

3.4.2 Evaluation of Results

Using the most recent groundwater analytical results for each site well, **Figure 3** through **Figure 9** depict the detections of the individual Matrix 1 and Matrix 2 chemicals relative to the lowest applicable SL. On these figures:

- Blue dot indicates the chemical was not detected.
- Green dot indicates the chemical was detected, but below its respective SL.
- Red dot indicates the chemical was detected above the SL.
- If a chemical was not detected and the SL was above the detection limit, it was assumed that the chemical was not present and therefore does not present a potential risk.

The results indicate no detections of CCL4. Also, there are very few detections but no exceedances of SLs near Site buildings for 1,1-DCE, PCE, and 1,1,1-TCA.

The recent groundwater data provided by the supplemental wells indicate that TCE is present in the groundwater at concentrations in exceedance of SLs in the vicinity of TR-4, TR-5, TR-6A, TR-7, and TR-7A. Similarly, VC and cis-1,2-DCE are present at concentrations in exceedance of SLs in the vicinity of TR-4, TR-6A, TR-7, and TR-7A.

3.5 Other Considerations

Facility personnel have anecdotal information indicating a degreaser was formerly located in the eastern half of the TR-19 building. The approximate location of the former degreaser based on the recollection of facility personnel is shown on **Figure 10**.

4. Recommendations

Exceedance of groundwater SLs generally suggests that further evaluation of the VI pathway is appropriate. The need for further evaluation also considers additional information that may be available for the building and immediately surrounding area. For the buildings (or portions of buildings) listed below, AECOM recommends VI investigations. The rationale specific to each building is also provided.

TR-4

An SSD system is being constructed in the west-central portion of TR-4. The groundwater data show exceedances of SLs in well MW-69, located to the west of TR-4, and in well MW-84, located to the east of TR-4. Based on these exceedances, additional VI investigation of the southern portion TR-4 that lies south of the influence of the SSD system is warranted.

TR-5

Additional VI investigations are recommended for the central and southern portions of TR-5 for the following reasons:

- TCE was detected above the SL in monitoring well MW-84 located adjacent to the southwest wall of TR-5. The well is potentially upgradient of portions of TR-5.
- There are stormwater sewer laterals beneath TR-5 that connect to the main trunk line on the west side of the building. It is conceivable that impacts from the MW-84 area could migrate along the sewer laterals as a preferential pathway for soil vapors.
- Previous VI investigations, which focused at north end of the building, detected CVOCs in sub-slab vapors and indoor air (although below NYDOH concentrations requiring action).

TR-6A, TR-7, and TR-7A

Buildings TR-6A, TR-7, and TR-7A are in close proximity to monitoring well MW-69 where some CVOC concentrations exceed SLs. Monitoring well MW-69 is located north and in the inferred downgradient direction from

these buildings. The subsurface stormwater piping, which ties back to drainage features near these buildings, is within close proximity of monitoring well MW-69. Based on the presence of downgradient impacts, further VI investigation is recommended for these buildings.

TR-19 and TR-20

Based on the anecdotal information regarding the former presence of a degreaser in building TR-19, VI investigations are recommended for building TR-19. Furthermore, given that building TR-20 is immediately adjacent to building TR-19, VI investigations should be planned for TR-20 as well, with a final decision to be made after TR-19 investigation results are reviewed to see if any subsurface contamination extends to the vicinity of TR-20.

TR-21

Further VI investigation is recommended for TR-21. Although groundwater immediately downgradient of TR-21 appears to be un-impacted, elevated levels of TCE have been detected in the sewer running along the eastern side of the building. Also, VC, 1,1-DCA, and 1,1,1-TCA were previously detected in the soils south of the building. As reported in the EnSafe *RCRA Facility Investigation Report*, dated September 2002, TCE concentrations in the shallow soil ranged from 4.5 µg/kg to 114 µg/kg. A soil concentration of 114 ug/kg of TCE at 25 °C could theoretically result in a soil gas concentration of approximately 107,000 ug/m^3. Using the assumed VISL attenuation factor of 0.03, the estimated indoor air concentration would be about 3,000 ug/m^3 which is well above the NY indoor air target concentration.

