APPENDIX D

Delineation

Sampling Event

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS

March 29, 2021

Shaminder Chawla
Deputy Director
Office of Environmental Remediation
100 Gold Street, 2nd Floor
New York New York 10038

RE: 148-28 Hillside Avenue, Jamaica, NY 11435
NYCOER Project No. 17TMP0097Q
NYSDEC Order on Consent (Site No. 241199)

Dear Shaminder:

On April 24, 2020, The New York State Department of Environmental Conservation (NYSDEC) and 168 Hillside Inc. (the "Volunteer") executed an Order on Consent directing the Volunteer to perform a Site Characterization to address the hotspot of Tetrachloroethene (PCE) in shallow soil discovered during a Remedial Investigation (RI) under New York City Voluntary Cleanup Program (VCP). The NYSDEC Order on Consent was apparently issued due to the delayed implementation of an approved Remedial Action Work Plan (RAWP) by the New York City Office of Environmental Remediation (NYCOER).

Since issuance of a Notice to Proceed on May 1, 2018, the Volunteer, has sought approval from the New York City Department of Housing Preservation and Development (NYCHPD) for the development of a nine-story mixed-use building with affordable housing units, which has recently been approved. The COVID-19 pandemic caused additional delays in the commencement of remedial activities until only recently when NYCOER was contacted to schedule a pre-construction meeting pursuant to the approved Stipulation List.

Due to the comprehensive investigations already performed at the Site, the Volunteer seeks to continue remedial activities under the NYCOER's Voluntary Cleanup Program. The following information summarizes the NYCOER-approved remedial investigations and remedial activities intended to address urban fill and the PCE hotspot beneath the Site.

In October of 2016, ACT issued a Remedial Investigation Report ("RIR"), which indicated that the Site was formerly occupied by a filling station and auto repair shop. The Remedial Investigation included a site inspection, geophysical investigation, and the installation, screening, and sampling of 10 soil borings, 3 groundwater monitoring wells, and 7 soil vapor probes throughout the Site. A Sampling Diagram is attached as Figure 1.

The results of the Remedial Investigation indicated the following:

Soil:

- PCE was detected above its Unrestricted Use Soil Cleanup Objectives (UUSCOs) in one shallow soil sample (SB-9, 11 mg/Kg @ 0-2 ft) beneath the eastern portion of the former building. A soil sample collected from SB-9 at the 10-12 foot depth did not contain PCE above its laboratory method detection limit. No other VOCs except Acetone were detected in soil above their UUSCOs during the Remedial Investigation;

- Shallow soil also contained two SVOCs (Benzo(a)anthracene, 1.55 mg/kg and Chrysene, 1.56 mg/kg), one pesticide (4,4'-DDT, 5.06 mg/kg), and four metals (Lead, max. 1,100 mg/Kg, Selenium, max. 7.18 mg/Kg, Chromium, max. 31.2 mg/Kg, and Mercury, max. 0.217 mg/Kg) above SCOs;

- With the exception of PCE, shallow soil chemistry beneath the Site is consistent with historical urban fill material in New York City.

Groundwater:

- One VOC, Chloroform was detected in two groundwater samples (max. 14 µg/L) above its GQS of 7 µg/L;

- One SVOC, Bis(2-ethylhexyl)phthalate was detected in one groundwater sample (11 µg/L) above its GQS of 5 µg/L. PCBs were detected in the three groundwater samples (max. 0.135 µg/L) above its GQS of 0.09 µg/L

Soil Vapor:

- PCE was detected in all six soil vapor samples with a maximum concentration of 2,700 µg/m^3 in SS-3 beneath the eastern portion of the Site. Trichloroethylene was also detected in SS-3 @ 55 µg/m^3.

A RAWP and Stipulation List approved by the NYCOER indicate that the following remedial activities will be protective of public health and the environment:

- Delineation of PCE contaminated shallow soil previously identified in SB-9;

- Excavation and removal of soil/fill exceeding Track 4 Site Specific SCOs. The entire footprint of the Site will be excavated to a depth of approximately 13 feet below grade for development purposes. A small portion of property will be excavated to the depths of 18 feet below grade for elevator pit(s);

- Collection of 8 endpoint soil samples, including 1 endpoint sample in the vicinity of the PCE hotspot;

- Installation of a vapor barrier system beneath the building slab and outside of sub-grade foundation sidewalls to mitigate soil vapor migration into the building;

- Installation of an active sub-slab depressurization system (SSDS) beneath the building slab and vapor barrier system;

- Construction and operation of a cellar parking garage with high volume air exchange in conformance with NYC Building Code.

In 2017, ACT conducted a PCE Delineation Investigation at the Site, which included the installation, screening and sampling of 4 soil borings spaced 5 feet from soil boring SB-9. Two soil samples (4-6ft and 6-8ft) were collected from each soil boring. Only soil boring SB-4 contained PCE (0.0093 mg/Kg @ 4-6ft) well below its UUSCO of 1.3 mg/Kg. None of the remaining seven soil samples contained PCE above its laboratory method detection limit. A diagram of chlorinated volatile organic compounds (CVOCs) detected in subsurface soil during the Remedial Investigation and Delineation Investigation is included in Figure 2.

