TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC

NORTHEAST SUPPLY ENHANCEMENT PROJECT

ENVIRONMENTAL REPORT

APPENDIX I. SEDIMENT SAMPLING ANALYTICAL DATA FOR UPLAND DISPOSAL (FEBRUARY 2019)

NOVEMBER 2026

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HALEY ALDRICH

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REPORT ON

NORTHEAST SUPPLY ENHANCEMENT PROJECT
SEDIMENT SAMPLING AND ANALYSIS PLAN
ANALYTICAL DATA FOR UPLAND PLACEMENT

by
Haley & Aldrich, Inc.
Rochester, New York

for
Transcontinental Gas Pipeline Company, LLC
Houston, Texas

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1 February 2019
File No. 132614

Transcontinental Gas Pipeline Company, LLC
2800 Post Oak Blvd, Level 9
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Attention: Chris Martinez

Subject: Northeast Supply Enhancement Project
Sediment Sampling and Analysis Plan
Report on analytical data for upland placement

Dear Chris,

Attached in the data report on the approved Northeast Supply Enhancement Project Upland Disposition Sediment Sampling and Analysis Plan dated October 9, 2018 (NJDEP File No. 0000-01-1001.3 DRG180001).

Sincerely yours,
Haley & Aldrich, Inc.

Ryan J. Scott
Senior Technical Specialist

Vincent B. Dick
Principal

Enclosures

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Executive Summary

Transcontinental Gas Pipe Line Company, LLC, a subsidiary of Williams Partners L.P. (hereafter "Williams"), is proposing to expand its existing interstate natural gas pipeline system in Pennsylvania and New Jersey and its existing offshore natural gas pipeline system in New Jersey and New York waters. The offshore portion of this project, the proposed Northeast Supply Enhancement Project (NESE Project), includes dredging to accommodate pipeline burial offshore, and potential upland placement of dredge material generated from certain portions of the pipeline alignment.

A Sediment Sampling and Analysis Plan (hereafter "SSAP" or "Plan") was jointly developed between Williams and the New Jersey Department of Environmental Protection's (NJDEP) Office of Dredging and Sediment Technology, resulting in a final document approved for implementation dated October 9, 2018. The information contained in this report includes data required to be submitted by applicants in "The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters" found in Appendix G of the Coastal Zone Management Rules (N.J.A.C. 7:7) as part of the permit application for a dredging project.

The collection of data herein and the methods used to collect the data comply with the requirements listed in the approved SSAP. During implementation of the data collection, the NJDEP was notified and approved a limited number of deviations from the SSAP in compliance with plan requirements; the methods of data collection and sample analysis and approved deviations from the plan are documented herein.

Sample analyses included Structural Fill Protocol including bulk sediment chemistry and Synthetic Precipitation Leaching Procedure (SPLP) analyses on amended sediment samples as required by the SSAP. Also, as required by the approved SSAP, analyses included semi-volatile compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs) as Aroclors, organochlorine pesticides, and inorganics (including hexavalent and trivalent chromium). Sediment sampling tests included grain size distribution, total organic carbon, and water content. Additionally, analyses on raw sediment included extractable petroleum hydrocarbons (EPH) and polychlorinated dibenzo dioxins and furans (PCDDs and PCDFs; 17 congeners) presented using current World Health Organization Toxic Equivalency Factors (WHO TEFs) with the calculated toxic equivalency (TEQ) at select locations as noted in the Plan.

As outlined in the approved SSAP, the sampling program consisted of sixty-nine (69) Vibracore sample locations with those cores being sampled using a combination of composite and discrete methods as determined by the Plan and field observations. Sample collection was completed during October and November 2018. The project used two research vessels based on core locations, water depths, and core lengths required by the Plan; the vessels were the 110-foot Research Vessel (RV) Shearwater and 24-foot RV George, both operated by Alpine Ocean Seismic Survey, Inc. All Vibracores collected were logged and photographed in the field by Alpine field personnel. Samples were collected and managed by Haley & Aldrich field personnel and submitted to TerraSense and Alpha Analytical laboratories under chain of custody procedures.

The raw and amended bulk sediment sample analytical results are herein compared to the NJDEP's Residential and Non-Residential Direct Contact Soil Remediation Standards (SRS). In general, results are less than the applicable SRS. There were a limited number of exceedances of SRS's in the raw and

amended bulk sediment chemistry results for benzo(a)pyrene (SVOC), arsenic (Inorganic), and total PCBs (sum of Aroclors), as shown in the results tables of this report.

The SPLP analytical results are herein compared to the NJDEP Default Leachate Criteria for Class II Groundwater. There were no exceedances of the SPLP Default Leachate Criteria except for arsenic. Note that for one SVOC analyte (hexachlorobenzene) and one VOC analyte (1,2-dibromoethane (ethylene dibromide)), there are SPLP results of the amended sediment samples that are non-detect at a detection limit above the SPLP Default Leachate Criteria. However, the results from the analysis of the associated raw and amended sediment samples were non-detect at a detection limit below the Impact to Groundwater Soil Screening Levels (IGWSSL).

Overall, the SSAP was designed to characterize sediments for planned placement of selected dredge material at an upland facility using the NJDEP Structural Fill Protocol. Additional analyses may be required by individual facilities or at the time of actual dredging depending on final means and methods of dredging and material handling for the project. However, based on the Vibracore explorations completed, sampling protocols followed, analyses completed, and conformance with the approved SSAP, the results herein are suitable to be provided to potential upland management facilities for evaluation to determine acceptance of the dredge material for upland placement.

Moving forward, when Williams has shared the data herein with prospective upland facilities and received acceptance letters from such facilities, we assume Williams will then develop and submit its application to NJDEP for approval of upland placement of the applicable pipeline segments' dredge material.

Please note that compliance with the SSAP requires one (1) hard copy of the data summary tables contained herein and one (1) full electronic copy of the laboratory quality assurance/quality control (QA/QC) data must be provided to NJDEP with the application. We have organized and formatted this report to facilitate the submittal requirements to NJDEP by Williams.

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1. Introduction

1.1 PROJECT BACKGROUND

Transcontinental Gas Pipe Line Company, LLC, a subsidiary of Williams Partners L.P. (hereafter "Williams"), is proposing to expand its existing interstate natural gas pipeline system in Pennsylvania and New Jersey and its existing offshore natural gas pipeline system in New Jersey and New York waters. The offshore portion of this project, the proposed Northeast Supply Enhancement Project (NESE Project), includes dredging to accommodate pipeline burial offshore, and potential upland placement of dredge material generated from certain portions of the pipeline alignment.

The offshore portion of the proposed Northeast Supply Enhancement Project (NESE Project) is shown on Figure 1. The project includes a new 26-inch-diameter pipeline that would extend from the Borough of Sayreville shoreline in Middlesex County, New Jersey, to the Rockaway Transfer Point, which is the interconnection point between Transcontinental's existing Rockaway Delivery Lateral and the Lower New York Bay Lateral in New York waters. The new offshore pipeline, referred to as the "Raritan Bay Loop," would extend approximately 23.33 miles east-northeast across Raritan Bay and Lower New York Bay to the Rockaway Transfer Point, located in the Atlantic Ocean approximately 3 statute miles seaward of Rockaway, New York.

The offshore portion of the NESE Project includes dredging a total of approximately 741,252 cubic yards (CY) to accommodate pipeline burial offshore. A portion of the volume (345,646 CY) is currently under application to the U.S. Army Corps of Engineers (USACE) for potential disposition at the offshore Historic Area Remediation Site (HARS). The remainder is anticipated to be dredged using environmental clamshell dredge equipment and methods, with the dredge spoils to be processed and moved to upland disposition at permitted facilities in New Jersey and possibly Pennsylvania. The sediment intended for HARS placement was included in the Sediment Sampling and Analysis Plan as a contingency for upland placement if not accepted for placement at HARS.

1.2 SEDIMENT SAMPLING AND ANALYSIS PLAN

A Sediment Sampling and Analysis Plan (hereafter "SSAP" or "Plan") was jointly developed between Williams and the New Jersey Department of Environmental Protection's (NJDEP) Office of Dredging and Sediment Technology resulting in a final document approved by NJDEP for implementation, dated October 9, 2018, NJDEP File No. 0000-01-1001.3 DRG180001. The information gathered by the approved SSAP is required to be submitted by applicants under "The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters" found in Appendix G of the Coastal Zone Management Rules (N.J.A.C. 7:7) as part of a permit application for a dredging project. The Plan approved for the NESE Project, under which sampling and analyses are reported herein, is included in this data report in Appendix A.

The Plan requires that sample analyses follow NJDEP's Structural Fill Protocol and include analysis of raw sediment and amended sediment samples in addition to Synthetic Precipitation Leaching Procedure (SPLP) analyses for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) inorganics (metals), polychlorinated biphenyls (PCBs), and organochlorine pesticides (pesticides).

This data report also includes the optional analysis of raw sediment for extractable petroleum hydrocarbons (EPH) and polychlorinated dibenzo dioxins and furans (dioxins) at select locations to supplement dioxin analytical results from previous investigations.

1.3 PURPOSE

The purpose of the sediment sampling program is to collect sufficient data for characterization for upland placement at a Processed Dredged Material Facility. Upland placement areas include, but are not limited to, use as alternative fill, beneficial re-use, and landfill cover. Other options include out-of-state (i.e. outside the state of New Jersey) placement options and, if required, landfill disposal. The SSAP was designed to characterize all material that would be dredged to install the pipeline and generate data necessary to determine acceptance for upland placement of the dredge material using the Structural Fill Protocol. Alternatively, and as noted above, Williams has identified, based on previous analytical data, areas along the route of the proposed pipeline from which dredged sediment may be potentially placed at HARS, pending acceptance of data from those areas by the USACE.

2. Fieldwork Summary

The approved SSAP summarizes the sediment Vibracore exploration locations, sampling depths, sampling protocols (including compositing and discrete sampling schemes), required sediment sample analytical requirements, sampling plan implementation requirements, and reporting requirements. As outlined in the Plan, the sampling program consisted of sixty-nine (69) Vibracore locations. The locations were scheduled for sampling based on the Vibracore rig to be used, the vessel needed to complete the cores, and the tidal access to planned core locations. Alpine Ocean Seismic Survey, Inc. (Alpine) was retained by Haley & Aldrich to execute the Vibracoring activities. Refer to Figures 2 through 9 for final sample locations.

Alpine utilized two vessels to conduct the Vibracore sediment sampling. On 17 October 2018, Alpine mobilized Research Vessel (RV) Shearwater at Liberty Landing Marina. Vibracoring activities on the RV Shearwater commenced on 20 October 2018 and were completed on 31 October 2018. The RV Shearwater collected cores from sixty-five (65) locations, twenty-seven (27) locations using a 30-foot Vibracore rig and the remaining thirty-eight (38) locations using a 20-foot Vibracore rig. Following the RV Shearwater sampling program, Vibracoring activities on the RV George commenced on 12 November 2018 and were completed on 13 November 2018. The RV George collected cores from four (4) locations using a 15-foot long mini-Vibracore rig. Refer to Table 1 for additional details of both campaigns including sample IDs, sample dates, and field notes. Refer to Table 2 for as-sampled location information.

Prior to the start of the project and each work day, health and safety meetings were conducted by the crew onboard the RV Shearwater or on land during the RV George campaign. The protected species observer (PSO) surveyed the area proximal to the sampling locations for at least 30 minutes prior to the start of work. If the vessel mobilized to a new area for sampling that day, the PSO started a new watch. There were no incidences involving safety protocols or avoidance that was required by the PSO during the fieldwork.

2.1 VIBRACORING

Vibracoring activities were conducted by Alpine using an Alpine model P Vibracore system, configured to collect both 20-foot and 30-foot cores on the RV Shearwater, and an Alpine Model M Vibracore system, configured to collect up to 15-foot cores on the RV George. The corer was deployed to reach the required recovery depth or to refusal, whichever was reached first. Cores were aimed to have a recovery of 80% or greater based on field observations. Where recovery was significantly less than 80%, up to three attempts were made to achieve better recovery. Overall, the Vibracores were advanced to between 7.5 feet and 28 feet below mudline, with the depth of penetration completed as required by the SSAP except for three locations which encountered refusal shallower than the targeted penetration depth (core locations VC204, VC328 and VC329); see Section 2.3.3 below. Penetration rates in sediment varied with certain locations being very soft with rates of 1 to 2 seconds per foot.

Refer to Section 5, Survey Procedures, in Alpine's Survey Report in Appendix B for details on Vibracoring equipment and procedures. Refer to Table 1 for a summary of the core dates, depths and sampling, Table 2 for location details of as-sampled cores, and Table 3 for analytical methods applied to samples.

2.2 CORE LOGGING

Upon being recovered shipboard on the RV Shearwater, collected cores were placed in a trough and split longitudinally into two halves. During the RV George campaign, the cores were placed on poly sheeting while on land. One of the two cut halves was placed on deck or on land for photographing and logging by Alpine and sampling by Haley & Aldrich personnel. All cores were visually inspected prior to removing the sediment from the core liner for homogenization, compositing, or subsampling based on strata differences. Observations regarding the color, texture, odor, apparent stratification, and presence of oil sheens or other contaminants were recorded in the Vibracore logs and field notebook. Additionally, cores were photographed in two-foot sections; a survey measuring tape was used alongside the core for reference in the photographs. Refer to Appendix C for photographs of Vibracores.

Alpine documented the following information on the core logs.

- Vibracore Station ID
- Date the core was taken
- Name of the person in charge of processing
- Run number, if more than one core was attempted due to refusal, etc.
- Coordinates of the coring location (in feet)
- Elevation of the seabed at the core location referenced to MLLW (in feet)
- Total core penetration depth (in feet)
- Measurement of core recovery (in feet)
- Record of the core penetration rate
- Lithology of the core detailing the sediment types, layering, etc., as follows:
    - material classification (sediment type)
    - remarks, such as odor (e.g., hydrogen sulfide, petroleum/chemical, etc.)
    - visual stratification or lenses, debris
    - biological activity (e.g., burrows, living or dead organisms, shells, etc.)
    - presence of oil sheen, vegetation, leaves, stems, peat, roots, etc.
    - any supplemental notes
- Locations within each core where samples were extracted for analysis and sample ID
- Photoionization detector (PID) readings
- Pocket penetrometer and Torvane test results
- Water content (based on laboratory test results obtained subsequent to the field program)
- Fines content (based on laboratory test results obtained subsequent to the field program)

With the above data, a gINT log was produced for each core. Upon return to shore and receipt of core physical test data (grain size analyses), gINT logs were reviewed for general consistency and refinement if needed based on sample results. Refer to Appendix D for the final Vibracore gINT logs.

2.3 SAMPLE COLLECTION AND STORAGE

Following the inspection and logging of the sediment core, Haley & Aldrich personnel screened the sediment core with a PID, and readings were collected at each foot. A sample for VOCs analysis was collected from all cores. The sample for VOCs analysis was collected at the depth with the highest PID reading or at the midpoint of the core if no differentiation in PID readings was apparent. Sediment from the entire core length was homogenized in stainless-steel containers in accordance with Planned Core Sample Compositing Scheme and Sampling Plan Implementation Requirements in the approved SSAP.

Samples collected from the homogenized mixture were submitted for the analysis of VOCs, SVOCs, inorganics, including hexavalent chromium, PCBs, pesticides, EPH, total organic carbon (TOC), dioxins where applicable, and soil moisture. Between sampling locations, the stainless-steel containers used for homogenization were cleaned of gross contamination with seawater and then decontaminated with Alconox, potable water, 1% nitric acid, deionized water, and dried with paper towels prior to reuse.

Sediment samples were collected in the appropriate containers provided by the laboratory. Samples were assigned a unique sample alphanumerical identification. The sample identification format for sediment chemistry analyses consisted of the site number followed by a dash (-) and the subsequent depth (D) intervals, in feet. The letter "E" (for environmental) followed this number. The final depth interval numbers generally reflect the depths/strata breaks represented in the sample. Samples that were field-duplicated for QC purposes were identified in a manner that allowed for "blind" submittal to the laboratory. Field duplicates, matrix spike, and matrix spike duplicates were collected on a minimum frequency of 1 in 20 samples. All samples were accounted for on a chain-of-custody which follows the handling of the samples from time of sampling through completion of all required analyses. Refer to Table 1 for sample collection summary.

Containerized samples were stored in plastic coolers. On board the RV Shearwater, coolers were stored in a walk-in refrigerator maintained at 4 degrees Celsius (°C). Approximately twice per week, the stored samples were transferred via crew boat to shore where Haley & Aldrich personnel facilitated the transfer of samples under chain-of-custody to an Alpha Analytical laboratory courier and the delivered samples to the TerraSense laboratory. For the sample locations completed by the RV George, sample processing was conducted on land and samples were delivered to the laboratories daily using chain-of-custody procedures.

2.3.1 Homogenization

As stated in the approved SSAP, "individual sediment core samples may be homogenized in their entirety for analysis provided that there no distinct strata (apparent grain size distribution, composition, and visual characteristics) present that are greater than two (2) feet in depth." Based on communications with the NJDEP, included in Appendix E of this report, and guidance from the Appendix G of NJAC 7:7, that indicate core samples six feet or less in length may be homogenized, all cores that were 7.5 ft (6.5 ft plus 1 ft over dredge) or less in length were homogenized by uniformly collecting a portion of the material over the entire length of the core in order to create a sample of sufficient volume.

Distinct strata were encountered in cores at four discrete locations (DEP6, DEP7, VC235, and VC318) at a thickness of greater than two feet within cores greater than 7.5 feet in length. Each distinct stratum was documented and collected as separate samples.

2.3.2 Compositing

Overall, compositing was completed according to the SSAP and NJDEP guidance. As stated in the approved SSAP, "individual sediment core samples may be composited only if the grain size distribution of the sediment is similar. Individual samples should not be composited if the percentage clay, silt, or sand differ by more than 20%." However, review of past sampling data for the overall project alignment indicated there may be locations where refinement of the compositing procedure may be needed for the conditions encountered and our correspondence with NJDEP (Appendix E) included clarification of

how compositing would be approached in these circumstances. The locations affected are summarized below.

Difference in grain size distribution was encountered in two composite groups, specifically Composite N (VC232, VC232A, VC232B) and Composite O (VC237, VC237A, VC237B). For these locations, representative subsamples of each distinct strata were combined in equal proportions (by mass) to form the composite analytical sample. For example, for Composite N, one type of strata was noted in the 0-6 ft interval within VC232, 0-4 ft interval within VC232A, and 0-4 ft interval within VC232B; these intervals were combined in equal proportions by mass and homogenized to form sample COMP-N-D0-4E. The remaining length of the three cores were another type of strata, and therefore were similarly combined and homogenized to form sample COMP-N-D4-22.5E.

VC311 was also sampled as a discrete location, not composited together with the original composite group (Composite J), because the stratum was distinct and different from that encountered in the other samples of Composite J. The remaining locations (DEP2 and VC310) were similar and composited as Composite J.

2.3.3 Refusal

Refusal at a sample depth shallower than was targeted in the approved SSAP was encountered at three locations (VC204, VC328, VC329). Refusal at locations VC328 and VC329 appeared to result from the sediment material type (too coarse for Vibracore penetration) at the depth of refusal. Multiple attempts were made at VC329 to achieve the penetration depth in the Plan. Based on the material encountered during these multiple attempts at VC329, a field decision was made to accept the depth achieved at VC329 and subsequently VC328 due to refusal. Refusal at VC204 was likely due to sediment conditions and reached 14 feet of penetration. Since the refusal depth was near the target depth of 15 feet, the weather conditions would make additional attempts difficult, and that it would be composited with VC204 which did achieve penetration of 15 feet, the NJDEP approved this core as discussed in Appendix E. For each of these locations, the depth of refusal was noted on the logs and the collected core length was sampled.

2.4 DEVIATIONS FROM THE SSAP

Three locations (VC301, DEP4, DEP5) did not have State Historic Preservation Office (SHPO) clearance by the time all other sampling was complete. It became necessary to move to alternative proximal locations that had previously received SHPO clearance. These locations were renamed with "-R" as a suffix (VC301R, DEP4R, DEP5R). This change was discussed with the NJDEP prior to sampling. Refer to Appendix E for NJDEP correspondence regarding these re-locations. Final coordinates for these shifted core locations appear in the sample documentation tables herein, on the gINT logs, and are shown on the sample location figures.

Related to the above sample location shifts, three Vibracore locations (VC303, VC304, DEP3), which were initially part of multi-core composites, were instead sampled as discrete locations. Specifically, VC303, VC304, and DEP3 were sampled as discrete locations because the other locations in their original composite group (Composite D and E) were unavailable at the time of collection.

3. Laboratory Analysis

Samples submitted for chemical analyses were sent to an NJDEP certified laboratory to conduct analytical procedures pursuant to the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18) or the National Environmental Laboratory Accreditation Program (NELAP). Sediment samples were submitted to Alpha Analytical in Westborough, Massachusetts (NJDEP laboratory certification MA935) for bulk sediment chemistry and SPLP analyses. Sediment samples were also submitted to TerraSense Laboratory in Totowa, New Jersey for sediment amendment processing and grain size analyses.

Refer to Table 1 for the samples associated with each Vibracore location or group (if composited) and their associated analyses, and Table 3 for a summary of analytical methods, containers, and holding times.

3.1 ALPHA ANALYTICAL

Raw sediment samples (sediment as collected in the field) were delivered to Alpha Analytical in Westborough, Massachusetts. The raw sediment samples were submitted for the analysis of VOCs, SVOCs, inorganics including hexavalent chromium, PCBs, pesticides, EPH, total organic carbon (TOC), and soil moisture. Certain samples (VC204, VC205, VC208, VC211, VC214, DEP1, VC230, VC230A, VC230B, DEP6, VC232, VC232A, VC232B, DEP7, VC235, VC237, VC237A, VC237B, VC326 and VC327) were also submitted for dioxins analysis.

Following the sediment amendment process, discussed below and conducted at TerraSense laboratory, amended samples (sediment amended with portland cement) were submitted to Alpha Analytical for subsequent analysis of VOCs, SVOCs, inorganics including hexavalent chromium, PCBs, pesticides, soil moisture, and SPLP analysis for TCL VOCs, TCL SVOCs, TAL metals, PCBs, and pesticides.

Samples were submitted with appropriate preservation methods and within holding time. Refer to Appendix F for Alpha Analytical laboratory reports.

3.2 TERRASENSE

Collected sediment samples to be amended with portland cement were submitted to TerraSense for the amendment processing consistent with the Structural Fill Protocol, as well as grain size analysis.

Sediment amendment was completed under the Structural Fill Protocol as follows: a sample of the processed dredged material product was created by combining measured amounts of portland cement with a pre-weighed sample of the sediment. The amount of portland cement required for each sample amendment was calculated by multiplying the weight of the raw sediment sample by a factor of 0.08 (8%). The ratio of additive to sediment sample, by weight, was recorded. The mixing time and mixing process was consistent with that of the blending operation(s) planned to be used in the actual full-scale NESE Project. After mixing, the amended sample was placed into an individually-labeled and dedicated stainless steel pan for curing at the minimum ambient temperature of 21˚C. The sample was turned twice each day using a stainless-steel trowel to break up lumps. After 48 hours, the cured amended sample was removed from the pan, put into a plastic bag, labeled, and stored in a refrigerator until delivered to Alpha Analytical under chain of custody.

Grain size analyses were also completed on raw sediment samples by TerraSense, which included sieve and hydrometer analysis.

Refer to Appendix G for details on the amendment process and TerraSense laboratory reports.

4. Field and Analytical Results

4.1 FIELD CORE LOGS AND PHOTOS

Color photographs of split cores and gINT core logs are included in Appendix C and D, respectively. Refer to Figures 2 through 9 for sampling locations. Additionally, penetration graphs for cores completed on the RV Shearwater are included in Alpine's Survey Report in Appendix B.

4.2 ANALYTICAL DATA

Analytical data for the raw sediment, amended sediment, and SPLP are reported separately in Table 4 through Table 7; the organization and formatting of these tables is consistent with NJDEP requirements in the SSAP. The results are compared to the Residential Direct Contact Soil Remediation Standards (SRS), Non-Residential Direct Contact SRS, Impact to Groundwater Soil Screening Levels (IGWSSL), and SPLP Default Leachate Criteria for Class II Groundwater, as applicable. Please note that the same analytical data results are also included in tables in Appendix H but are presented in a single-table format as was requested by prospective upland facilities for their review.

4.2.1 SVOCs, Inorganics (Metals), PCBs, Pesticides, and EPH

Analytical results including SVOCs, inorganics (metals), PCBs, pesticides, and EPH, for raw sediment, amended sediment, and SPLP are included in Table 4, 6 and 7. Table H-1 in Appendix H presents the same results for each sample. Review of the analytical results indicates the following:

- Raw and amended sediment sample results contained exceedances of the Residential and Non-Residential SRS for:
    - SVOCs - Benzo(a)pyrene
    - Inorganics – Arsenic
    - Total PCBs (sum of Aroclors)
- Raw and amended sediment sample results contained exceedances of the IGWSSL for various analytes as indicated in the tables.
- SPLP sample results contained exceedances of the Default Leachate Criteria for:
    - Inorganics - Arsenic

Note that for one SVOC compound (hexachlorobenzene), there are SPLP results of the amended sediment samples that are non-detect at a detection limit above the SPLP Default Leachate Criteria. However, the results from the analysis of the raw and amended sediment samples were also non-detect at a detection limit below the IGWSSL.

Additionally, the results for several SVOC compounds (e.g. phenol) in some amended samples were rejected due to poor recovery of the associated surrogate compounds and/or batch specific spike sample analyses. The poor surrogate and spike recovery of these target parameters is likely due to matrix interference from the amendment (portland cement) added to the raw sediment sample prior to analysis. However, it should be noted that the results for the affected parameters were not detected in the raw sediment samples at reporting limits below the SRS and IGWSSL, therefore the low surrogate and spike recovery are not considered to be of consequence for the amended sample results.

4.2.2 VOCs

VOC results for raw sediment, amended sediment, and SPLP are included in Table 5 through Table 7. Table H-2 in Appendix H presents the same VOC results. Review of the analytical results for VOCs indicates the following:

- Sample results contained no exceedances of the Residential or Non-Residential SRS
- Raw and amended sediment sample results contained exceedances of the IGWSSL for:
    - Bromomethane (methyl bromide) was detected in the raw sediment at VC-252 slightly above the IGWSSL
    - Methylene chloride was detected in five (5) amended sediment samples above the IGWSSL although it was not detected in any of the raw sediment samples; it was noted that one of the samples had a detection limit slightly above the IGWSSL.
- Sample results contained no exceedances of the SPLP Default Leachate Criteria

Note that for one VOC compound (1,2-dibromoethane (ethylene dibromide)), there are SPLP results of the amended sediment samples that are non-detect at a detection limit above the SPLP Default Leachate Criteria. However, the results from the analysis of the raw and amended sediment samples were also non-detect at a detection limit below the IGWSSL.

Additionally, one raw sediment sample had a detection limit for 1,2-dibromo-3-chloropropane (DBCP) slightly greater than the associated IGWSSL.

4.2.3 Dioxins

Polychlorinated dibenzo dioxins and furans (dioxins) results for raw sediment are included in Table H-3 in Appendix H (dioxin was requested to be analyzed for prospective receiving facilities only and is therefore not an NJDEP required analyte included in tables 4 through 7).

Review of the analytical results for Dioxins indicates the following:

- All sample results collected under the approved SSAP exhibit a Toxicity Equivalency Quotient (TEQ) less than 50 parts per trillion (ppt)

4.2.4 Other parameters

Moisture content, Total Organic Carbon (TOC), Total Solids, and pH are included in Table 4. TOC analysis was completed by United States Environmental Protection Agency (USEPA or EPA) Method 9060, as modified based on communications with the NJDEP included in Appendix E. Tentatively identified compounds (TICs) for VOCs and SVOCs (requested for prospective receiving facilities; not an NJDEP requirement) are included in Table H-4 in Appendix H.

4.2.5 Grain Size Data

Grain size data is included on the core logs in Appendix D and in the TerraSense Report in Appendix G.

4.2.6 Quality Assurance/Quality Control (QA/QC)

Environmental laboratory reports prepared from the analysis of sediment samples collected as part of the NESE Project were reviewed for compliance with the following quality assurance/quality control (QA/QC) requirements:

- Preservation Protocol and Holding Time Compliance
- Initial Calibration and Continuing Calibration Procedures
- Field/Method/Preparation Blank Sample Analysis
- System Monitoring Compound (Surrogate) Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Internal Standard Recoveries
- Field Duplicate Sample Analysis

The findings of the review process confirmed that the reported results met the data usability requirements for the project with the following qualifications.

4.2.6.1 Amended Sediment Sample VOC Container, Preservation and Holding Time Compliance

Amended sediment samples were submitted to Alpha Analytical in labeled zip-lock plastic bags which are not the recommended sample containers for the analysis of VOCs in in accordance with EPA Method 5035/8260C. Because the amendment process involves mixing of portland cement with the sediment, there was concern that curing of the amended samples may make subsequent collection of aliquots and analysis processing impossible if the amended samples solidified in jar containers; therefore, bags were used. The use of a different container type for the VOC analyses of the amended samples was noted within the laboratory report case narrative.

The amended sediment results for each sample were compared to the raw sediment results for each location corresponding to the discrete or composite amended sample. VOC results in the raw sediment samples were below IGWSSL and the DEP's Residential and Non-Residential SRS with one exception as noted previously for bromomethane at VC-252 which was slightly above the IGWSSL in the raw sediment. Thus, the use of non-complaint containers should not restrict the evaluation of the amended sediment for upland placement and results were therefore not qualified.

4.2.6.2 Laboratory Control Samples, Matrix Spike, Surrogate Compound Recoveries

The percent recovery (%R) calculated for each target analyte within the project-specific matrix spike (MS) sample and associated laboratory control sample (LCS) analyses were evaluated versus the method-specific acceptance criteria. The reported %R of MS and LCS analyses fell within the laboratory QA acceptance criteria with the following exceptions.

During the analysis of the amended sediment samples for SVOCs in accordance with EPA Method 8270D, the %R for the project-specific MS and LCS sample analyses fell below the laboratory acceptance criteria. The low %R for these MS and LCS analyses was noted in the laboratory report case narrative. When the affected target compounds were not detected in the associated project samples, the reporting limits for these target compounds were qualified with an "R" as rejected.

Since the analysis of the unamended raw sediment samples did not detect these target compounds and the %R for the associated MS and LCS sample analyses were compliant with the laboratory acceptance criteria, the rejected non-detect results for these target compounds should not restrict the evaluation of the amended sediment for upland placement because these target compounds were not present in the sediment sample matrix.

This analytical anomaly is most likely due to the addition of the portland cement to the raw sediment, resulting in an elevated sample pH or alkaline conditions which restricted the ability of the analytical procedure from detecting these target compounds within the amended sediment sample matrix.

5. Conclusions

The collection of data herein and the methods used to collect the data comply with the requirements listed in the approved SSAP. Where deviations from the approved SSAP were required, during implementation of the data collection the NJDEP was notified for approval and those deviations from the SSAP were documented herein in compliance with Plan requirements.

Overall, chemical analyses of raw and amended sediment samples collected under this SSAP program indicate most results for bulk analyses are compliant with Residential and Non-Residential SRS. The data indicate that raw and amended sediment sample results contain limited exceedances of the SRS for one SVOC analyte (Benzo(a)pyrene), one inorganic analyte (arsenic), and total PCBs (sum of Aroclors). Chemical analysis also indicates that SPLP sample results contain exceedances of the Default Leachate Criteria for only one inorganic (arsenic) and are otherwise compliant with Default Leachate Criteria for SPLP analytical results.

The findings of the QA/QC review for this project confirmed that the reported results meet the data usability requirements for the project with few qualifications and that these qualifications should not restrict the evaluation of the amended sediment for upland placement.

Additional analyses may be required by individual facilities or at the time of actual dredging, depending on final means and methods of dredging and material handling for the project. However, based on the sample methods used, analyses completed, and conformance with the approved SSAP, the results herein are suitable to be provided to potential upland management facilities for evaluation to determine acceptance of the dredge material for upland placement.

References

1. Data Quality Assessment and Data Usability Evaluation Technical Guidance, Version 1.0, New Jersey Department of Environmental Protection, dated April 2014.

