LETTER OF TRANSMITTAL

RECIPIENT: Ms. Tara Blum
NYSDEC Region 7
Division of Environmental Remediation
615 Erie Blvd. West
Syracuse, New York 13204-2400

DATE: 7/22/2014

PROJECT: Carrier Corporation
Thompson Road Facility
Syracuse, New York
Corrective Action Order - Index No.
CO 7-20051118-4
Site Registry No.: 734043

TRANSMITTED VIA: ☐U.S. MAIL ☒FED EX ☐UPS ☐FAX ☐HAND DELIVERED ☒OTHER Email

WE ARE SENDING YOU:

DOC. NO.	DATE	NO. OF COPIES	DOCUMENT DESCRIPTION
1	7/22/14	1	**Former Building TR-3 North Wall Investigation Work Plan**

THESE ARE TRANSMITTED as checked below:

☒ For your record ☒ For review and comment ☒ For approval ☐ As requested
☐ Other _____

REMARKS:

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REGION 7 - SYRACUSE

DOCUMENTS WERE COPIED TO:

Mark Sergott

Krista Anders

FROM: May Heflin

SIGNED: May M. Heflin

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July 22, 2014

Submitted via e-mail on July 22, 2014

Tara M. Blum, PE
Environmental Engineer
NYSDEC Region 7
Division of Environmental Remediation
615 Erie Boulevard West
Syracuse, New York 13204-2400

Re: Carrier Corporation, Thompson Road Facility, Syracuse, New York
Corrective Action Order — Index CO 7-20051118-4
NYSDEC Site Registry Number: 734043
Former Building TR-3 North Wall Investigation Work Plan, July 2014

Dear Ms. Blum:

In accordance with the referenced order, Carrier Corporation is providing one hard copy and one electronic copy (PDF via email) of the Former Building TR-3 North Wall Investigation Work Plan.

Please call me at (615) 255-9300 if you have any questions.

Sincerely,

EnSafe Inc.

May M Heflin

By: May Mishu Heflin, PE

Enclosure: Former Building TR-3 North Wall Investigation Work Plan, July 2014

cc: Mr. Mark Sergott — NYSDOH
Ms. Krista Anders — NYSDOH
Mr. John Wolski — UTC
Mr. Joe Basile — Carrier Corporation
Ms. Kathleen McFadden — UTC

Former Building TR-3 North Wall Investigation

CARRIER THOMPSON ROAD FACILITY
CARRIER PARKWAY
SYRACUSE, NEW YORK

EnSafe Project Number
0888815577

Revision: 0

Corrective Action Order — Index CO 7-20051118-4
NYSDEC Site Registry No.: 734043

Prepared for:

United Technologies

UTC SHARED REMEDIATION SERVICES
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Prepared by:

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July 2014

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Appendices

1.0 INTRODUCTION

Carrier Corporation, a wholly owned subsidiary of United Technologies Corporation, has prepared this work plan for proposed additional supplemental subsurface investigation activities with regard to the *Manhole 3 (MH3) Work Plan Addendum to the 2013 PLR Investigation* submitted to the New York Department of Environmental Conservation Division of Remediation (NYSDEC-DER) on March 27, 2014, and approved via email correspondence on May 8, 2014. In 2013, as part of routine operations and maintenance (O&M) activities associated with the Site's storm water treatment system, Carrier discovered an accumulation of oil in manhole PS-MH3 (MH3), which is down stream of storm water lines beneath the western two-thirds of Parking Lot R (PLR). Samples of oil from MH3 collected on June 26, 2013, and January 8, 2014, yielded concentrations of PCBs (Aroclor 1254) at 230 micrograms per kilogram (µg/kg) and 2,600 µg/kg respectively.

Investigation activities related to oil source identification, as outlined in *Manhole 3 (MH3) Work Plan Addendum to the 2013 PLR* Investigation, were conducted in May 2014 and identified two locations (MW54 and PLR-063) with small amounts of light non-aqueous phase liquid (LNAPL) which may be contributing to the accumulation of oil in manhole MH3. No conclusions with regard to the oil source were identified; however, the MH3 Oil Source investigation did identify potentially elevated concentrations of cis-1, 2-dichloroethene and vinyl chloride in the area north of the former Building TR-3 foundation wall and adjacent to Sanders Creek. Potentially elevated concentrations of trichloroethene were also identified near the northwest corner of the storm water treatment building (SWTB) — within the footprint of the former building TR-3.

Based on observations and laboratory analytical results from the MH3 Oil Source Investigation, additional investigation is warranted to determine the extent of impacts, to confirm the detected elevated concentrations of chlorinated compounds, and to further evaluate if remedial actions are warranted. Figure 1 depicts the general Parking Lot R area in relation to the rest of the site. Figure 2 depicts MH3, the SWTB, and the former Building TR-3 foundation wall and Sanders Creek as well as proposed soil borings and monitoring wells detailed in Section 2.0. Both figures are included in Appendix A.

