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February 22, 2013

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

Re: Carrier Corporation, Thompson Road Facility, Syracuse, New York
Corrective Action Order — Index No. CO 7-20051118-4
Former Building TR-1, Substation I Interim Action – Concrete and Soil Removal

Ms. Blum:

On behalf of Carrier Corporation, please find enclosed one hard copy and one electronic copy of the *Former Building TR-1 Substation I – Intermim Action Report*, which summarizes field activities at the Carrier Thompson Road facility in Syracuse, New York, that took place in August 2012.

Per email correspondence from your department on September 12, 2011, and follow-up email on October 25, 2011, a hard copy and an electronic copy of this letter will be submitted (via US Mail) to the New York State Department of Health contacts, Ms. Krista Anders (replacement for Mr. Steven Bates), with the Bureau of Environmental Exposure Investigation, and Mr. Mark Sergott (NYSDOH).

If you have any questions, please feel free to contact me at (615) 255-9300.

Sincerely,

EnSafe Inc.

May M. Heflin

By: May Heflin, PE

cc: (hard copy and electronic copy):
Ms. Krista Anders — New York State Department of Health
Mr. Mark Sergott — New York State Department of Health

cc: (electronic copy only):
Mr. John Wolski — United Technologies Corporation
Mr. Nelson Wong — Carrier Corporation

FORMER BUILDING TR-1
SUBSTATION I — INTERIM ACTION REPORT

UNITED TECHNOLOGIES/CARRIER
THOMPSON ROAD FACILITY
SYRACUSE, NEW YORK

EnSafe Project Number
0888809186

Revision No.: 0

Prepared for:

United Technologies Corporation
UTC Shared Remediation Services
United Technologies Building
Hartford, Connecticut 06010

Prepared by:

EnSafe Inc.
220 Athens Way, Suite 410
Nashville, Tennessee 37228
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February 2013

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February 2013

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EXECUTIVE SUMMARY

Carrier Corporation, a wholly-owned subsidiary of United Technologies Corporation, is currently working under a Corrective Action Order — Index CO 7-20051118-4 (Order) dated February 13, 2006, with the New York State Department of Environmental Conservation Division of Environmental Remediation (NYSDEC-DER), to determine if there are ongoing contributions to the Basin 002 storm water system from polychlorinated biphenyl (PCB)-containing oil (free product) released from historical operations in Building TR-1.

To this end, Carrier advanced soil borings to the soil/groundwater interface (approximately 5-7 feet below ground surface) at each of the 12 former substation locations, as well as several other areas identified to be potential PCB release areas based on historical use or visual observation (i.e., stained areas).

The PCB data collected from Building TR-1 sub-slab soils (*Building TR-1 Sub-slab and Degreaser Report*, *October 2011*) indicated PCBs to be present at a single location at former Substation I. A soil sample at the soil-groundwater interface near Substation I was found to contain Total PCBs at a concentration of 26.4 milligrams per kilogram (mg/kg), just above the NYSDEC Industrial Soil Cleanup Objective (SCO) of 25 mg/kg. An expanded soil boring investigation around this location did not detect PCBs above the Industrial SCO.

In 2011, as part of the campus redevelopment which supported campus-wide storm water management activities, Building TR-1 was demolished and its floor slab covered and graded to promote clean storm water runoff to two newly constructed outfalls, 003 and 004. To minimize the impacts of remedial actions on the planned covering, filling, and landscaping of the TR- 1 footprint area, Carrier implemented an interim action at Substation I in the brief interval between building demolition and storm water management activities. Approximately 100 cubic yards of concrete and soil were removed and disposed of at the Model City Landfill, a special waste landfill permitted for disposal of PCB-contaminated material. Following soil excavation at Substation I, the pit was backfilled with flowable concrete and later covered with crushed stone, asphalt pavement, and soil as part of the former building footprint re-grading activities.