2. Development of the Impact to Ground Water Soil Remediation Standards Using the Soil-Water Partition Equation, Version 2.0, New Jersey Department of Environmental Protection, dated November 2013.

3. Development of Site-Specific Impact to Ground Water Soil Remediation Standards using the Synthetic Precipitation Leaching Procedure, Version 3.0, New Jersey Department of Environmental Protection, dated November 2013.

4. Field Sampling Procedures Manual (2005), New Jersey Department of Environmental Protection, dated August 2005.

5. N.J.A.C. 7:7 Coastal Zone Management Rules, The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters, Appendix G, New Jersey Department of Environmental Protection, updated 5 September 2018.

6. N.J.A.C. 7:18 Regulations Governing the Certification of Laboratories and Environmental Measurements, New Jersey Department of Environmental Protection, updated 4 September 2018.

7. N.J.A.C. 7:26D Remediation Standards, New Jersey Department of Environmental Protection, updated 18 September 2017.

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TABLES

TABLE 1 - SAMPLING PROGRAM SUMMARY TABLE
WILLIAMS NORTHEAST SUPPLY ENHANCEMENT PROJECT
RARITAN BAY & LOWER NY HARBOR, NJ/NY

Sampling Plan as outlined in the NJDEP Approved SSAP				Field Program as completed				
Sampling Segment	**Sampling Locations (Locations in parentheses to be composited)**	**Sample depths, in feet, to be composited**	**Analyses**	**Vessel**	**Sampling Locations (Locations in parentheses were composited)**	**Date Completed**	**Samples Collected**	**Notes**
Nearshore	**A** - (VC204, VC205) *	(0 - 15, 0 - 15)	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture *Include Dioxins for all Nearshore samples	RV George	**A** - (VC204, VC205) *	11/12/2018 11/13/2018	VC-204-D0-14E VC-205-D0-15E, **COMP-A-D0-15E**	Refusal encountered at 14 ft at VC204; recovery was over 80%.
	VC208 *	0 - 7.5			VC208 *	11/12/2018	**VC-208-D0-7.5E**	-
	VC211 *	0 - 7.5			VC211 *	11/12/2018	**VC-211-D0-7.5E**	-
	VC214 *	0 - 7.5		RV Shearwater	VC214 *	10/29/2018	**VC-214-D0-7.5E**	-
	DEP1 *	0 - 7.5			DEP1 *	10/31/2018	**DEP-1-D0-7.5E**	-
Between Nearshore Area and Raritan Channel	**D** - (VC301, VC303, VC304)	(0 - 7.5, 0 - 7.5, 0 - 7.5)	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture		VC301-REV	10/29/2018	**VC-304-D0-7.5E**	VC303, VC304 and VC301-REV were sampled as discrete locations. VC301 was moved to SHPO cleared area and renamed VC301-REV.
					VC303	10/30/2018	**VC-301-REV-D0-7.5E**	
					VC304	10/31/2018	**VC-303-D0-7.5E**	
	E - (DEP 3, DEP 4, DEP 5)	(0 - 7.5, 0 - 7.5, 0 - 7.5)			DEP 3	10/30/2018	**DEP-4-REV-D0-7.5E**	DEP4 and DEP5 were moved into SHPO cleared area and renamed DEP4-REV and DEP5-REV. DEP4-REV, DEP5-REV, and DEP3 were sampled as a discrete locations.
					DEP 4-REV	10/30/2018	**DEP-5-REV-D0-7.5E**	
					DEP 5-REV	10/31/2018	**DEP-3-D0-7.5E**	
	VC216	0 - 7.5			VC216	10/29/2018	**VC-216-D0-7.5E**	-
	VC217	0 - 7.5			VC217	10/29/2018	**VC-217-D0-7.5E**	-
	VC218	0 - 7.5			VC218	10/29/2018	**VC-218-D0-7.5E**	-
	G - (VC219, VC220, VC221)	(0 - 7.5, 0 - 7.5, 0 - 7.5)			**G** - (VC219, VC220, VC221)	10/28/2018	VC-219-D0-7.5E, VC-220-D0-7.5E, VC-221-D0-7.5E, **COMP-G-D0-7.5E**	-
	VC222	0 - 7.5			VC222	10/28/2018	**VC-222-D0-7.5E**	-
	VC223	0 - 7.5			VC223	10/28/2018	**VC-223-D0-7.5E**	-
	I - (VC307, VC308, VC309)	(0 - 7.5, 0 - 7.5, 0 - 7.5)			**I** - (VC307, VC308, VC309)	10/28/2018	VC-307-D0-7.5E, VC-308-D0-7.5E, VC-309-D0-7.5E, **COMP-I-D0-7.5E**	-
	J - (DEP2, VC310, VC311)	(0 - 7.5, 0 - 7.5, 0 - 7.5)			**J** - (DEP2, VC310, VC311)	10/28/2018	DEP-2-D0-7.5E, VC-310-D0-7.5E, **COMP-J-D0-7.5E** **VC-311-D0-7.5E**	VC311 was collected as a discrete location. DEP2 and VC310 were composited as COMP-J
	K - (VC312, VC313, VC314)	(0 - 7.5, 0 - 7.5, 0 - 7.5)			**K** - (VC312, VC313, VC314)	10/28/2018	VC-312-D0-7.5E, VC-313-D0-7.5E, VC-314-D0-7.5E, **COMP-K-D0-7.5E**	-

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WILLIAMS NORTHEAST SUPPLY ENHANCEMENT PROJECT
RARITAN BAY & LOWER NY HARBOR, NJ/NY

	Sampling Plan as outlined in the NJDEP Approved SSAP			Field Program as completed				
Sampling Segment	**Sampling Locations (Locations in parentheses to be composited)**	**Sample depths, in feet, to be composited**	**Analyses**	**Vessel**	**Sampling Locations (Locations in parentheses were composited)**	**Date Completed**	**Samples Collected**	**Notes**
Raritan Bay Channel and transitions	**L** - (VC225, VC227, VC228)	(0 - 7.5, 0 - 14, 0 - 20.5)	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture *Include Dioxins for DEP6, DEP7, VC235, Composite M, N, O	RV Shearwater	**L** - (VC225, VC227, VC228)	10/20/2018	VC-225-D0-7.5E, VC-227-D0-14E, VC-228-D0-20.5E, **COMP-L-D0-20.5E**	-
	VC229	0 - 28			VC229	10/20/2018	**VC-229-D0-28E**	-
	M - (VC230, VC230A, VC230B) *	(0 - 27, 0 - 27, 0 - 27)			**M** - (VC230, VC230A, VC230B) *	10/20/2018	VC-230-D0-27E, VC-230A-D0-27E, VC-230B-D0-27E, **COMP-M-D0-27E**	-
	DEP6 *	0 - 27			DEP6 *	10/22/2018	**DEP-6-D0-13.5E** **DEP-6-D13.5-27E**	Additional sample collected due to strata change
	N - (VC232, VC232A, VC232B) *	(0 - 22.5, 0 - 22.5, 0 - 22.5)			**N** - (VC232, VC232A, VC232B) *	10/22/2018	VC-232-D0-6E, VC-232-D6-22.5E, VC-232A-D0-4E, VC-232A-D4-22.5E, VC-232B-D0-4E, VC-232B-D4-22.5E **COMP-N-D0-4E, COMP-N-D4-22.5E**	Additional samples collected due to strata change
	DEP7 *	0 - 20			DEP7 *	10/22/2018	**DEP-7-D0-15E,** **DEP-7-D15-20E**	Additional sample collected due to strata change
	VC235 *	(0 - 24)			VC235 *	10/22/2018	**VC-235-D0-13.7E,** **VC-235-D13.7-24E**	Additional sample collected due to strata change
	O - (VC237, VC237A, VC237B) *	(0 - 25, 0 - 25, 0 - 25)			**O** - (VC237, VC237A, VC237B) *	10/22/2018	VC-237-D0-3E, VC-237-D3-25E, VC-237A-D0-4E, VC-237A-D4-25E, VC-237B-D0-2E, VC-237B-D2-25E, **COMP-O-D0-2E, COMP-O-D2-25E**	Additional samples collected due to strata change
	VC238	0 - 28			VC238	10/23/2018	**VC-238-D0-28E**	-
	P - (VC239, VC240, VC242)	(0 - 23, 0 - 16, 0 - 9)			**P** - (VC239, VC240, VC242)	10/23/2018	VC-239-D0-23E, VC-240-D0-16E, VC-242-D0-9E, **COMP-P-D0-23E**	-
Between Raritan Bay and Chapel Hill Channels	**Q** - (VC315, VC316, VC317)	(0 - 10.5, 0 - 10.5, 0 - 10.5)	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture		**Q** - (VC315, VC316, VC317)	10/29/2018	VC-315-D0-10.5E, VC-316-D0-10.5E, VC-317-D0-10.5E, **COMP-Q-D0-10.5E**	-
	VC244	0 - 4			VC244	10/26/2018	**VC-244-D0-4E**	-
	VC245	0 - 4			VC245	10/26/2018	**VC-245-D0-4E**	-
	VC246	0 - 4			VC246	10/26/2018	**VC-246-D0-4E**	-
	VC247 (2 sample depth intervals)	0 - 4			VC247 (2 sample depth intervals)	10/23/2018	**VC-247-D0-4E**	-
		4 - 21.5				10/23/2018	**VC-247-D4-21.5E**	-
	R HARS - (VC244, VC245, VC246)	(4 - 10.5, 4 - 10.5, 4 - 10.5)			**R HARS** - (VC244, VC245, VC246)	10/26/2018	VC-244-D4-10.5E, VC-245-D4-10.5E, VC-246-D4-10.5E, **COMP-R-D4-10.5E**	-
Chapel Hill Channel and transitions	VC318	0 - 21.5	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture		VC318	10/23/2018	**VC-318-D0-3.5E,** **VC-318-D3.5-21.5E**	Additional sample collected due to strata change
	VC320	0 - 19			VC320	10/23/2018	**VC-320-D0-19E**	-
	VC321	0 - 20.5			VC321	10/23/2018	**VC-321-D0-20.5E**	-
	VC323	0 - 22			VC323	10/23/2018	**VC-323-D0-22E**	-
Between Chapel and Ambrose Channels	VC251	0 - 7.5	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture		VC251	10/23/2018	**VC-251-D0-7.5E**	-
	VC252	0 - 7.5			VC252	10/26/2018	**VC-252-D0-7.5E**	-
	VC253	0 - 7.5			VC253	10/26/2018	**VC-253-D0-7.5E**	-

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RARITAN BAY & LOWER NY HARBOR, NJ/NY

	Sampling Plan as outlined in the NJDEP Approved SSAP			Field Program as completed				
Sampling Segment	**Sampling Locations (Locations in parentheses to be composited)**	**Sample depths, in feet, to be composited**	**Analyses**	**Vessel**	**Sampling Locations (Locations in parentheses were composited)**	**Date Completed**	**Samples Collected**	**Notes**
Ambrose Channel	**S** - (VC326, VC327) *	(0 - 21, 0 - 21)	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture *Include Dioxins for Composite	RV Shearwater	**S** - (VC326, VC327) *	10/25/2018	VC-326-D0-21E, VC-327-D0-21E, **COMP-S-D0-21E**	-
	T - (VC328, VC329)	(0 - 25, 0 - 25)			**T** - (VC328, VC329)	10/25/2018	VC-328-D0-22.5E, VC-329-D0-20.9E, **COMP-T-D0-22.5E**	Refusal was encountered at 22.5 ft at VC328 and at 20.9 ft at VC329.
East of Ambrose Channel	VC255	0 - 7.5	TAL Metals, Hex chrom, TCL VOCs, TCL SVOCs, PCBs, Pesticides, EPH, Grain size, TOC, Soil moisture		VC255	10/26/2018	**VC-255-D0-7.5E**	-
	VC256	0 - 7.5			VC256	10/26/2018	**VC-256-D0-7.5E**	-

Notes:
- : Not applicable
1. Color key for "Sample depths (in feet) to be composited" indicate the following:
   - Small boat cores
   - 20 foot cores, tidal dependent
   - 20 foot cores
   - 30 foot cores
2. Locations and sample depths in parentheses indicate multi-cores composite samples. Sample locations in parentheses correspond to the sample depth in parentheses in the next column, respectively.
3. Sample IDs in **bold** are composite samples submitted for full suite (TAL Metals, hex chromium, TCL VOCs, TCL SVOCs, PCBs, pesticides, EPH, grain size, TOC, soil moisture, and dioxins, where applicable*), as outlined in the SSAP, with the exception of composite samples with prefix of "**COMP-**" which were submitted for the full suite but not for TCL VOCs. Remaining sample IDs in plain text are discrete samples that were submitted for TCL VOCs only and are associated with the "**COMP-**" composite samples.

TABLE 2 - AS-SAMPLED LOCATIONS
NORTHEAST SUPPLY ENHANCEMENT PROJECT
RARITAN BAY & LOWER NY HARBOR, NJ/NY

				New Jersey State Plane		New York State Plane	
Vessel	Location ID	Date	Elevation MLLW (ft)	As Sampled X-Easting (ft)	As Sampled Y-Northing (ft)	As Sampled X-Easting (ft)	As Sampled Y-Northing (ft)
RV Shearwater	DEP1	10/31/2018	9.1	561251.7668	596343.1322	914266.91	110737.33
	DEP2	10/28/2018	14.2	574218.8256	603830.2191	927277.74	118151.39
	DEP3	10/31/2018	11.3	564324.6542	598117.8879	917350.18	112494.78
	DEP4R	10/30/2018	11.5	565160.9083	598583.4791	918189.16	112955.66
	DEP5R	10/30/2018	12.4	566841.8715	599573.5939	919875.91	113936.31
	DEP6	10/22/2018	38.4	582791.7465	608706.9665	935879.14	122979.85
	DEP7	10/22/2018	38.1	583160.8366	609009.1976	936249.98	123280.01
	VC214	10/29/2018	8.2	560766.8392	596064.191	913780.35	110461.12
	VC216	10/29/2018	12.2	567510.5375	599953.8404	920546.80	114312.79
	VC217	10/29/2018	13.1	568069.9866	600277.3109	921108.14	114633.11
	VC218	10/29/2018	13.6	568580.8025	600575.7573	921620.70	114928.68
	VC219	10/28/2018	14.3	569098.4197	600870.3428	922140.04	115220.35
	VC220	10/28/2018	14.8	569622.2289	601175.1124	922665.63	115522.17
	VC221	10/28/2018	14.4	570144.7577	601476.4253	923189.92	115820.54
	VC222	10/28/2018	14.3	570649.0065	601767.545	923695.87	116108.82
	VC223	10/28/2018	14.5	571073.6475	602012.0765	924121.94	116350.96
	VC225	10/20/2018	17.3	581862.177	608173.9512	934946.46	122452.07
	VC227	10/20/2018	17.3	582047.9881	608278.2077	935132.88	122555.28
	VC228	10/20/2018	17.4	582233.3059	608383.0916	935318.81	122659.12
	VC229	10/20/2018	17.9	582430.6331	608494.9233	935516.79	122769.84
	VC230	10/20/2018	29.3	582609.9335	608606.4824	935696.74	122880.39
	VC230A	10/20/2018	29.9	582550.8778	608647.0733	935637.91	122921.32
	VC230B	10/20/2018	28.9	582675.7463	608576.7888	935762.39	122850.32
	VC232	10/22/2018	46.2	582971.1287	608811.1868	936059.13	123083.06
	VC232A	10/22/2018	45.1	583035.0038	608784.6522	936122.86	123056.16
	VC232B	10/22/2018	46.9	582898.2943	608849.9995	935986.51	123122.29
	VC235	10/22/2018	31.8	583432.4402	609078.3348	936522.00	123347.61
	VC237	10/22/2018	19.3	583556.5039	609163.7924	936646.56	123432.37
	VC237A	10/22/2018	21.0	583635.3724	609120.5643	936725.19	123388.69
	VC237B	10/22/2018	30.3	583467.4437	609177.5151	936557.57	123446.60
	VC238	10/23/2018	19.5	583740.7938	609256.0216	936831.39	123523.56
	VC239	10/23/2018	17.9	583930.7742	609362.1419	937021.99	123628.61
	VC240	10/23/2018	17.8	584122.6125	609466.8129	937214.44	123732.20
	VC242	10/23/2018	17.6	584314.4396	609562.9445	937406.83	123827.25
	VC244	10/26/2018	21.3	617298.8998	617590.8386	970439.58	131668.50
	VC245	10/26/2018	21.9	617872.8607	617449.0069	971012.78	131523.40
	VC246	10/26/2018	22.7	618364.2104	617324.3345	971503.46	131395.93
	VC247	10/23/2018	24.6	618899.2476	617197.8303	972037.82	131266.38
	VC251	10/23/2018	18.2	621311.1323	616616.6097	974446.59	130671.43
	VC252	10/26/2018	16.5	621988.1334	616406.4365	975122.45	130457.40
	VC253	10/26/2018	16.7	622624.0025	616142.5539	975756.87	130189.89
	VC255	10/26/2018	32.9	659962.5205	616596.4121	1013100.55	130432.14
	VC256	10/26/2018	33.7	660925.3814	616965.3315	1014065.56	130795.63
	VC301R	10/30/2018	9.1	561777.324	596633.8033	914794.17	111025.04
	VC303	10/31/2018	10.3	562617.9419	597131.8562	915637.70	111518.36
	VC304	10/29/2018	9.4	563461.6663	597620.0277	916484.28	112001.78
	VC307	10/28/2018	14.7	571907.6999	602496.0336	924958.82	116830.22
	VC308	10/28/2018	14.4	572672.668	602937.9415	925726.37	117267.82
	VC309	10/28/2018	13.6	573441.5454	603379.9917	926497.83	117705.54
	VC310	10/28/2018	11.6	574852.1417	604193.7958	927913.18	118511.40
	VC311	10/28/2018	9.6	575634.0607	604647.7894	928697.75	118960.99
	VC312	10/28/2018	10.7	576326.5431	605042.8795	929392.54	119352.18
	VC313	10/28/2018	13.2	577187.3132	605543.0169	930256.23	119847.47
	VC314	10/28/2018	14.9	577964.6048	606003.8233	931036.21	120303.90
	VC315	10/29/2018	20.7	615068.2206	617941.592	968210.72	132031.94

TABLE 2 - AS-SAMPLED LOCATIONS
NORTHEAST SUPPLY ENHANCEMENT PROJECT
RARITAN BAY & LOWER NY HARBOR, NJ/NY

				New Jersey State Plane		New York State Plane	
Vessel	**Location ID**	**Date**	**Elevation MLLW (ft)**	**As Sampled X-Easting (ft)**	**As Sampled Y-Northing (ft)**	**As Sampled X-Easting (ft)**	**As Sampled Y-Northing (ft)**
RV Shearwater	VC316	10/29/2018	21.0	615880.5858	617866.2185	969022.72	131951.95
	VC317	10/29/2018	20.8	616873.1493	617681.2356	970014.31	131761.32
	VC318	10/23/2018	30.3	619363.2626	617086.742	972501.24	131152.65
	VC320	10/23/2018	35.4	619725.1858	617002.0319	972862.71	131065.88
	VC321	10/23/2018	33.1	620084.2065	616917.7554	973221.28	130979.56
	VC323	10/23/2018	27.7	620441.0095	616829.6267	973577.61	130889.40
	VC326	10/25/2018	38.6	640093.3262	608815.2984	993185.94	122763.05
	VC327	10/25/2018	36.9	640106.9564	608776.2185	993199.35	122723.89
	VC328	10/25/2018	16.3	643996.1858	610450.2144	997098.34	124375.97
	VC329	10/25/2018	16.2	644006.0774	610410.973	997108.01	124336.67
RV George	VC204	11/12/2018	7.1	559546.7926	595338.5418	912556.06	109742.34
	VC205	11/12/2018	6.5	559587.5861	595411.0669	912597.27	109814.64
	VC208	11/12/2018	7.8	559964.2845	595605.5007	912975.11	110006.95
	VC211	11/12/2018	8.0	560364.6537	595830.9961	913376.80	110230.19

Notes:

MLLW: Mean Lower Low Water

2. Station positions are referenced to New York State Plane, Long Island, NAD83 and Feet New Jersey State Plane, NAD83 Feet

TABLE 3 - ANALYTICAL METHODS, CONTAINERS, PRESERVATION AND HOLDING TIMES FOR CHEMICAL ANALYSES
NORTHEAST SUPPLY ENHANCEMENT PROJECT
RARITAN BAY & LOWER NY HARBOR, NJ/NY

Test Description	Analytical Method	Type and Size of Container for each Group of Analytes	Preservative	Holding Time
TAL Metals	EPA Method 6020B	16-oz glass jar with Teflon®-lined cap	Cool to 4±2°C	6 months
Mercury	EPA Method 7474			28 days
Hexavalent Chromium (CrVI)	EPA Method 7196A			14 days
Total Organic Carbon (TOC)	EPA Method 9060A			28 days
Water content	SM 2540 G			7 days
TCL Semi-Volatile Organic Compounds (SVOCs)	EPA Method 8270D	16-oz glass jar with Teflon®-lined cap	Cool to 4±2°C	Extract within 14 days, analyze within 40 days
TCL Pesticides	EPA Method 8081B			
Polychlorinated Biphenyls (PCB) as Aroclors	EPA Method 8082A			
Dioxins/Furans	EPA Method 1613B	4-oz Amber glass jar with Teflon®-lined cap	Cool to 4±2°C	Extract within 365 days, analyze within 365 days.
TCL Volatile Organic Compounds (VOCs)	EPA Method 8260C	5 Grams Grab Samples	3- Methanol	Methanol – 14 Days Analysis
			1- Water	Water – 48 hours (freeze)
			Cool to 4±2°C	(14 days) Analysis
Extractable Petroleum Hydrocarbons (EPH)	NJDEP EPH 103	4-oz Container	Cool to 4±2°C	14 days
Grain size	ASTM D422	1-quart ziploc bag	Cool to 4±2°C	N/A

Key:

TAL = Target Analyte List

TCL = Target Compound List

°C = degrees Celsius

oz = ounces

TABLE 4
SUMMARY OF RAW SEDIMENT SOIL QUALITY DATA - SVOCs, EPH, INORGANICS, PCBs and PESTICIDES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Location Name						Nearshore					Nearshore-Raritan												
Sample Name	NJ-R-INGESTDER MSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDER MSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	COMP-A	VC-208	VC-211	VC-214	DEP-1	VC-301	VC-303	VC-304	DEP-3	DEP-4	DEP-5	VC-216	VC-217	VC-218	COMP-G	VC-222	VC-223	COMP-I	COMP-J
Sample Date						COMP-A-D0-15E	VC-208-D0-7.5E	VC-211-D0-7.5E	VC-214-D0-7.5E	DEP-1-D0-7.5E	VC-301-REV-D0-7.5E	VC-303-D0-7.5E	VC-304-D0-7.5E	DEP-3-D0-7.5E	DEP-4-REV-D0-7.5E	DEP-5-REV-D0-7.5E	VC-216-D0-7.5E	VC-217-D0-7.5E	VC-218-D0-7.5E	COMP-G-D0-7.5E	VC-222-D0-7.5E	VC-223-D0-7.5E	COMP-I-D0-7.5E	COMP-J-D0-7.5E
Sample Type						11/13/2018	11/12/2018	11/12/2018	10/29/2018	10/31/2018	10/30/2018	10/31/2018	10/29/2018	10/31/2018	10/30/2018	10/30/2018	10/29/2018	10/29/2018	10/29/2018	10/28/2018	10/28/2018	10/28/2018	10/28/2018	10/28/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1846405-02	L1846346-02	L1846346-01	L1844234-35	L1844690-06	L1844690-01	L1844690-07	L1844234-37	L1844690-05	L1844690-02	L1844690-03	L1844234-33	L1844234-32	L1844234-30	L1844234-28	L1844234-24	L1844234-23	L1844234-22	L1844234-21
						0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Semi-Volatile Organic Compounds (mg/kg)																								
1,2,4,5-Tetrachlorobenzene	23	NA	390	NA	NA	0.00911 U	0.00685 U	0.00953 U	0.00686 U	0.00824 U	0.00998 U	0.0109 U	0.00658 U	0.0123 U	0.0116 U	0.0123 U	0.00668 U	0.00622 U	0.00703 U	0.00651 U	0.00697 U	0.00633 U	0.00676 U	0.00515 U
2,2'-oxybis(1-Chloropropane)	3100	NA	NA	NA	1.9	0.016 U	0.012 U	0.0167 U	0.012 U	0.0144 U	0.0175 U	0.0192 U	0.0115 U	0.0216 U	0.0202 U	0.0216 U	0.0117 U	0.0109 U	0.0123 U	0.0114 U	0.0122 U	0.0111 U	0.0118 U	0.00902 U
2,3,4,6-Tetrachlorophenol	1900	NA	27000	NA	26	0.0166 U	0.0124 U	0.0173 U	0.0125 U	0.015 U	0.0181 U	0.0199 U	0.012 U	0.0224 U	0.021 U	0.0224 U	0.0121 U	0.0113 U	0.0128 U	0.0118 U	0.0127 U	0.0115 U	0.0123 U	0.00935 U
2,4,5-Trichlorophenol	6300	NA	91000	NA	68	0.0114 U	0.00858 U	0.0119 U	0.0086 U	0.0103 U	0.0125 U	0.0137 U	0.00823 U	0.0154 U	0.0145 U	0.0154 U	0.00837 U	0.00779 U	0.00881 U	0.00815 U	0.00872 U	0.00793 U	0.00847 U	0.00644 U
2,4,6-Trichlorophenol	49	NA	230	NA	0.86	0.00855 U	0.00643 U	0.00895 U	0.00645 U	0.00774 U	0.00937 U	0.0103 U	0.00618 U	0.0116 U	0.0108 U	0.0116 U	0.00628 U	0.00584 U	0.0066 U	0.00611 U	0.00654 U	0.00595 U	0.00635 U	0.00483 U
2,4-Dichlorophenol	190	NA	2700	NA	0.19	0.0103 U	0.00773 U	0.0108 U	0.00774 U	0.0093 U	0.0112 U	0.0124 U	0.00742 U	0.0139 U	0.013 U	0.0139 U	0.00754 U	0.00702 U	0.00794 U	0.00734 U	0.00786 U	0.00714 U	0.00763 U	0.00581 U
2,4-Dimethylphenol	1300	NA	18000	NA	2.3	0.0158 U	0.0118 U	0.0165 U	0.0119 U	0.0143 U	0.0173 U	0.019 U	0.0114 U	0.0214 U	0.02 U	0.0213 U	0.0116 U	0.0108 U	0.0122 U	0.0113 U	0.0121 U	0.011 U	0.0117 U	0.00891 U
2,4-Dinitrophenol	130	NA	1800	NA	0.33	0.163 U	0.123 U	0.17 U	0.123 U	0.148 U	0.179 U	0.196 U	0.118 U	0.221 U	0.207 U	0.221 U	0.12 U	0.111 U	0.126 U	0.116 U	0.125 U	0.113 U	0.121 U	0.0921 U
2,4-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.0067 U	0.00504 U	0.00701 U	0.00505 U	0.00606 U	0.00734 U	0.00805 U	0.00484 U	0.00907 U	0.00849 U	0.00907 U	0.00491 U	0.00458 U	0.00517 U	0.00478 U	0.00512 U	0.00466 U	0.00497 U	0.00378 U
2,6-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.0247 U	0.0186 U	0.0258 U	0.0186 U	0.0223 U	0.027 U	0.0297 U	0.0178 U	0.0334 U	0.0313 U	0.0334 U	0.0181 U	0.0169 U	0.0191 U	0.0176 U	0.0189 U	0.0172 U	0.0183 U	0.0139 U
2-Chloronaphthalene	4800	NA	67000	NA	NA	0.00042 U	0.00063 U	0.00045 U	0.00067 U	0.00079 U	0.00048 U	0.00052 U	0.00063 U	0.00057 U	0.00056 U	0.00058 U	0.00064 U	0.00058 U	0.00067 U	0.00061 U	0.00066 U	0.00058 U	0.00066 U	0.0005 U
2-Chlorophenol	390	NA	6500	NA	0.76	0.00631 U	0.00475 U	0.00661 U	0.00476 U	0.00572 U	0.00692 U	0.00759 U	0.00456 U	0.00856 U	0.00801 U	0.00855 U	0.00463 U	0.00432 U	0.00488 U	0.00451 U	0.00483 U	0.00439 U	0.00469 U	0.00357 U
2-Methylnaphthalene	240	NA	3300	NA	3.1	0.00067 U	0.0498	0.00072 U	0.198	0.00126 U	0.00077 U	0.00082 U	0.00164 J	0.00211 J	0.00298 J	0.00189 J	0.00348 J	0.00804	0.0648	0.0525	0.0541	0.0315	0.00104 U	0.00106 J
2-Methylphenol (o-Cresol)	320	NA	4600	NA	0.77	0.00823 U	0.00619 U	0.00861 U	0.0062 U	0.00745 U	0.00902 U	0.00989 U	0.00594 U	0.0111 U	0.0104 U	0.0111 U	0.00604 U	0.00562 U	0.00635 U	0.00588 U	0.00629 U	0.00572 U	0.00611 U	0.00465 U
2-Nitroaniline	NA	NA	NA	NA	NA	0.0155 U	0.0116 U	0.0162 U	0.0116 U	0.014 U	0.0169 U	0.0186 U	0.0112 U	0.0209 U	0.0196 U	0.0209 U	0.0113 U	0.0106 U	0.0119 U	0.011 U	0.0118 U	0.0108 U	0.0115 U	0.00874 U
2-Nitrophenol	NA	NA	NA	NA	NA	0.0103 U	0.00776 U	0.0108 U	0.00777 U	0.00934 U	0.0113 U	0.0124 U	0.00745 U	0.014 U	0.0131 U	0.014 U	0.00757 U	0.00705 U	0.00796 U	0.00737 U	0.00789 U	0.00717 U	0.00766 U	0.00583 U
3&4-Methylphenol	NA	NA	NA	NA	NA	0.0125 U	0.0111 J	0.0131 U	0.0281 J	0.0113 U	0.0137 U	0.015 U	0.00904 U	0.017 U	0.0159 U	0.0169 U	0.00918 U	0.0156 J	0.0417 J	0.0215 J	0.0385 J	0.0249 J	0.0093 U	0.00707 U
3,3'-Dichlorobenzidine	1.2	NA	5.7	NA	3.9	0.0163 U	0.0123 U	0.0171 U	0.0123 U	0.0148 U	0.0179 U	0.0196 U	0.0118 U	0.0221 U	0.0207 U	0.0221 U	0.012 U	0.0112 U	0.0126 U	0.0117 U	0.0125 U	0.0114 U	0.0121 U	0.00922 U
3-Nitroaniline	NA	NA	NA	NA	NA	0.01 U	0.00756 U	0.0105 U	0.00757 U	0.00909 U	0.011 U	0.0121 U	0.00725 U	0.0136 U	0.0127 U	0.0136 U	0.00737 U	0.00686 U	0.00776 U	0.00718 U	0.00768 U	0.00699 U	0.00746 U	0.00568 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	0.184 U	0.138 U	0.192 U	0.138 U	0.166 U	0.201 U	0.221 U	0.133 U	0.249 U	0.233 U	0.249 U	0.135 U	0.126 U	0.142 U	0.131 U	0.14 U	0.128 U	0.136 U	0.104 U
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	0.00899 U	0.00676 U	0.00941 U	0.00678 U	0.00814 U	0.00985 U	0.0108 U	0.00649 U	0.0122 U	0.0114 U	0.0122 U	0.0066 U	0.00615 U	0.00694 U	0.00643 U	0.00688 U	0.00625 U	0.00668 U	0.00508 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	0.0138 U	0.0104 U	0.0144 U	0.0104 U	0.0125 U	0.0151 U	0.0166 U	0.00997 U	0.0187 U	0.0175 U	0.0187 U	0.0101 U	0.00944 U	0.0107 U	0.00987 U	0.0106 U	0.00961 U	0.0103 U	0.00781 U
4-Chloroaniline	2.7	NA	13	NA	0.23	0.00874 U	0.00658 U	0.00915 U	0.00659 U	0.00792 U	0.00958 U	0.0105 U	0.00631 U	0.0118 U	0.0111 U	0.0118 U	0.00642 U	0.00598 U	0.00675 U	0.00625 U	0.00669 U	0.00608 U	0.0065 U	0.00494 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	0.00922 U	0.00694 U	0.00965 U	0.00695 U	0.00835 U	0.0101 U	0.0111 U	0.00666 U	0.0125 U	0.0117 U	0.0125 U	0.00677 U	0.0063 U	0.00712 U	0.00659 U	0.00706 U	0.00641 U	0.00685 U	0.00521 U
4-Nitroaniline	27	NA	130	NA	NA	0.0129 U	0.00971 U	0.0135 U	0.00974 U	0.0117 U	0.0142 U	0.0155 U	0.00932 U	0.0175 U	0.0164 U	0.0175 U	0.00948 U	0.00883 U	0.00997 U	0.00923 U	0.00988 U	0.00898 U	0.00959 U	0.0073 U
4-Nitrophenol	NA	NA	NA	NA	NA	0.526 U	0.396 U	0.55 U	0.397 U	0.476 U	0.577 U	0.632 U	0.38 U	0.713 U	0.667 U	0.712 U	0.386 U	0.36 U	0.406 U	0.376 U	0.402 U	0.366 U	0.391 U	0.297 U
Acenaphthene	3600	NA	50000	NA	NA	0.00068 J	0.0743	0.00065 U	0.204	0.00114 U	0.00069 U	0.00074 U	0.00094 J	0.00118 J	0.00239 J	0.00124 J	0.00151 J	0.00349 J	0.0244	0.0204	0.0203	0.0113	0.00094 U	0.00071 U
Acenaphthylene	NA	NA	NA	NA	NA	0.00161 J	0.0526	0.00039 U	0.157	0.00338 J	0.0012 J	0.00044 U	0.0027 J	0.00178 J	0.00313 J	0.00348 J	0.00364 J	0.0168	0.133	0.11	0.129	0.0704	0.00056 U	0.00182 J
Acetophenone	7800	NA	130000	NA	3.6	0.012 U	0.00907 U	0.0126 U	0.00909 U	0.0109 U	0.0132 U	0.0145 U	0.0087 U	0.0163 U	0.0153 U	0.0163 U	0.00884 U	0.00824 U	0.0134 J	0.00861 U	0.00922 J	0.0101 J	0.00895 U	0.00681 U
Anthracene	18000	NA	250000	NA	NA	0.00067 U	0.152	0.00072 U	0.351	0.00126 U	0.00077 U	0.00082 U	0.00342 J	0.00565 J	0.00872	0.00355 J	0.00912	0.0193	0.147	0.114	0.135	0.0898	0.00159 J	0.00219 J
Atrazine	220	NA	3200	NA	0.33	0.0083 U	0.00624 U	0.00869 U	0.00626 U	0.00752 U	0.0091 U	0.00998 U	0.006 U	0.0112 U	0.0105 U	0.0112 U	0.00609 U	0.00568 U	0.00641 U	0.00593 U	0.00635 U	0.00578 U	0.00617 U	0.00469 U
Benzaldehyde	170	NA	910	NA	NA	0.0241 U	0.0386 J	0.0252 U	0.043 J	0.0218 U	0.0264 U	0.029 U	0.0174 U	0.0734 J	0.0645 J	0.0326 U	0.0177 U	0.0167 J	0.0381 J	0.0208 J	0.0565 J	0.0456 J	0.0179 U	0.0136 U
Benzo[a]anthracene4	5.1	78000	23	370000	0.71	0.00145 U	0.296	0.00156 U	1.43	0.00272 U	0.00166 U	0.00177 U	0.0104	0.0233	0.0336	0.0159	0.0297	0.0809	0.526	0.402	0.432	0.274	0.00225 U	0.00642
Benzo(a)pyrene	0.51	3500	2.3	16000	NA	0.00063 U	0.203[m]	0.00068 U	1.12	0.00119 U	0.00072 U	0.00077 U	0.011	0.0154	0.0242	0.0119	0.0323	0.106	0.677	0.519	0.566	0.385[m]	0.00141 J	0.00715
Benzo(b)fluoranthene	5.1	78000	23	370000	NA	0.00098 J	0.23	0.00079 J	1.01	0.0015 J	0.00114 J	0.00126 J	0.0129	0.0134	0.0273	0.00963	0.028	0.0917	0.476	0.379	0.447	0.293	0.00192 J	0.00585 J
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.00061 J	0.169	0.00056 J	0.723	0.00084 U	0.00102 J	0.00106 J	0.00949	0.0102	0.0146	0.00809	0.0226	0.0744	0.439	0.34	0.377	0.265	0.00134 J	0.00589 J
Benzo(k)fluoranthene	51	780000	230	NA	NA	0.00055 U	0.125	0.0006 U	0.706	0.00105 U	0.00065 J	0.00076 J	0.00889	0.0132	0.0174	0.0075 J	0.0259	0.0616	0.434	0.338	0.345	0.23	0.00176 J	0.0059 J
Biphenyl	87	NA	450	NA	NA	0.01 U	0.0124 J	0.0105 U	0.0317 J	0.00909 U	0.011 U	0.0121 U	0.00725 U	0.0136 U	0.0127 U	0.0136 U	0.00737 U	0.00686 U	0.0259 J	0.0144 J	0.0224 J	0.0188 J	0.00746 U	0.00568 U
bis(2-Chloroethoxy)methane	190	NA	2700	NA	NA	0.00962 U	0.00724 U	0.0101 U	0.00725 U	0.00871 U	0.0105 U	0.0116 U	0.00695 U	0.013 U	0.0122 U	0.013 U	0.00706 U	0.00658 U	0.00743 U	0.00688 U	0.00736 U	0.00669 U	0.00715 U	0.00544 U
bis(2-Chloroethyl)ether	0.63	NA	3.3	NA	0.33	0.0176 U	0.0132 U	0.0184 U	0.0132 U	0.0159 U	0.0192 U	0.0211 U	0.0127 U	0.0238 U	0.0223 U	0.0238 U	0.0129 U	0.012 U	0.0136 U	0.0126 U	0.0134 U	0.0122 U	0.013 U	0.00993 U
bis(2-Ethylhexyl)phthalate	39	NA	180	NA	14	0.0251 U	1.86	0.0262 U	4.98	0.0227 U	0.0275 U	0.0301 U	0.0185 J	0.034 U	0.0318 U	0.0339 U	0.0184 U	0.0382 J	0.154	0.142	0.527	0.457	0.0186 U	0.0142 U
Butyl benzylphthalate	290	NA	1300	NA	29	0.0193 U	0.018 J	0.0815 J	0.0287 J	0.0175 U	0.0212 U	0.0232 U	0.014 U	0.0262 U	0.0245 U	0.0262 U	0.0142 U	0.0132 U	0.0149 U	0.0156 J	0.0206 J	0.0248 J	0.0144 U	0.0109 U
Caprolactam	32000	290	460000	1300	16	0.014 U	0.0106 U	0.0147 U	0.0106 U	0.0127 U	0.0154 U	0.0169 U	0.0101 U	0.019 U	0.0178 U	0.019 U	0.0103 U	0.0096 U	0.0108 U	0.01 U	0.0107 U	0.00977 U	0.0104 U	0.00794 U
Carbazole	NA	NA	NA	NA	NA	0.0061 U	0.00459 U	0.00639 U	0.0046 U	0.00552 U	0.00669 U	0.00734 U	0.00441 U	0.00827 U	0.00774 U	0.00826 U	0.00448 U	0.00417 U	0.0139 J	0.00436 U	0.00467 U	0.0101 J	0.00453 U	0.00345 U
Chrysene	510	NA	2300	NA	NA	0.00065 J	0.188	0.00051 U	1.17	0.00097 J	0.00095 J	0.00118 J	0.00912	0.0131	0.0206	0.00893	0.0202	0.0639	0.419	0.304	0.349	0.235	0.00228 J	0.00483 J
Dibenz(a,h)anthracene	0.51	7800	2.3	37000	NA	0.00055 U	0.038	0.0006 U	0.195	0.00105 U	0.00063 U	0.00068 U	0.0021 J	0.00287 J	0.00424 J	0.00203 J	0.0055 J	0.0191	0.114	0.0879	0.103	0.0662	0.00086 U	0.00124 J
Dibenzofuran	NA	NA	NA	NA	NA	0.00716 U	0.0181 J	0.00749 U	0.0382 J	0.00648 U	0.00784 U	0.0086 U	0.00517 U	0.0097 U	0.00908 U	0.00969 U	0.00525 U	0.00654 J	0.0322 J	0.0174 J	0.0278 J	0.0206 J	0.00532 U	0.00404 U
Diethyl phthalate	51000	NA	730000	NA	44	0.0105 J	0.00735 U	0.0102 U	0.0376 J	0.0107 J	0.0107 U	0.0143 J	0.0211 J	0.014 J	0.0124 U	0.0233 J	4.18	0.00668 U	0.00755 U	0.00699 U	0.00748 U	0.0068 U	0.00726 U	0.00552 U
Dimethyl phthalate	NA	NA	NA	NA	NA	0.00746 U	0.00561 U	0.00781 U	0.00562 U	0.00676 U	0.00818 U	0.00897 U	0.00539 U	0.0101 U	0.00946 U	0.0101 U	0.00548 U	0.0051 U	0.00576 U	0.00533 U	0.00571 U	0.00519 U	0.00554 U	0.00422 U
Di-n-butylphthalate	6300	NA	91000	NA	NA	0.00911 U	0.00685 U	0.00953 U	0.00686 U	0.00824 U	0.00998 U	0.0109 U	0.00658 U	0.0123 U	0.0116 U	0.0123 U	0.00668 U	0.00622 U	0.00703 U	0.00651 U	0.00697 U	0.00633 U	0.00676 U	0.00515 U
Di-n-octyl phthalate	630	NA	9100	NA	NA	0.0396 U	0.0298 U	0.0414 U	0.0298 U	0.0358 U	0.0434 U	0.0476 U	0.0286 U	0.0537 U	0.0502 U	0.0536 U	0.0291 U	0.0271 U	0.0306 U	0.0283 U	0.0303 U	0.0275 U	0.0294 U	0.0224 U
Fluoranthene	2400	NA	33000	NA	NA	0.00159 J	0.901	0.00107 U	2.77	0.00186 U	0.00164 J	0.00239 J	0.0154	0.0328	0.0504	0.0173	0.0361	0.0665	0.572	0.448	0.485	0.275	0.00407 J	0.0063 J
Fluorene	2400	NA 8	33000	NA	NA	0.0011 J	0.0402	0.00054 J	0.374	0.00078 J	0.00103 J	0.00099 J	0.00255 J	0.00435 J	0.00636 J	0.00302 J	0.00472 J	0.00698 J	0.0357	0.0283	0.0299	0.0181	0.00191 J	0.00129 J
Hexachlorobenzene	0.43	NA	2.3	NA	0.17	0.00932 U	0.00701 U	0.00975 U	0.00702 U	0.00844 U	0.0102 U	0.0112 U	0.00673 U	0.0126 U	0.0118 U	0.0126 U	0.00684 U	0.00637 U	0.0072 U	0.00666 U	0.00713 U	0.00648 U	0.00692 U	0.00527 U
Hexachlorobutadiene	8.9	NA	47	NA	0.17	0.0186 U	0.014 U	0.0194 U	0.014 U	0.0168 U	0.0203 U	0.0223 U	0.0134 U	0.0251 U	0.0235 U	0.0251 U	0.0136 U	0.0127 U	0.0143 U	0.0133 U	0.0142 U	0.0129 U	0.0138 U	0.0105 U
Hexachlorocyclopentadiene	470	2.7	7800	NA	2.5	0.105 U	0.0789 U	0.11 U	0.079 U	0.0949 U	0.115 U	0.126 U	0.0757 U	0.142 U	0.133 U	0.142 U	0.0769 U	0.0717 U	0.081 U	0.0749 U	0.0802 U	0.0729 U	0.0779 U	0.0592 U
Hexachloroethane	17	NA	91	NA	0.17	0.016 U	0.012 U	0.0167 U	0.012 U	0.0145 U	0.0175 U	0.0192 U	0.0115 U	0.0217 U	0.0203 U	0.0216 U	0.0117 U	0.0109 U	0.0124 U	0.0114 U	0.0122 U	0.0111 U	0.0119 U	0.00904 U
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NA	0.00342 J	0.148	0.00356 J	0.651	0.00608 J	0.00414 J	0.00431 J	0.0135	0.0145	0.02	0.0119	0.0272	0.0742	0.406	0.318	0.352	0.252	0.00564 J	0.00862
Isophorone	570	NA	2700	NA	0.23	0.0105 U	0.00789 U	0.011 U	0.0079 U	0.00949 U	0.0115 U	0.0126 U	0.00757 U	0.0142 U	0.0133 U	0.0142 U	0.00769 U	0.00717 U	0.0081 U	0.00749 U	0.00802 U	0.00729 U	0.00779 U	0.00592 U
Naphthalene	2500	5.7	34000	27	19	0.00066 J	0.0546	0.00052 U	0.185	0.00106 J	0.00078 J	0.00084 J	0.00394 J	0.0036 J	0.00512 J	0.00435 J	0.00635 J	0.0136	0.117	0.0801	0.0792	0.0494	0.00125 J	0.00205 J
Nitrobenzene	160	7.5	2600	36	0.17	0.00997 U	0.0075 U	0.0104 U	0.00751 U	0.00902 U	0.0109 U	0.012 U	0.0072 U	0.0135 U	0.0126 U	0.0135 U	0.00731 U	0.00681 U	0.0077 U	0.00712 U	0.00763 U	0.00693 U	0.0074 U	0.00563 U
N-Nitrosodi-n-propylamine	0.17	NA	0.36	NA	0.17	0.0163 U	0.0122 U	0.017 U	0.0123 U	0.0147 U	0.0178 U	0.0196 U	0.0118 U	0.0221 U	0.0206 U	0.022 U	0.0119 U	0.0111 U	0.0126 U	0.0116 U	0.0124 U	0.0113 U	0.0121 U	0.0092 U
N-Nitrosodiphenylamine	110	NA	520	NA	1.1	0.00672 U	0.00505 U	0.00703 U	0.00506 U	0.00608 U	0.00736 U	0.00807 U	0.00485 U	0.0091 U	0.00852 U	0.00909 U	0.00493 U	0.00459 U	0.00519 U	0.0048 U	0.00514 U	0.00467 U	0.00499 U	0.0038 U
Pentachlorophenol	1	NA	4.4	NA	0.33	0.172 U	0.129 U	0.18 U	0.13 U	0.156 U	0.188 U	0.207 U	0.124 U	0.233 U	0.218 U	0.233 U	0.126 U	0.118 U	0.133 U	0.123 U	0.132 U	0.12 U	0.128 U	0.0972 U
Phenanthrene	NA	NA	NA	NA	NA	0.00145 J	0.188	0.00084 J	2.21	0.00162 J	0.00151 J	0.00182 J	0.00746 J	0.0103	0.0159	0.00722 J	0.0144	0.0316	0.223	0.185	0.195	0.104	0.00346 J	0.00384 J
Phenol	19000	39000	270000	NA	21	0.00909 U	0.00684 U	0.00951 U	0.00685 U	0.00823 U	0.00996 U	0.0109 U	0.00656 U	0.0123 U	0.0115 U	0.0123 U	0.00667 U	0.00621 U	0.00702 U	0.00649 U	0.00695 U	0.00632 U	0.00675 U	0.00514 U
Pyrene	1800	NA	25000	NA	NA	0.00098 J	0.596	0.00059 U	2.38	0.00104 U	0.00131 J	0.00152 J	0.0179	0.028	0.0391	0.0174	0.04	0.101	0.72	0.568	0.603	0.321	0.00368 J	0.00894
SUM of Semi-Volatile Organic Compounds	NA	NA	NA	NA	NA	0.0105	1.9582	0.0815	5.1873	0.0107	ND	0.0143	0.0396	0.0874	0.0645	0.0233	4.18	0.07704	0.3192	0.2317	0.70202	0.6119	ND	ND
SUM of Semi-Volatile Organic Compounds (SIM)	NA	NA	NA	NA	NA	0.01373	3.5055	0.00629	15.834	0.01539	0.01537	0.01613	0.13335	0.19574	0.29604	0.13533	0.31072	0.83911	5.5279	4.2942	4.7015	2.9707	0.03031	0.07339
EPH (mg/kg)																								
Total Extractable Petroleum Hydrocarbons	5100	54000	NA	NA	NA	94.4 U	128	36 U	109	30.7 U	37.3 U	40.1 U	47.7 U	45.8 U	43.1 U	44.5 U	50.8 U	48.3 U	51.9 U	49.2 U	102	47.2 U	49.8 U	38.8 U

TABLE 4
SUMMARY OF RAW SEDIMENT SOIL QUALITY DATA - SVOCs, EPH, INORGANICS, PCBs and PESTICIDES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

						Nearshore					Nearshore-Raritan												
Location Name	NJ-R-INGESTDERMSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERMSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	COMP-A	VC-208	VC-211	VC-214	DEP-1	VC-301	VC-303	VC-304	DEP-3	DEP-4	DEP-5	VC-216	VC-217	VC-218	COMP-G	VC-222	VC-223	COMP-I	COMP-J
Sample Name						COMP-A-D0-15E	VC-208-D0-7.5E	VC-211-D0-7.5E	VC-214-D0-7.5E	DEP-1-D0-7.5E	VC-301-REV-D0-7.5E	VC-303-D0-7.5E	VC-304-D0-7.5E	DEP-3-D0-7.5E	DEP-4-REV-D0-7.5E	DEP-5-REV-D0-7.5E	VC-216-D0-7.5E	VC-217-D0-7.5E	VC-218-D0-7.5E	COMP-G-D0-7.5E	VC-222-D0-7.5E	VC-223-D0-7.5E	COMP-I-D0-7.5E	COMP-J-D0-7.5E
Sample Date						11/13/2018	11/12/2018	11/12/2018	10/29/2018	10/31/2018	10/30/2018	10/31/2018	10/29/2018	10/31/2018	10/30/2018	10/30/2018	10/29/2018	10/29/2018	10/29/2018	10/28/2018	10/28/2018	10/28/2018	10/28/2018	10/28/2018
Sample Type						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID						L1846405-02	L1846346-02	L1846346-01	L1844234-35	L1844690-06	L1844690-01	L1844690-07	L1844234-37	L1844690-05	L1844690-02	L1844690-03	L1844234-33	L1844234-32	L1844234-30	L1844234-28	L1844234-24	L1844234-23	L1844234-22	L1844234-21
Sample Depth (bgs)						0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Inorganic Compounds (mg/kg)																								
Aluminum	78000	NA	NA	NA	NA	5670	7720	4190	11200	3660	7730	9280	13000	8230	13000	12800	11800	14200	13100	9780	13700	10900	9560	5960
Antimony	31	NA	520	NA	5.4	0.191 U	5.25	0.343 J	5.57	0.176 U	0.216 U	0.756 J	0.277 U	0.262 U	0.241 J	0.26 J	0.272 U	0.468 J	2.96 J	2.27 J	3.5	1.53 J	0.662 J	0.212 U
Arsenic	19	1100	19	5200	19	6.03	63.8	5.41	70.1	3.9	7.85	8.45	11.6	5.11	8.39	11	11.4	18.7	50.9	31.4	45	21.8	8.38	6.16
Barium	16000	870000	260000	NA	2100	11.7	47.6	8.18	65.8	10.7	13.1	15.3	22.9	12.2	29.9	25.7	23.4	31.2	70.8	47.7	67.4	40.7	17	9.79
Beryllium	160	2000	2600	9300	0.7	0.482	0.833	0.48	0.895	0.656	0.56	0.624	0.773	0.638	0.836	0.851	0.74	0.823	0.899	0.822	0.933	0.721	0.615 J	0.391 J
Cadmium	71	2600	1100	12000	1.9	0.055 J	1.31	0.084 J	1.8	0.041 J	0.086 J	0.093 J	0.111 J	0.064 J	0.062 J	0.103 J	0.098 J	0.224 J	0.734	0.547	0.976	0.594	0.076 J	0.053 J
Calcium	NA	NA	NA	NA	NA	1420	17100	3380	5920	922	1920	1750	4160	7030	7670	12400	6120	5590	7680	7720	17800	11800	10600	15100
Chromium	NA	NA	NA	NA	NA	15.9	77.7	31.9	102	12.1	17.8	20.6	30.1	17	24.9	28.2	26.3	34.9	62.3	50.4	79	51	20.9	14.6
Chromium VI (Hexavalent)	NA	NA	NA	NA	NA	0.232 U	0.352 U	0.243 U	0.353 U	0.213 U	0.257 U	0.281 U	0.333 U	0.317 U	0.296 U	0.311 U	0.339 U	0.324 U	0.357 U	0.338 U	0.353 U	0.321 U	0.343 U	0.264 U
Cobalt	23	520	390	2500	90	4.14	6.4	3.08	7.99	4.28	5.38	6.41	8.97	6.25	8.77	8.9	8.1	10	9.48	7.09	10.1	8.18	6.36	4.62
Copper	3100	NA	52000	NA	910	5.49	180	5.59	229	7.12	7.15	8.56	14.2	9.82	14.2	14	15.6	39.2	163	100	165	86	8.76	7.32
Iron	NA	NA	NA	NA	NA	17600	34000	20400	35700	9870	20700	23200	33600	19500	28000	31300	28400	34600	33200	26000	36300	28300	23600	16500
Lead	400	NA	800	NA	90	6.62	133	9.63	159	7.24	8.05	8.51	15.1	14.2	19.4	15.1	19	34.2	136	95	143	81.9	8.17	8.81
Magnesium	NA	NA	NA	NA	NA	3460	3980	2480	5740	2040	4640	5480	7450	4710	6210	7040	6650	8020	7000	5700	7710	6390	6200	3770
Manganese	1900	87000	31000	400000	NA	146	160	111	236	85.8	202	240	366	279	353	371	326	379	347	258	381	315	355	197
Mercury	23	520000	390	NA	0.1	0.004 J	1.56	0.01 J	2.17	0.012 J	0.015 J	0.015 J	0.05	0.08	0.076	0.067	0.099	0.303	1.29	1.39	1.6	1.08	0.014 J	0.042
Nickel	1600	20000	26000	93000	48	10.1	27.7	7.42	30.8	7.59	13	15.8	22.8	14.6	19.2	22.2	20.9	26.7	32.9	23.6	35.1	24.8	17	11.3
Potassium	NA	NA	NA	NA	NA	1520	1580	1020	2260	984	1930	2260	3070	1830	2530	3000	2660	3300	2800	2250	2990	2470	2520	1430
Selenium	390	NA	6500	NA	11	1.07 U	4.36	1.14 U	6.59	1.81 J	1.99 J	2.41 J	3.07 J	2.3 J	2.42 J	2.59 J	2.39 J	3.36 J	5.28	3.54 J	6.47	3.45 J	2.46 J	1.78 J
Silver	390	NA	6500	NA	0.5	0.069 U	2.11	0.074 U	3.18	0.063 U	0.078 U	0.105 J	0.134 J	0.094 U	0.087 U	0.093 U	0.098 U	0.338 J	1.89	1.58	2.71	1.51	0.13 J	0.077 U
Sodium	NA	NA	NA	NA	NA	3920	6950	3030	9300	3050	5270	5090	8060	6290	7270	7200	7940	9000	9610	9670	9980	8180	9000	4710
Thallium	NA	NA	NA	NA	NA	0.092 J	0.219 J	0.143 J	0.184 J	0.067 U	0.083 J	0.433	0.131 J	0.1 U	0.108 J	0.12 J	0.126 J	0.138 J	0.177 J	0.146 J	1.24	0.174 J	0.159 J	0.081 U
Vanadium	390	170000	6500	800000	NA	21.4	56.1	28.6	56.5	21.3	21.6	23.9	34.8	20.8	32.3	33.6	32.2	36.6	40.6	32.1	45.2	32.3	24.4	15.4
Zinc	23000	NA	390000	NA	930	31.7	228	29.9	281	25	40.8	47.5	71.4	43.2	59.6	66.7	66.8	98.3	237	172	269	161	46.7	40.1
PCBs (mg/kg)																								
Aroclor-1016 (PCB-1016)	NA	NA	NA	NA	NA	0.00131 U	0.00989 U	0.00138 U	0.0101 U	0.0012 U	0.00147 U	0.00159 U	0.0019 U	0.00182 U	0.00168 U	0.00178 U	0.00191 U	0.00185 U	0.00205 U	0.00194 U	0.00199 U	0.00182 U	0.00193 U	0.0015 U
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	0.00175 U	0.0132 U	0.00185 U	0.0136 U	0.00161 U	0.00197 U	0.00213 U	0.00255 U	0.00245 U	0.00226 U	0.00239 U	0.00256 U	0.0248 U	0.0275 U	0.0026 U	0.00267 U	0.00244 U	0.00258 U	0.00201 U
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	0.00168 U	0.0127 U	0.00177 U	0.013 U	0.00154 U	0.00188 U	0.00204 U	0.00244 U	0.00234 U	0.00216 U	0.00229 U	0.00245 U	0.00238 U	0.00263 U	0.00249 U	0.00255 U	0.00234 U	0.00247 U	0.00192 U
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	0.0012 U	0.227	0.00127 U	0.276	0.0011 U	0.00135 U	0.00146 U	0.00549	0.00168 U	0.00155 U	0.00164 U	0.00283 J	0.00813	0.0453	0.0445	0.0723	0.0429	0.00178 U	0.00138 U
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	0.00151 U	0.0114 U	0.00159 U	0.0116 U	0.00138 U	0.00169 U	0.00183 U	0.00219 U	0.0021 U	0.00194 U	0.00205 U	0.0022 U	0.00214 U	0.00236 U	0.00223 U	0.00229 U	0.0021 U	0.00222 U	0.00173 U
Aroclor-1254 (PCB-1254)	NA	NA	NA	NA	NA	0.0015 U	0.407	0.00158 U	0.448	0.00137 U	0.00168 U	0.00182 U	0.00683	0.00209 U	0.00193 U	0.00204 U	0.00453 J	0.00996	0.0982	0.136	0.148	0.0554	0.00221 U	0.00172 U
Aroclor-1260 (PCB-1260)	NA	NA	NA	NA	NA	0.00151 U	0.187	0.00159 U	0.145	0.00138 U	0.00169 U	0.00183 U	0.00247 J	0.0021 U	0.00194 U	0.00205 U	0.0022 U	0.00363 J	0.0258	0.0363	0.0492	0.0188	0.00222 U	0.00173 U
Aroclor-1262 (PCB-1262)	NA	NA	NA	NA	NA	0.00137 U	0.0104 U	0.00145 U	0.0106 U	0.00126 U	0.00154 U	0.00167 U	0.002 U	0.00192 U	0.00177 U	0.00187 U	0.002 U	0.00195 U	0.00215 U	0.00204 U	0.00209 U	0.00192 U	0.00203 U	0.00157 U
Aroclor-1268 (PCB-1268)	NA	NA	NA	NA	NA	0.00118 U	0.00896 U	0.00125 U	0.00916 U	0.00109 U	0.00133 U	0.00144 U	0.00172 U	0.00165 U	0.00153 U	0.00162 U	0.00173 U	0.00168 U	0.00186 U	0.00176 U	0.0018 U	0.00165 U	0.00175 U	0.00136 U
SUM of PCBs	0.25	NA	1.1	NA	1.6	ND	0.821	ND	0.869	ND	ND	ND	0.01479	ND	ND	ND	0.00736	0.02172	0.1693	0.2168	0.2695	0.1171	ND	ND
Other																								
Moisture (%)	NA	NA	NA	NA	NA	30.9	54.6	34.1	54.7	24.8	37.8	43	52	49.6	45.9	48.6	52.8	50.6	55.2	52.6	54.7	50.1	53.3	39.4
Total Organic Carbon (TOC) - Rep1 (%)	NA	NA	NA	NA	NA	0.75	1.46	0.403	2.1	0.733	0.984	1.4	1.5	1.46	1.66	1.62	1.73	1.68	2.78	2.36	2.17	1.98	1.52	1.08
Total Organic Carbon (TOC) - Rep2 (%)	NA	NA	NA	NA	NA	0.863	1.73	0.383	2.24	0.673	0.98	1.27	1.56	1.45	1.52	1.63	1.76	1.68	2.39	2.35	2.16	2.14	1.49	0.897
Total Solids (%)	NA	NA	NA	NA	NA	69.1	45.4	65.9	45.3	75.2	62.2	57	48	50.4	54.1	51.4	47.2	49.4	44.8	47.4	45.3	49.9	46.7	60.6
Oxidation reduction potential (millivolts)	NA	NA	NA	NA	NA	170	150	180	120	120	180	130	130	120	130	130	130	130	120	130	130	150	170	180
pH (lab) (pH units)	NA	NA	NA	NA	NA	8.6	8.1	8.5	8.1	8.1	8.6	8.6	8.5	8.5	8.5	8.6	8.5	8.6	8.4	8.5	8.6	8.2	8.4	8
Pesticides (mg/kg)																								
4,4'-DDD	2.3	NA	11	NA	0.47	0.00004 U	0.00727	0.00005 U	0.00894	0.00004 U	0.00005 U	0.00005 U	0.00015	0.00006 U	0.00006 U	0.00006 U	0.00007	0.00014	0.00357	0.00468	0.00427	0.00102	0.00006 U	0.00005 U
4,4'-DDE	2	NA	11	NA	0.47	0.00004 U	0.0289	0.00005 U	0.0366	0.00004 U	0.00005 U	0.00005 U	0.00025	0.00006 U	0.00006 U	0.00008 P	0.0001 IP	0.00027	0.0207	0.0272	0.0214	0.00452	0.00006 U	0.0001 P
4,4'-DDT	1.9	NA	9.5	NA	0.67	0.00004 U	0.002 IP	0.00005 U	0.00314 IP	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00009 IP	0.00057 IP	0.00276 IP	0.00071 IP	0.00152 IP	0.00006 U	0.00005 U
Aldrin	0.041	NA	0.21	NA	0.13	0.00004 U	0.00007 U	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00125 P	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
alpha-BHC	0.086	NA	0.41	NA	0.0023	0.00004 U	0.00166 P	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
alpha-Chlordane	NA	NA	NA	NA	NA	0.00004 U	0.00057 P	0.00005 U	0.00088	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00013 IP	0.00006 U	0.00005 U
beta-BHC	0.3	NA	1.4	NA	0.0046	0.00004 U	0.00206	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
Chlordane	0.27	NA	1.4	NA	1.4	0.00238 U	0.0036 U	0.00252 U	0.00736 U	0.00218 U	0.00267 U	0.00289 U	0.00346 U	0.00332 U	0.00306 U	0.00324 U	0.00347 U	0.00337 U	0.00373 U	0.00353 U	0.00362 U	0.00332 U	0.00351 U	0.00272 U
delta-BHC	NA	NA	NA	NA	NA	0.00004 U	0.00007 U	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
Dieldrin	0.034	NA	0.16	NA	0.024	0.00004 U	0.00353 IP	0.00005 U	0.00116 IP	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00018 IP	0.00026 IP	0.00044 IP	0.00031 IP	0.00006 U	0.00005 U
Endosulfan I	470	NA	7800	NA	NA	0.00004 U	0.00007 U	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
Endosulfan II	470	NA	7800	NA	NA	0.00004 U	0.00007 U	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00176 P	0.00006 U	0.00005 U
Endosulfan sulfate	NA	NA	NA	NA	NA	0.00004 U	0.00007 U	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
Endrin	19	NA	270	NA	1.6	0.00004 U	0.0073 P	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
Endrin aldehyde	NA	NA	NA	NA	NA	0.00014 U	0.00021 U	0.00015 U	0.00044 U	0.00013 U	0.00016 U	0.00017 U	0.0002 U	0.00019 U	0.00018 U	0.00019 U	0.0002 U	0.0002 U	0.00022 U	0.00021 U	0.00021 U	0.00019 U	0.00021 U	0.00016 U
Endrin ketone	NA	NA	NA	NA	NA	0.00004 U	0.00502 P	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
gamma-BHC (Lindane)	0.57	NA	2.8	NA	0.0035	0.00004 U	0.00007 U	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
gamma-Chlordane	0.27	NA	1.4	NA	1.4	0.00004 U	0.00672 P	0.00005 U	0.00893 I	0.00004 U	0.00005 U	0.00005 U	0.00015 IP	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00016 IP	0.00081 IP	0.00111 IP	0.00176 IP	0.00006 U	0.00006 U	0.00005 U
Heptachlor	0.15	NA	0.81	NA	0.083	0.00004 U	0.00142 P	0.00005 U	0.00014 U	0.00004 U	0.00005 U	0.00005 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00007 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U
Heptachlor epoxide	0.076	NA	0.4	NA	0.081	0.00009 U	0.00367	0.0001 U	0.00029 U	0.00008 U	0.0001 U	0.00011 U	0.00013 U	0.00013 U	0.00012 U	0.00012 U	0.00013 U	0.00013 U	0.00014 U	0.00014 U	0.00014 U	0.00013 U	0.00014 U	0.0001 U
Methoxychlor	320	NA	4600	NA	NA	0.00047 U	0.00071 U	0.0005 U	0.00146 U	0.00043 U	0.00053 U	0.00057 U	0.00068 U	0.00066 U	0.00061 U	0.00064 U	0.00069 U	0.00067 U	0.00074 U	0.0007 U	0.00072 U	0.00066 U	0.00069 U	0.00054 U
Toxaphene	0.49	NA	2.3	NA	6.2	0.00238 U	0.0036 U	0.00252 U	0.00736 U	0.00218 U	0.00267 U	0.00289 U	0.00346 U	0.00332 U	0.00306 U	0.00324 U	0.00347 U	0.00337 U	0.00373 U	0.00353 U	0.00362 U	0.00332 U	0.00351 U	0.00272 U