2.0 INVESTIGATION STRATEGY

The objective for supplemental investigation activities is to determine the extent of impacts, to confirm the detected elevated concentrations of chlorinated compounds, and to further evaluate if remedial actions are warranted. The proposed investigation sample locations (soil borings and monitoring wells) are depicted on Figure 2. The strategies for additional assessment of chlorinated solvent impacts north of the former Building TR3 foundation wall are described below.

2.1 Investigation of Chlorinated Compounds North of Former Building TR-3 Wall

Ten (10) soil borings will be advanced using direct-push technology (or hand auger if the boring location is inaccessible via drilling rig due to slope stability or underground utilities) in the area between the northern wall of former Building TR3 and Sanders Creek. Placement of soil borings is constrained to accessible areas due to underground utilities and steep slopes along the south bank of Sanders Creek.

- One soil boring will be advanced to the east of Outfall 001 to assess functionality of a barrier wall and recovery well system, which was installed to prevent chlorinated compound impacted groundwater from migrating to Sanders Creek.

- Seven soil borings will be advanced along the base of the former Building TR-3 wall and along the south bank of Sanders Creek. The objective of these borings is to determine the extent of shallow aquifer groundwater potentially impacted by chlorinated compounds, assess the condition of the deep groundwater aquifer in this area, confirm the detected elevated concentrations of chlorinated compounds, and to further evaluate if remedial actions are warranted.

- One soil boring will be advanced within the footprint of the former TR-3 building to assess the subsurface conditions beneath the floor slab where soils were removed and backfilled previously.

- One soil boring will be advanced within the footprint of the former TR-3 building to assess the subsurface conditions beneath the floor slab south of monitoring well MW43 and west of MW47.

Proposed locations are depicted on Figure 2. These locations were chosen:

- because chlorinated compounds have been detected at monitoring well MW18 during historical groundwater monitoring events with no confirmation of functionality of the barrier wall/recovery well system at Outfall 001;

- because this areas is downgradient of former manufacturing activities conducted within former Building TR-3 which utilized oils and degreasers; and,

- because potential exists for incomplete removal of oil-impacted soils beneath former Building TR-3 due to limitations associated with structural integrity of the foundation wall and concrete slab during historic (early 1990's) excavation activities.

Hand augering is proposed as a backup advancement method to a direct-push rig due to limited accessibility and/or steep slopes along the south bank of Sanders Creek. At each location, a minimum 2-inch diameter groundwater monitoring well will be installed.

2.2 Convert Existing Piezometers to Monitoring Wells

Based on observations of light non-aqueous phase liquid (LNAPL) during MH3 Oil Source investigation activities in May 2014, piezometer PLR-063 shall be converted to a 4-inch diameter monitoring well for potential LNAPL recovery. Due to detections of select chlorinated compounds in excess December 2006 NYSDEC-DER 6 NYCRR Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations at monitoring well MW42, piezometer TW004 shall be converted to a minimum 2-inch diameter monitoring well. The purpose of converting TW004 to a monitoring well is to assess the western extent of shallow aquifer groundwater along Sanders Creek potentially impacted by chlorinated compounds.

2.3 LNAPL Fingerprinting

Passive skimmers shall be placed in monitoring wells in which LNAPL has been or is observed in order to obtain sufficient quantity for fingerprint analyses. Fingerprint analysis will potentially be used to identify the source of LNAPL.

2.4 Geotechnical Assessment

During soil boring advancement and monitoring well installation activities, native soil will be collected from up to four locations proposed herein and submitted to a laboratory for geotechnical analyses for potential future remedial action development purposes. Geotechnical analyses shall include but are not limited to: moisture content, porosity, permeability, and grain size.

3.0 SAMPLING AND ANALYSIS AND HEALTH AND SAFETY PLANS

Soil and groundwater sampling will be conducted in accordance with methods outlined in Section 3.0 of the August 2013 *Parking Lot R Work Plan* and Table 3.1 below. The site-specific health and safety plan will encompass proposed field activities.

Table 3.1
Former Building TR-3 North Wall Investigation Sample Analysis
Carrier Corporation, Syracuse, New York

Sample Matrix	VOCs (Method 8260)	Total PCBs (Method 8081A/8082)	Fingerprint/ DRO/ORO (Method 8015)
Soil (Unsaturated)	×	×	×
Groundwater	×	×	×
NAPL (if present)	×	×	×

Notes:
VOC = Volatile organic compound
PCB = Polychlorinated biphenyl
DRO = Diesel Range Organics
ORO = Oil Range Organics

4.0 IMPLEMENTATION SCHEDULE

Parking Lot R area construction activities are scheduled to begin the week of July 28, 2014, with Outfall 005 construction activities tentatively scheduled for August 25 through September 5, 2014. Carrier respectfully requests expedited review of this work plan in order to complete soil boring and monitoring well installation activities described herein in concert with Outfall 005 construction activities. Mobilization related to the field activities described in this work plan will not occur prior to NYSDEC's approval. While Carrier does not anticipate delays, weather could impact implementation of work plan activities described herein. In accordance with Consent Order requirements, Carrier will notify NYSDEC a minimum of 5 days prior to field investigation activities.