1.0. BACKGROUND

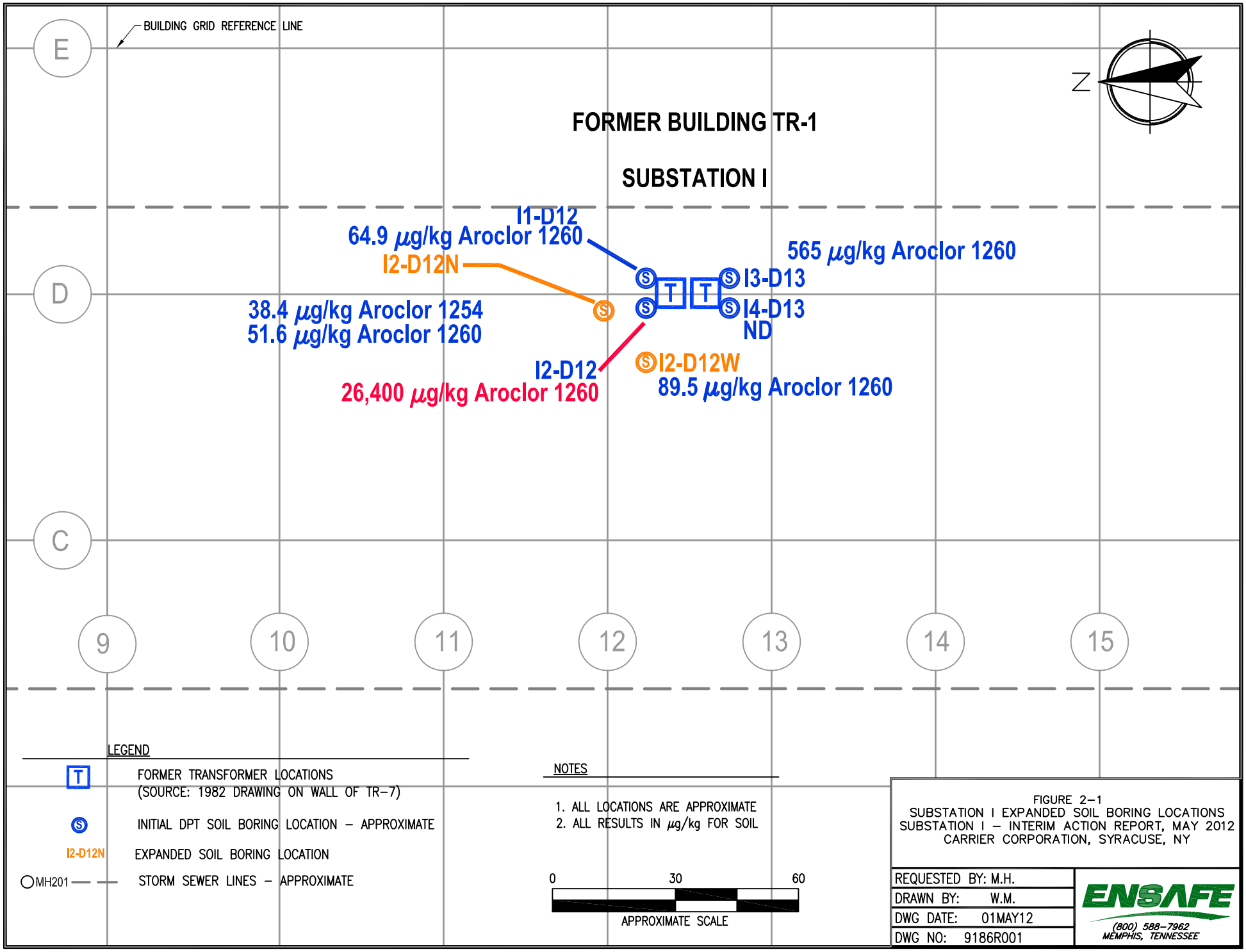
Carrier began sub-slab investigation activities beneath the concrete floor of Building TR-1 in January 2011 (prior to building demolition) to determine if there are ongoing contributions to the storm water system from polychlorinated biphenyl (PCB)-containing oil (free product) and/or volatile organic compound (VOC)-containing non-aqueous phase liquid (NAPL) (also free-product) released from historical operations. Investigations focused on Building TR-1 because this building formerly had PCB transformers, and historical sampling data from the adjacent Thompson Road storm sewer manholes indicated PCB-containing sediments that appear to represent a continuing source of PCBs in storm water. The findings of this investigation were detailed in the *Building TR-1Sub-slab and Degreaser Report*, *October 2011,* submitted to New York State Department of Environmental Conservation (NYSDEC) in October 2011.

