



HydroEnvironmental
S O L U T I O N S , I N C .

June 7, 2023

Sent via email: akaufman@northcastleny.com

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

RE: Imported Fill Sampling Work Plan
9 Barnard Road
Armonk, New York

Dear Mr. Kaufman:

HydroEnvironmental Solutions, Inc. (HES) is pleased to submit the following Work Plan to complete imported fill sampling at the property located at 9 Barnard Road in Armonk, New York. HES understands that fill of unknown origin was imported to the site by the property owner without an approved permit. As a result, the Town of North Castle is requiring the site owner to characterize the fill and then determine the most suitable action for the material in accordance with DER-10 and New York State Department of Environmental Conservation (NYSDEC) regulations related to NYCRR Part 360 and Part 375. Based on our recent site visit and meeting, HES has compiled the following Work Plan to characterize approximately 1,000 yds³ of material that was imported to the subject property without a permit. Given this information, HES recommends that the following work be completed at the site:

Two Center Street • Croton Falls, New York 10519

914.276.2560 • FAX 914.276.2664

Characterization of Imported Fill Material – 1,000 Cubic Yards

Task 1 – Test Pit Installation and Soil Sampling Fill Characterization Soil Sampling

NYSDEC Regulation, 6 CRR-NY 360.13 states that characterization sampling is required for fill material originating from a location outside the City of New York, if

- (i) there is historical evidence of impacts such as reported spill events, or visual or other indication (odors, etc.) of chemical or physical contamination;
- (ii) the fill material originates from a site with industrial land use as defined in section 375-1.8(g)(2)(iv) of this Title; or
- (iii) if, during excavation, visual indication of chemical or physical contamination is discovered.

Because the origin of the fill is unknown, HES believes that it would be in the best interest of the Town to sample the imported fill according to the Part 360.13 regulations as stated in Part 360.13 (e) and summarized below:

- Six (6) discrete grab soil samples are to be collected for the first 10,000 yds³ of fill. Therefore, a total of six (6) discrete volatile organic compound (VOC) grab samples will be required. Discrete grab samples are to be collected and analyzed for VOCs via EPA Method 8260.
- Sampling requirements include collection of three (3) composite soil samples for the first 10,000 yds³ of fill. Therefore, given the estimated imported fill volume, a total of three (3) composite soil samples will be required to properly characterize the imported fill. Composite samples are to be composed of three to five (3-5) discrete samples. Composite samples are to be analyzed for the following parameters: semi-VOCs using EPA Method 8270, Target Analyte List (TAL) Metals, Pesticides, and Polychlorinated biphenyls (PCBs) via EPA Method 8080. The material must also be characterized for physical analysis including corrosivity, ignitability and asbestos, if required by the NYSDEC.
- As per Part 360.13, the samples must be representative of the fill material, and the sampling program must be designed and implemented by or under the direction of a qualified environmental professional (QEP). Written documentation of the sampling program with certification from the QEP demonstrating that the proposed sampling will be representative of the fill material must be provided.

- HES proposes that the sampling be conducted via test pits or hand auger. The sampling locations and depths will be at the discretion of the on-site geologist or QEP.

The summary table below outlines the sampling frequency and associated laboratory analyses that are required to properly characterize the imported fill material at the site:

Fill Volume (cu yds)	VOC Analysis (Discrete Samples)	All Other Parameters (composite samples)
1,001-10,000	6	3
10,001+	Two for every additional 10,000 cubic yards	One per every additional 10,000 cubic yards
Total Number of Samples for 15,000 cu yds	8	4

Task 2 – Fill Delineation and Analysis Report

Following completion of the sampling, the property owner's QEP will compile a technical report detailing the soil sampling results. This will include a surveyed site plan which will be used to estimate the total volume of fill and determine if additional sampling is required. HES will interpret the laboratory analytical results of the samples collected and compare them to NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil to determine if soil can stay in place. The report will include a summary of laboratory results as well as recommendations and conclusions related to soil disposal.

Mr. Adam Kaufman, AICP

June 7, 2023

Page 4

HES can initiate startup of this project immediately upon Town approval of the above outlined Work Plan. If you have any questions regarding the Work Plan, please contact me at (914) 276-2560. We look forward to working with you on this project.

Very truly yours,
HydroEnvironmental Solutions, Inc.



William A. Canavan, PG, LSRP
President/Hydrogeologist

Enclosures

cc: File