VI Investigation Work Plan

AECOM recommends that the VI investigations include sub-slab and indoor air sampling. Should NYSDEC/NYSDOH concur with the recommended building selection/rationale and that sub-slab and indoor air sampling be performed, AECOM will prepare a work plan detailing proposed investigation activities.

N

SANDERS CREEK

MW-80

MW-05R

MW-17

MW-21

MW-65

MW-42

MW-14D

MW-14

MW-68

MW-67

TR3-PW-02

MW-50

TR3-GB-03

TR3-MW-01

MW-56

MW-43

MW-57

TR3-MW-02

MW-66

MW-58

MW-55

MW-64

MW-54D

MW-79

MW-63

MW-53

PLR061

MW-59

MW-18

MW-11

MW-60

PLR060

MW-52

MW-51

MW-48

PLR056

PLR057

MW-54

PLR059

PLR058

TR-3

MW-62

TR3-PW-01

MW-46

MW-61

MW-47

MW-45

MW-44

MW-20

MW-41D

PLR002

PLR001

CARRIER PKWY

AR-MW-01

AR-MW-02

AR-MW-03

A&R

AR-MW-04

AR-MW-06

AR-MW-05

TR-2

MW-70

MW-49

MW-10

MW-78

MW-81

MW-82

MW-83

FIRST ST

MW-40D

MW-38

MW-06

MW-37

MW-36

MW-39

MW-73

TR-18

TR-18S

MW-19

MW-23

MW-24

THOMPSON RD

MW-35D

MW-31

MW-34

MW-33

MW-30

MW-32

MW-26

MW-29

MW-28

MW-27

MW-25

MW-03S

MW-03D

MW-13D2

TR-4

TR-5

TR-19

TR-20

MW-77

KINNE ST

MW-75

MW-84

MW-08

MW-22D

TR-1

TR-6

MW-69

MW-76

MW-71

TR-7

TR-7A

TR-6A

MW-74

TR-21

TR-11

TR-10

MW-72

MW-09

TR-8

TR-21A

TR-13

TR-23

TR-10A

TR-12

TR-14

MW-16D

DP-MW-01

DP-MW-02

DP-MW-04

DP-MW-05

DP-MW-03

VERIZON SERVICE RD

Legend

- Supplemental Monitoring Well (2017)
- Monitoring Well
- Piezometer
- Pump Well

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

NOTES: SSD = Sub-Slab Depressurization System;
Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
SITE-WIDE GROUNDWATER NETWORK

AECOM

FIGURE 1

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\01 SITE-WIDE GW NETWORK.mxd 4/25/2017

N

SANDERS CREEK

CARRIER PKWY

FIRST ST

THOMPSON RD

KINNE ST

VERIZON SERVICE RD

MW-80, 391.18

MW-79, 393.69

MW-70, 395.20

MW-73, 394.94

MW-82, 394.85

MW-78, 395.08

MW-81, 399.20

MW-83, 399.20

MW-77, 396.07

MW-75, 397.74

MW-84, 396.72

MW-69, 398.78

MW-08, 398.65

MW-76, 398.64

MW-71, 395.61

MW-74, 398.94

MW-72, 399.00

392

394

396

398

399

397

Legend

- Monitoring Well
- Groundwater Elevation Contour

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

NOTES: Elevation shown in feet above mean sea level (ft amsl), NAVD 88 Datum;
SSD = Sub-Slab Depressurization System.
Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
GROUNDWATER ELEVATIONS
(FEBRUARY 15, 2017)

AECOM

FIGURE 2

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\02 GROUNDWATER ELEVATIONS (20170215).mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Trichloroethene Concentration:

- Not Detected
- Below Criteria (< 4.9 µg/L)
- At or Above Criteria (> 4.9 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: Screening Level calculated using the Environmental Protection Agency (EPA) (VISL) Calculator [Version 3.5.1 (May 2016 RSLs)]. The value was calculated using the NY indoor air target concentration.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE TRICHLOROETHENE IN GROUNDWATER

AECOM

FIGURE 3

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\03 TCE IN WG.mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

KINNE ST

THOMPSON RD

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Carbon Tetrachloride Concentration:

- Not Detected
- Below Criteria (< 1.8 µg/L)
- At or Above Criteria (> 1.8 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: Vapor Intrusion Screening Level (VISL) calculated using the Environmental Protection Agency (EPA) VISL Calculator [Version 3.5.1 (May 2016 RSLs)] with Exposure Scenario set as Commercial, Target Risk as one-per-million lifetime cancer risk, and a conservative 25°C groundwater temperature. (OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, June 2015)

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System.
Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
CARBON TETRACHLORIDE
IN GROUNDWATER

AECOM

FIGURE 4

J:\Projects\60310231_UTCAOCGRI\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\04 CCL4 IN WG.mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

KINNE ST

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Vinyl Chloride Concentration:

- Not Detected
- Below Criteria (< 2.4 µg/L)
- At or Above Criteria (> 2.4 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: Vapor Intrusion Screening Level (VISL) calculated using the Environmental Protection Agency (EPA) VISL Calculator [Version 3.5.1 (May 2016 RSLs)] with Exposure Scenario set as Commercial, Target Risk as one-per-million lifetime cancer risk, and a conservative 25^{0}C groundwater temperature. (OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, June 2015)

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE VINYL CHLORIDE IN GROUNDWATER

AECOM

FIGURE 5

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\05 VC IN WG.mxd 4/25/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

KINNE ST

THOMPSON RD

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

1,1-Dichloroethene Concentration:

- Not Detected
- Below Criteria (< 94 µg/L)
- At or Above Criteria (> 94 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: Screening Level calculated using the Environmental Protection Agency (EPA) (VISL) Calculator [Version 3.5.1 (May 2016 RSLs)]. The value was calculated using the NY indoor air target concentration.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE 1,1-DICHLOROETHENE IN GROUNDWATER

AECOM

FIGURE 6

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\06 1,1-DCE IN WG.mxd 4/25/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

KINNE ST

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Cis-1,2-Dichloroethene Concentration:

- Not Detected
- Below Criteria (< 20 µg/L)
- At or Above Criteria (> 20 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: Screening Level calculated using the Environmental Protection Agency (EPA) (VISL) Calculator [Version 3.5.1 (May 2016 RSLs)]. The value was calculated using the NY indoor air target concentration.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE CIS-1,2-DICHLOROETHENE IN GROUNDWATER

AECOM

FIGURE 7

J:\Projects\60310231_UTCAOCGRI\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\07 CIS-1,2-DCE IN WG.mxd 4/25/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Tetrachloroethene Concentration:

- Not Detected
- Below Criteria (< 41 µg/L)
- At or Above Criteria (> 41 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: Screening Level calculated using the Environmental Protection Agency (EPA) (VISL) Calculator [Version 3.5.1 (May 2016 RSLs)]. The value was calculated using the NY indoor air target concentration.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE TETRACHLOROETHENE IN GROUNDWATER

AECOM

FIGURE 8

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\08 PCE IN WG.mxd 4/25/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

1,1,1-Trichloroethane Concentration:

- Not Detected
- Below Criteria (< 142 µg/L)
- At or Above Criteria (> 142 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: Screening Level calculated using the Environmental Protection Agency (EPA) (VISL) Calculator [Version 3.5.1 (May 2016 RSLs)]. The value was calculated using the NY indoor air target concentration.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE 1,1,1-TRICHLOROETHANE IN GROUNDWATER

AECOM

FIGURE 9

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\09 1,1,1-TCA IN WG.mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

Former Degreaser

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

- Former Degreaser

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

NOTES: SSD = Sub-Slab Depressurization System.
Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
FORMER DEGREASER LOCATION IN TR-19

AECOM

FIGURE 10

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\10 FORMER DEGREASER LOCATION.mxd 4/25/2017

TABLE 1
Thompson Road Facility Building Survey for Vapor Intrusion Study
UTC/Carrier