Building TR-1 was demolished in 2011, as part of the campus redevelopment which supported campus-wide storm water management activities. Crushed stone, asphalt, fill soil, and topsoil were used to regrade the former building footprint to divert clean surface water runoff to the two newly constructed outfalls, 003 and 004. To minimize the impacts of remedial actions on the planned covering and landscaping of the TR-1 footprint area, Carrier implemented an interim action (IA) in the brief interval between building demolition and grading activities.

2.0 IDENTIFICATION OF PCB-CONTAINING SOIL

As detailed in the *Building TR-1 Sub-slab and Degreaser Report*, *October 2011,* 72 borings were advanced at various locations in Building TR-1, with only one location (I2-D12) exceeding the Total PCB Industrial Soil Cleanup Objective (SCO) of 25 milligrams per kilogram (mg/kg) — which was the basis for expanding field investigations beyond an initial investigation boring. This soil sample was taken at the 5- to 7-foot boring interval at Substation I and exhibited a PCB concentration of 26.4 mg/kg Aroclor 1260 (USEPA Method 8082). Pursuant to the NYSDEC-approved work plan protocol [*PCB Source Investigation Work Plan (Rev 1), Sub-Slab Investigation in Building TR-1, January 2011]*, the soil investigation for PCBs was expanded in the immediate vicinity of this soil boring.

Two additional borings were advanced as part of the expanded investigation at Substation I — one approximately 10 feet to the north (I-2D-12N) and one approximately 10 feet to the west (I-1D-12W) of the original location. Borings were not added to the east or south because two borings (I-1-D12 and I-4-D13, respectively) that were advanced as part of the initial four borings at this substation were determined (with NYSDEC approval) to bound the area in these directions. Figure 2-1 — Substation I Expanded Soil Boring Locations, illustrates the locations of the initial and subsequent soil borings. PCBs were detected at low concentrations (< 0.1 mg/kg) in the expanded boring soil samples, thus defining the horizontal and vertical extent of PCB impact in soils.


BUILDING GRID REFERENCE LINE
E
D
C
9
10
11
12
13
14
15
N
FORMER BUILDING TR-1
SUBSTATION I
I1-D12
64.9 µg/kg Aroclor 1260
I2-D12N
38.4 µg/kg Aroclor 1254
51.6 µg/kg Aroclor 1260
I2-D12
26,400 µg/kg Aroclor 1260
565 µg/kg Aroclor 1260
I3-D13
I4-D13
ND
I2-D12W
89.5 µg/kg Aroclor 1260
T
T
LEGEND
FORMER TRANSFORMER LOCATIONS
(SOURCE: 1982 DRAWING ON WALL OF TR-7)
INITIAL DPT SOIL BORING LOCATION – APPROXIMATE
I2-D12N
EXPANDED SOIL BORING LOCATION
MH201
STORM SEWER LINES – APPROXIMATE
NOTES
1. ALL LOCATIONS ARE APPROXIMATE
2. ALL RESULTS IN µg/kg FOR SOIL
0
30
60
APPROXIMATE SCALE
FIGURE 2-1
SUBSTATION I EXPANDED SOIL BORING LOCATIONS
SUBSTATION I – INTERIM ACTION REPORT, MAY 2012
CARRIER CORPORATION, SYRACUSE, NY
REQUESTED BY: M.H.
DRAWN BY: W.M.
DWG DATE: 01MAY12
DWG NO: 9186R001
ENSAFE
(800) 588-7962
MEMPHIS, TENNESSEE
I:\2012 PROJECTS BST\9186 UTC CARRIER - SYRACUSE SUB SLAB\9186R01 FIG2-1 SUBSTATION I EXPANDED SOIL BORING LOCATIONS.DWG

