

Memorandum

To: Adam R. Kaufman, AICP
Director of Planning
Town of North Castle
17 Bedford Road
Armonk, New York 10504

From: William A. Canavan, PG, LSRP
HydroEnvironmental Solutions, Inc.
Two Center Street, P.O. Box 929
Croton Falls, New York 10519

Date: March 8, 2023

Re: 9 Barnard Road
Armonk, New York

HydroEnvironmental Solutions, Inc. (HES) was retained by the Town of North Castle, Westchester County, New York to review a recent Application at 9 Barnard Road in Armonk, New York. It is our understanding that fill material (reported as 300 cubic yards) was imported to the subject site and that the Applicant was required to confirm, in accordance with New York State Department of Environmental Conservation (NYSDEC) Regulations, that the imported fill was compliant for use in a residential setting. The fill was imported by the property owner without a permit. As part of our review process, HES reviewed the following documents provided by the Town and the Applicant:

A July 27, 2022, letter related to recent soil sampling at the subject site and an attached site plan and soil sampling laboratory analytical results provided by the property owner's consultant Sterling Environmental Engineering, P.C. (Sterling) and Gabriel E. Senor, P.C. (Senor)

Based on our review of the materials provided we offer the following:

Project Background

The Applicant imported fill material (reportedly 300 cubic yards, according to Applicant engineer) for regrading and backfill purposes. The imported fill material was not approved nor properly documented prior to importation. Consequently, the Town requested that the Applicant and their consultant characterize the imported material in accordance with NYSDEC Regulations. The imported fill material was not sampled by

Two Center Street • Croton Falls, New York 10519

914.276.2560 • FAX 914.276.2664

the engineer of record, but by EMSL Analytical, Inc., a New York State certified laboratory and their soil sampling consultant, Charles Copple of Applied Technologies Services, Inc. (Applied Technologies) located in New Rochelle, New York.

The Applicant has completed the following environmental work related to the imported fill material:

- The Applicant's consultant, Sterling, submitted a Soil Sampling Results letter to the Town of North Castle on July 27, 2022. The letter states that the soil that was sampled by Applied Technologies on September 16, 2020 and analyzed by EMSL was compliant with Section 161-1(A)(3) of the Town Code, and that the delivered fill was compliant with 6 NYCRR, Part 360 for the parameters analyzed as it related to protection of Human Health and Groundwater which included the following:
 - Volatile organic compounds
 - Semi volatile organic compounds
 - PCBs and Pesticides
 - Metals

No soil sampling plan or field notes were provided for review to date, only laboratory data, the summary opinion letter, and a site plan showing the soil sampling location.

Discussion of Results

HES has reviewed the provided soil sampling results, summary letter and site plan showing soil sampling locations and offers the following:

- The soil sampling was conducted by EMSL, and their sampling consultant. No soil sampling plan or soil volume calculations were provided prior to conducting the sampling. No soil manifests or source location information were provided with the submission.
- The results indicate that the fill material is impacted with metals, specifically lead, above NYSDEC Unrestricted Use Soil Cleanup Objectives (UUSCOs). Detections for pesticides and poly cyclic aromatic hydrocarbons (PAHs) were

also noted in the sample collected. No summary table comparing the detected constituents of concern (COCs) to UUSCOs or Restricted Residential Use Soil Cleanup Objectives (RRUSCOs) was provided as part of the application. However, exceedances of UUSCOs were detected for COCs.

Recommendations:

Based on our review of the soil sampling results, HES recommends that the imported fill material can remain in place. Since lead, pesticides and PAHs were detected in the composite soil sampling location and slightly exceeded UUSCOs, HES recommends the placement of a demarcation layer such as orange polyethylene construction fencing or a comparable geotextile membrane over the top of the entire fill area. Following the placement of the demarcation layer, a 24-inch topsoil layer should be placed atop the demarcation layer across the entire fill area. HES does not recommend removal of the fill given the results of the soil sampling, as the concentrations of lead, PAHs and pesticides do not pose a threat to groundwater or the surrounding environment.

It should be noted that the Applicant cites the Town Code related to fill importation and permitting requirements, and states that, in their opinion, the fill material can remain in place and is compliant, as is. However, the fill was imported without a permit, and the source of the fill was not properly documented. Similar fill sites within the Town of North Castle have not been approved by the Planning Board, as the Town requires that imported fill sites be approved under permit, and that all fill material proposed for importation meets NYSDEC UUSCOs.

HES would be pleased to answer any questions related to this matter, or attend any future meetings as required.