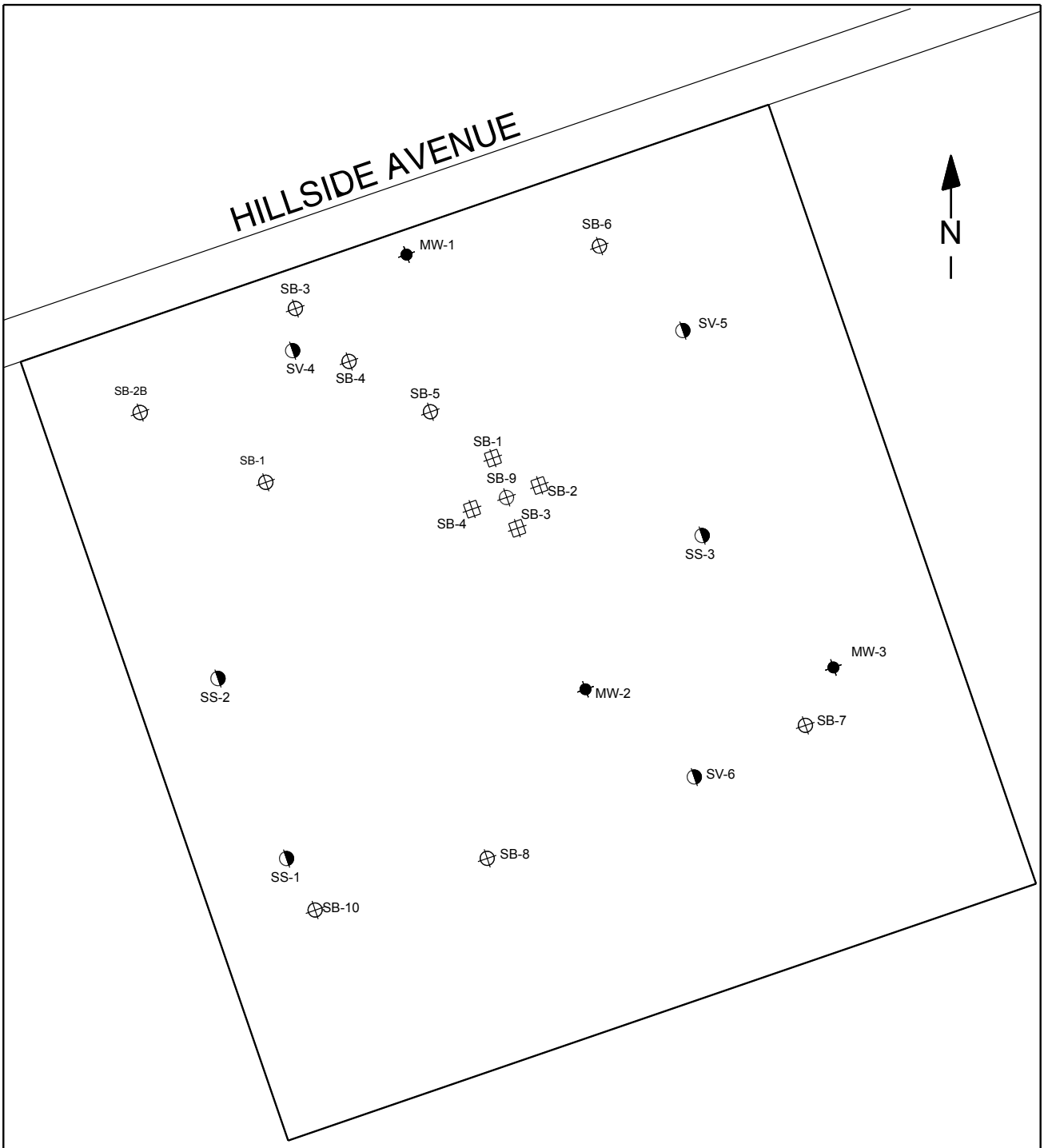
In summary, the extent of PCE soil contamination has been delineated to a depth of 0-2 ft below a small area in the eastern portion of the Site. The remedial activities specified in the NYOER-approved RAWP will remove soil up to 13 feet in depth beneath the entire site and mitigate residual soil vapor intrusion with a vapor barrier system, active sub-slab depressurization system and a parking garage ventilation system.

In light of the above, ACT concludes the above-mentioned remedial activities will sufficiently address the PCE hotspot and urban fill material in shallow soil beneath the Site. In an effort to minimize the economic burden and time for development of this affordable housing project, ACT requests to continue remedial activities under the NYCOER's Voluntary Cleanup Program.

Please let us know if NYSDEC and NYCOER finds this request acceptable.