Building Number	Approximate Building Size (Square Feet)	Building Uses	Occupancy Status				Need for Further VI Investigation
			Occupied	Staff Size	Hrs of Occupancy	Comments	
SWTP	10,811	Maintenance, Facility Support	Yes	1	Less than 8 hrs/day	SWTP for GW and surface water treatment. Staff in and out of building all day long, large roll-up door on building.	No, building is not occupied full time. Site-wide groundwater is collected and treated in this building. As such, off gassing of vapors and impact to indoor air would be expected to be present.
TR-1	N/A	Demolished	-	-	-	-	No
TR-2	N/A	Demolished	-	-	-	-	No
TR-3	N/A	Demolished	-	-	-	-	No
TR-4	204,493	Offices, Laboratory	Yes	350	8 hrs/day	Lab and administrative functions - south primarily labs. offices. Lab, Café.	Yes. An SSD installation is scheduled for the west-central portion of the building. The presence of VISL exceedences off the southern end of the buidling may warrant additional points/refinement of the system following startup.
TR-5	167,241	Offices, Warehouse, Laboratory	Yes	290	8 hrs/day	Offices, lab and warehouse storage area.	Yes. Previous SVI investigations focused on the north end of the building. Groundwater contamination (TCE) in exceedence of VISL was detected near the southwest corner. An SVI investigation focusing on the southern portion of the building may be warranted.
TR-6	14,771	Facility Support, Maintenance	Yes	31	8 hrs/day	Maintenance Department head quarters. Staff dispatched from this building, central FMS location for trades groups. Staff in and out of building all day long, and at night till 11 PM, Weekends also occupied.	No. SSD system currently being installed.
TR-6A	6,315	Facility Support, Maintenance	Yes	5	Less than 8 hrs/day	Material storage for FMS Grounds Crew - Locker room for grounds staff.	Yes. Building is in close proximity to groundwater with VISL exceedences.
TR-7	13,687	Laboratory, Offices	Yes	70	8 hrs/day	Lab space and office space.	Yes. Building is in close proximity to groundwater with VISL exceedences.
TR-7A	16,276	Laboratory, Offices	Yes	Included above	8 hrs/day	Lab space and office space.	Yes. Building is in close proximity to groundwater with VISL exceedences.
TR-8	34,859	Warehouse, Offices	Yes	2	8 hrs/day	Document storage & archives.	No. Not in area of VISL exceedance.
TR-9		Demolished	-	-	-	-	No.
TR-10	16,902	Facility Support	Yes	3	8 hrs/day	Power house.	No. Not in area of VISL exceedance.
TR-10A	141	Facility Support	No	-	N/A	Million gallon tank chemical feed room. Staff in periodically to check and fill chemicals.	No, not occupied.
TR-11	6,725	Warehouse	No	0	N/A	Maintenance and storage.	No, not occupied.
TR-12	5,903	Laboratory	Yes	1	8 hrs/day	One person occupies this building.	No. Not in area of VISL exceedance.

TABLE 1
Thompson Road Facility Building Survey for Vapor Intrusion Study
UTC/Carrier

Building Number	Approximate Building Size (Square Feet)	Building Uses	Occupancy Status				Need for Further VI Investigation
			Occupied	Staff Size	Hrs of Occupancy	Comments	
TR-12A	N/A	Demolished	-	-	-	-	No
TR-13	834	Facility Support	No	0	N/A	Treatment (neutralizer) for boiler water to sanitary. Staff in periodically to check pH or to add chemicals.	No, not occupied.
TR-14	1,144	Facility Support	No	0	Less than 8 hrs/day	16" domestic water line metering building. Staff in periodically to read the meter and check mechanicals.	No, not occupied.
TR-15	N/A	Demolished	-	-	-	-	No
TR-16	N/A	Demolished	-	-	-	-	No
TR-17	N/A	Demolished	-	-	-	-	No
TR-18	12,461	Offices	No	0	N/A	Currently not occupied.	No. SSD system currently being installed.
TR-18S	18,080	Offices	Yes	46	8 hrs/day	Computer center.	No. SSD system currently being installed.
TR-19	334,240	Laboratory, Offices, Recreational	Yes	146	8 hrs/day	Lab space, office space, limited warehouse, and wellness center.	Yes. Anecdotal information indicates a degreaser may have been used in the eastern half of the builing.
TR-20	446,515	Offices, Laboratory, Warehouse	Yes	180	8 hrs/day	Office, lab, and warehouse space.	Yes. Given that building TR-20 is immediately adjacent to building TR-19, VI investigations should be planned for TR-20 as well, with a final decision to be made after TR-19 investigation results are reviewed to see if any subsurface contamination extends to the vicinity of TR-20.
TR-21	31,137	Laboratory, Offices	Yes	15	8 hrs/day	Lab space with offices.	Yes. Elevated levels of TCE have been detected in the sewer on the eastern side of the building. Also, in 2002 elevated levels of TCE were reported in soils south of the building.
TR-21A	1,435	Facility Support	No	0	Less than 8 hrs/day	Mechanical room for tower system. Periodic access only.	No, not occupied.
TR-22	N/A	Demolished	-	-	-	-	No
TR-23	3,902	Facility Support, Maintenance	No	0	Less than 8 hrs/day	Maintenance heavy equipment storage, PIV repairs, HE repairs, and cart wash area - periodic access by staff.	No, not occupied.