3.0 REMOVAL OF PCB-CONTAINING SOIL

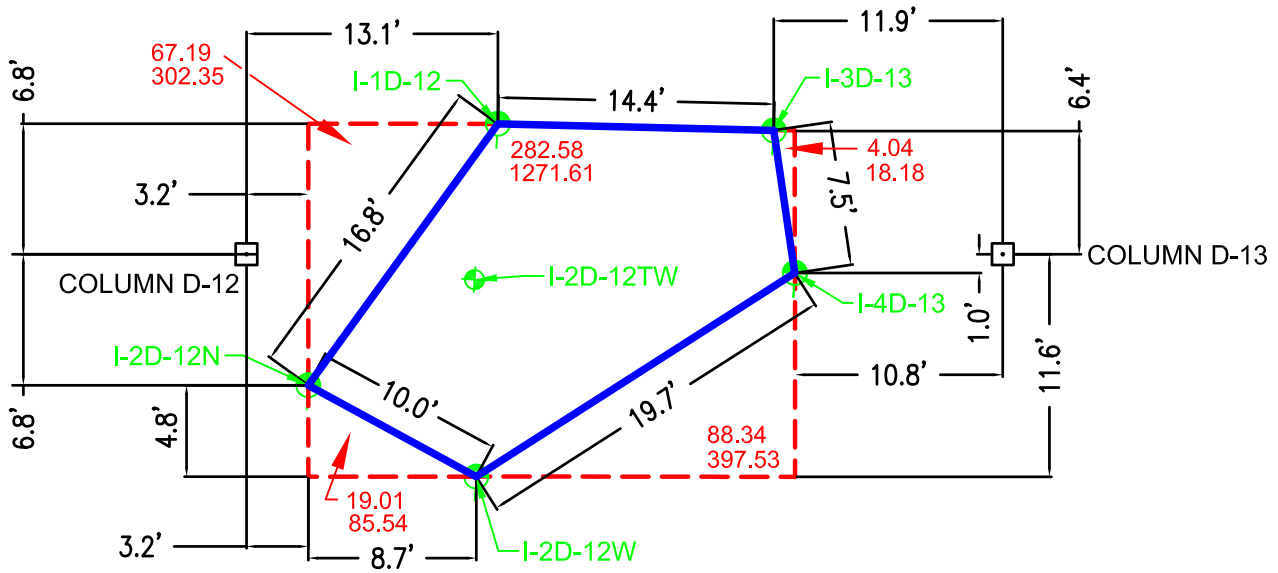
As mentioned earlier, to minimize the impacts of remedial actions on the subsequent construction in the TR-1 footprint area, Carrier implemented an IA in the brief interval between building demolition and site grading. Prior to initiating field work, Bill Penn of United Technologies Corporation (UTC) notified NYSDEC of the proposed work and received approval of the planned activities.

In August 2011, a construction crew cut through the concrete so that a backhoe could access the underlying soils. Appendix A contains photographs taken during excavation activities. Approximately 12 to 18 inches of concrete were removed in an irregularly shaped area exposing underlying soils. On August 25, 2011, a backhoe was used to excavate soils bounded by the confirmation borings (I-1D-12, I-2D-12N, I-2D-12W, I3-D13, and I-4D-13). The depth of the excavation was approximately seven feet below ground surface, and extended to the groundwater table. Water that collected in the bottom of the excavation was the result of trapped water contained in the gravel pack surrounding an old electric vault that was encountered, and was not groundwater infiltration. Figure 3-1 — Limits of Concrete and Soil Excavation, shows the limits of concrete removal and soil excavation. Approximately 100 cubic yards of soil and concrete were removed and placed in lined tandem trailers and roll-off containers. These containers were covered with tarps until they were transported to CWM Chemical Services, LLC, in Model Cities, New York, NYD049836679. The excavation pit was backfilled with flowable concrete.

NOTES:

- LIMITS OF SOIL EXCAVATION, AUGUST 2011.

- SOIL SAMPLES OBTAINED FROM BOUNDARY BORINGS AT THE 5-7' INTERVAL WERE LESS THAN 25 mg/kg PER AROCLOR.
- UPPER 1.5 FT CONCRETE AND GRAVEL → DISPOSAL OFFSITE.
- SOIL BEGINS @ 1.5FT BGS → GROUNDWATER TABLE, @ APPROXIMATELY 7FT BGS, DISPOSAL OFFSITE.