NOTES & ABBREVIATIONS:

I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
U: Not detected; number is the method detection limit.
Shaded values exceed the listed
Detected values are bold

TABLE 4
SUMMARY OF RAW SEDIMENT SOIL QUALITY DATA - SVOCs, EPH, INORGANICS, PCBs and PESTICIDES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Location Name						Nearshore-Raritan		Raritan Bay													Raritan-Chapel	
Sample Name	NJ-R-INGESTDER MSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDER MSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N	COMP-N	DEP-7	VC-235	VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244
Sample Date						VC-311-D0-7.5E	COMP-K-D0-7.5E	COMP-L-D0-20.5E	VC-229-D0-28E	COMP-M-D0-27E	DEP-6-D0-13.5E	DEP-6-D13.5-27E	COMP-N-D0-4E	COMP-N-D4-22.5E	DEP-7-D0-15E	VC-235-D0-13.7E	VC-235-D13.7-24E	COMP-O-D0-2E	COMP-O-D2-25E	VC-238-D0-28E	COMP-P-D0-23E	COMP-Q-D0-10.5E	VC-244-D0-4E
Sample Type						10/28/2018	10/28/2018	10/20/2018	10/20/2018	10/20/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/23/2018	10/23/2018	10/29/2018	10/26/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844234-14	L1844234-20	L1843139-04	L1843139-09	L1843139-08	L1843140-13	L1843140-14	L1843140-07	L1843140-08	L1843140-11	L1843140-12	L1843140-09	L1843140-10	L1843140-15	L1843140-16	L1843140-28	L1844234-41	L1844234-08
						0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)
Semi-Volatile Organic Compounds (mg/kg)																							
1,2,4,5-Tetrachlorobenzene	23	NA	390	NA	NA	0.00375 U	0.00368 U	0.00609 U	0.00615 U	0.00613 U	0.00742 U	0.00585 U	0.00651 U	0.00563 U	0.00656 U	0.00577 U	0.00715 U	0.00577 U	0.00713 U	0.00588 U	0.00584 U	0.00556 U	0.00398 U	0.0042 U
2,2'-oxybis(1-Chloropropane)	3100	NA	NA	NA	1.9	0.00657 U	0.00644 U	0.0107 U	0.0108 U	0.0107 U	0.013 U	0.0102 U	0.0114 U	0.00987 U	0.0115 U	0.0101 U	0.0125 U	0.0101 U	0.0125 U	0.0103 U	0.0102 U	0.00975 U	0.00697 U	0.00736 U
2,3,4,6-Tetrachlorophenol	1900	NA	27000	NA	26	0.00681 U	0.00668 U	0.0111 U	0.0112 U	0.0111 U	0.0135 U	0.0106 U	0.0118 U	0.0102 U	0.0119 U	0.0105 U	0.013 U	0.0105 U	0.013 U	0.0107 U	0.0106 U	0.0101 U	0.00723 U	0.00764 U
2,4,5-Trichlorophenol	6300	NA	91000	NA	68	0.00469 U	0.0046 U	0.00763 U	0.0077 U	0.00768 U	0.00929 U	0.00732 U	0.00816 U	0.00705 U	0.00821 U	0.00723 U	0.00895 U	0.00722 U	0.00893 U	0.00736 U	0.00731 U	0.00697 U	0.00498 U	0.00526 U
2,4,6-Trichlorophenol	49	NA	230	NA	0.86	0.00352 U	0.00345 U	0.00572 U	0.00577 U	0.00576 U	0.00697 U	0.00549 U	0.00612 U	0.00529 U	0.00616 U	0.00542 U	0.00671 U	0.00542 U	0.0067 U	0.00552 U	0.00548 U	0.00523 U	0.00374 U	0.00395 U
2,4-Dichlorophenol	190	NA	2700	NA	0.19	0.00687 U	0.00693 U	0.00687 U	0.00693 U	0.00692 U	0.00837 U	0.0066 U	0.00735 U	0.00636 U	0.0074 U	0.00651 U	0.00806 U	0.00651 U	0.00804 U	0.00664 U	0.00658 U	0.00628 U	0.00449 U	0.00474 U
2,4-Dimethylphenol	1300	NA	18000	NA	2.3	0.00649 U	0.00636 U	0.0105 U	0.0106 U	0.0106 U	0.0128 U	0.0101 U	0.0113 U	0.00975 U	0.0114 U	0.00999 U	0.0124 U	0.00998 U	0.0123 U	0.0102 U	0.0101 U	0.00963 U	0.00689 U	0.00728 U
2,4-Dinitrophenol	130	NA	1800	NA	0.33	0.0671 U	0.0658 U	0.109 U	0.11 U	0.11 U	0.133 U	0.105 U	0.117 U	0.101 U	0.117 U	0.103 U	0.128 U	0.103 U	0.128 U	0.105 U	0.104 U	0.0996 U	0.0712 U	0.0752 U
2,4-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.00276 U	0.0027 U	0.00448 U	0.00452 U	0.00451 U	0.00546 U	0.0043 U	0.00479 U	0.00414 U	0.00482 U	0.00424 U	0.00526 U	0.00424 U	0.00524 U	0.00432 U	0.00429 U	0.00409 U	0.00293 U	0.00309 U
2,6-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.0102 U	0.00996 U	0.0165 U	0.0166 U	0.0166 U	0.0201 U	0.0158 U	0.0176 U	0.0153 U	0.0178 U	0.0156 U	0.0194 U	0.0156 U	0.0193 U	0.0159 U	0.0158 U	0.0151 U	0.0108 U	0.0114 U
2-Chloronaphthalene	4800	NA	67000	NA	NA	0.00063 U	0.00073 U	0.00058 U	0.00057 U	0.00057 U	0.00701 U	0.00055 U	0.00621 U	0.00053 U	0.0065 U	0.00055 U	0.00687 U	0.00055 U	0.00699 U	0.00058 U	0.00054 U	0.00054 U	0.00067 U	0.00081 U
2-Chlorophenol	390	NA	6500	NA	0.76	0.0026 U	0.00255 U	0.00422 U	0.00426 U	0.00425 U	0.00514 U	0.00406 U	0.00452 U	0.00391 U	0.00455 U	0.004 U	0.00496 U	0.004 U	0.00494 U	0.00408 U	0.00405 U	0.00386 U	0.00276 U	0.00291 U
2-Methylnaphthalene	240	NA	3300	NA	3.1	0.00101 U	0.00117 U	0.00099 J	0.0009 U	0.00264 J	0.067 J	0.00088 U	0.0444 J	0.00094 J	0.0473 J	0.00087 U	0.0447 J	0.00184 J	0.0305 J	0.00092 U	0.00086 U	0.00157 J	0.00146 J	0.0219
2-Methylphenol (o-Cresol)	320	NA	4600	NA	0.77	0.00339 U	0.00332 U	0.0055 U	0.00555 U	0.00554 U	0.0067 U	0.00528 U	0.00588 U	0.00509 U	0.00592 U	0.00522 U	0.00646 U	0.00521 U	0.00644 U	0.00531 U	0.00527 U	0.00503 U	0.00359 U	0.0038 U
2-Nitroaniline	NA	NA	NA	NA	NA	0.00636 U	0.00624 U	0.0103 U	0.0104 U	0.0104 U	0.0126 U	0.00993 U	0.011 U	0.00956 U	0.0111 U	0.0098 U	0.0121 U	0.00979 U	0.0121 U	0.00998 U	0.00991 U	0.00945 U	0.00676 U	0.00713 U
2-Nitrophenol	NA	NA	NA	NA	NA	0.00424 U	0.00416 U	0.0069 U	0.00696 U	0.00694 U	0.0084 U	0.00662 U	0.00738 U	0.00638 U	0.00743 U	0.00654 U	0.00809 U	0.00653 U	0.00807 U	0.00666 U	0.00661 U	0.0063 U	0.00451 U	0.00476 U
3&4-Methylphenol	NA	NA	NA	NA	NA	0.00515 U	0.00505 U	0.00837 U	0.00844 U	0.00842 U	0.0521 J	0.00804 U	0.0356 J	0.00774 U	0.0296 J	0.00793 U	0.033 J	0.00792 U	0.0259 J	0.00808 U	0.00802 U	0.00765 U	0.00547 U	0.0171 J
3,3'-Dichlorobenzidine	1.2	NA	5.7	NA	3.9	0.00672 U	0.00659 U	0.0109 U	0.011 U	0.011 U	0.0133 U	0.0105 U	0.0117 U	0.0101 U	0.0118 U	0.0103 U	0.0128 U	0.0103 U	0.0128 U	0.0105 U	0.0104 U	0.00997 U	0.00713 U	0.00753 U
3-Nitroaniline	NA	NA	NA	NA	NA	0.00414 U	0.00405 U	0.00672 U	0.00678 U	0.00676 U	0.00818 U	0.00645 U	0.00718 U	0.00621 U	0.00723 U	0.00637 U	0.00788 U	0.00636 U	0.00786 U	0.00649 U	0.00644 U	0.00614 U	0.00439 U	0.00464 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	0.0756 U	0.0741 U	0.123 U	0.124 U	0.124 U	0.15 U	0.118 U	0.131 U	0.114 U	0.132 U	0.116 U	0.144 U	0.116 U	0.144 U	0.119 U	0.118 U	0.112 U	0.0802 U	0.0848 U
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	0.0037 U	0.00363 U	0.00602 U	0.00607 U	0.00605 U	0.00732 U	0.00578 U	0.00643 U	0.00556 U	0.00648 U	0.0057 U	0.00706 U	0.00569 U	0.00704 U	0.00581 U	0.00576 U	0.0055 U	0.00393 U	0.00415 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	0.00569 U	0.00558 U	0.00924 U	0.00932 U	0.0093 U	0.0112 U	0.00887 U	0.00988 U	0.00855 U	0.00995 U	0.00876 U	0.0108 U	0.00875 U	0.0108 U	0.00892 U	0.00885 U	0.00844 U	0.00604 U	0.00637 U
4-Chloroaniline	2.7	NA	13	NA	0.23	0.0036 U	0.00353 U	0.00585 U	0.0059 U	0.00589 U	0.00712 U	0.00562 U	0.00625 U	0.00541 U	0.0063 U	0.00554 U	0.00686 U	0.00554 U	0.00685 U	0.00565 U	0.0056 U	0.00534 U	0.00382 U	0.00404 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	0.0038 U	0.00372 U	0.00617 U	0.00622 U	0.00621 U	0.00751 U	0.00592 U	0.0066 U	0.0057 U	0.00664 U	0.00585 U	0.00724 U	0.00584 U	0.00722 U	0.00596 U	0.00591 U	0.00564 U	0.00403 U	0.00426 U
4-Nitroaniline	27	NA	130	NA	NA	0.00532 U	0.00521 U	0.00864 U	0.00872 U	0.00869 U	0.0105 U	0.0083 U	0.00924 U	0.00799 U	0.0093 U	0.00819 U	0.0101 U	0.00818 U	0.0101 U	0.00834 U	0.00828 U	0.00789 U	0.00564 U	0.00596 U
4-Nitrophenol	NA	NA	NA	NA	NA	0.217 U	0.212 U	0.352 U	0.355 U	0.354 U	0.429 U	0.338 U	0.376 U	0.326 U	0.379 U	0.334 U	0.413 U	0.333 U	0.412 U	0.34 U	0.337 U	0.322 U	0.23 U	0.243 U
Acenaphthene	3600	NA	50000	NA	NA	0.00091 U	0.00105 U	0.00083 U	0.00081 U	0.00122 J	0.0244 J	0.00079 U	0.0198 J	0.00099 J	0.0188 J	0.00079 U	0.0207 J	0.00079 U	0.0153 J	0.00083 U	0.00077 U	0.00098 J	0.00096 U	0.015
Acenaphthylene	NA	NA	NA	NA	NA	0.00054 U	0.00063 U	0.0007 J	0.00049 U	0.00377 J	0.0826 J	0.00047 U	0.0718 J	0.00045 U	0.0603 J	0.00047 U	0.0642 J	0.00286 J	0.0523 J	0.0005 U	0.00046 U	0.00432 J	0.0092	0.0672
Acetophenone	7800	NA	130000	NA	3.6	0.00496 U	0.00486 U	0.00806 U	0.00814 U	0.00812 U	0.0123 J	0.00774 U	0.00862 U	0.00746 U	0.00868 U	0.00764 U	0.0144 J	0.00763 U	0.0109 J	0.00778 U	0.00772 U	0.00737 U	0.00527 U	0.00556 U
Anthracene	18000	NA	250000	NA	NA	0.00101 U	0.00117 U	0.00214 J	0.00109 J	0.00607 J	0.109	0.00145 J	0.0848	0.00194 J	0.0835	0.00141 J	0.0919	0.00353 J	0.0729 J	0.00111 J	0.00188 J	0.0073	0.0118	0.146
Atrazine	220	NA	3200	NA	0.33	0.00342 U	0.00335 U	0.00555 U	0.0056 U	0.00559 U	0.00676 U	0.00533 U	0.00594 U	0.00514 U	0.00598 U	0.00526 U	0.00652 U	0.00526 U	0.0065 U	0.00536 U	0.00532 U	0.00507 U	0.00363 U	0.00383 U
Benzaldehyde	170	NA	910	NA	NA	0.00992 U	0.00973 U	0.0161 U	0.0163 U	0.0162 U	0.068 J	0.0155 U	0.0698	0.0149 U	0.0591 J	0.0153 U	0.0805	0.0153 U	0.0786	0.0156 U	0.0154 U	0.0147 U	0.0105 U	0.0111 U
Benzo(a)anthracene	5.1	78000	23	370000	0.71	0.00218 U	0.00251 U	0.00521 J	0.00195 U	0.0312	0.45	0.0019 U	0.312	0.004 J	0.35	0.00188 U	0.384	0.012	0.348	0.002 U	0.00298 J	0.0335	0.0514	0.582
Benzo(a)pyrene	0.51	3500	2.3	16000	NA	0.00095 U	0.0011 U	0.00366 J	0.00085 U	0.0228	0.34[R]	0.00083 U	0.295[R]	0.00231 J	0.281[R]	0.00082 U	0.334[R]	0.0081	0.311[R]	0.00087 U	0.00158 J	0.029	0.0723	0.679[HC]
Benzo(b)fluoranthene	5.1	78000	23	370000	NA	0.00084 U	0.00119 J	0.00421 J	0.00149 J	0.0271	0.383	0.0016 J	0.227	0.00327 J	0.266	0.00198 J	0.319	0.00692 J	0.303	0.0016 J	0.00203 J	0.0215	0.0429	0.473
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.00067 U	0.00098 J	0.0031 J	0.00105 J	0.0194	0.244	0.00119 J	0.196	0.00259 J	0.192	0.00143 J	0.233	0.00685 J	0.198	0.00114 J	0.0013 J	0.0214	0.0392	0.361
Benzo(k)fluoranthene	51	780000	230	NA	NA	0.00084 U	0.00097 U	0.00264 J	0.00075 U	0.018	0.207	0.00073 U	0.206	0.0023 J	0.196	0.00085 J	0.22	0.00605 J	0.187	0.00077 U	0.00158 J	0.0199	0.0449	0.371
Biphenyl	87	NA	450	NA	NA	0.00414 U	0.00405 U	0.00672 U	0.00678 U	0.00676 U	0.0351 J	0.00645 U	0.0282 J	0.00621 U	0.0236 J	0.00637 U	0.0278 J	0.00636 U	0.0171 J	0.00649 U	0.00644 U	0.00614 U	0.00439 U	0.0107 J
bis(2-Chloroethoxy)methane	190	NA	2700	NA	NA	0.00396 U	0.00388 U	0.00644 U	0.0065 U	0.00648 U	0.00784 U	0.00618 U	0.00688 U	0.00595 U	0.00693 U	0.0061 U	0.00755 U	0.00609 U	0.00754 U	0.00622 U	0.00617 U	0.00588 U	0.0042 U	0.00444 U
bis(2-Chloroethyl)ether	0.63	NA	3.3	NA	0.33	0.00723 U	0.00709 U	0.0117 U	0.0118 U	0.0118 U	0.0143 U	0.0113 U	0.0126 U	0.0109 U	0.0126 U	0.0111 U	0.0138 U	0.0111 U	0.0138 U	0.0113 U	0.0112 U	0.0107 U	0.00767 U	0.0081 U
bis(2-Ethylhexyl)phthalate	39	NA	180	NA	14	0.0103 U	0.0101 U	0.182	0.0435 J	0.559	7.15	0.0333 J	3.12	0.0452 J	5	0.0304 J	3.54	0.107	0.304	0.0452 J	0.0161 U	0.0153 U	0.011 U	0.0126 J
Butyl benzylphthalate	290	NA	1300	NA	29	0.00796 U	0.0078 U	0.211	0.013 U	0.0144 J	0.0745 J	0.0124 U	0.0326 J	0.012 U	0.0427 J	0.0122 U	0.0473 J	0.0122 U	0.0231 J	0.0125 U	0.0124 U	0.0118 U	0.00844 U	0.00892 U
Caprolactam	32000	290	460000	1300	16	0.00578 U	0.00567 U	0.00939 U	0.00948 U	0.00945 U	0.0718 J	0.00902 U	0.01 U	0.00869 U	0.0101 U	0.0089 U	0.011 U	0.00889 U	0.011 U	0.00907 U	0.009 U	0.00858 U	0.00614 U	0.00648 U
Carbazole	NA	NA	NA	NA	NA	0.00251 U	0.00246 U	0.00408 U	0.00412 U	0.00411 U	0.024 J	0.00392 U	0.0174 J	0.00378 U	0.0135 J	0.00387 U	0.0174 J	0.00386 U	0.0123 J	0.00394 U	0.00391 U	0.00373 U	0.00267 U	0.00945 J
Chrysene	510	NA	2300	NA	NA	0.00071 U	0.00082 U	0.00388 J	0.00138 J	0.0232	0.274	0.00145 J	0.218	0.00378 J	0.219	0.00163 J	0.245	0.00792	0.232	0.00144 J	0.0024 J	0.0212	0.045	0.487
Dibenz(a,h)anthracene	0.51	7800	2.3	37000	NA	0.00084 U	0.00097 U	0.00076 U	0.00075 U	0.00421 J	0.0518 J	0.00073 U	0.0408 J	0.0007 U	0.0456 J	0.00072 U	0.048 J	0.00135 J	0.0487 J	0.00077 U	0.00071 U	0.00405 J	0.00962	0.106
Dibenzofuran	NA	NA	NA	NA	NA	0.00295 U	0.00289 U	0.00479 U	0.00483 U	0.00482 U	0.0348 J	0.0046 U	0.029 J	0.00443 U	0.0255 J	0.00454 U	0.0293 J	0.00453 U	0.021 J	0.00462 U	0.00459 U	0.00437 U	0.00313 U	0.0164 J
Diethyl phthalate	51000	NA	730000	NA	44	0.0751	0.00395 U	0.00654 U	0.0066 U	0.0352 J	0.00796 U	0.00628 U	0.00699 U	0.00605 U	0.00704 U	0.0062 U	0.00767 U	0.00619 U	0.00766 U	0.00631 U	0.00626 U	0.00597 U	0.00451 J	0.00451 U
Dimethyl phthalate	NA	NA	NA	NA	NA	0.00307 U	0.00301 U	0.00499 U	0.00504 U	0.00502 U	0.00608 U	0.00479 U	0.00534 U	0.00462 U	0.00537 U	0.00473 U	0.00586 U	0.00472 U	0.00584 U	0.00482 U	0.00478 U	0.00456 U	0.00326 U	0.00344 U
Di-n-butylphthalate	6300	NA	91000	NA	NA	0.00375 U	0.00368 U	0.00609 U	0.00615 U	0.00613 U	0.0457 J	0.00585 U	0.0148 J	0.00563 U	0.00656 U	0.00577 U	0.014 J	0.00577 U	0.00899 J	0.00588 U	0.00584 U	0.00556 U	0.00398 U	0.0042 U
Di-n-octyl phthalate	630	NA	9100	NA	NA	0.0163 U	0.016 U	0.0265 U	0.0267 U	0.0267 U	0.0323 U	0.0254 U	0.0283 U	0.0245 U	0.0285 U	0.0251 U	0.0311 U	0.0251 U	0.031 U	0.0256 U	0.0254 U	0.0242 U	0.0173 U	0.0183 U
Fluoranthene	2400	NA	33000	NA	NA	0.00149 U	0.00172 U	0.00869	0.00341 J	0.0292	0.483	0.00384 J	0.333	0.00915	0.373	0.00376 J	0.432	0.0115	0.369	0.00302 J	0.00633 J	0.0376	0.0353	0.6
Fluorene	2400	NA	33000	NA	NA	0.00054 U	0.00062 U	0.00267 J	0.002 J	0.00316 J	0.0338 J	0.00236 J	0.0254 J	0.00274 J	0.0281 J	0.00222 J	0.0292 J	0.00256 J	0.0207 J	0.00148 J	0.00159 J	0.00334 J	0.0017 J	0.024
Hexachlorobenzene	0.43	NA	2.3	NA	0.17	0.00384 U	0.00376 U	0.00623 U	0.00629 U	0.00627 U	0.00759 U	0.00599 U	0.00666 U	0.00576 U	0.00671 U	0.00591 U	0.00731 U	0.0059 U	0.0073 U	0.00602 U	0.00597 U	0.00569 U	0.00407 U	0.0043 U
Hexachlorobutadiene	8.9	NA	47	NA	0.17	0.00764 U	0.00749 U	0.0124 U	0.0125 U	0.0125 U	0.0151 U	0.0119 U	0.0133 U	0.0115 U	0.0134 U	0.0118 U	0.0146 U	0.0118 U	0.0145 U	0.012 U	0.0119 U	0.0113 U	0.00811 U	0.00856 U
Hexachlorocyclopentadiene	470	2.7	7800	NA	2.5	0.0432 U	0.0423 U	0.0701 U	0.0708 U	0.0706 U	0.0854 U	0.0674 U	0.075 U	0.0649 U	0.0755 U	0.0665 U	0.0823 U	0.0664 U	0.0821 U	0.0677 U	0.0672 U	0.0641 U	0.0458 U	0.0484 U
Hexachloroethane	17	NA	91	NA	0.17	0.00658 U	0.00646 U	0.0107 U	0.0108 U	0.0108 U	0.013 U	0.0103 U	0.0114 U	0.0099 U	0.0115 U	0.0101 U	0.0126 U	0.0101 U	0.0125 U	0.0103 U	0.0102 U	0.00977 U	0.00699 U	0.00738 U
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NA	0.00448 J	0.00579 J	0.00673 J	0.00458 J	0.0214	0.248	0.00462 J	0.208	0.00576 J	0.219	0.00478 J	0.243	0.00968	0.224	0.00484 J	0.00478 J	0.0227	0.0396	0.376
Isophorone	570	NA	2700	NA	0.23	0.00432 U	0.00423 U	0.00701 U	0.00708 U	0.00706 U	0.00854 U	0.00674 U	0.0075 U	0.00649 U	0.00755 U	0.00665 U	0.00823 U	0.00664 U	0.00821 U	0.00677 U	0.00672 U	0.00641 U	0.00458 U	0.00484 U
Naphthalene	2500	5.7	34000	27	19	0.00073 U	0.00064 U	0.00202 J	0.00113 J	0.00434 J	0.0922	0.00101 J	0.0624 J	0.00182 J	0.0653 J	0.00102 J	0.0622 J	0.0029 J	0.0452 J	0.00076 J	0.00076 J	0.0035 J	0.00405 J	0.0633
Nitrobenzene	160	7.5	2600	36	0.17	0.0041 U	0.00402 U	0.00667 U	0.00673 U	0.00671 U	0.00812 U	0.0064 U	0.00713 U	0.00617 U	0.00718 U	0.00632 U	0.00782 U	0.00631 U	0.0078 U	0.00644 U	0.00639 U	0.00609 U	0.00436 U	0.0046 U
N-Nitrosodi-n-propylamine	0.17	NA	0.36	NA	0.17	0.0067 U	0.00657 U	0.0109 U	0.011 U	0.011 U	0.0133 U	0.0105 U	0.0116 U	0.0101 U	0.0117 U	0.0103 U	0.0128 U	0.0103 U	0.0127 U	0.0105 U	0.0104 U	0.00995 U	0.00711 U	0.00751 U
N-Nitrosodiphenylamine	110	NA	520	NA	1.1	0.00276 U	0.00271 U	0.00449 U	0.00453 U	0.00452 U	0.00547 U	0.00431 U	0.0048 U	0.00415 U	0.00484 U	0.00426 U	0.00527 U	0.00425 U	0.00526 U	0.00434 U	0.0043 U	0.0041 U	0.00293 U	0.0031 U
Pentachlorophenol	1	NA	4.4	NA	0.33	0.0708 U	0.0694 U	0.115 U	0.116 U	0.116 U	0.14 U	0.11 U	0.123 U	0.106 U	0.124 U	0.109 U	0.135 U	0.109 U	0.135 U	0.111 U	0.11 U	0.105 U	0.0752 U	0.0794 U
Phenanthrene	NA	NA	NA	NA	NA	0.00096 U	0.00111 U	0.00496 J	0.00299 J	0.0104	0.215	0.0032 J	0.145	0.00756	0.15	0.00314 J	0.175	0.00654 J	0.138	0.00248 J	0.00493 J	0.0152	0.00949	0.203
Phenol	19000	39000	270000	NA	21	0.00374 U	0.00367 U	0.00608 U	0.00613 U	0.00612 U	0.0115 J	0.00584 U	0.0298 J	0.00562 U	0.00951 J	0.00576 U	0.0138 J	0.00575 U	0.0301 J	0.00587 U	0.00582 U	0.00555 U	0.00397 U	0.00419 U
Pyrene	1800	NA	25000	NA	NA	0.00083 U	0.0015 J	0.00842	0.00217 J	0.0286	0.519	0.00235 J	0.372	0.00759	0.395	0.00299 J	0.446	0.0124	0.396	0.00264 J	0.00518 J	0.0422	0.0573	0.755
SUM of Semi-Volatile Organic Compounds	NA	NA	NA			0.0751	ND	0.393	0.0435	0.6086	7.5798	0.0333	3.3772	0.0452	5.20351	0.0304	3.8175	0.107	0.53199	0.0452	ND	ND	0.00451	0.06625
SUM of Semi-Volatile Organic Compounds (SIM)	NA	NA	NA			0.00448	0.00946	0.06002	0.02129	0.25671	3.8238	0.02307	2.8614	0.05674	2.9899	0.02521	3.3919	0.103	2.9916	0.02051	0.03732	0.28926	0.47522	5.3304
EPH (mg/kg)																							
Total Extractable Petroleum Hydrocarbons	5100	54000	NA			28.8 U	26.9 U	44.5 U	46.6 U	44.9 U	145	43.4 U	48.7 U	42.3 U	48.4 U	42.1 U	51.8 U	42.5 U	54.1 U	43.9 U	42.9 U	42.1 U	29.2 U	79.9

TABLE 4
SUMMARY OF RAW SEDIMENT SOIL QUALITY DATA - SVOCs, EPH, INORGANICS, PCBs and PESTICIDES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