Appendix A
Figures

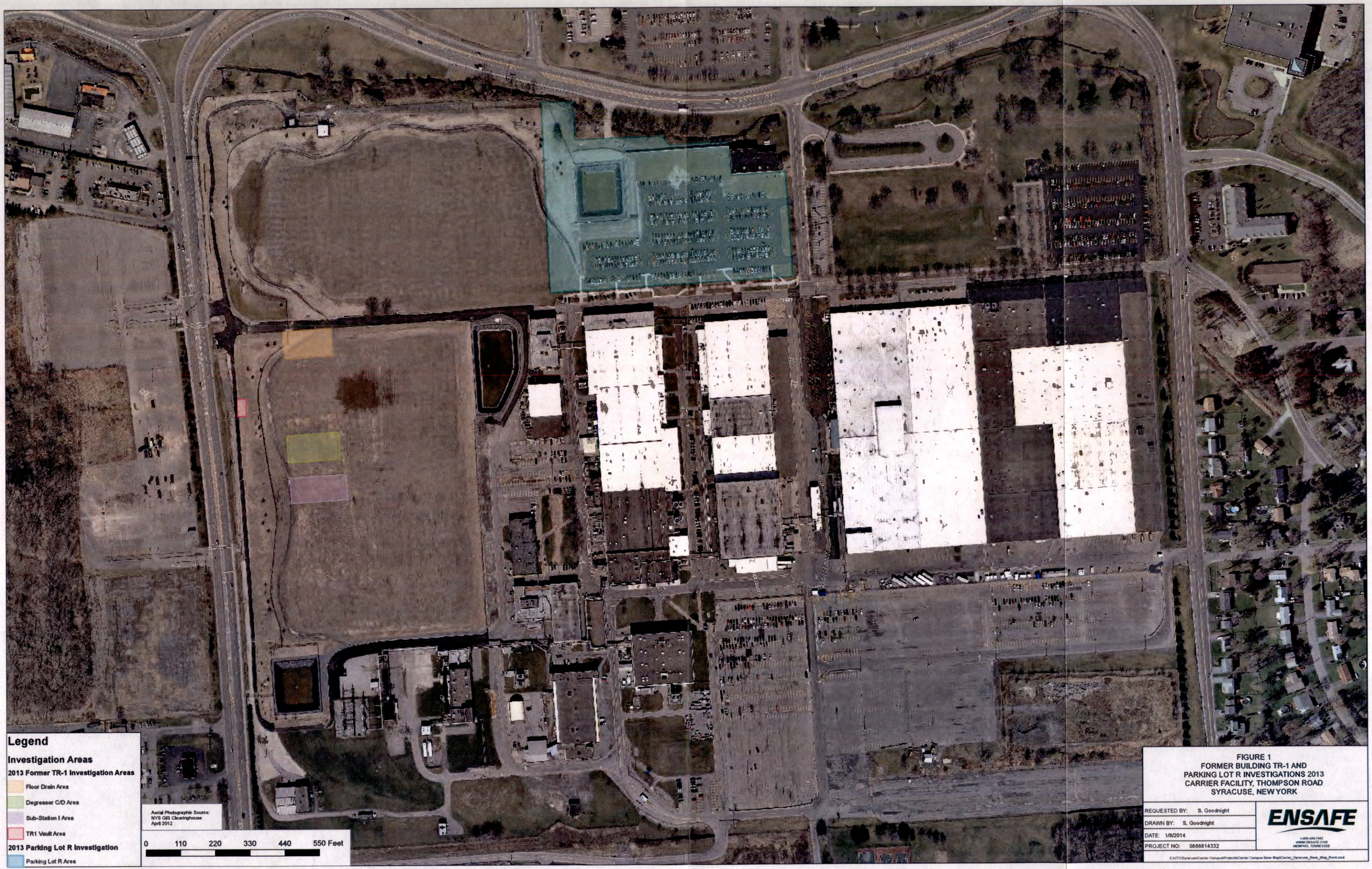

FIGURE 1
FORMER BUILDING TR-1 AND
PARKING LOT R INVESTIGATIONS 2013
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	S. Goodnight
DRAWN BY:	S. Goodnight
DATE:	1/8/2014
PROJECT NO:	0888814332

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FIGURE 2
FORMER BUILDING TR-3 NORTH WALL
PROPOSED LOCATIONS - JULY 2014
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY: M. Heflin	ENSAFE
DRAWN BY: S. Goodnight	
DATE: 7/18/2014	
PROJECT NO: 0888815577	

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