Notes:
SSD - Sub-slab depressurization
TCE- trichloroethene
VI - vapor intrusion
SCGs - site criteria and guidance values
SVI - soil vapor intrusion
VISL- Vapor Intrusion Screening Level

Appendix A Groundwater Data Compared to NYS Groundwater Criteria

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

KINNE ST

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Concentration:

- Not Detected
- Below Criteria
- At or Above Criteria

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System.
Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
COMBINED RESULTS OF
VI MATRIX 1 & 2 CHEMICALS

AECOM

FIGURE A-1

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A01 COMBINED RESULTS (TOGS).mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-2

TR-3

SWTP

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Trichloroethene Concentration:

- Not Detected
- Below Criteria (< 5 µg/L)
- At or Above Criteria (> 5 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

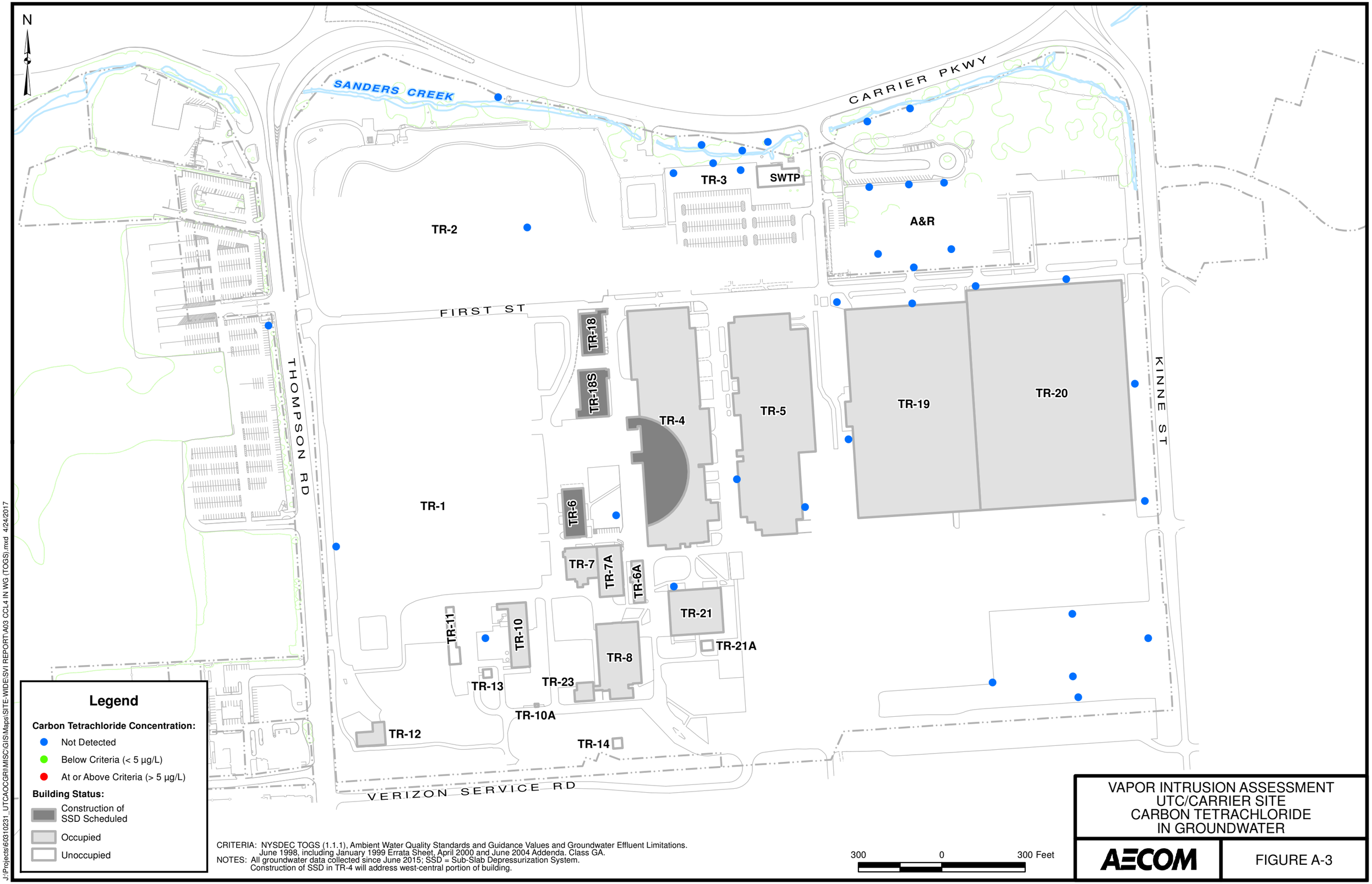
300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE TRICHLOROETHENE IN GROUNDWATER