						Nearshore-Raritan		Raritan Bay														Raritan-Chapel	
Location Name	NJ-R-INGESTDER MSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDER MSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N	COMP-N	DEP-7	DEP-7	VC-235	VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244
Sample Name						VC-311-D0-7.5E	COMP-K-D0-7.5E	COMP-L-D0-20.5E	VC-229-D0-28E	COMP-M-D0-27E	DEP-6-D0-13.5E	DEP-6-D13.5-27E	COMP-N-D0-4E	COMP-N-D4-22.5E	DEP-7-D0-15E	DEP-7-D15-20E	VC-235-D0-13.7E	VC-235-D13.7-24E	COMP-O-D0-2E	COMP-O-D2-25E	VC-238-D0-28E	COMP-P-D0-23E	COMP-Q-D0-10.5E	VC-244-D0-4E
Sample Date						10/28/2018	10/28/2018	10/20/2018	10/20/2018	10/20/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/23/2018	10/23/2018	10/29/2018	10/26/2018
Sample Type						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID						L1844234-14	L1844234-20	L1843139-04	L1843139-09	L1843139-08	L1843140-13	L1843140-14	L1843140-07	L1843140-08	L1843140-11	L1843140-12	L1843140-09	L1843140-10	L1843140-15	L1843140-16	L1843140-28	L1843140-27	L1844234-41	L1844234-08
Sample Depth (bgs)						0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)
Inorganic Compounds (mg/kg)																								
Aluminum	78000	NA	NA	NA	NA	4630	2950	14100	15800	17000	14200	17200	13100	16000	12300	14600	14200	15400	12000	17000	12600	12300	3620	4910
Antimony	31	NA	520	NA	5.4	0.179 J	0.178 J	0.283 J	0.455 J	0.748 J	1.78 J	0.271 J	1.31 J	0.349 J	1.16 J	0.262 J	1.19 J	0.303 J	1.58 J	0.441 J	0.248 J	0.311 J	0.213 J	0.312 J
Arsenic	19	1100	19	5200	19	5.83	2.94	9.33	10.7	13	30.3	12.3	24.8	12.1	21.1	11	21.4	11.6	12.5	12.6	9.08	9.72	4.61	6.53
Barium	16000	870000	260000	NA	2100	4.61	5.64	26.3	30	32.9	83.7	32.5	62.5	31.1	55.6	28.4	65.8	28.8	43.3	32	23.6	24.5	7.85	18.6
Beryllium	160	2000	2600	9300	0.7	0.303 J	0.236 J	0.826	0.978	1.02	1.04	0.905	0.926	0.991	0.878	0.94	0.981	0.967	0.803	1.12	0.799	0.775	0.254 J	0.274 J
Cadmium	71	2600	1100	12000	1.9	0.032 U	0.031 U	0.129 J	0.091 J	0.174 J	2.66	0.116 J	1.65	0.161 J	1.54	0.13 J	1.57	0.179 J	0.708	0.129 J	0.068 J	0.109 J	0.074 J	0.143 J
Calcium	NA	NA	NA	NA	NA	866	601	7040	5910	9220	9780	8890	8570	9130	8910	8850	12700	8140	12000	8140	5830	13600	1440	12000
Chromium	NA	NA	NA	NA	NA	12.7	7.88	29.3	33.9	38.8	151	38.2	99.8	35.2	96.8	32.7	104	36.3	61.1	37.4	26.9	27.1	9.1	14.8
Chromium VI (Hexavalent)	NA	NA	NA	NA	NA	0.192 U	0.19 U	0.314 U	0.313 U	0.31 U	0.798 J	0.295 U	0.339 U	0.327 J	0.38 J	0.529 J	0.365 U	0.296 U	0.366 U	0.302 U	0.298 U	0.288 U	0.205 U	0.216 U
Cobalt	23	520	390	2500	90	2.55	3.4	9.54	10.3	10.9	10.4	11.2	9.63	10.4	9.28	9.25	11.6	9.94	9.56	11.1	8.05	8.64	4.02	4.01
Copper	3100	NA	52000	NA	910	8.94	7.05	13	13	17.3	175	15	111	15.3	109	13.1	123	16.7	66.5	14.3	10.6	12.8	8.61	17.6
Iron	NA	NA	NA	NA	NA	18900	10400	31000	35200	37400	36300	38400	33400	36400	31200	32600	35700	34600	27800	39100	28300	28200	12200	11500
Lead	400	NA	800	NA	90	5.07	4.15	13.8	13.9	17.7	192	15	120	14.7	116	12.3	139	16.6	92.4	14.6	10.8	15.4	10.1	39.3
Magnesium	NA	NA	NA	NA	NA	1490	1530	8330	9260	9750	8360	9580	7960	8910	7360	8080	8620	8710	7630	9770	8000	7510	1970	3040
Manganese	1900	87000	31000	400000	NA	50.8	89.2	378	415	463	575	433	491	386	460	354	654	380	389	449	327	342	78.5	172
Mercury	23	520000	390	NA	0.1	0.01 J	0.014 J	0.035	0.016 J	0.117	2.78	0.019 J	1.3	0.018 J	1.81	0.016 J	2.06	0.087	1.03	0.013 J	0.014 J	0.076	0.119	0.703
Nickel	1600	20000	26000	93000	48	6.16	6.51	24.8	27.4	28.6	37.2	28.8	33.9	27.7	31.2	24.4	36.1	25.8	28.2	28.3	20.3	22.1	9.91	11.3
Potassium	NA	NA	NA	NA	NA	574	414	3430	3930	4110	3380	4180	3100	3890	3020	3740	3290	3770	2880	4140	3290	2940	561	1170
Selenium	390	NA	6500	NA	11	1.01 J	0.894 U	3.56 J	2.92 J	3.44 J	4.24 J	3.42 J	3.74 J	3.47 J	3.38 J	2.56 J	4.21 J	3.36 J	3.88 J	4.24	2.71 J	2.91 J	1.12 J	1.29 J
Silver	390	NA	6500	NA	0.5	0.058 U	0.058 U	0.092 U	0.092 U	0.293 J	6.02	0.088 J	3.47	0.103 J	3.49	0.084 U	3.91	0.187 J	2.12	0.089 U	0.088 U	0.086 U	0.062 U	0.171 J
Sodium	NA	NA	NA	NA	NA	2100	1720	8820	8570	7300	13500	6130	10800	5620	9530	5080	11900	5500	11800	6000	9850	7450	1720	4110
Thallium	NA	NA	NA	NA	NA	0.062 U	0.061 U	0.168 J	0.182 J	0.224 J	0.226 J	0.156 J	0.222 J	0.177 J	0.176 J	0.146 J	0.218 J	0.15 J	0.5	0.226 J	0.146 J	0.174 J	0.065 U	0.09 J
Vanadium	390	170000	6500	800000	NA	22	11.2	34.7	39.6	40.4	53.4	41.6	42.4	40.9	40.7	38.7	47.2	38.7	34	43	30.5	32.3	12.4	15
Zinc	23000	NA	390000	NA	930	21.4	21.3	69.7	77	87.6	373	83.1	253	78.7	246	71.5	300	78.9	215	93.1	67.4	67.8	57.5	54.1
PCBs (mg/kg)																								
Aroclor-1016 (PCB-1016)	NA	NA	NA	NA	NA	0.00108 U	0.00106 U	0.00179 U	0.00174 U	0.00178 U	0.0106 U	0.00169 U	0.00191 U	0.00164 U	0.00377 U	0.00166 U	0.00208 U	0.00167 U	0.00205 U	0.00168 U	0.0017 U	0.00162 U	0.00116 U	0.00121 U
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	0.00144 U	0.00143 U	0.0024 U	0.00234 U	0.00238 U	0.0143 U	0.00226 U	0.00256 U	0.00219 U	0.00505 U	0.00222 U	0.00279 U	0.00224 U	0.00275 U	0.00226 U	0.00227 U	0.00218 U	0.00155 U	0.00162 U
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	0.00138 U	0.00136 U	0.0023 U	0.00224 U	0.00228 U	0.0136 U	0.00216 U	0.00245 U	0.0021 U	0.00483 U	0.00213 U	0.00266 U	0.00214 U	0.00263 U	0.00216 U	0.00218 U	0.00208 U	0.00148 U	0.00155 U
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	0.00099 U	0.00097 U	0.00165 U	0.0016 U	0.0152	0.382	0.00155 U	0.157	0.0015 U	0.215	0.00153 U	0.146	0.00574	0.105	0.00155 U	0.00156 U	0.00149 U	0.00106 U	0.00377
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	0.00124 U	0.00123 U	0.00206 U	0.00201 U	0.00205 U	0.0123 U	0.00194 U	0.0022 U	0.00198 U	0.00434 U	0.00191 U	0.00239 U	0.00192 U	0.00236 U	0.00194 U	0.00195 U	0.00187 U	0.00133 U	0.00139 U
Aroclor-1254 (PCB-1254)	NA	NA	NA	NA	NA	0.00123 U	0.00122 U	0.00205 U	0.002 U	0.0202	0.573 P	0.00193 U	0.148	0.00187 U	0.278	0.0019 U	0.132	0.00774	0.123 P	0.00193 U	0.00194 U	0.00186 U	0.00132 U	0.00375
Aroclor-1260 (PCB-1260)	NA	NA	NA	NA	NA	0.00124 U	0.00123 U	0.00206 U	0.00201 U	0.00965	0.232	0.00194 U	0.0687	0.00188 U	0.111	0.00191 U	0.0641	0.00328 J	0.0498	0.00194 U	0.00195 U	0.00187 U	0.00133 U	0.00145 J
Aroclor-1262 (PCB-1262)	NA	NA	NA	NA	NA	0.00113 U	0.00112 U	0.00188 U	0.00183 U	0.00187 U	0.0112 U	0.00177 U	0.00201 U	0.00172 U	0.00396 U	0.00174 U	0.00218 U	0.00175 U	0.00216 U	0.00177 U	0.00178 U	0.0017 U	0.00121 U	0.00127 U
Aroclor-1268 (PCB-1268)	NA	NA	NA	NA	NA	0.00097 U	0.00096 U	0.00162 U	0.00158 U	0.00161 U	0.00964 U	0.00153 U	0.00173 U	0.00148 U	0.00341 U	0.0015 U	0.00188 U	0.00151 U	0.00186 U	0.00152 U	0.00154 U	0.00147 U	0.00105 U	0.0011 U
SUM of PCBs	0.25	NA	1.1	NA	1.6	ND	ND	ND	ND	0.04505	1.187	ND	0.3737	ND	0.604	ND	0.3421	0.01676	0.2778	ND	ND	ND	ND	0.00897
Other																								
Moisture (%)	NA	NA	NA	NA	NA	16.7	15.9	49	48.9	48.4	57.4	45.8	52.8	45	52.7	45.2	56.2	46	56.3	47	46.4	44.5	22	26
Total Organic Carbon (TOC) - Rep1 (%)	NA	NA	NA	NA	NA	0.173	0.093	1.34	1.52	1.44	3.22	1.39	2.44	1.36	2.35	1.42	2.69	1.41	2.26	1.47	1.45	1.24	0.226	0.793
Total Organic Carbon (TOC) - Rep2 (%)	NA	NA	NA	NA	NA	0.21	0.069	1.34	1.52	1.54	3.09	1.39	2.38	1.38	2.29	1.44	2.76	1.42	2.44	1.46	1.41	1.28	0.168	0.631
Total Solids (%)	NA	NA	NA	NA	NA	83.3	84.1	51	51.1	51.6	42.6	54.2	47.2	55	47.3	54.8	43.8	54	43.7	53	53.6	55.5	78	74
Oxidation reduction potential (millivolts)	NA	NA	NA	NA	NA	170	180	160	160	160	140	160	160	150	140	130	160	140	160	150	140	150	130	180
pH (lab) (pH units)	NA	NA	NA	NA	NA	7.7	7.6	8.5	8.4	8.6	8.1	8.5	8.2	8.5	7.9	8.4	8.3	8.4	8.5	8.6	8.4	8.6	8.2	8.4
Pesticides (mg/kg)																								
4,4'-DDD	2.3	NA	11	NA	0.47	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00018	0.00544	0.00006 U	0.00455	0.00005 U	0.00311	0.00006 U	0.00247	0.00013	0.00168	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00008
4,4'-DDE	2	NA	11	NA	0.47	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00057	0.0177	0.00006 P	0.0156	0.00011 P	0.00983	0.00015 P	0.00733	0.00032	0.00387	0.00006 U	0.00008 P	0.0001 P	0.00004 U	0.0002 IP
4,4'-DDT	1.9	NA	9.5	NA	0.67	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00008 IP	0.00242 IP	0.00006 U	0.00136 IP	0.00005 U	0.00123 IP	0.00006 U	0.00124 IP	0.00006 U	0.00325 P	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00009 IP
Aldrin	0.041	NA	0.21	NA	0.13	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00098 P	0.00006 U	0.00095 P	0.00005 U	0.00094 P	0.00006 U	0.00073 P	0.00021 P	0.00093 P	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
alpha-BHC	0.086	NA	0.41	NA	0.0023	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00011	0.0014 P	0.00006 U	0.00097 P	0.00005 U	0.00082 P	0.00006 U	0.00072 P	0.00006 U	0.00021	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
alpha-Chlordane	NA	NA	NA	NA	NA	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00006 U	0.00006 U	0.0004	0.00006 U	0.00031	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
beta-BHC	0.3	NA	1.4	NA	0.0046	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
Chlordane	0.27	NA	1.4	NA	1.4	0.00196 U	0.00194 U	0.00326 U	0.00317 U	0.00324 U	0.00387 U	0.00307 U	0.00347 U	0.00297 U	0.00343 U	0.00302 U	0.00378 U	0.00303 U	0.00373 U	0.00306 U	0.00308 U	0.00295 U	0.0021 U	0.0022 U
delta-BHC	NA	NA	NA	NA	NA	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
Dieldrin	0.034	NA	0.16	NA	0.024	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00117 IP	0.00006 U	0.00078 IP	0.00005 U	0.00622 P	0.00006 U	0.0006 IP	0.00006 U	0.00031 IP	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 UI
Endosulfan I	470	NA	7800	NA	NA	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
Endosulfan II	470	NA	7800	NA	NA	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00764 P	0.00006 U	0.00393 P	0.00005 U	0.00399 P	0.00006 U	0.00327 P	0.00011 P	0.00234 P	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00008 P
Endosulfan sulfate	NA	NA	NA	NA	NA	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
Endrin	19	NA	270	NA	1.6	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00405 P	0.00006 U	0.00007 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
Endrin aldehyde	NA	NA	NA	NA	NA	0.00011 U	0.00011 U	0.00019 U	0.00018 U	0.00021 P	0.00466 P	0.00018 U	0.00246 P	0.00017 U	0.00242 P	0.00018 U	0.0021 P	0.00018 U	0.00137 P	0.00018 U	0.00018 U	0.00017 U	0.00012 U	0.00013 U
Endrin ketone	NA	NA	NA	NA	NA	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00369 P	0.00006 U	0.00177 P	0.00005 U	0.00191 P	0.00006 U	0.00157 P	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
gamma-BHC (Lindane)	0.57	NA	2.8	NA	0.0035	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00073 P	0.00006 U	0.0004 P	0.00005 U	0.00048 P	0.00006 U	0.00037 P	0.00021	0.00017 P	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
gamma-Chlordane	0.27	NA	1.4	NA	1.4	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00036	0.00714 I	0.00006 U	0.00351	0.00005 U	0.00372	0.00006 P	0.00322	0.00014	0.0022	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
Heptachlor	0.15	NA	0.81	NA	0.083	0.00003 U	0.00003 U	0.00006 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00122 P	0.00005 U	0.00006 U	0.00006 U	0.00007 U	0.00006 U	0.00007 U	0.00006 U	0.00006 U	0.00005 U	0.00004 U	0.00004 U
Heptachlor epoxide	0.076	NA	0.4	NA	0.081	0.00007 U	0.00007 U	0.00013 U	0.00012 U	0.00012 U	0.00015 U	0.00012 U	0.00013 U	0.00011 U	0.00013 U	0.00012 U	0.00015 U	0.00012 U	0.00014 U	0.00012 U	0.00012 U	0.00011 U	0.00008 U	0.00008 U
Methoxychlor	320	NA	4600	NA	NA	0.00039 U	0.00038 U	0.00064 U	0.00063 U	0.00064 U	0.00077 U	0.00061 U	0.00069 U	0.00059 U	0.00068 U	0.0006 U	0.00075 U	0.0006 U	0.00074 U	0.00061 U	0.00061 U	0.00058 U	0.00041 U	0.00043 U
Toxaphene	0.49	NA	2.3	NA	6.2	0.00196 U	0.00194 U	0.00326 U	0.00317 U	0.00324 U	0.00387 U	0.00307 U	0.00347 U	0.00297 U	0.00343 U	0.00302 U	0.00378 U	0.00303 U	0.00373 U	0.00306 U	0.00308 U	0.00295 U	0.0021 U	0.0022 U

TABLE 4
SUMMARY OF RAW SEDIMENT SOIL QUALITY DATA - SVOCs, EPH, INORGANICS, PCBs and PESTICIDES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Location Name	NJ-R-INGESTDER MSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDER MSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Raritan-Chapel					Chapel Hill					Chapel-Ambrose			Ambrose Channel		East of Ambrose	
Sample Name						VC-245	VC-246	COMP-R	VC-247	VC-247	VC-318	VC-318	VC-320	VC-321	VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample Date						VC-245-D0-4E	VC-246-D0-4E	COMP-R-D4-10.5E	VC-247-D0-4E	VC-247-D4-21.5E	VC-318-D0-3.5E	VC-318-D3.5-21.5E	VC-320-D0-19E	VC-321-D0-20.5E	VC-323-D0-22E	VC-251-D0-7.5E	VC-252-D0-7.5E	VC-253-D0-7.5E	COMP-S-D0-0-21E	COMP-T-D0-22.5E	VC-255-D0-7.5E	VC-256-D0-7.5E
Sample Type						10/26/2018	10/26/2018	10/26/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/26/2018	10/26/2018	10/25/2018	10/25/2018	10/26/2018	10/26/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844234-06	L1844234-04	L1844234-10	L1843846-08	L1843846-09	L1843846-10	L1843846-11	L1843846-12	L1843846-13	L1843846-14	L1843846-15	L1844234-03	L1844234-01	L1843846-05	L1843846-06	L1843846-20	L1843846-18
						0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Semi-Volatile Organic Compounds (mg/kg)																						
1,2,4,5-Tetrachlorobenzene	23	NA	390	NA	NA	0.00461 U	0.00538 U	0.00412 U	0.00528 U	0.00409 U	0.00608 U	0.00355 U	0.00363 U	0.00365 U	0.00411 U	0.00427 U	0.00404 U	0.00375 U	0.00404 U	0.00352 U	0.00399 U	0.00403 U
2,2'-oxybis(1-Chloropropane)	3100	NA	NA	NA	1.9	0.00807 U	0.00943 U	0.00722 U	0.00925 U	0.00716 U	0.0107 U	0.00621 U	0.00636 U	0.0064 U	0.0072 U	0.00747 U	0.00707 U	0.00657 U	0.00707 U	0.00617 U	0.00698 U	0.00706 U
2,3,4,6-Tetrachlorophenol	1900	NA	27000	NA	26	0.00837 U	0.00978 U	0.00749 U	0.00959 U	0.00743 U	0.011 U	0.00644 U	0.0066 U	0.00664 U	0.00747 U	0.00775 U	0.00733 U	0.00681 U	0.00734 U	0.0064 U	0.00724 U	0.00733 U
2,4,5-Trichlorophenol	6300	NA	91000	NA	68	0.00577 U	0.00674 U	0.00516 U	0.00661 U	0.00512 U	0.00762 U	0.00444 U	0.00454 U	0.00457 U	0.00515 U	0.00534 U	0.00505 U	0.0047 U	0.00506 U	0.00441 U	0.00499 U	0.00505 U
2,4,6-Trichlorophenol	49	NA	230	NA	0.86	0.00433 U	0.00505 U	0.00387 U	0.00496 U	0.00384 U	0.00571 U	0.00333 U	0.00341 U	0.00343 U	0.00386 U	0.00401 U	0.00379 U	0.00352 U	0.00379 U	0.0033 U	0.00374 U	0.00378 U
2,4-Dichlorophenol	190	NA	2700	NA	0.19	0.0052 U	0.00607 U	0.00465 U	0.00596 U	0.00461 U	0.00686 U	0.004 U	0.00409 U	0.00412 U	0.00464 U	0.00481 U	0.00455 U	0.00423 U	0.00456 U	0.00397 U	0.0045 U	0.00455 U
2,4-Dimethylphenol	1300	NA	18000	NA	2.3	0.00798 U	0.00932 U	0.00714 U	0.0131 J	0.00708 U	0.0105 U	0.00614 U	0.00628 U	0.00632 U	0.00712 U	0.00738 U	0.00699 U	0.00649 U	0.00699 U	0.00609 U	0.0069 U	0.00698 U
2,4-Dinitrophenol	130	NA	1800	NA	0.33	0.0825 U	0.0963 U	0.0738 U	0.0945 U	0.0732 U	0.109 U	0.0635 U	0.065 U	0.0654 U	0.0736 U	0.0764 U	0.0722 U	0.0671 U	0.0723 U	0.063 U	0.0714 U	0.0722 U
2,4-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.00339 U	0.00396 U	0.00303 U	0.00388 U	0.003 U	0.00447 U	0.00261 U	0.00267 U	0.00268 U	0.00302 U	0.00314 U	0.00297 U	0.00276 U	0.00297 U	0.00259 U	0.00293 U	0.00296 U
2,6-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.0125 U	0.0146 U	0.0112 U	0.0143 U	0.0111 U	0.0165 U	0.00961 U	0.00984 U	0.0099 U	0.0111 U	0.0116 U	0.0109 U	0.0102 U	0.0109 U	0.00954 U	0.0108 U	0.0109 U
2-Chloronaphthalene	4800	NA	67000	NA	NA	0.00044 U	0.00051 U	0.00071 U	0.00052 U	0.00079 U	0.0006 U	0.0007 U	0.00069 U	0.00272 J	0.00081 U	0.00164 J	0.00077 U	0.00071 U	0.0008 U	0.00166 J	0.00076 U	0.00138 J
2-Chlorophenol	390	NA	6500	NA	0.76	0.00319 U	0.00373 U	0.00286 U	0.00366 U	0.00283 U	0.00422 U	0.00246 U	0.00252 U	0.00253 U	0.00285 U	0.00296 U	0.0028 U	0.0026 U	0.0028 U	0.00244 U	0.00276 U	0.00279 U
2-Methylnaphthalene	240	NA	3300	NA	3.1	0.0316	0.067	0.00114 U	0.0918	0.00126 U	0.0607	0.00111 U	0.00109 U	0.00391 J	0.00247 J	0.00785 J	0.00158 J	0.00114 U	0.0132	0.00194 J	0.00309 J	0.00514 J
2-Methylphenol (o-Cresol)	320	NA	4600	NA	0.77	0.00416 U	0.00486 U	0.00372 U	0.00477 U	0.00369 U	0.0055 U	0.0032 U	0.00328 U	0.0033 U	0.00371 U	0.00385 U	0.00364 U	0.00339 U	0.00365 U	0.00318 U	0.0036 U	0.00364 U
2-Nitroaniline	NA	NA	NA	NA	NA	0.00782 U	0.00914 U	0.007 U	0.00896 U	0.00694 U	0.0103 U	0.00602 U	0.00616 U	0.0062 U	0.00698 U	0.00724 U	0.00685 U	0.00636 U	0.00685 U	0.00598 U	0.00677 U	0.00684 U
2-Nitrophenol	NA	NA	NA	NA	NA	0.00522 U	0.00609 U	0.00467 U	0.00598 U	0.00463 U	0.00689 U	0.00402 U	0.00411 U	0.00413 U	0.00465 U	0.00483 U	0.00457 U	0.00425 U	0.00457 U	0.00399 U	0.00451 U	0.00456 U
3&4-Methylphenol	NA	NA	NA	NA	NA	0.0243 J	0.0514 J	0.00566 U	0.0569	0.00562 U	0.0421 J	0.00487 U	0.00499 U	0.00502 U	0.00565 U	0.00586 U	0.00554 U	0.00515 U	0.0107 J	0.00484 U	0.00548 U	0.00554 U
3,3'-Dichlorobenzidine	1.2	NA	5.7	NA	3.9	0.00826 U	0.00964 U	0.00739 U	0.00946 U	0.00732 U	0.0109 U	0.00636 U	0.0065 U	0.00654 U	0.00737 U	0.00764 U	0.00723 U	0.00672 U	0.00724 U	0.00631 U	0.00714 U	0.00722 U
3-Nitroaniline	NA	NA	NA	NA	NA	0.00508 U	0.00594 U	0.00455 U	0.00582 U	0.00451 U	0.00671 U	0.00391 U	0.004 U	0.00403 U	0.00453 U	0.0047 U	0.00445 U	0.00414 U	0.00445 U	0.00388 U	0.0044 U	0.00445 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	0.0929 U	0.108 U	0.0832 U	0.106 U	0.0824 U	0.123 U	0.0715 U	0.0732 U	0.0736 U	0.0829 U	0.086 U	0.0814 U	0.0756 U	0.0814 U	0.071 U	0.0804 U	0.0813 U
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	0.00455 U	0.00531 U	0.00407 U	0.00521 U	0.00404 U	0.00601 U	0.0035 U	0.00358 U	0.0036 U	0.00406 U	0.00421 U	0.00398 U	0.0037 U	0.00399 U	0.00348 U	0.00394 U	0.00398 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	0.00699 U	0.00816 U	0.00625 U	0.00801 U	0.0062 U	0.00923 U	0.00538 U	0.0055 U	0.00554 U	0.00623 U	0.00647 U	0.00612 U	0.00569 U	0.00612 U	0.00534 U	0.00605 U	0.00611 U
4-Chloroaniline	2.7	NA	13	NA	0.23	0.00442 U	0.00517 U	0.00396 U	0.00507 U	0.00392 U	0.00584 U	0.0034 U	0.00348 U	0.0035 U	0.00395 U	0.0041 U	0.00387 U	0.0036 U	0.00388 U	0.00338 U	0.00383 U	0.00387 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	0.00467 U	0.00545 U	0.00418 U	0.00535 U	0.00414 U	0.00616 U	0.00359 U	0.00368 U	0.0037 U	0.00416 U	0.00432 U	0.00409 U	0.0038 U	0.00409 U	0.00356 U	0.00404 U	0.00408 U
4-Nitroaniline	27	NA	130	NA	NA	0.00653 U	0.00763 U	0.00585 U	0.00749 U	0.0058 U	0.00863 U	0.00503 U	0.00515 U	0.00518 U	0.00583 U	0.00605 U	0.00572 U	0.00532 U	0.00572 U	0.00499 U	0.00565 U	0.00572 U
4-Nitrophenol	NA	NA	NA	NA	NA	0.266 U	0.311 U	0.238 U	0.305 U	0.236 U	0.352 U	0.205 U	0.21 U	0.211 U	0.237 U	0.246 U	0.233 U	0.217 U	0.233 U	0.203 U	0.23 U	0.233 U
Acenaphthene	3600	NA	50000	NA	NA	0.0259	0.0473	0.00103 U	0.0864	0.00114 U	0.0323	0.001 U	0.00098 U	0.00263 J	0.00153 J	0.00766 J	0.00126 J	0.00103 U	0.0511	0.00158 J	0.00177 J	0.018
Acenaphthylene	NA	NA	NA	NA	NA	0.144	0.242	0.00061 U	0.359	0.0035 J	0.12	0.00067 J	0.00106 J	0.00343 J	0.00402 J	0.012	0.00243 J	0.00061 U	0.0317	0.00151 J	0.00727 J	0.0079 J
Acetophenone	7800	NA	130000	NA	3.6	0.0061 U	0.00712 U	0.00546 U	0.00699 U	0.00541 U	0.00805 U	0.00469 U	0.0048 U	0.00483 U	0.00544 U	0.00565 U	0.00534 U	0.00496 U	0.00534 U	0.00466 U	0.00528 U	0.00534 U
Anthracene	18000	NA	250000	NA	NA	0.218	0.48	0.00114 U	0.516	0.00126 U	0.173	0.00111 U	0.00109 U	0.00116 J	0.00554 J	0.0136	0.0023 J	0.00114 U	0.308	0.00111 U	0.0186	0.072
Atrazine	220	NA	3200	NA	0.33	0.0042 U	0.00491 U	0.00376 U	0.00481 U	0.00373 U	0.00555 U	0.00323 U	0.00331 U	0.00333 U	0.00375 U	0.00389 U	0.00368 U	0.00342 U	0.00368 U	0.00321 U	0.00363 U	0.00368 U
Benzaldehyde	170	NA	910	NA	NA	0.0122 U	0.0142 U	0.0109 U	0.034 J	0.0108 U	0.0559 J	0.00939 U	0.00961 U	0.00967 U	0.0109 U	0.0142 J	0.0107 U	0.00993 U	0.0107 U	0.00932 U	0.0106 U	0.0107 U
Benzo(a)anthracene	5.1	78000	23	370000	0.71	0.896	1.86	0.00245 U	2.27	0.0129	0.683	0.00238 U	0.00236 U	0.00258 J	0.0204	0.0347	0.00583 J	0.00245 U	0.601	0.00239 U	0.0292	0.162
Benzo(a)pyrene	0.51	3500	2.3	16000	NA	1.44	2.43	0.00207 J	2.07	0.0138	0.675	0.00104 U	0.00103 U	0.00322 J	0.0235	0.0394	0.0063 J	0.00132 J	0.478	0.00105 U	0.0345	0.155
Benzo(b)fluoranthene	5.1	78000	23	370000	NA	0.765	1.17	0.00175 J	1.28	0.00733 J	0.462	0.00092 U	0.00091 U	0.00288 J	0.0148	0.0336	0.00608 J	0.00166 J	0.333	0.00093 U	0.0231	0.0972
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.668	1.18	0.00116 J	1.01	0.00749 J	0.376	0.00073 U	0.00072 U	0.00261 J	0.0118	0.028	0.00468 J	0.00119 J	0.219	0.00073 U	0.0297	0.0847
Benzo(k)fluoranthene	51	780000	230	NA	NA	0.653	1.13	0.00186 J	1.07	0.00696 J	0.434	0.00092 U	0.0009 U	0.00279 J	0.015	0.028	0.00577 J	0.00123 J	0.328	0.00092 U	0.0231	0.0954
Biphenyl	87	NA	450	NA	NA	0.018 J	0.0347 J	0.00455 U	0.0408 J	0.00451 U	0.0308 J	0.00391 U	0.004 U	0.00403 U	0.00453 U	0.0047 U	0.00445 U	0.00414 U	0.00976 J	0.00388 U	0.0044 U	0.00445 U
bis(2-Chloroethoxy)methane	190	NA	2700	NA	NA	0.00487 U	0.00569 U	0.00436 U	0.00558 U	0.00432 U	0.00643 U	0.00375 U	0.00384 U	0.00386 U	0.00434 U	0.00451 U	0.00426 U	0.00396 U	0.00427 U	0.00372 U	0.00421 U	0.00426 U
bis(2-Chloroethyl)ether	0.63	NA	3.3	NA	0.33	0.00889 U	0.0104 U	0.00795 U	0.0102 U	0.00788 U	0.0117 U	0.00684 U	0.007 U	0.00704 U	0.00793 U	0.00823 U	0.00778 U	0.00723 U	0.00779 U	0.00679 U	0.00769 U	0.00778 U
bis(2-Ethylhexyl)phthalate	39	NA	180	NA	14	0.0152 J	0.0148 U	0.0113 U	0.0145 U	0.0112 U	2.85	0.00976 U	0.00999 U	0.01 U	0.015 J	0.25	0.019 J	0.0103 U	0.0111 U	0.00969 U	0.011 U	0.0111 U
Butyl benzylphthalate	290	NA	1300	NA	29	0.00978 U	0.0114 U	0.00875 U	0.0112 U	0.00867 U	0.0456 J	0.00752 U	0.0077 U	0.00775 U	0.00872 U	0.00905 U	0.00856 U	0.00796 U	0.00857 U	0.00747 U	0.00846 U	0.00855 U
Caprolactam	32000	290	460000	1300	16	0.00804 J	0.0184 J	0.00636 U	0.00814 U	0.0063 U	0.00938 U	0.00547 U	0.0056 U	0.00563 U	0.00634 U	0.00658 U	0.00622 U	0.00578 U	0.00623 U	0.00543 U	0.00615 U	0.00622 U
Carbazole	NA	NA	NA	NA	NA	0.0159 J	0.031 J	0.00276 U	0.0304 J	0.00274 U	0.0249 J	0.00238 U	0.00243 U	0.00245 U	0.00275 U	0.00286 U	0.0027 U	0.00251 U	0.021 J	0.00236 U	0.00267 U	0.0131 J
Chrysene	510	NA	2300	NA	NA	0.71	1.54	0.00197 J	1.38	0.0077 J	0.488	0.00078 U	0.00077 U	0.00211 J	0.0164	0.0276	0.00476 J	0.00101 J	0.474	0.00083 J	0.0288	0.132
Dibenz(a,h)anthracene	0.51	7800	2.3	37000	NA	0.175	0.365	0.00094 U	0.283	0.00168 J	0.0935	0.00092 U	0.0009 U	0.00084 U	0.00323 J	0.00673 J	0.0012 J	0.00094 U	0.0632	0.00092 U	0.00562 J	0.019
Dibenzofuran	NA	NA	NA	NA	NA	0.0249 J	0.0467 J	0.00324 U	0.0551 J	0.00321 U	0.0312 J	0.00279 U	0.00285 U	0.00287 U	0.00323 U	0.00335 U	0.00317 U	0.00295 U	0.0376 J	0.00277 U	0.00313 U	0.00991 J
Diethyl phthalate	51000	NA	730000	NA	44	0.00495 U	0.00961 J	0.00459 J	0.00567 U	0.00439 U	0.00653 U	0.00381 U	0.0039 U	0.00392 U	0.00441 U	0.00458 U	0.00433 U	0.00402 U	0.00433 U	0.00378 U	0.00428 U	0.00433 U
Dimethyl phthalate	NA	NA	NA	NA	NA	0.00378 U	0.00441 U	0.00338 U	0.00432 U	0.00335 U	0.00499 U	0.0029 U	0.00297 U	0.00299 U	0.00337 U	0.0035 U	0.00331 U	0.00307 U	0.00331 U	0.00288 U	0.00327 U	0.0033 U
Di-n-butylphthalate	6300	NA	91000	NA	NA	0.00461 U	0.00538 U	0.00412 U	0.00528 U	0.00409 U	0.00608 U	0.00355 U	0.00363 U	0.00365 U	0.00411 U	0.00427 U	0.00404 U	0.00375 U	0.00404 U	0.00352 U	0.00399 U	0.00403 U
Di-n-octyl phthalate	630	NA	9100	NA	NA	0.02 U	0.0234 U	0.0179 U	0.023 U	0.0178 U	0.0265 U	0.0154 U	0.0158 U	0.0159 U	0.0179 U	0.0186 U	0.0176 U	0.0163 U	0.0176 U	0.0153 U	0.0173 U	0.0175 U
Fluoranthene	2400	NA	33000	NA	NA	0.919	2.05	0.00331 J	2.21	0.00695 J	0.677	0.00164 U	0.00161 U	0.00383 J	0.023	0.0442	0.00793 J	0.0018 J	1	0.00179 J	0.0422	0.296
Fluorene	2400	NA	33000	NA	NA	0.0381	0.0723	0.00061 U	0.0994	0.00068 U	0.0355	0.00059 U	0.00105 J	0.00116 J	0.00159 J	0.00979 J	0.00162 J	0.00061 U	0.0814	0.00094 J	0.00302 J	0.0157
Hexachlorobenzene	0.43	NA	2.3	NA	0.17	0.00471 U	0.00551 U	0.00422 U	0.0054 U	0.00418 U	0.00623 U	0.00363 U	0.00371 U	0.00374 U	0.0042 U	0.00436 U	0.00413 U	0.00384 U	0.00413 U	0.0036 U	0.00408 U	0.00412 U
Hexachlorobutadiene	8.9	NA	47	NA	0.17	0.00939 U	0.011 U	0.0084 U	0.0108 U	0.00833 U	0.0124 U	0.00723 U	0.0074 U	0.00744 U	0.00838 U	0.00869 U	0.00822 U	0.00764 U	0.00823 U	0.00717 U	0.00812 U	0.00822 U
Hexachlorocyclopentadiene	470	2.7	7800	NA	2.5	0.053 U	0.062 U	0.0475 U	0.0608 U	0.047 U	0.0701 U	0.0408 U	0.0418 U	0.042 U	0.0473 U	0.0491 U	0.0465 U	0.0432 U	0.0465 U	0.0405 U	0.0459 U	0.0464 U
Hexachloroethane	17	NA	91	NA	0.17	0.00809 U	0.00945 U	0.00724 U	0.00927 U	0.00718 U	0.0107 U	0.00623 U	0.00637 U	0.00641 U	0.00722 U	0.00749 U	0.00709 U	0.00659 U	0.00709 U	0.00618 U	0.007 U	0.00708 U
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NA	0.622	1.06	0.00602 J	0.938	0.0123	0.34	0.00255 U	0.00497 J	0.00687 J	0.0174	0.0328	0.0102	0.0059 J	0.226	0.005 J	0.0288	0.0882
Isophorone	570	NA	2700	NA	0.23	0.0053 U	0.0062 U	0.00475 U	0.00608 U	0.0047 U	0.00701 U	0.00408 U	0.00418 U	0.0042 U	0.00473 U	0.00491 U	0.00465 U	0.00432 U	0.00465 U	0.00405 U	0.00459 U	0.00464 U
Naphthalene	2500	5.7	34000	27	19	0.09	0.182	0.00125 J	0.234	0.00195 J	0.0993	0.0008 U	0.00088 J	0.00369 J	0.00509 J	0.0103 J	0.00237 J	0.00134 J	0.0411	0.00215 J	0.00962 J	0.0111
Nitrobenzene	160	7.5	2600	36	0.17	0.00504 U	0.00589 U	0.00451 U	0.00578 U	0.00447 U	0.00666 U	0.00388 U	0.00397 U	0.004 U	0.0045 U	0.00467 U	0.00442 U	0.0041 U	0.00442 U	0.00385 U	0.00436 U	0.00441 U
N-Nitrosodi-n-propylamine	0.17	NA	0.36	NA	0.17	0.00824 U	0.00962 U	0.00737 U	0.00944 U	0.00731 U	0.0109 U	0.00634 U	0.00649 U	0.00653 U	0.00735 U	0.00763 U	0.00722 U	0.0067 U	0.00722 U	0.00629 U	0.00713 U	0.00721 U
N-Nitrosodiphenylamine	110	NA	520	NA	1.1	0.0034 U	0.00397 U	0.00304 U	0.00389 U	0.00301 U	0.00449 U	0.00262 U	0.00268 U	0.00269 U	0.00303 U	0.00314 U	0.00298 U	0.00276 U	0.00298 U	0.0026 U	0.00294 U	0.00297 U
Pentachlorophenol	1	NA	4.4	NA	0.33	0.087 U	0.102 U	0.0779 U	0.0997 U	0.0772 U	0.115 U	0.067 U	0.0685 U	0.069 U	0.0776 U	0.0806 U	0.0762 U	0.0708 U	0.0763 U	0.0665 U	0.0753 U	0.0761 U
Phenanthrene	NA	NA	NA	NA	NA	0.358	0.684	0.00179 J	0.747	0.00177 J	0.307	0.00105 U	0.00117 J	0.00246 J	0.00693 J	0.0221	0.00451 J	0.00134 J	0.545	0.00208 J	0.0174	0.198
Phenol	19000	39000	270000	NA	21	0.0046 U	0.00537 U	0.00411 U	0.00527 U	0.00408 U	0.00607 U	0.00354 U	0.00362 U	0.00364 U	0.0041 U	0.00426 U	0.00403 U	0.00374 U	0.00403 U	0.00351 U	0.00398 U	0.00402 U
Pyrene	1800	NA	25000	NA	NA	1.66	2.61	0.00305 J	2.73	0.0112	0.89	0.00091 U	0.0009 U	0.00426 J	0.0386	0.0515	0.00944 J	0.00202 J	0.773	0.00177 J	0.0439	0.288
SUM of Semi-Volatile Organic Compounds	NA	NA	NA			0.10634	0.19181	0.00459	0.2303	ND	3.0805	ND	ND	ND	0.015	0.2642	0.019	ND	0.07906	ND	ND	0.02301
SUM of Semi-Volatile Organic Compounds (SIM)	NA	NA	NA			9.4136	17.1696	0.02423	17.3746	0.09553	5.9463	0.00067	0.00913	0.05231	0.2113	0.41147	0.07826	0.01881	5.5667	0.02125	0.34969	1.74672
EPH (mg/kg)																						
Total Extractable Petroleum Hydrocarbons	5100	54000	NA			86	54.2	30 U	110	30.7 U	161	26.3 U	32.6	26.7 U	31.8 U	31.3 U	52.9	28.4 U	31.3	26.4 U	28.7 U	29.3 U