Very truly yours,

Paul P. Stewart, MS, QEP
President



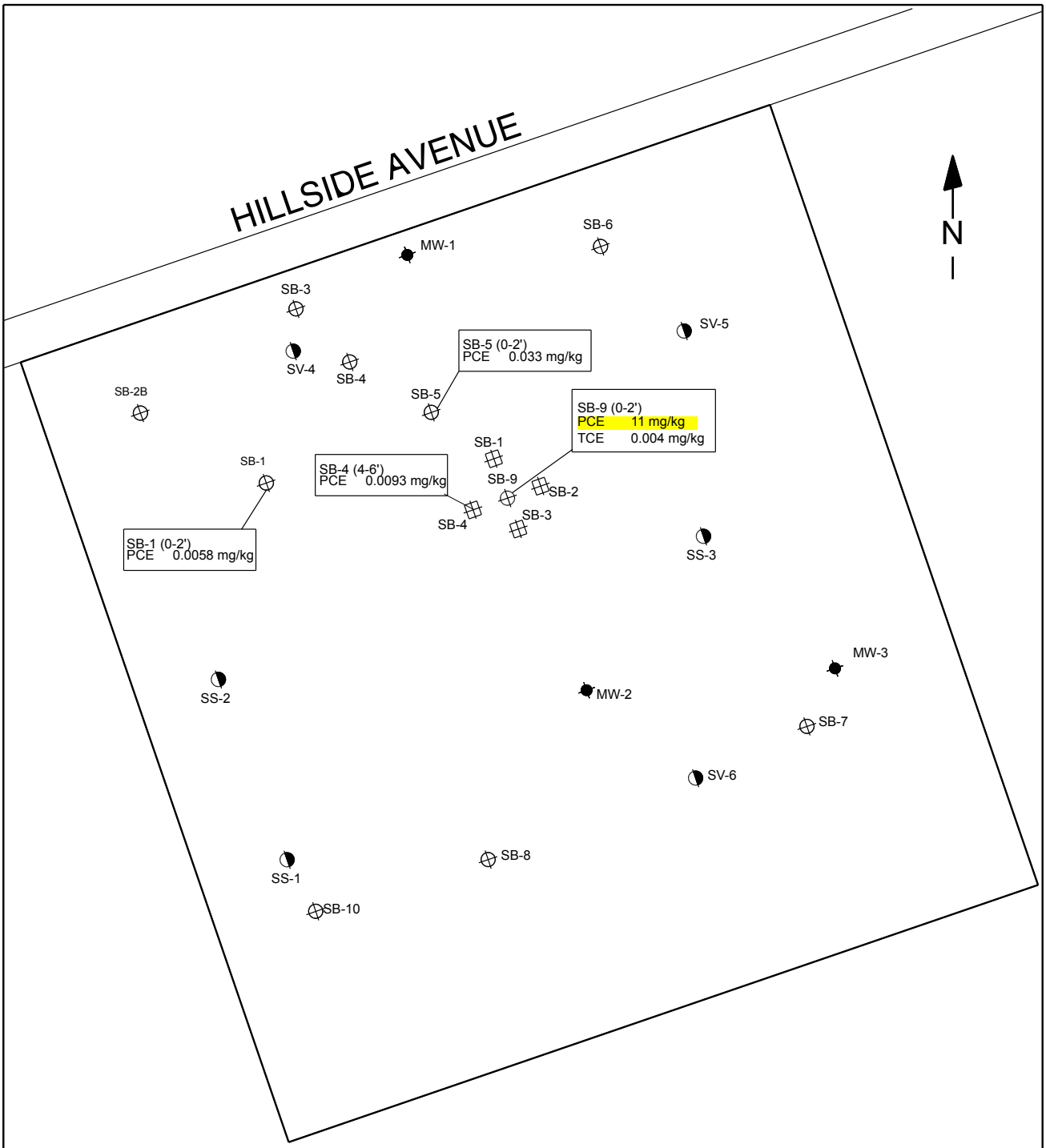
Legend

- SB-1 Soil Boring- RI
- MW-1 Monitoring Well- RI
- SS-1 Soil Vapor Sample- RI
- SB-2 Soil Boring- 2017 Supplemental

Sampling Diagram

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
200 Broadhollow Road-Suite 207 Melville, New York 11747
Tel: 516-441-5800 Fax: 516-441-5511

Project No.: 8346-JANY	Figure No.: 1
Date: 03/26/2021	Scale: Not To Scale



Legend

- SB-1 Soil Boring- RI
- MW-1 Monitoring Well- RI
- SS-1 Soil Vapor Sample- RI
- SB-2 Soil Boring- 2017 Supplemental

Note:

PCE: Tetrachoroethylene
TCE: Trichloroethylene
c12-DCE: cis-1,2 Dichloroethylene
VC: Vinyl Chloride

Unit: mg/kg

Yellow Highlight Indicates an Exceedance above NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Protection of GW

Orange Highlight Indicates an Exceedance above NYSDEC Part 375 Restricted Use Soil Cleanup Objectives-Commercial

CVOCs in Subsurface Soil

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
200 Broadhollow Road-Suite 207 Melville, New York 11747
Tel: 516-441-5800 Fax: 516-441-5511

Project No.: 8346-JANY	Figure No.: 2
Date: 03/26/2021	Scale: Not To Scale