AECOM

FIGURE A-2

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A02 TCE IN WG (TOGS).mxd 4/24/2017



CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.
NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
CARBON TETRACHLORIDE IN GROUNDWATER

AECOM

FIGURE A-3

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A03 CCL4 IN WG (TOGS).mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Vinyl Chloride Concentration:

- Not Detected
- Below Criteria (< 2 µg/L)
- At or Above Criteria (> 2 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE VINYL CHLORIDE IN GROUNDWATER

AECOM

FIGURE A-4

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A04 VC IN WG (TOGS).mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

1,1-Dichloroethene Concentration:

- Not Detected
- Below Criteria (< 5 µg/L)
- At or Above Criteria (> 5 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
1,1-DICHLOROETHENE
IN GROUNDWATER

AECOM

FIGURE A-5

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A05 1,1-DCE IN WG (TOGS).mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Cis-1,2-Dichloroethene Concentration:

- Not Detected
- Below Criteria (< 5 µg/L)
- At or Above Criteria (> 5 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System.
Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
CIS-1,2-DICHLOROETHENE
IN GROUNDWATER

AECOM

FIGURE A-6

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A06 CIS-1,2-DCE IN WG (TOGS).mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

Tetrachloroethene Concentration:

- Not Detected
- Below Criteria (< 5 µg/L)
- At or Above Criteria (> 5 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT
UTC/CARRIER SITE
TETRACHLOROETHENE
IN GROUNDWATER

AECOM

FIGURE A-7

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A07 PCE IN WG (TOGS).mxd 4/24/2017

N

SANDERS CREEK

CARRIER PKWY

TR-3

SWTP

TR-2

A&R

FIRST ST

THOMPSON RD

KINNE ST

TR-18

TR-18S

TR-4

TR-5

TR-19

TR-20

TR-1

TR-6

TR-7

TR-7A

TR-6A

TR-21

TR-21A

TR-11

TR-10

TR-8

TR-13

TR-23

TR-10A

TR-12

TR-14

VERIZON SERVICE RD

Legend

1,1,1-Trichloroethane Concentration:

- Not Detected
- Below Criteria (< 5 µg/L)
- At or Above Criteria (> 5 µg/L)

Building Status:

- Construction of SSD Scheduled
- Occupied
- Unoccupied

CRITERIA: NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

NOTES: All groundwater data collected since June 2015; SSD = Sub-Slab Depressurization System. Construction of SSD in TR-4 will address west-central portion of building.

300 0 300 Feet

VAPOR INTRUSION ASSESSMENT UTC/CARRIER SITE 1,1,1-TRICHLOROETHANE IN GROUNDWATER

AECOM

FIGURE A-8

J:\Projects\60310231_UTCAOCGR\MISC\GIS\Maps\SITE-WIDE\SVI REPORT\A08 1,1,1-TCA IN WG (TOGS).mxd 4/24/2017

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