TABLE 4
SUMMARY OF RAW SEDIMENT SOIL QUALITY DATA - SVOCs, EPH, INORGANICS, PCBs and PESTICIDES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Location Name						Raritan-Chapel					Chapel Hill					Chapel-Ambrose			Ambrose Channel		East of Ambrose	
Sample Name	NJ-R-INGESTDERMSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERMSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	VC-245	VC-246	COMP-R	VC-247	VC-247	VC-318	VC-318	VC-320	VC-321	VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample ID						VC-245-D0-4E	VC-246-D0-4E	COMP-R-D4-10.5E	VC-247-D0-4E	VC-247-D4-21.5E	VC-318-D0-3.5E	VC-318-D3.5-21.5E	VC-320-D0-19E	VC-321-D0-20.5E	VC-323-D0-22E	VC-251-D0-7.5E	VC-252-D0-7.5E	VC-253-D0-7.5E	COMP-S-D0-0-21E	COMP-T-D0-22.5E	VC-255-D0-7.5E	VC-256-D0-7.5E
Sample Date						10/26/2018	10/26/2018	10/26/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/26/2018	10/26/2018	10/25/2018	10/25/2018	10/26/2018	10/26/2018
Sample Type						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID						L1844234-06	L1844234-04	L1844234-10	L1843846-08	L1843846-09	L1843846-10	L1843846-11	L1843846-12	L1843846-13	L1843846-14	L1843846-15	L1844234-03	L1844234-01	L1843846-05	L1843846-06	L1843846-20	L1843846-18
Sample Depth (bgs)						0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Inorganic Compounds (mg/kg)																						
Aluminum	78000	NA	NA	NA	NA	4600	8280	2820	6960	3050	6830	3930	4840	3500	2370	2080	759	569	2580	393	1220	1840
Antimony	31	NA	520	NA	5.4	0.481 J	0.733 J	0.171 U	0.757 J	0.198 J	0.96 J	0.165 J	0.153 U	2.39	0.76 J	0.557 J	0.165 U	0.843 J	0.168 U	0.242 J	0.35 J	0.447 J
Arsenic	19	1100	19	5200	19	7.88	13.8	2.75	15.6	2.48	12.6	3.34	6.08	8.09	2.78	3.22	1.4	0.907	2.15	1.67	3.06	5.53
Barium	16000	870000	260000	NA	2100	19.9	37.3	5.2	47.1	7.64	47.8	50.8	7.5	4.76	8.67	6.5	3.21 J	1.4 J	9.08	0.695 J	5.83	5.6
Beryllium	160	2000	2600	9300	0.7	0.282 J	0.477 J	0.183 J	0.43 J	0.236 J	0.466 J	0.291 J	0.337 J	0.382	0.153 J	0.144 J	0.106 U	0.102 U	0.171 J	0.096 U	0.116 J	0.172 J
Cadmium	71	2600	1100	12000	1.9	0.154 J	0.295 J	0.033 U	0.392	0.034 U	1.56	0.03 U	0.03 U	0.079 J	0.052 J	0.272	0.032 U	0.031 U	0.054 J	0.029 U	0.064 J	0.04 J
Calcium	NA	NA	NA	NA	NA	3320	4150	3170	6560	1930	13100	227 J	678	3950	2380	11000	1880	1100	5980	689	7080	4200
Chromium	NA	NA	NA	NA	NA	14.4	25.8	7.97	27.9	7.31	75.4	11.6	13.2	13.2	7.76	19	2.6	1.98 J	8.56	3.56	6.96	8.87
Chromium VI (Hexavalent)	NA	NA	NA	NA	NA	0.235 U	0.276 U	0.209 U	0.271 U	0.211 U	0.309 U	0.249 J	0.184 U	0.189 U	0.213 U	0.217 U	0.206 U	0.193 U	0.208 U	0.182 U	0.202 U	0.204 U
Cobalt	23	520	390	2500	90	3.92	6.61	3.27	5.72	3.78	6.92	3.83	4.52	3.1	2.33	3.31	1.19	0.731	2.1	0.308 J	1.62	2.72
Copper	3100	NA	52000	NA	910	22.9	46.7	3.47	47.2	5.87	74.4	8.68	5.02	5.32	3.73	20	2.08 J	0.809 J	3.94	0.348 J	3.16	4.6
Iron	NA	NA	NA	NA	NA	11000	19200	8220	16300	9960	19700	18700	16900	22200	5960	5310	1840	1350	5720	2150	4220	9650
Lead	400	NA	800	NA	90	51.7	99	3.17	98.5	3.7	101	4.39	4.91	4.49	5.77	30.7	6.57	1.22	11	1.06	18.6	19.6
Magnesium	NA	NA	NA	NA	NA	2910	5040	1860	4460	1780	4740	1590	1890	1780	1440	1590	725	536	1750	456	1150	1370
Manganese	1900	87000	31000	400000	NA	142	236	82.1	223	72.1	311	69	146	198	67	263	265	48.8	78.6	16.5	49.9	87.3
Mercury	23	520000	390	NA	0.1	0.834	1.67	0.002 U	1.5	0.002 U	1.22	0.002 U	0.004 J	0.011 J	0.055	0.164	0.025	0.002 U	0.087	0.002 U	0.051	0.072
Nickel	1600	20000	26000	93000	48	11.8	21.2	7.21	18.8	7.4	21.8	11.1	9.35	8.93	5.84	8.23	2.28	1.5	5.72	0.984 J	3.26	5.96
Potassium	NA	NA	NA	NA	NA	1100	1890	626	1760	485	1810	558	1060	597	602	608	250	196	837	580	458	496
Selenium	390	NA	6500	NA	11	1.47 J	1.82 J	0.955 U	1.74 J	0.968 U	1.61 J	0.856 U	1.02 J	1.15 J	0.974 U	0.99 U	0.924 U	0.881 U	0.938 U	0.832 U	0.942 U	0.942 U
Silver	390	NA	6500	NA	0.5	0.244 J	0.65 J	0.062 U	0.776 J	0.063 U	2.65	0.055 U	0.055 U	0.096 J	0.063 U	0.791	0.06 U	0.057 U	0.123 J	0.054 U	0.156 J	0.061 U
Sodium	NA	NA	NA	NA	NA	4400	6200	2420	5740	1590	7710	933	1720	1850	1020	3610	2180	1770	3190	2010	2680	2640
Thallium	NA	NA	NA	NA	NA	0.088 J	0.162 J	0.065 U	0.213 J	0.068 J	0.182 J	0.058 U	0.059 U	0.096 J	0.067 U	0.068 U	0.076 J	0.124 J	0.186 J	0.204 J	0.792	0.064 U
Vanadium	390	170000	6500	800000	NA	13.9	24.6	7.74	23.2	9.9	31.6	21	16.6	29.6	7.64	10.9	3.17	2.05	9.26	3.27	8.23	13.8
Zinc	23000	NA	390000	NA	930	62.5	120	16	115	18.1	165	18.2	24.3	29.5	15.4	51.4	9.86 J	3.88 J	16.6	2.86 U	23.9	22.9
PCBs (mg/kg)																						
Aroclor-1016 (PCB-1016)	NA	NA	NA	NA	NA	0.00135 U	0.00158 U	0.00118 U	0.00155 U	0.00119 U	0.00873 U	0.00103 U	0.00105 U	0.00108 U	0.0012 U	0.00125 U	0.00118 U	0.00111 U	0.00117 U	0.00103 U	0.00116 U	0.00116 U
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	0.00181 U	0.00212 U	0.00158 U	0.00208 U	0.00159 U	0.0117 U	0.00138 U	0.0014 U	0.00146 U	0.00162 U	0.00167 U	0.00158 U	0.00148 U	0.00157 U	0.00138 U	0.00155 U	0.00155 U
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	0.00173 U	0.00202 U	0.00152 U	0.00199 U	0.00152 U	0.0112 U	0.00132 U	0.00134 U	0.00139 U	0.00155 U	0.0016 U	0.00151 U	0.00142 U	0.0015 U	0.00132 U	0.00148 U	0.00148 U
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	0.00314 JP	0.00145 U	0.00109 U	0.00142 U	0.00109 U	0.287	0.00094 U	0.00096 U	0.00209 J	0.00193 J	0.0129	0.00108 U	0.00102 U	0.00108 U	0.00094 U	0.00262 J	0.00106 U
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	0.00155 U	0.00182 U	0.00136 U	0.00178 U	0.00137 U	0.0101 U	0.00119 U	0.0012 U	0.00125 U	0.00139 U	0.00144 U	0.00135 U	0.00128 U	0.00135 U	0.00118 U	0.00133 U	0.00133 U
Aroclor-1254 (PCB-1254)	NA	NA	NA	NA	NA	0.00214 J	0.00181 U	0.00135 U	0.00177 U	0.00136 U	0.269	0.00118 U	0.0012 U	0.00192 J	0.0027 J	0.0177	0.0019 J	0.00127 U	0.00134 U	0.00118 U	0.0043	0.00132 U
Aroclor-1260 (PCB-1260)	NA	NA	NA	NA	NA	0.00155 U	0.00182 U	0.00136 U	0.00178 U	0.00137 U	0.109	0.00119 U	0.0012 U	0.00125 U	0.00139 U	0.00727	0.00135 U	0.00128 U	0.00135 U	0.00118 U	0.00283 J	0.00133 U
Aroclor-1262 (PCB-1262)	NA	NA	NA	NA	NA	0.00142 U	0.00166 U	0.00124 U	0.00163 U	0.00125 U	0.00918 U	0.00108 U	0.0011 U	0.00114 U	0.00127 U	0.00131 U	0.00124 U	0.00116 U	0.00123 U	0.00108 U	0.00121 U	0.00122 U
Aroclor-1268 (PCB-1268)	NA	NA	NA	NA	NA	0.00122 U	0.00143 U	0.00107 U	0.0014 U	0.00108 U	0.00791 U	0.00093 U	0.00094 U	0.00098 U	0.00109 U	0.00113 U	0.00106 U	0.001 U	0.00106 U	0.00093 U	0.00105 U	0.00105 U
SUM of PCBs	0.25	NA	1.1	NA	1.6	0.00528	ND	ND	ND	ND	0.665	ND	ND	0.00401	0.00463	0.03787	0.0019	ND	ND	ND	0.00975	ND
Other																						
Moisture (%)	NA	NA	NA	NA	NA	32	42.1	23.3	40.9	24.3	48.2	11.7	13	15.3	25	26.4	22.2	17.2	22.9	12	20.9	21.6
Total Organic Carbon (TOC) - Rep1 (%)	NA	NA	NA	NA	NA	0.775	1.03	0.122	1.15	0.119	1.28	0.016	0.979	0.215	0.175	0.399	0.072	0.022	0.252	0.016	0.075	0.094
Total Organic Carbon (TOC) - Rep2 (%)	NA	NA	NA	NA	NA	0.81	1.32	0.102	1.12	0.125	1.32	0.012	0.993	0.23	0.139	0.464	0.09	0.038	0.292	0.01 U	0.067	0.093
Total Solids (%)	NA	NA	NA	NA	NA	68	57.9	76.7	59.1	75.7	51.8	88.3	87	84.7	75	73.6	77.8	82.8	77.1	88	79.1	78.4
Oxidation reduction potential (millivolts)	NA	NA	NA	NA	NA	180	190	170	170	160	160	150	160	160	140	150	200	190	180	170	180	150
pH (lab) (pH units)	NA	NA	NA	NA	NA	8.2	7.9	8.5	8.4	8.1	8.5	8.1	8.2	8.1	8.3	8.4	7.5	7.7	8.2	8	8.1	8.2
Pesticides (mg/kg)																						
4,4'-DDD	2.3	NA	11	NA	0.47	0.0002 P	0.00045 P	0.00004 U	0.00005 U	0.00004 U	0.00367	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00037	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
4,4'-DDE	2	NA	11	NA	0.47	0.0001 IP	0.00022 IP	0.00004 U	0.00026 IP	0.00004 U	0.0154	0.00003 U	0.00003 U	0.0002 IP	0.00005	0.00121 I	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00017 P	0.00017 P
4,4'-DDT	1.9	NA	9.5	NA	0.67	0.00018 P	0.00017	0.00004 U	0.00016 I	0.00004 U	0.00158 IP	0.00003 U	0.00003 U	0.00006 IP	0.00004 U	0.00015 IP	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 UI	0.00004 UI
Aldrin	0.041	NA	0.21	NA	0.13	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
alpha-BHC	0.086	NA	0.41	NA	0.0023	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
alpha-Chlordane	NA	NA	NA	NA	NA	0.00004 U	0.00005 U	0.00004 U	0.00005 UI	0.00004 U	0.00052	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00011	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
beta-BHC	0.3	NA	1.4	NA	0.0046	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
Chlordane	0.27	NA	1.4	NA	1.4	0.00245 U	0.00287 U	0.00215 U	0.00282 U	0.00216 U	0.00318 U	0.00188 U	0.0019 U	0.00197 U	0.00219 U	0.00227 U	0.00214 U	0.00201 U	0.00213 U	0.00187 U	0.0021 U	0.00211 U
delta-BHC	NA	NA	NA	NA	NA	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
Dieldrin	0.034	NA	0.16	NA	0.024	0.00004 IP	0.00005 U	0.00004 U	0.00007	0.00004 U	0.00081 IP	0.00003 U	0.00003 U	0.00003 UI	0.00004 UI	0.00008 IP	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 UI	0.00004 UI
Endosulfan I	470	NA	7800	NA	NA	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
Endosulfan II	470	NA	7800	NA	NA	0.00015	0.00017 P	0.00004 U	0.00009 IP	0.00004 U	0.00033 IP	0.00003 U	0.00003 U	0.00003 U	0.00004 UI	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00006 P	0.00004 U
Endosulfan sulfate	NA	NA	NA	NA	NA	0.00004 U	0.00005 U	0.00004 U	0.00061	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.0001 P
Endrin	19	NA	270	NA	1.6	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
Endrin aldehyde	NA	NA	NA	NA	NA	0.00014 U	0.00017 U	0.00012 U	0.00016 U	0.00012 U	0.00036 IP	0.00011 U	0.00011 U	0.00011 U	0.00013 U	0.00013 U	0.00012 U	0.00012 U	0.00012 U	0.00011 U	0.00012 U	0.00012 U
Endrin ketone	NA	NA	NA	NA	NA	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
gamma-BHC (Lindane)	0.57	NA	2.8	NA	0.0035	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
gamma-Chlordane	0.27	NA	1.4	NA	1.4	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004	0.00004 U
Heptachlor	0.15	NA	0.81	NA	0.083	0.00004 U	0.00005 U	0.00004 U	0.00005 U	0.00004 U	0.00006 U	0.00003 U	0.00003 U	0.00003 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00004 U	0.00003 U	0.00004 U	0.00004 U
Heptachlor epoxide	0.076	NA	0.4	NA	0.081	0.00009 U	0.00011 U	0.00008 U	0.00011 U	0.00008 U	0.00012 U	0.00007 U	0.00007 U	0.00007 U	0.00008 U	0.00009 U	0.00008 U	0.00008 U	0.00008 U	0.00007 U	0.00008 U	0.00008 U
Methoxychlor	320	NA	4600	NA	NA	0.00048 U	0.00057 U	0.00042 U	0.00056 U	0.00043 U	0.00063 U	0.00037 U	0.00037 U	0.00039 U	0.00043 U	0.00045 U	0.00042 U	0.0004 U	0.00042 U	0.00037 U	0.00041 U	0.00042 U
Toxaphene	0.49	NA	2.3	NA	6.2	0.00245 U	0.00287 U	0.00215 U	0.00282 U	0.00216 U	0.00318 U	0.00188 U	0.0019 U	0.00197 U	0.00219 U	0.00227 U	0.00214 U	0.00201 U	0.00213 U	0.00187 U	0.0021 U	0.00211 U

NOTES & ABBREVIATIONS:
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
U: Not detected; number is the method detection limit.
Shaded values exceed the listed
Detected values are bold

TABLE 5
SUMMARY OF RAW SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Composite Group/Discrete Location Location Name Sample Name Sample Date Sample Type Lab Sample ID Sample Depth (bgs)	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Nearshore						Nearshore-Raritan								
						COMP-A VC-204 VC-204-D0-14E 11/12/2018 Primary L1846346-03 0 - 14 (ft)	COMP-A VC-205 VC-205-D0-15E 11/13/2018 Primary L1846405-01 0 - 15 (ft)	VC-208 VC-208 VC-208-D0-7.5E 11/12/2018 Primary L1846346-02 0 - 7.5 (ft)	VC-211 VC-211 VC-211-D0-7.5E 11/12/2018 Primary L1846346-01 0 - 7.5 (ft)	VC-214 VC-214 VC-214-D0-7.5E 10/29/2018 Primary L1844234-35 0 - 7.5 (ft)	DEP-1 DEP-1 DEP-1-D0-7.5E 10/31/2018 Primary L1844690-06 0 - 7.5 (ft)	VC-301 VC-301 VC-301-REV-D0-7.5E 10/30/2018 Primary L1844690-01 0 - 7.5 (ft)	VC-303 VC-303 VC-303-D0-7.5E 10/31/2018 Primary L1844690-07 0 - 7.5 (ft)	VC-304 VC-304 VC-304-D0-7.5E 10/29/2018 Primary L1844234-37 0 - 7.5 (ft)	DEP-3 DEP-3 DEP-3-D0-7.5E 10/31/2018 Primary L1844690-05 0 - 7.5 (ft)	DEP-4 DEP-4 DEP-4-REV-D0-7.5E 10/30/2018 Primary L1844690-02 0 - 7.5 (ft)	DEP-5 DEP-5 DEP-5-REV-D0-7.5E 10/30/2018 Primary L1844690-03 0 - 7.5 (ft)	VC-216 VC-216 VC-216-D0-7.5E 10/29/2018 Primary L1844234-33 0 - 7.5 (ft)	VC-217 VC-217 VC-217-D0-7.5E 10/29/2018 Primary L1844234-32 0 - 7.5 (ft)	VC-218 VC-218 VC-218-D0-7.5E 10/29/2018 Primary L1844234-30 0 - 7.5 (ft)
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00018 U	0.0002 U	0.00039 U	0.00022 U	0.00032 U	0.00018 U	0.00023 U	0.00029 U	0.00039 U	0.00036 U	0.0003 U	0.00034 U	0.0004 U	0.0004 U	0.00044 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00018 U	0.0002 U	0.00038 U	0.00022 U	0.00032 U	0.00018 U	0.00023 U	0.00028 U	0.00039 U	0.00036 U	0.00029 U	0.00034 U	0.0004 U	0.0004 U	0.00043 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00029 U	0.00031 U	0.00062 U	0.00036 U	0.00051 U	0.00028 U	0.00037 U	0.00046 U	0.00062 U	0.00058 U	0.00047 U	0.00054 U	0.00064 U	0.00064 U	0.0007 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00016 U	0.00017 U	0.00034 U	0.00019 U	0.00028 U	0.00015 U	0.0002 U	0.00025 U	0.00034 U	0.00032 U	0.00026 U	0.00029 U	0.00035 U	0.00035 U	0.00038 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00026 U	0.00028 U	0.00055 U	0.00032 U	0.00046 U	0.00025 U	0.00033 U	0.00041 U	0.00056 U	0.00052 U	0.00042 U	0.00048 U	0.00057 U	0.00057 U	0.00062 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00035 U	0.00038 U	0.00075 U	0.00043 U	0.00062 U	0.00034 U	0.00044 U	0.00055 U	0.00075 U	0.0007 U	0.00057 U	0.00065 U	0.00077 U	0.00077 U	0.00084 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.0003 U	0.00032 U	0.00063 U	0.00036 U	0.00052 U	0.00029 U	0.00038 U	0.00047 U	0.00064 U	0.00059 U	0.00048 U	0.00055 U	0.00065 U	0.00065 U	0.00071 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0011 U	0.0012 U	0.0023 U	0.0013 U	0.0019 U	0.0011 U	0.0014 U	0.0017 U	0.0023 U	0.0022 U	0.0018 U	0.002 U	0.0024 U	0.0024 U	0.0026 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.0003 U	0.00033 U	0.00065 U	0.00037 U	0.00053 U	0.0003 U	0.00038 U	0.00048 U	0.00065 U	0.00061 U	0.00049 U	0.00056 U	0.00067 U	0.00067 U	0.00073 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00016 U	0.00017 U	0.00033 U	0.00019 U	0.00028 U	0.00015 U	0.0002 U	0.00025 U	0.00034 U	0.00031 U	0.00025 U	0.00029 U	0.00034 U	0.00034 U	0.00038 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00028 U	0.0003 U	0.0006 U	0.00034 U	0.00049 U	0.00027 U	0.00035 U	0.00044 U	0.0006 U	0.00056 U	0.00045 U	0.00052 U	0.00061 U	0.00061 U	0.00067 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00014 U	0.00015 U	0.00029 U	0.00017 U	0.00024 U	0.00013 U	0.00017 U	0.00021 U	0.00029 U	0.00027 U	0.00022 U	0.00025 U	0.0003 U	0.0003 U	0.00032 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00016 U	0.00017 U	0.00034 U	0.0002 U	0.00028 U	0.00016 U	0.0002 U	0.00025 U	0.00034 U	0.00032 U	0.00026 U	0.0003 U	0.00035 U	0.00035 U	0.00038 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00019 U	0.0002 U	0.00051 J	0.00023 U	0.00033 U	0.00018 U	0.00024 U	0.00029 U	0.0004 U	0.00037 U	0.0003 U	0.00035 U	0.00041 U	0.00041 U	0.00044 U
1,4-Dioxane	7	45	36	210	0.067	0.038 U	0.041 U	0.082 U	0.047 U	0.067 U	0.037 U	0.048 U	0.06 U	0.082 U	0.076 U	0.062 U	0.071 U	0.084 U	0.084 U	0.092 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.0048 J	0.0026 U	0.04	0.003 U	0.022	0.0024 U	0.0031 U	0.0038 U	0.0052 U	0.0048 U	0.0053 J	0.0045 U	0.0053 U	0.0053 U	0.017 J
2-Hexanone	390	1000	6500	NA	0.15	0.0013 U	0.0014 U	0.0027 U	0.0016 U	0.0022 U	0.0012 U	0.0016 U	0.002 U	0.0028 U	0.0026 U	0.0021 U	0.0024 U	0.0028 U	0.0028 U	0.0031 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0014 U	0.0015 U	0.003 U	0.0017 U	0.0024 U	0.0014 U	0.0018 U	0.0022 U	0.003 U	0.0028 U	0.0023 U	0.0026 U	0.0031 U	0.003 U	0.0033 U
Acetone	70000	NA	NA	NA	19	0.043	0.018	0.21	0.024	0.2	0.016	0.019	0.066	0.033	0.052	0.055	0.04	0.044	0.034	0.083
Benzene	3	2.2	16	11	0.0094	0.00018 U	0.0002 U	0.001 J	0.00022 U	0.0019	0.00018 U	0.00023 U	0.00028 U	0.00039 U	0.00036 U	0.00029 U	0.00034 U	0.0004 U	0.0004 U	0.00043 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00012 U	0.00013 U	0.00025 U	0.00014 U	0.00021 U	0.00012 U	0.00015 U	0.00019 U	0.00025 U	0.00024 U	0.00019 U	0.00022 U	0.00026 U	0.00026 U	0.00028 U
Bromoform	88	NA	460	NA	0.018	0.00027 U	0.00029 U	0.00057 U	0.00033 U	0.00047 U	0.00026 U	0.00034 U	0.00042 U	0.00057 U	0.00054 U	0.00043 U	0.0005 U	0.00059 U	0.00059 U	0.00064 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.00063 U	0.00068 U	0.0013 U	0.00077 U	0.0011 U	0.00062 U	0.0008 U	0.001 U	0.0014 U	0.0013 U	0.001 U	0.0012 U	0.0014 U	0.0014 U	0.0015 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.005 U	0.0062 J	0.01 U	0.0061 U	0.0087 U	0.0048 U	0.0063 U	0.0078 U	0.012 J	0.0099 U	0.008 U	0.0092 U	0.011 J	0.012 J	0.012 U
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00025 U	0.00027 U	0.00053 U	0.00031 U	0.00044 U	0.00024 U	0.00032 U	0.00039 U	0.00054 U	0.0005 U	0.00041 U	0.00047 U	0.00055 U	0.00055 U	0.0006 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00014 U	0.00015 U	0.0003 U	0.00017 U	0.00024 U	0.00013 U	0.00018 U	0.00022 U	0.0003 U	0.00028 U	0.00022 U	0.00026 U	0.0003 U	0.0003 U	0.00033 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00022 U	0.00024 U	0.00048 U	0.00027 U	0.00039 U	0.00022 U	0.00028 U	0.00035 U	0.00048 U	0.00045 U	0.00036 U	0.00042 U	0.00049 U	0.00049 U	0.00053 U
Chloroethane	NA	NA	NA	NA	NA	0.00049 U	0.00053 U	0.001 U	0.0006 U	0.00086 U	0.00048 U	0.00062 U	0.00078 U	0.001 U	0.00098 U	0.0008 U	0.00092 U	0.0011 U	0.0011 U	0.0012 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00015 U	0.00016 U	0.00032 U	0.00019 U	0.00027 U	0.00018 J	0.00022 J	0.00029 J	0.00033 U	0.0003 U	0.00027 J	0.00032 J	0.00033 U	0.00033 U	0.00036 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.001 U	0.0011 U	0.0022 U	0.0012 U	0.0018 U	0.00099 U	0.0013 U	0.0016 U	0.0022 U	0.002 U	0.0016 U	0.0019 U	0.0022 U	0.0022 U	0.0024 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00019 U	0.00021 U	0.00041 U	0.00023 U	0.00033 U	0.00018 U	0.00024 U	0.0003 U	0.00041 U	0.00038 U	0.00031 U	0.00035 U	0.00042 U	0.00042 U	0.00046 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00017 U	0.00019 U	0.00037 U	0.00021 U	0.0003 U	0.00017 U	0.00022 U	0.00027 U	0.00037 U	0.00034 U	0.00028 U	0.00032 U	0.00038 U	0.00038 U	0.00041 U
Cyclohexane	NA	NA	NA	NA	NA	0.00059 U	0.00064 U	0.0013 U	0.00072 U	0.0019 J	0.00058 U	0.00075 U	0.00093 U	0.0013 U	0.0012 U	0.00096 U	0.0011 U	0.0013 U	0.0013 U	0.0014 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00015 U	0.00016 U	0.00032 U	0.00019 U	0.00027 U	0.00015 U	0.00019 U	0.00024 U	0.00033 U	0.0003 U	0.00025 U	0.00028 U	0.00033 U	0.00033 U	0.00036 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.001 U	0.0011 U	0.0021 U	0.0012 U	0.0018 U	0.00097 U	0.0013 U	0.0016 U	0.0021 U	0.002 U	0.0016 U	0.0018 U	0.0022 U	0.0022 U	0.0024 U
Ethylbenzene	7800	10	130000	48	15	0.00015 U	0.00017 U	0.00033 U	0.00019 U	0.00052 J	0.00015 U	0.00019 U	0.00024 U	0.00033 U	0.00031 U	0.00025 U	0.00028 U	0.00034 U	0.00034 U	0.00037 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00012 U	0.00013 U	0.00052 J	0.00014 U	0.00021 U	0.00012 U	0.00015 U	0.00019 U	0.00025 U	0.00024 U	0.00019 U	0.00022 U	0.00026 U	0.00026 U	0.00028 U
Methyl acetate	78000	NA	NA	NA	22	0.001 U	0.0011 U	0.0022 U	0.0013 U	0.0018 U	0.001 U	0.0013 U	0.0016 U	0.0022 U	0.0021 U	0.0017 U	0.0019 U	0.0023 U	0.0023 U	0.0025 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.00066 U	0.00071 U	0.0016 J	0.0008 U	0.0073 J	0.00064 U	0.00083 U	0.001 U	0.0014 U	0.0013 U	0.0011 U	0.0012 U	0.0014 U	0.0014 U	0.0016 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00022 U	0.00024 U	0.00047 U	0.00027 U	0.00038 U	0.00021 U	0.00028 U	0.00034 U	0.00047 U	0.00044 U	0.00036 U	0.00041 U	0.00048 U	0.00048 U	0.00052 U
Methylene chloride	50	1400	260	NA	0.013	0.0025 U	0.0027 U	0.0053 U	0.003 U	0.0044 U	0.0024 U	0.0032 U	0.0039 U	0.0053 U	0.005 U	0.004 U	0.0046 U	0.0055 U	0.0055 U	0.006 U
Styrene	16000	NA	260000	NA	2.1	0.00021 U	0.00023 U	0.00046 U	0.00026 U	0.00037 U	0.00021 U	0.00027 U	0.00034 U	0.00046 U	0.00043 U	0.00035 U	0.0004 U	0.00047 U	0.00047 U	0.00051 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00021 U	0.00023 U	0.00046 U	0.00026 U	0.00037 U	0.00021 U	0.00027 U	0.00034 U	0.00046 U	0.00043 U	0.00035 U	0.0004 U	0.00047 U	0.00047 U	0.00051 U
Toluene	6300	NA	100000	NA	7.8	0.00059 U	0.00064 U	0.0013 U	0.00072 U	0.001 U	0.00058 U	0.00075 U	0.00093 U	0.0013 U	0.0012 U	0.00096 U	0.0011 U	0.0013 U	0.0013 U	0.0014 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00015 U	0.00016 U	0.00032 U	0.00018 U	0.00026 U	0.00014 U	0.00019 U	0.00024 U	0.00032 U	0.0003 U	0.00024 U	0.00028 U	0.00033 U	0.00033 U	0.00036 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.0003 U	0.00032 U	0.00063 U	0.00036 U	0.00052 U	0.00029 U	0.00038 U	0.00047 U	0.00064 U	0.0006 U	0.00048 U	0.00055 U	0.00065 U	0.00065 U	0.00071 U
Trichloroethene	15	3	79	14	0.0065	0.00015 U	0.00016 U	0.00032 U	0.00018 U	0.00026 U	0.00014 U	0.00019 U	0.00024 U	0.00032 U	0.0003 U	0.00024 U	0.00028 U	0.00033 U	0.00033 U	0.00036 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.00076 U	0.00082 U	0.0016 U	0.00093 U	0.0013 U	0.00074 U	0.00096 U	0.0012 U	0.0016 U	0.0015 U	0.0012 U	0.0014 U	0.0017 U	0.0016 U	0.0018 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.00076 U	0.00082 U	0.0016 U	0.00092 U	0.0013 U	0.00074 U	0.00096 U	0.0012 U	0.0016 U	0.0015 U	0.0012 U	0.0014 U	0.0016 U	0.0016 U	0.0018 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00037 U	0.00039 U	0.00078 U	0.00045 U	0.00064 U	0.00036 U	0.00046 U	0.00058 U	0.00078 U	0.00073 U	0.00059 U	0.00068 U	0.0008 U	0.0008 U	0.00087 U
Xylene (total)	12000	NA	190000	NA	19	0.00032 U	0.00034 U	0.00093 J	0.00039 U	0.0038 J	0.00031 U	0.0004 U	0.0005 U	0.00068 U	0.00063 U	0.00051 U	0.00059 U	0.0007 U	0.00069 U	0.00076 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.0478	0.0242	0.25456	0.024	0.23742	0.01618	0.01922	0.06629	0.045	0.052	0.06057	0.04032	0.055	0.046	0.1

ABBREVIATIONS:

J: Result is less than the reporting limit but greater than the method detection limit.

mg/Kg: milligram per killogram.