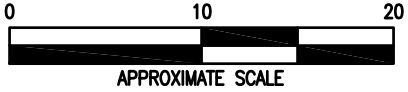


FIGURE 3-1
LIMITS OF CONCRETE AND SOIL EXCAVATION, OCTOBER 2011
SUBSTATION I – INTERIM ACTION
CARRIER CORPORATION, SYRACUSE, NY

REQUESTED BY: M.H.	ENSAFE
DRAWN BY: W.M.	(800) 588-7962 MEMPHIS, TENNESSEE
DWG DATE: FEB. 22, 2013	
DWG NO: 9186R004	

I:\2012 PROJECTS BST\9186 UTC CARRIER - SYRACUSE SUB SLAB\9186R004 SUBSTATION CONCRETE AND SOIL REMOVAL - TR-1.DWG

4.0 CONCLUSION

The subsurface investigation and IA to remove PCB-impacted soils above the Industrial SCO of 25 mg/kg from the Substation I area have been completed successfully. In view of these activities, no further action is proposed relative to the PCBs in soils at Substation I.

Appendix A
Site Photographs

Substation I Interim Action, Concrete and Soil Removal
Carrier — Thompson Road Facility
Syracuse, New York

Photo 1: Interim Action Photo, Substation I

Photo 2: Interim Action Photo, Substation I

Photo 3: Interim Action Photo, Substation I

Photo 4: Interim Action Photo, Substation I

Photo 5: Interim Action Photo, Substation I

Photo 6: Interim Action Photo, Substation I

Substation I Interim Action, Concrete and Soil Removal
Carrier — Thompson Road Facility
Syracuse, New York

Photo 7: Interim Action Photo, Substation I

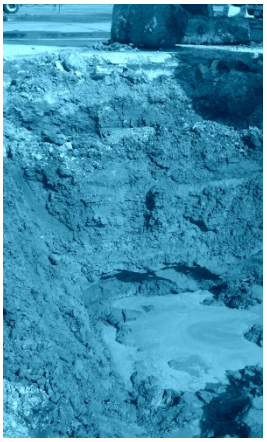


Photo 8: Interim Action Photo, Substation I

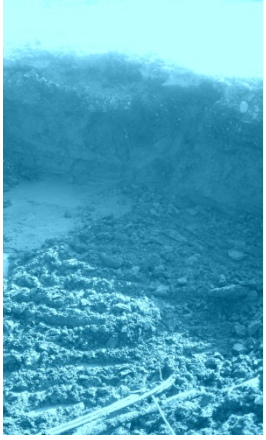


Photo 9: Interim Action Photo, Substation I

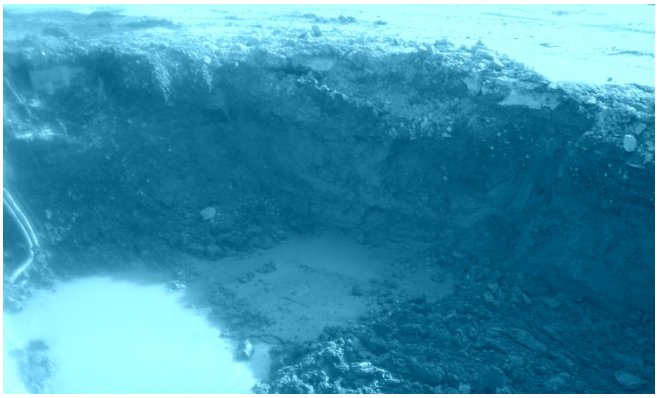


Photo 10: Interim Action Photo, Substation I

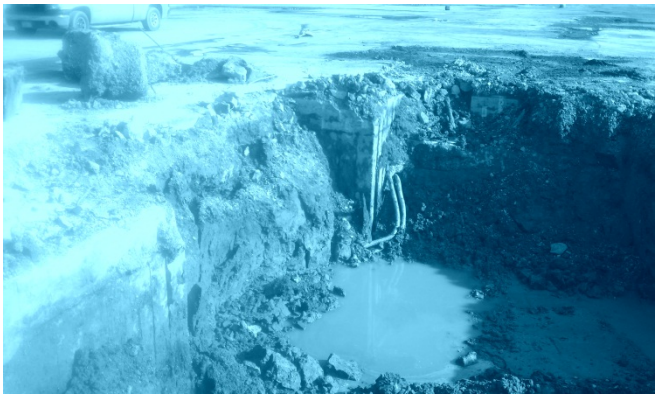


Photo 11: Interim Action Photo, Substation I