U: Not detected; number is the method detection limit.

- Detected values are bold.

TABLE 5
SUMMARY OF RAW SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Composite Group/Discrete Location Location Name Sample Name Sample Date Sample Type Lab Sample ID Sample Depth (bgs)	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Nearshore-Raritan													
						COMP-G VC-219 VC-219-D0-7.5E 10/28/2018 Primary L1844234-27 0 - 7.5 (ft)	COMP-G VC-220 VC-220-D0-7.5E 10/28/2018 Primary L1844234-26 0 - 7.5 (ft)	COMP-G VC-221 VC-221-D0-7.5E 10/28/2018 Primary L1844234-25 0 - 7.5 (ft)	VC-222 VC-222 VC-222-D0-7.5E 10/28/2018 Primary L1844234-24 0 - 7.5 (ft)	VC-223 VC-223 VC-223-D0-7.5E 10/28/2018 Primary L1844234-23 0 - 7.5 (ft)	COMP-I VC-307 VC-307-D0-7.5E 10/28/2018 Primary L1844234-19 0 - 7.5 (ft)	COMP-I VC-308 VC-308-D0-7.5E 10/28/2018 Primary L1844234-18 0 - 7.5 (ft)	COMP-I VC-309 VC-309-D0-7.5E 10/28/2018 Primary L1844234-17 0 - 7.5 (ft)	COMP-J DEP-2 DEP-2-D0-7.5E 10/28/2018 Primary L1844234-16 0 - 7.5 (ft)	COMP-J VC-310 VC-310-D0-7.5E 10/28/2018 Primary L1844234-15 0 - 7.5 (ft)	VC-311 VC-311 VC-311-D0-7.5E 10/28/2018 Primary L1844234-14 0 - 7.5 (ft)	COMP-K VC-312 VC-312-D0-7.5E 10/28/2018 Primary L1844234-13 0 - 7.5 (ft)	COMP-K VC-313 VC-313-D0-7.5E 10/28/2018 Primary L1844234-12 0 - 7.5 (ft)	COMP-K VC-314 VC-314-D0-7.5E 10/28/2018 Primary L1844234-11 0 - 7.5 (ft)
Volatile Organic Compounds (mg/kg)																			
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00042 U	0.00033 U	0.00037 U	0.00041 U	0.00036 U	0.00036 U	0.00038 U	0.00039 U	0.0003 U	0.00029 U	0.00017 U	0.00016 U	0.00015 U	0.00012 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00042 U	0.00033 U	0.00037 U	0.0004 U	0.00036 U	0.00035 U	0.00038 U	0.00039 U	0.0003 U	0.00029 U	0.00017 U	0.00016 U	0.00014 U	0.00012 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00067 U	0.00053 U	0.00059 U	0.00065 U	0.00057 U	0.00057 U	0.00061 U	0.00063 U	0.00048 U	0.00047 U	0.00027 U	0.00026 U	0.00023 U	0.00019 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00036 U	0.00029 U	0.00032 U	0.00035 U	0.00031 U	0.00031 U	0.00033 U	0.00034 U	0.00026 U	0.00025 U	0.00015 U	0.00014 U	0.00013 U	0.0001 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.0006 U	0.00047 U	0.00052 U	0.00058 U	0.00051 U	0.00051 U	0.00054 U	0.00056 U	0.00043 U	0.00042 U	0.00024 U	0.00023 U	0.00021 U	0.00017 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00081 U	0.00064 U	0.00071 U	0.00078 U	0.00069 U	0.00068 U	0.00074 U	0.00076 U	0.00058 U	0.00056 U	0.00032 U	0.00031 U	0.00028 U	0.00023 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.00069 U	0.00054 U	0.0006 U	0.00066 U	0.00058 U	0.00058 U	0.00062 U	0.00064 U	0.00049 U	0.00048 U	0.00027 U	0.00026 U	0.00024 U	0.00019 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0025 U	0.002 U	0.0022 U	0.0024 U	0.0021 U	0.0021 U	0.0023 U	0.0023 U	0.0018 U	0.0018 U	0.001 U	0.00096 U	0.00087 U	0.00071 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.0007 U	0.00055 U	0.00062 U	0.00068 U	0.0006 U	0.00059 U	0.00064 U	0.00066 U	0.0005 U	0.00049 U	0.00028 U	0.00027 U	0.00024 U	0.0002 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00036 U	0.00028 U	0.00032 U	0.00035 U	0.00031 U	0.00031 U	0.00033 U	0.00034 U	0.00026 U	0.00025 U	0.00014 U	0.00014 U	0.00013 U	0.0001 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00065 U	0.00051 U	0.00057 U	0.00063 U	0.00055 U	0.00055 U	0.00059 U	0.0006 U	0.00046 U	0.00045 U	0.00026 U	0.00025 U	0.00022 U	0.00018 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00032 U	0.00025 U	0.00028 U	0.0003 U	0.00027 U	0.00027 U	0.00028 U	0.00029 U	0.00022 U	0.00022 U	0.00012 U	0.00012 U	0.00011 U	0.00008 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00037 U	0.00029 U	0.00033 U	0.00036 U	0.00032 U	0.00032 U	0.00034 U	0.00035 U	0.00026 U	0.00026 U	0.00015 U	0.00014 U	0.00013 U	0.0001 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00043 U	0.00034 U	0.00038 U	0.00042 U	0.00037 U	0.00036 U	0.00039 U	0.0004 U	0.00031 U	0.0003 U	0.00017 U	0.00016 U	0.00015 U	0.00012 U
1,4-Dioxane	7	45	36	210	0.067	0.088 U	0.069 U	0.077 U	0.086 U	0.075 U	0.075 U	0.08 U	0.083 U	0.063 U	0.062 U	0.035 U	0.034 U	0.031 U	0.025 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.016 J	0.0044 U	0.008 J	0.013 J	0.0048 U	0.0047 U	0.0051 U	0.0052 U	0.004 U	0.0039 U	0.0022 U	0.0021 U	0.0019 U	0.0016 U
2-Hexanone	390	1000	6500	NA	0.15	0.003 U	0.0023 U	0.0026 U	0.0029 U	0.0025 U	0.0025 U	0.0027 U	0.0028 U	0.0021 U	0.0021 U	0.0012 U	0.0011 U	0.001 U	0.00084 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0032 U	0.0025 U	0.0028 U	0.0031 U	0.0028 U	0.0027 U	0.0029 U	0.003 U	0.0023 U	0.0022 U	0.0013 U	0.0012 U	0.0011 U	0.00091 U
Acetone	70000	NA	NA	NA	19	0.093	0.038	0.054	0.073	0.06	0.038	0.017 J	0.022 J	0.019	0.024	0.016	0.0067 J	0.0068 J	0.0068 J
Benzene	3	2.2	16	11	0.0094	0.00042 U	0.00033 U	0.00037 U	0.0004 U	0.00036 U	0.00035 U	0.00038 U	0.00039 U	0.0003 U	0.00029 U	0.00017 U	0.00016 U	0.00014 U	0.00012 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00028 U	0.00022 U	0.00024 U	0.00026 U	0.00023 U	0.00023 U	0.00025 U	0.00026 U	0.0002 U	0.00019 U	0.00011 U	0.0001 U	0.00009 U	0.00007 U
Bromoform	88	NA	460	NA	0.018	0.00062 U	0.00048 U	0.00054 U	0.0006 U	0.00053 U	0.00052 U	0.00056 U	0.00058 U	0.00044 U	0.00043 U	0.00025 U	0.00024 U	0.00022 U	0.00017 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.0015 U	0.0011 U	0.0013 U	0.0014 U	0.0012 U	0.0012 U	0.0013 U	0.0014 U	0.001 U	0.001 U	0.00058 U	0.00056 U	0.00051 U	0.00041 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.017 J	0.009 U	0.01 U	0.013 J	0.0098 U	0.0097 U	0.01 U	0.011 U	0.0081 U	0.008 U	0.0046 U	0.0045 J	0.004 U	0.0032 U
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00058 U	0.00045 U	0.00051 U	0.00056 U	0.00049 U	0.00049 U	0.00052 U	0.00054 U	0.00041 U	0.0004 U	0.00023 U	0.00022 U	0.0002 U	0.00016 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00032 U	0.00025 U	0.00028 U	0.00031 U	0.00027 U	0.00027 U	0.00029 U	0.0003 U	0.00023 U	0.00022 U	0.00013 U	0.00012 U	0.00011 U	0.00009 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00052 U	0.0004 U	0.00045 U	0.0005 U	0.00044 U	0.00044 U	0.00047 U	0.00048 U	0.00037 U	0.00036 U	0.00021 U	0.0002 U	0.00018 U	0.00014 U
Chloroethane	NA	NA	NA	NA	NA	0.0011 U	0.00089 U	0.001 U	0.0011 U	0.00097 U	0.00096 U	0.001 U	0.0011 U	0.00081 U	0.00079 U	0.00046 U	0.00043 U	0.0004 U	0.00032 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00035 U	0.00028 U	0.00031 U	0.00034 U	0.0003 U	0.0003 U	0.00032 U	0.00033 U	0.00025 U	0.00024 U	0.00014 U	0.00013 U	0.00012 U	0.00009 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.0024 U	0.0018 U	0.002 U	0.0023 U	0.002 U	0.002 U	0.0021 U	0.0022 U	0.0017 U	0.0016 U	0.00094 U	0.00089 U	0.00082 U	0.00066 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00044 U	0.00034 U	0.00039 U	0.00043 U	0.00038 U	0.00037 U	0.0004 U	0.00041 U	0.00031 U	0.00031 U	0.00018 U	0.00017 U	0.00015 U	0.00012 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.0004 U	0.00031 U	0.00035 U	0.00038 U	0.00034 U	0.00034 U	0.00036 U	0.00037 U	0.00028 U	0.00028 U	0.00016 U	0.00015 U	0.00014 U	0.00011 U
Cyclohexane	NA	NA	NA	NA	NA	0.0014 U	0.0011 U	0.0012 U	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0013 U	0.00097 U	0.00095 U	0.00055 U	0.00052 U	0.00048 U	0.00038 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00035 U	0.00028 U	0.00031 U	0.00034 U	0.0003 U	0.0003 U	0.00032 U	0.00033 U	0.00025 U	0.00024 U	0.00014 U	0.00013 U	0.00012 U	0.00009 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.0023 U	0.0018 U	0.002 U	0.0022 U	0.002 U	0.0019 U	0.0021 U	0.0022 U	0.0016 U	0.0016 U	0.00092 U	0.00088 U	0.0008 U	0.00065 U
Ethylbenzene	7800	10	130000	48	15	0.00036 U	0.00028 U	0.00031 U	0.00034 U	0.0003 U	0.0003 U	0.00032 U	0.00033 U	0.00025 U	0.00025 U	0.00014 U	0.00014 U	0.00012 U	0.0001 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00028 U	0.00022 U	0.00024 U	0.00026 U	0.00023 U	0.00023 U	0.00025 U	0.00026 U	0.0002 U	0.00019 U	0.00011 U	0.0001 U	0.00009 U	0.00007 U
Methyl acetate	78000	NA	NA	NA	22	0.0024 U	0.0019 U	0.0021 U	0.0023 U	0.002 U	0.002 U	0.0022 U	0.0022 U	0.0017 U	0.0017 U	0.00096 U	0.00091 U	0.00083 U	0.00067 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.0015 U	0.0012 U	0.0013 U	0.0015 U	0.0013 U	0.0013 U	0.0014 U	0.0014 U	0.0011 U	0.001 U	0.00061 U	0.00058 U	0.00053 U	0.00043 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00051 U	0.0004 U	0.00044 U	0.00049 U	0.00043 U	0.00043 U	0.00046 U	0.00047 U	0.00036 U	0.00035 U	0.0002 U	0.00019 U	0.00018 U	0.00014 U
Methylene chloride	50	1400	260	NA	0.013	0.0058 U	0.0045 U	0.005 U	0.0056 U	0.0049 U	0.0049 U	0.0052 U	0.0054 U	0.0041 U	0.004 U	0.0023 U	0.0022 U	0.002 U	0.0016 U
Styrene	16000	NA	260000	NA	2.1	0.00049 U	0.00039 U	0.00043 U	0.00048 U	0.00042 U	0.00042 U	0.00045 U	0.00046 U	0.00035 U	0.00034 U	0.0002 U	0.00019 U	0.00017 U	0.00014 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00049 U	0.00039 U	0.00043 U	0.00048 U	0.00042 U	0.00042 U	0.00045 U	0.00046 U	0.00035 U	0.00034 U	0.0002 U	0.00019 U	0.00017 U	0.00014 U
Toluene	6300	NA	100000	NA	7.8	0.0014 U	0.0011 U	0.0012 U	0.0013 U	0.0012 U	0.0012 U	0.0012 U	0.0013 U	0.00097 U	0.00095 U	0.00055 U	0.00052 U	0.00048 U	0.00038 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00034 U	0.00027 U	0.0003 U	0.00033 U	0.00029 U	0.00029 U	0.00031 U	0.00032 U	0.00024 U	0.00024 U	0.00014 U	0.00013 U	0.00012 U	0.00009 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00069 U	0.00054 U	0.0006 U	0.00066 U	0.00059 U	0.00058 U	0.00062 U	0.00064 U	0.00049 U	0.00048 U	0.00027 U	0.00026 U	0.00024 U	0.00019 U
Trichloroethene	15	3	79	14	0.0065	0.00034 U	0.00027 U	0.0003 U	0.00033 U	0.00029 U	0.00029 U	0.00031 U	0.00032 U	0.00024 U	0.00024 U	0.00014 U	0.00013 U	0.00012 U	0.00009 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.0018 U	0.0014 U	0.0015 U	0.0017 U	0.0015 U	0.0015 U	0.0016 U	0.0016 U	0.0012 U	0.0012 U	0.0007 U	0.00067 U	0.00061 U	0.00049 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.0017 U	0.0014 U	0.0015 U	0.0017 U	0.0015 U	0.0015 U	0.0016 U	0.0016 U	0.0012 U	0.0012 U	0.0007 U	0.00066 U	0.00061 U	0.00049 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00084 U	0.00066 U	0.00074 U	0.00082 U	0.00072 U	0.00071 U	0.00076 U	0.00079 U	0.0006 U	0.00059 U	0.00034 U	0.00032 U	0.00029 U	0.00024 U
Xylene (total)	12000	NA	190000	NA	19	0.00073 U	0.00057 U	0.00064 U	0.00071 U	0.00062 U	0.00062 U	0.00066 U	0.00068 U	0.00052 U	0.00051 U	0.00029 U	0.00028 U	0.00025 U	0.00021 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.126	0.038	0.062	0.099	0.06	0.038	0.017	0.022	0.019	0.024	0.016	0.0112	0.0068	0.0068

ABBREVIATIONS:

J: Result is less than the reporting limit but greater than the method detection limit.

mg/Kg: milligram per killogram.

U: Not detected; number is the method detection limit.

- Detected values are bold.

- Shaded values exceed the listed New Jersey criteria.

TABLE 5
SUMMARY OF RAW SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Composite Group/Discrete Location Location Name Sample Name Sample Date Sample Type Lab Sample ID Sample Depth (bgs)	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Raritan Bay													
						COMP-L VC-225 VC-225-D0-7.5E 10/20/2018 Primary L1843139-01 0 - 7.5 (ft)	COMP-L VC-227 VC-227-D0-14E 10/20/2018 Primary L1843139-02 0 - 14 (ft)	COMP-L VC-228 VC-228-D0-20.5E 10/20/2018 Primary L1843139-03 0 - 20.5 (ft)	VC-229 VC-229 VC-229-D0-28E 10/20/2018 Primary L1843139-09 0 - 28 (ft)	COMP-M VC-230 VC-230-D0-27E 10/20/2018 Primary L1843139-06 0 - 27 (ft)	COMP-M VC-230A VC-230A-D0-27E 10/20/2018 Primary L1843139-05 0 - 27 (ft)	COMP-M VC-230B VC-230B-D0-27E 10/20/2018 Primary L1843139-07 0 - 27 (ft)	DEP-6 DEP-6 DEP-6-D0-13.5E 10/22/2018 Primary L1843140-13 0 - 14 (ft)	DEP-6 DEP-6 DEP-6-D13.5-27E 10/22/2018 Primary L1843140-14 14 - 27 (ft)	COMP-N (0-4) VC-232 VC-232-D0-6E 10/22/2018 Primary L1843140-03 0 - 6.6 (ft)	COMP-N (0-4) VC-232A VC-232A-D0-4E 10/22/2018 Primary L1843140-05 0 - 4.1 (ft)	COMP-N (0-4) VC-232B VC-232B-D0-4E 10/22/2018 Primary L1843140-01 0 - 4.8 (ft)	COMP-N (4-22.5) VC-232 VC-232-D6-22.5E 10/22/2018 Primary L1843140-04 6.6 - 22.5 (ft)	COMP-N (4-22.5) VC-232A VC-232A-D4-22.5E 10/22/2018 Primary L1843140-06 4.1 - 22.5 (ft)	COMP-N (4-22.5) VC-232B VC-232B-D4-22.5E 10/22/2018 Primary L1843140-02 4.8 - 22.5 (ft)
Volatile Organic Compounds (mg/kg)																			
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00037 U	0.00012 U	0.00012 U	0.00033 U	0.00059 U	0.00038 U	0.0004 U	0.0005 U	0.0003 U	0.00034 U	0.001 U	0.00041 U	0.00036 U	0.00028 U	0.00037 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00036 U	0.00012 U	0.00012 U	0.00033 U	0.00058 U	0.00037 U	0.0004 U	0.00049 U	0.0003 U	0.00034 U	0.00099 U	0.00041 U	0.00036 U	0.00027 U	0.00037 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00059 U	0.00019 U	0.00019 U	0.00052 U	0.00094 U	0.0006 U	0.00064 U	0.0008 U	0.00048 U	0.00055 U	0.0016 U	0.00066 U	0.00058 U	0.00044 U	0.00059 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00032 U	0.0001 U	0.0001 U	0.00028 U	0.00051 U	0.00033 U	0.00034 U	0.00043 U	0.00026 U	0.0003 U	0.00087 U	0.00036 U	0.00031 U	0.00024 U	0.00032 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00052 U	0.00017 U	0.00017 U	0.00047 U	0.00084 U	0.00054 U	0.00057 U	0.00071 U	0.00043 U	0.00049 U	0.0014 U	0.00058 U	0.00052 U	0.00039 U	0.00052 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00071 U	0.00023 U	0.00022 U	0.00063 U	0.0011 U	0.00072 U	0.00077 U	0.00096 U	0.00058 U	0.00066 U	0.0019 U	0.00079 U	0.0007 U	0.00053 U	0.00071 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.0006 U	0.0002 U	0.00019 U	0.00054 U	0.00096 U	0.00061 U	0.00065 U	0.00081 U	0.00049 U	0.00056 U	0.0016 U	0.00067 U	0.00059 U	0.00045 U	0.0006 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0022 U	0.00072 U	0.0007 U	0.002 U	0.0035 U	0.0022 U	0.0024 U	0.003 U	0.0018 U	0.002 U	0.006 U	0.0024 U	0.0022 U	0.0016 U	0.0022 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00061 U	0.0002 U	0.00019 U	0.00055 U	0.00098 U	0.00063 U	0.00066 U	0.00083 U	0.0005 U	0.00057 U	0.0017 U	0.00069 U	0.0006 U	0.00046 U	0.00062 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00032 U	0.0001 U	0.0001 U	0.00028 U	0.00051 U	0.00032 U	0.00034 U	0.00043 U	0.00026 U	0.00029 U	0.00086 U	0.00035 U	0.00031 U	0.00024 U	0.00032 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00056 U	0.00018 U	0.00018 U	0.0005 U	0.0009 U	0.00058 U	0.00061 U	0.00076 U	0.00046 U	0.00052 U	0.0015 U	0.00063 U	0.00056 U	0.00042 U	0.00057 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00028 U	0.00009 U	0.00008 U	0.00025 U	0.00044 U	0.00028 U	0.0003 U	0.00037 U	0.00023 U	0.00026 U	0.00075 U	0.00031 U	0.00027 U	0.0002 U	0.00028 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00032 U	0.00011 U	0.0001 U	0.00029 U	0.00052 U	0.00033 U	0.00035 U	0.00044 U	0.00027 U	0.0003 U	0.00088 U	0.00036 U	0.00032 U	0.00024 U	0.00033 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00038 U	0.00012 U	0.00012 U	0.00034 U	0.0006 U	0.00038 U	0.00041 U	0.00051 U	0.00031 U	0.00035 U	0.001 U	0.00042 U	0.00037 U	0.00028 U	0.00038 U
1,4-Dioxane	7	45	36	210	0.067	0.077 U	0.025 U	0.024 U	0.069 U	0.12 U	0.079 U	0.084 U	0.1 U	0.063 U	0.072 U	0.21 U	0.086 U	0.076 U	0.058 U	0.078 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.008 J	0.0042 J	0.0032 J	0.0058 J	0.02 J	0.014 J	0.012 J	0.035	0.0075 J	0.014 J	0.039 J	0.022 J	0.01 J	0.0064 J	0.0074 J
2-Hexanone	390	1000	6500	NA	0.15	0.0026 U	0.00085 U	0.00082 U	0.0023 U	0.0041 U	0.0026 U	0.0028 U	0.0035 U	0.0021 U	0.0024 U	0.007 U	0.0029 U	0.0026 U	0.0019 U	0.0026 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0028 U	0.00092 U	0.00089 U	0.0025 U	0.0045 U	0.0029 U	0.003 U	0.0038 U	0.0023 U	0.0026 U	0.0076 U	0.0032 U	0.0028 U	0.0021 U	0.0028 U
Acetone	70000	NA	NA	NA	19	0.089	0.04	0.027	0.063	0.18	0.11	0.18	0.2	0.046	0.071	0.26	0.14	0.076	0.039	0.049
Benzene	3	2.2	16	11	0.0094	0.00036 U	0.00012 U	0.00012 U	0.00033 U	0.00058 U	0.00037 U	0.0004 U	0.00049 U	0.0003 U	0.00034 U	0.00099 U	0.00041 U	0.00036 U	0.00027 U	0.00037 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00024 U	0.00007 U	0.00007 U	0.00021 U	0.00038 U	0.00024 U	0.00026 U	0.00032 U	0.0002 U	0.00022 U	0.00065 U	0.00027 U	0.00024 U	0.00018 U	0.00024 U
Bromoform	88	NA	460	NA	0.018	0.00054 U	0.00018 U	0.00017 U	0.00048 U	0.00086 U	0.00055 U	0.00058 U	0.00073 U	0.00044 U	0.0005 U	0.0015 U	0.0006 U	0.00053 U	0.0004 U	0.00054 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.0013 U	0.00042 U	0.00041 U	0.0011 U	0.002 U	0.0013 U	0.0014 U	0.0017 U	0.001 U	0.0012 U	0.0035 U	0.0014 U	0.0012 U	0.00096 U	0.0013 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.023	0.03	0.0094	0.009 U	0.024 J	0.021 J	0.021 J	0.014 U	0.0082 U	0.0093 U	0.027 U	0.011 U	0.012 J	0.0075 U	0.01 U
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00051 U	0.00016 U	0.00016 U	0.00045 U	0.00081 U	0.00052 U	0.00055 U	0.00068 U	0.00042 U	0.00047 U	0.0014 U	0.00057 U	0.0005 U	0.00038 U	0.00051 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00028 U	0.00009 U	0.00008 U	0.00025 U	0.00045 U	0.00028 U	0.0003 U	0.00038 U	0.00023 U	0.00026 U	0.00076 U	0.00031 U	0.00027 U	0.00021 U	0.00028 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00045 U	0.00015 U	0.00014 U	0.0004 U	0.00072 U	0.00046 U	0.00049 U	0.00061 U	0.00037 U	0.00042 U	0.0012 U	0.0005 U	0.00044 U	0.00034 U	0.00045 U
Chloroethane	NA	NA	NA	NA	NA	0.00099 U	0.00032 U	0.00032 U	0.00089 U	0.0016 U	0.001 U	0.0011 U	0.0013 U	0.00082 U	0.00092 U	0.0027 U	0.0011 U	0.00098 U	0.00074 U	0.001 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00031 U	0.0001 U	0.00009 U	0.00028 U	0.00049 U	0.00032 U	0.00033 U	0.00042 U	0.00025 U	0.00029 U	0.00084 U	0.00034 U	0.0003 U	0.00023 U	0.00031 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.002 U	0.00067 U	0.00065 U	0.0018 U	0.0033 U	0.0021 U	0.0022 U	0.0028 U	0.0017 U	0.0019 U	0.0056 U	0.0023 U	0.002 U	0.0015 U	0.002 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00038 U	0.00012 U	0.00012 U	0.00034 U	0.00062 U	0.00039 U	0.00042 U	0.00052 U	0.00032 U	0.00036 U	0.001 U	0.00043 U	0.00038 U	0.00029 U	0.00039 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00035 U	0.00011 U	0.00011 U	0.00031 U	0.00056 U	0.00036 U	0.00038 U	0.00047 U	0.00028 U	0.00032 U	0.00094 U	0.00039 U	0.00034 U	0.00026 U	0.00035 U
Cyclohexane	NA	NA	NA	NA	NA	0.0012 U	0.00039 U	0.00038 U	0.0011 U	0.0019 U	0.0012 U	0.0013 U	0.0016 U	0.00098 U	0.0011 U	0.0032 U	0.0013 U	0.0012 U	0.0009 U	0.0012 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00031 U	0.0001 U	0.00009 U	0.00028 U	0.00049 U	0.00032 U	0.00033 U	0.00042 U	0.00025 U	0.00029 U	0.00084 U	0.00034 U	0.0003 U	0.00023 U	0.00031 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.002 U	0.00066 U	0.00064 U	0.0018 U	0.0032 U	0.002 U	0.0022 U	0.0027 U	0.0016 U	0.0019 U	0.0055 U	0.0022 U	0.002 U	0.0015 U	0.002 U
Ethylbenzene	7800	10	130000	48	15	0.00031 U	0.0001 U	0.00009 U	0.00028 U	0.0005 U	0.00032 U	0.00034 U	0.00042 U	0.00026 U	0.00029 U	0.00084 U	0.00035 U	0.0003 U	0.00023 U	0.00031 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00024 U	0.00007 U	0.00007 U	0.00021 U	0.00038 U	0.00024 U	0.00026 U	0.001 J	0.0002 U	0.00022 U	0.00065 U	0.00027 U	0.00024 U	0.00018 U	0.00024 U
Methyl acetate	78000	NA	NA	NA	22	0.0021 U	0.00068 U	0.00066 U	0.0019 U	0.0033 U	0.0021 U	0.0023 U	0.0028 U	0.0017 U	0.0019 U	0.0057 U	0.0023 U	0.002 U	0.0016 U	0.0021 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.0013 U	0.00043 U	0.00042 U	0.0012 U	0.0021 U	0.0014 U	0.0014 U	0.0018 U	0.0011 U	0.0012 U	0.0036 U	0.0015 U	0.0013 U	0.00099 U	0.0013 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00044 U	0.00014 U	0.00014 U	0.0004 U	0.00071 U	0.00045 U	0.00048 U	0.0006 U	0.00036 U	0.00041 U	0.0012 U	0.00049 U	0.00044 U	0.00033 U	0.00044 U
Methylene chloride	50	1400	260	NA	0.013	0.005 U	0.0016 U	0.0016 U	0.0045 U	0.008 U	0.0052 U	0.0054 U	0.0068 U	0.0041 U	0.0047 U	0.014 U	0.0056 U	0.005 U	0.0038 U	0.005 U
Styrene	16000	NA	260000	NA	2.1	0.00043 U	0.00014 U	0.00014 U	0.00038 U	0.00069 U	0.00044 U	0.00047 U	0.00058 U	0.00035 U	0.0004 U	0.0012 U	0.00048 U	0.00042 U	0.00032 U	0.00043 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00043 U	0.00014 U	0.00014 U	0.00038 U	0.00069 U	0.00044 U	0.00047 U	0.00058 U	0.00035 U	0.0004 U	0.0012 U	0.00048 U	0.00042 U	0.00032 U	0.00043 U
Toluene	6300	NA	100000	NA	7.8	0.0012 U	0.00039 U	0.00038 U	0.0011 U	0.0019 U	0.0012 U	0.0013 U	0.0016 U	0.00098 U	0.0011 U	0.0032 U	0.0013 U	0.0012 U	0.00089 U	0.0012 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.0003 U	0.00009 U	0.00009 U	0.00027 U	0.00048 U	0.00031 U	0.00033 U	0.00041 U	0.00025 U	0.00028 U	0.00082 U	0.00034 U	0.0003 U	0.00022 U	0.0003 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.0006 U	0.0002 U	0.00019 U	0.00054 U	0.00096 U	0.00061 U	0.00065 U	0.00081 U	0.00049 U	0.00056 U	0.0016 U	0.00067 U	0.00059 U	0.00045 U	0.0006 U
Trichloroethene	15	3	79	14	0.0065	0.0003 U	0.00009 U	0.00009 U	0.00027 U	0.00048 U	0.00031 U	0.00033 U	0.00041 U	0.00025 U	0.00028 U	0.00082 U	0.00034 U	0.0003 U	0.00022 U	0.0003 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.0015 U	0.00056 J	0.00048 U	0.0014 U	0.0024 U	0.0016 U	0.0016 U	0.0021 U	0.0012 U	0.0014 U	0.0042 U	0.0017 U	0.0015 U	0.0011 U	0.0015 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.0015 U	0.0005 U	0.00048 U	0.0014 U	0.0024 U	0.0016 U	0.0016 U	0.0021 U	0.0012 U	0.0014 U	0.0041 U	0.0017 U	0.0015 U	0.0011 U	0.0015 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00074 U	0.00024 U	0.00023 U	0.00066 U	0.0012 U	0.00075 U	0.0008 U	0.001 U	0.0006 U	0.00068 U	0.002 U	0.00082 U	0.00072 U	0.00055 U	0.00074 U
Xylene (total)	12000	NA	190000	NA	19	0.00064 U	0.00021 U	0.0002 U	0.00057 U	0.001 U	0.00066 U	0.00069 U	0.00087 U	0.00053 U	0.0006 U	0.0017 U	0.00072 U	0.00063 U	0.00048 U	0.00064 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.12	0.07476	0.0396	0.0688	0.224	0.145	0.213	0.236	0.0535	0.085	0.299	0.162	0.098	0.0454	0.0564

ABBREVIATIONS:
J: Result is less than the reporting limit but greater than the method detection limit.
mg/Kg: milligram per killogram.
U: Not detected; number is the method detection limit.
- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.

TABLE 5
SUMMARY OF RAW SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Composite Group/Discrete Location Location Name Sample Name Sample Date Sample Type Lab Sample ID Sample Depth (bgs)	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Raritan Bay													
						DEP-7 DEP-7 DEP-7-D0-15E 10/22/2018 Primary L1843140-11 0 - 15 (ft)	DEP-7 DEP-7 DEP-7-D15-20E 10/22/2018 Primary L1843140-12 15 - 20 (ft)	VC-235 VC-235 VC-235-D0-13.7E 10/22/2018 Primary L1843140-09 0 - 15.3 (ft)	VC-235 VC-235 VC-235-D13.7-24E 10/22/2018 Primary L1843140-10 15.3 - 24 (ft)	COMP-O (0-2) VC-237 VC-237-D0-3E 10/22/2018 Primary L1843140-17 0 - 3 (ft)	COMP-O (0-2) VC-237A VC-237A-D0-4E 10/22/2018 Primary L1843140-21 0 - 4.3 (ft)	COMP-O (0-2) VC-237B VC-237B-D0-2E 10/22/2018 Primary L1843140-19 0 - 2 (ft)	COMP-O (2-25) VC-237 VC-237-D3-25E 10/22/2018 Primary L1843140-18 3 - 25 (ft)	COMP-O (2-25) VC-237A VC-237A-D4-25E 10/22/2018 Primary L1843140-22 4.3 - 25 (ft)	COMP-O (2-25) VC-237B VC-237B-D2-25E 10/22/2018 Primary L1843140-20 2 - 25 (ft)	VC-238 VC-238 VC-238-D0-28E 10/23/2018 Primary L1843140-28 0 - 28 (ft)	COMP-P VC-239 VC-239-D0-23E 10/23/2018 Primary L1843140-26 0 - 23 (ft)	COMP-P VC-240 VC-240-D0-16E 10/23/2018 Primary L1843140-25 0 - 16 (ft)	COMP-P VC-242 VC-242-D0-9E 10/23/2018 Primary L1843140-24 0 - 9 (ft)
Volatile Organic Compounds (mg/kg)																			
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00037 U	0.00028 U	0.00037 U	0.00031 U	0.00034 U	0.00048 U	0.00042 U	0.00034 U	0.0003 U	0.00039 U	0.00035 U	0.00027 U	0.00032 U	0.00033 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00037 U	0.00028 U	0.00036 U	0.00031 U	0.00034 U	0.00047 U	0.00042 U	0.00034 U	0.0003 U	0.00039 U	0.00035 U	0.00027 U	0.00032 U	0.00033 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00059 U	0.00044 U	0.00059 U	0.00049 U	0.00055 U	0.00076 U	0.00068 U	0.00055 U	0.00048 U	0.00063 U	0.00056 U	0.00043 U	0.00052 U	0.00053 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00032 U	0.00024 U	0.00032 U	0.00027 U	0.0003 U	0.00041 U	0.00037 U	0.0003 U	0.00026 U	0.00034 U	0.0003 U	0.00023 U	0.00028 U	0.00029 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00053 U	0.0004 U	0.00052 U	0.00044 U	0.00049 U	0.00068 U	0.0006 U	0.00049 U	0.00043 U	0.00056 U	0.0005 U	0.00038 U	0.00046 U	0.00048 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00072 U	0.00054 U	0.00071 U	0.0006 U	0.00066 U	0.00092 U	0.00082 U	0.00066 U	0.00058 U	0.00076 U	0.00068 U	0.00052 U	0.00062 U	0.00064 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.0006 U	0.00045 U	0.0006 U	0.0005 U	0.00056 U	0.00078 U	0.00069 U	0.00056 U	0.00049 U	0.00064 U	0.00057 U	0.00044 U	0.00053 U	0.00054 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0022 U	0.0017 U	0.0022 U	0.0018 U	0.0021 U	0.0028 U	0.0025 U	0.0021 U	0.0018 U	0.0023 U	0.0021 U	0.0016 U	0.0019 U	0.002 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00062 U	0.00046 U	0.00061 U	0.00052 U	0.00058 U	0.0008 U	0.00071 U	0.00058 U	0.00051 U	0.00066 U	0.00059 U	0.00045 U	0.00054 U	0.00056 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00032 U	0.00024 U	0.00032 U	0.00027 U	0.0003 U	0.00041 U	0.00036 U	0.0003 U	0.00026 U	0.00034 U	0.0003 U	0.00023 U	0.00028 U	0.00029 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00057 U	0.00043 U	0.00056 U	0.00048 U	0.00053 U	0.00073 U	0.00065 U	0.00053 U	0.00047 U	0.0006 U	0.00054 U	0.00041 U	0.0005 U	0.00051 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00028 U	0.00021 U	0.00027 U	0.00023 U	0.00026 U	0.00036 U	0.00032 U	0.00026 U	0.00023 U	0.00029 U	0.00026 U	0.0002 U	0.00024 U	0.00025 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00033 U	0.00025 U	0.00032 U	0.00027 U	0.0003 U	0.00042 U	0.00037 U	0.0003 U	0.00027 U	0.00035 U	0.00031 U	0.00024 U	0.00029 U	0.0003 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00038 U	0.00028 U	0.00038 U	0.00032 U	0.00035 U	0.00049 U	0.00043 U	0.00035 U	0.00031 U	0.0004 U	0.00036 U	0.00027 U	0.00033 U	0.00034 U
1,4-Dioxane	7	45	36	210	0.067	0.078 U	0.058 U	0.077 U	0.065 U	0.072 U	0.1 U	0.089 U	0.072 U	0.064 U	0.083 U	0.074 U	0.056 U	0.068 U	0.07 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.024	0.0083 J	0.03	0.0071 J	0.011 J	0.0096 J	0.0056 U	0.0046 U	0.004 U	0.0052 U	0.0047 U	0.0038 J	0.0097 J	0.0044 U
2-Hexanone	390	1000	6500	NA	0.15	0.0026 U	0.002 U	0.0026 U	0.0022 U	0.0024 U	0.0034 U	0.003 U	0.0024 U	0.0021 U	0.0028 U	0.0025 U	0.0019 U	0.0023 U	0.0024 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0028 U	0.0021 U	0.0028 U	0.0024 U	0.0026 U	0.0036 U	0.0032 U	0.0026 U	0.0023 U	0.003 U	0.0027 U	0.002 U	0.0025 U	0.0026 U
Acetone	70000	NA	NA	NA	19	0.13	0.058	0.16	0.047	0.095	0.082	0.041	0.052	0.03	0.054	0.042	0.045	0.068	0.035
Benzene	3	2.2	16	11	0.0094	0.00037 U	0.00028 U	0.00036 U	0.00031 U	0.00034 U	0.00047 U	0.00042 U	0.00034 U	0.0003 U	0.00039 U	0.00035 U	0.00027 U	0.00032 U	0.00033 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00024 U	0.00018 U	0.00024 U	0.0002 U	0.00022 U	0.00031 U	0.00028 U	0.00022 U	0.0002 U	0.00026 U	0.00023 U	0.00017 U	0.00021 U	0.00022 U
Bromoform	88	NA	460	NA	0.018	0.00055 U	0.00041 U	0.00054 U	0.00046 U	0.00051 U	0.0007 U	0.00062 U	0.00051 U	0.00045 U	0.00058 U	0.00052 U	0.00039 U	0.00048 U	0.00049 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.0013 U	0.00097 U	0.0013 U	0.0011 U	0.0012 U	0.0016 U	0.0015 U	0.0012 U	0.001 U	0.0014 U	0.0012 U	0.00093 U	0.0011 U	0.0012 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.01 U	0.0076 U	0.017 J	0.0084 U	0.027	0.014 J	0.012 U	0.013 J	0.0083 U	0.014 J	0.015 J	0.0092 J	0.012 J	0.0091 U
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00051 U	0.00038 U	0.0005 U	0.00042 U	0.00048 U	0.00066 U	0.00058 U	0.00048 U	0.00042 U	0.00054 U	0.00048 U	0.00037 U	0.00045 U	0.00046 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00028 U	0.00021 U	0.00028 U	0.00024 U	0.00026 U	0.00036 U	0.00032 U	0.00026 U	0.00023 U	0.0003 U	0.00027 U	0.0002 U	0.00025 U	0.00025 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00046 U	0.00034 U	0.00045 U	0.00038 U	0.00042 U	0.00058 U	0.00052 U	0.00042 U	0.00037 U	0.00048 U	0.00043 U	0.00033 U	0.0004 U	0.00041 U
Chloroethane	NA	NA	NA	NA	NA	0.001 U	0.00075 U	0.00099 U	0.00084 U	0.00093 U	0.0013 U	0.0011 U	0.00093 U	0.00082 U	0.0011 U	0.00095 U	0.00072 U	0.00088 U	0.0009 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00031 U	0.00023 U	0.00031 U	0.00026 U	0.00029 U	0.0004 U	0.00035 U	0.00029 U	0.00025 U	0.00033 U	0.00029 U	0.00022 U	0.00027 U	0.00028 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.0021 U	0.0016 U	0.002 U	0.0017 U	0.0019 U	0.0027 U	0.0024 U	0.0019 U	0.0017 U	0.0022 U	0.002 U	0.0015 U	0.0018 U	0.0019 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00039 U	0.00029 U	0.00038 U	0.00032 U	0.00036 U	0.0005 U	0.00044 U	0.00036 U	0.00032 U	0.00041 U	0.00037 U	0.00028 U	0.00034 U	0.00035 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00035 U	0.00026 U	0.00035 U	0.00029 U	0.00033 U	0.00045 U	0.0004 U	0.00033 U	0.00029 U	0.00037 U	0.00033 U	0.00025 U	0.00031 U	0.00032 U
Cyclohexane	NA	NA	NA	NA	NA	0.0012 U	0.0009 U	0.0012 U	0.001 U	0.0011 U	0.0016 U	0.0014 U	0.0011 U	0.00099 U	0.0013 U	0.0011 U	0.00087 U	0.001 U	0.0011 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00031 U	0.00023 U	0.00031 U	0.00026 U	0.00029 U	0.0004 U	0.00035 U	0.00029 U	0.00025 U	0.00033 U	0.00029 U	0.00022 U	0.00027 U	0.00028 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.002 U	0.0015 U	0.002 U	0.0017 U	0.0019 U	0.0026 U	0.0023 U	0.0019 U	0.0017 U	0.0022 U	0.0019 U	0.0015 U	0.0018 U	0.0018 U
Ethylbenzene	7800	10	130000	48	15	0.00031 U	0.00023 U	0.00031 U	0.00026 U	0.00029 U	0.0004 U	0.00036 U	0.00029 U	0.00026 U	0.00033 U	0.0003 U	0.00023 U	0.00027 U	0.00028 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00024 U	0.00018 U	0.00024 U	0.0002 U	0.00022 U	0.00031 U	0.00028 U	0.00022 U	0.0002 U	0.00026 U	0.00023 U	0.00017 U	0.00021 U	0.00022 U
Methyl acetate	78000	NA	NA	NA	22	0.0021 U	0.0016 U	0.0021 U	0.0018 U	0.002 U	0.0027 U	0.0024 U	0.002 U	0.0017 U	0.0022 U	0.002 U	0.0015 U	0.0018 U	0.0019 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.0013 U	0.001 U	0.0013 U	0.0011 U	0.0012 U	0.0017 U	0.0015 U	0.0012 U	0.0011 U	0.0014 U	0.0013 U	0.00097 U	0.0012 U	0.0012 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00045 U	0.00033 U	0.00044 U	0.00037 U	0.00042 U	0.00057 U	0.00051 U	0.00042 U	0.00036 U	0.00047 U	0.00042 U	0.00032 U	0.00039 U	0.0004 U
Methylene chloride	50	1400	260	NA	0.013	0.0051 U	0.0038 U	0.005 U	0.0042 U	0.0047 U	0.0065 U	0.0058 U	0.0047 U	0.0042 U	0.0054 U	0.0048 U	0.0037 U	0.0044 U	0.0046 U
Styrene	16000	NA	260000	NA	2.1	0.00044 U	0.00033 U	0.00043 U	0.00036 U	0.0004 U	0.00056 U	0.0005 U	0.0004 U	0.00036 U	0.00046 U	0.00041 U	0.00031 U	0.00038 U	0.00039 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00044 U	0.00033 U	0.00043 U	0.00036 U	0.0004 U	0.00056 U	0.0005 U	0.0004 U	0.00036 U	0.00046 U	0.00041 U	0.00031 U	0.00038 U	0.00039 U
Toluene	6300	NA	100000	NA	7.8	0.0012 U	0.0009 U	0.0012 U	0.001 U	0.0011 U	0.0016 U	0.0014 U	0.0011 U	0.00099 U	0.0013 U	0.0011 U	0.00087 U	0.001 U	0.0011 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.0003 U	0.00023 U	0.0003 U	0.00025 U	0.00028 U	0.00039 U	0.00035 U	0.00028 U	0.00025 U	0.00032 U	0.00029 U	0.00022 U	0.00026 U	0.00027 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00061 U	0.00045 U	0.0006 U	0.0005 U	0.00056 U	0.00078 U	0.00069 U	0.00056 U	0.0005 U	0.00064 U	0.00057 U	0.00044 U	0.00053 U	0.00054 U
Trichloroethene	15	3	79	14	0.0065	0.0003 U	0.00023 U	0.0003 U	0.00025 U	0.00028 U	0.00039 U	0.00035 U	0.00028 U	0.00025 U	0.00032 U	0.00029 U	0.00022 U	0.00026 U	0.00027 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.0015 U	0.0012 U	0.0015 U	0.0013 U	0.0014 U	0.002 U	0.0018 U	0.0014 U	0.0013 U	0.0016 U	0.0015 U	0.0011 U	0.0013 U	0.0014 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.0015 U	0.0012 U	0.0015 U	0.0013 U	0.0014 U	0.002 U	0.0018 U	0.0014 U	0.0013 U	0.0016 U	0.0014 U	0.0011 U	0.0013 U	0.0014 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00074 U	0.00056 U	0.00074 U	0.00062 U	0.00069 U	0.00096 U	0.00085 U	0.00069 U	0.00061 U	0.00079 U	0.0007 U	0.00054 U	0.00065 U	0.00067 U
Xylene (total)	12000	NA	190000	NA	19	0.00065 U	0.00048 U	0.00064 U	0.00054 U	0.0006 U	0.00083 U	0.00074 U	0.0006 U	0.00053 U	0.00068 U	0.00061 U	0.00047 U	0.00056 U	0.00058 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.154	0.0663	0.207	0.0541	0.133	0.1056	0.041	0.065	0.03	0.068	0.057	0.058	0.0897	0.035

ABBREVIATIONS:

J: Result is less than the reporting limit but greater than the method detection limit.

mg/Kg: milligram per killogram.

U: Not detected; number is the method detection limit.

- Detected values are bold.

- Shaded values exceed the listed New Jersey criteria.

TABLE 5
SUMMARY OF RAW SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Composite Group/Discrete Location	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Raritan-Chapel											Chapel Hill			
Location Name						COMP-Q	COMP-Q	COMP-Q	VC-244	VC-245	VC-246	COMP-R	COMP-R	COMP-R	VC-247	VC-247	VC-318	VC-318	VC-320	VC-321
Sample Name						VC-315	VC-316	VC-317	VC-244	VC-245	VC-246	VC-244	VC-245	VC-246	VC-247	VC-247	VC-318	VC-318	VC-320	VC-321
Sample Date						VC-315-D0-10.5E	VC-316-D0-10.5E	VC-317-D0-10.5E	VC-244-D0-4E	VC-245-D0-4E	VC-246-D0-4E	VC-244-D4-10.5E	VC-245-D4-10.5E	VC-246-D4-10.5E	VC-247-D0-4E	VC-247-D4-21.5E	VC-318-D0-3.5E	VC-318-D3.5-21.5E	VC-320-D0-19E	VC-321-D0-20.5E
Sample Type						10/29/2018	10/29/2018	10/29/2018	10/26/2018	10/26/2018	10/26/2018	10/26/2018	10/26/2018	10/26/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844234-38 0 - 10.5 (ft)	L1844234-39 0 - 10.5 (ft)	L1844234-40 0 - 10.5 (ft)	L1844234-08 0 - 5 (ft)	L1844234-06 0 - 4.9 (ft)	L1844234-04 0 - 4.8 (ft)	L1844234-09 5 - 10.5 (ft)	L1844234-07 4.9 - 10.5 (ft)	L1844234-05 4.8 - 10.5 (ft)	L1843846-08 0 - 4.7 (ft)	L1843846-09 4.7 - 21.5 (ft)	L1843846-10 0 - 3.7 (ft)	L1843846-11 3.7 - 21.5 (ft)	L1843846-12 0 - 19 (ft)	L1843846-13 0 - 20.5 (ft)
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00017 U	0.00017 U	0.00018 U	0.00017 U	0.00018 U	0.00028 U	0.00011 U	0.00016 U	0.00015 U	0.00022 U	0.0002 U	0.0003 U	0.00012 U	0.00013 U	0.00018 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00017 U	0.00017 U	0.00018 U	0.00017 U	0.00018 U	0.00028 U	0.00011 U	0.00016 U	0.00015 U	0.00022 U	0.0002 U	0.0003 U	0.00012 U	0.00013 U	0.00018 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00027 U	0.00028 U	0.00029 U	0.00028 U	0.00028 U	0.00045 U	0.00018 U	0.00026 U	0.00024 U	0.00035 U	0.00033 U	0.00048 U	0.0002 U	0.00021 U	0.00028 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00015 U	0.00015 U	0.00016 U	0.00015 U	0.00015 U	0.00024 U	0.00009 U	0.00014 U	0.00013 U	0.00019 U	0.00018 U	0.00026 U	0.00011 U	0.00011 U	0.00015 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00024 U	0.00025 U	0.00026 U	0.00024 U	0.00025 U	0.0004 U	0.00016 U	0.00023 U	0.00022 U	0.00031 U	0.00029 U	0.00043 U	0.00018 U	0.00019 U	0.00025 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00033 U	0.00033 U	0.00034 U	0.00033 U	0.00034 U	0.00054 U	0.00022 U	0.00032 U	0.00029 U	0.00042 U	0.00039 U	0.00058 U	0.00024 U	0.00025 U	0.00034 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.00028 U	0.00028 U	0.00029 U	0.00028 U	0.00029 U	0.00046 U	0.00018 U	0.00027 U	0.00025 U	0.00035 U	0.00033 U	0.00049 U	0.0002 U	0.00021 U	0.00029 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.001 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.0017 U	0.00068 U	0.00098 U	0.00091 U	0.0013 U	0.0012 U	0.0018 U	0.00074 U	0.00079 U	0.0011 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00028 U	0.00029 U	0.0003 U	0.00029 U	0.0003 U	0.00047 U	0.00019 U	0.00027 U	0.00025 U	0.00036 U	0.00034 U	0.0005 U	0.00021 U	0.00022 U	0.0003 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00014 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00024 U	0.00009 U	0.00014 U	0.00013 U	0.00019 U	0.00018 U	0.00026 U	0.00011 U	0.00011 U	0.00015 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00026 U	0.00027 U	0.00028 U	0.00026 U	0.00027 U	0.00043 U	0.00017 U	0.00025 U	0.00023 U	0.00033 U	0.00031 U	0.00046 U	0.00019 U	0.0002 U	0.00027 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00021 U	0.00008 U	0.00012 U	0.00011 U	0.00016 U	0.00015 U	0.00023 U	0.00009 U	0.00009 U	0.00013 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00015 U	0.00015 U	0.00016 U	0.00015 U	0.00016 U	0.00025 U	0.0001 U	0.00014 U	0.00014 U	0.00019 U	0.00018 U	0.00027 U	0.00011 U	0.00012 U	0.00016 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00017 U	0.00018 U	0.00018 U	0.00018 U	0.00018 U	0.00029 U	0.00012 U	0.00017 U	0.00016 U	0.00022 U	0.00021 U	0.00031 U	0.00013 U	0.00013 U	0.00018 U
1,4-Dioxane	7	45	36	210	0.067	0.036 U	0.036 U	0.038 U	0.036 U	0.037 U	0.059 U	0.024 U	0.034 U	0.032 U	0.046 U	0.043 U	0.064 U	0.026 U	0.028 U	0.037 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.0022 U	0.0023 U	0.0024 U	0.0023 U	0.0024 U	0.0038 U	0.0015 U	0.0022 U	0.002 U	0.0029 U	0.0027 U	0.004 U	0.0016 U	0.0018 U	0.0024 U
2-Hexanone	390	1000	6500	NA	0.15	0.0012 U	0.0012 U	0.0013 U	0.0012 U	0.0012 U	0.002 U	0.0008 U	0.0012 U	0.0011 U	0.0015 U	0.0014 U	0.0021 U	0.00088 U	0.00093 U	0.0012 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0013 U	0.0013 U	0.0014 U	0.0013 U	0.0014 U	0.0022 U	0.00087 U	0.0012 U	0.0012 U	0.0017 U	0.0016 U	0.0023 U	0.00095 U	0.001 U	0.0014 U
Acetone	70000	NA	NA	NA	19	0.016	0.014	0.02	0.017	0.019	0.034	0.0094	0.0049 J	0.012	0.04	0.0059 U	0.048	0.013	0.004 J	0.024
Benzene	3	2.2	16	11	0.0094	0.00017 U	0.00017 U	0.00018 U	0.00017 U	0.00018 U	0.00028 U	0.00011 U	0.00016 U	0.00015 U	0.00022 U	0.0002 U	0.0003 U	0.00012 U	0.00013 U	0.00018 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00011 U	0.00011 U	0.00012 U	0.00011 U	0.00012 U	0.00018 U	0.00007 U	0.00011 U	0.00009 U	0.00014 U	0.00013 U	0.0002 U	0.00008 U	0.00008 U	0.00012 U
Bromoform	88	NA	460	NA	0.018	0.00025 U	0.00026 U	0.00026 U	0.00025 U	0.00026 U	0.00042 U	0.00017 U	0.00024 U	0.00022 U	0.00032 U	0.0003 U	0.00044 U	0.00018 U	0.00019 U	0.00026 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.00059 U	0.0006 U	0.00062 U	0.0006 U	0.00062 U	0.00098 U	0.00039 U	0.00057 U	0.00053 U	0.00076 U	0.00071 U	0.001 U	0.00043 U	0.00046 U	0.00062 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.0046 U	0.0047 U	0.0051 J	0.0047 U	0.0048 U	0.008 J	0.0031 U	0.0045 U	0.0042 U	0.0074 J	0.0056 U	0.016 J	0.0034 U	0.0038 J	0.0048 J
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00023 U	0.00024 U	0.00025 U	0.00024 U	0.00024 U	0.00039 U	0.00016 U	0.00022 U	0.00021 U	0.0003 U	0.00028 U	0.00042 U	0.00017 U	0.00018 U	0.00024 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00013 U	0.00013 U	0.00014 U	0.00013 U	0.00013 U	0.00021 U	0.00008 U	0.00012 U	0.00012 U	0.00016 U	0.00016 U	0.00023 U	0.00009 U	0.0001 U	0.00014 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00021 U	0.00021 U	0.00022 U	0.00021 U	0.00022 U	0.00035 U	0.00014 U	0.0002 U	0.00019 U	0.00027 U	0.00025 U	0.00037 U	0.00015 U	0.00016 U	0.00022 U
Chloroethane	NA	NA	NA	NA	NA	0.00046 U	0.00047 U	0.00048 U	0.00046 U	0.00048 U	0.00076 U	0.00031 U	0.00044 U	0.00041 U	0.00059 U	0.00055 U	0.00082 U	0.00034 U	0.00036 U	0.00048 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00014 U	0.00014 U	0.00015 U	0.00014 U	0.00015 U	0.00024 U	0.00009 U	0.00014 U	0.00013 U	0.00018 U	0.00017 U	0.00025 U	0.0001 U	0.00011 U	0.00015 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.00094 U	0.00097 U	0.001 U	0.00096 U	0.00099 U	0.0016 U	0.00063 U	0.00092 U	0.00085 U	0.0012 U	0.0011 U	0.0017 U	0.00069 U	0.00073 U	0.00099 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00018 U	0.00018 U	0.00019 U	0.00018 U	0.00018 U	0.0003 U	0.00012 U	0.00017 U	0.00016 U	0.00023 U	0.00021 U	0.00032 U	0.00013 U	0.00014 U	0.00019 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00016 U	0.00016 U	0.00017 U	0.00016 U	0.00017 U	0.00027 U	0.00011 U	0.00016 U	0.00014 U	0.0002 U	0.00019 U	0.00029 U	0.00012 U	0.00012 U	0.00017 U
Cyclohexane	NA	NA	NA	NA	NA	0.00055 U	0.00056 U	0.00058 U	0.00056 U	0.00058 U	0.00092 U	0.00037 U	0.00053 U	0.0005 U	0.00071 U	0.00066 U	0.00098 U	0.0004 U	0.00043 U	0.00058 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00014 U	0.00014 U	0.00015 U	0.00014 U	0.00015 U	0.00024 U	0.00009 U	0.00014 U	0.00013 U	0.00018 U	0.00017 U	0.00025 U	0.0001 U	0.00011 U	0.00015 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.00093 U	0.00095 U	0.00098 U	0.00094 U	0.00097 U	0.0015 U	0.00062 U	0.0009 U	0.00083 U	0.0012 U	0.0011 U	0.0016 U	0.00068 U	0.00072 U	0.00097 U
Ethylbenzene	7800	10	130000	48	15	0.00014 U	0.00015 U	0.00015 U	0.00014 U	0.00015 U	0.00024 U	0.00009 U	0.00014 U	0.00013 U	0.00018 U	0.00017 U	0.00026 U	0.0001 U	0.00011 U	0.00015 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00011 U	0.00011 U	0.00012 U	0.00011 U	0.00012 U	0.00018 U	0.00007 U	0.00011 U	0.00009 U	0.00014 U	0.00013 U	0.0002 U	0.00008 U	0.00008 U	0.00012 U
Methyl acetate	78000	NA	NA	NA	22	0.00096 U	0.00098 U	0.001 U	0.00098 U	0.001 U	0.0016 U	0.00064 U	0.00093 U	0.00087 U	0.0012 U	0.0012 U	0.0017 U	0.0007 U	0.00075 U	0.001 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.00061 U	0.00062 U	0.00065 U	0.00062 U	0.00064 U	0.001 U	0.00041 U	0.00059 U	0.00055 U	0.00078 U	0.00074 U	0.0011 U	0.00045 U	0.00048 U	0.00064 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.0002 U	0.00021 U	0.00022 U	0.00021 U	0.00021 U	0.00034 U	0.00014 U	0.0002 U	0.00018 U	0.00026 U	0.00024 U	0.00036 U	0.00015 U	0.00016 U	0.00021 U
Methylene chloride	50	1400	260	NA	0.013	0.0023 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0039 U	0.0016 U	0.0022 U	0.0021 U	0.003 U	0.0028 U	0.0041 U	0.0017 U	0.0018 U	0.0024 U
Styrene	16000	NA	260000	NA	2.1	0.0002 U	0.0002 U	0.00021 U	0.0002 U	0.00021 U	0.00033 U	0.00013 U	0.00019 U	0.00018 U	0.00025 U	0.00024 U	0.00035 U	0.00014 U	0.00015 U	0.00021 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.0002 U	0.0002 U	0.00021 U	0.0002 U	0.00021 U	0.00033 U	0.00013 U	0.00019 U	0.00018 U	0.00025 U	0.00024 U	0.00035 U	0.00014 U	0.00015 U	0.00021 U
Toluene	6300	NA	100000	NA	7.8	0.00055 U	0.00056 U	0.00058 U	0.00056 U	0.00058 U	0.00092 U	0.00037 U	0.00053 U	0.0005 U	0.0007 U	0.00066 U	0.00098 U	0.0004 U	0.00043 U	0.00058 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00014 U	0.00014 U	0.00015 U	0.00014 U	0.00014 U	0.00023 U	0.00009 U	0.00013 U	0.00012 U	0.00018 U	0.00017 U	0.00025 U	0.0001 U	0.00011 U	0.00014 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00028 U	0.00028 U	0.00029 U	0.00028 U	0.00029 U	0.00046 U	0.00018 U	0.00027 U	0.00025 U	0.00035 U	0.00033 U	0.00049 U	0.0002 U	0.00022 U	0.00029 U
Trichloroethene	15	3	79	14	0.0065	0.00014 U	0.00014 U	0.00015 U	0.00014 U	0.00014 U	0.00023 U	0.00009 U	0.00013 U	0.00012 U	0.00018 U	0.00017 U	0.00025 U	0.0001 U	0.00011 U	0.00014 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.0007 U	0.00072 U	0.00074 U	0.00072 U	0.00074 U	0.0012 U	0.00047 U	0.00068 U	0.00063 U	0.0009 U	0.00085 U	0.0012 U	0.00052 U	0.00055 U	0.00074 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.0007 U	0.00072 U	0.00074 U	0.00071 U	0.00074 U	0.0012 U	0.00047 U	0.00068 U	0.00063 U	0.0009 U	0.00085 U	0.0012 U	0.00051 U	0.00055 U	0.00074 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00034 U	0.00035 U	0.00036 U	0.00034 U	0.00036 U	0.00057 U	0.00023 U	0.00033 U	0.0003 U	0.00044 U	0.00041 U	0.00061 U	0.00025 U	0.00026 U	0.00036 U
Xylene (total)	12000	NA	190000	NA	19	0.00029 U	0.0003 U	0.00031 U	0.0003 U	0.00031 U	0.00049 U	0.0002 U	0.00028 U	0.00026 U	0.00038 U	0.00036 U	0.00053 U	0.00022 U	0.00023 U	0.00031 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.016	0.014	0.0251	0.017	0.019	0.042	0.0094	0.0049	0.012	0.0474	ND	0.064	0.013	0.0078	0.0288

ABBREVIATIONS:
J: Result is less than the reporting limit but greater than the method detection limit.
mg/Kg: milligram per killogram.
U: Not detected; number is the method detection limit.
- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.

TABLE 5
SUMMARY OF RAW SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Composite Group/Discrete Location	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Chapel Hill	Chapel-Ambrose			Ambrose Channel				East of Ambrose	
Location Name						VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-S	COMP-T	COMP-T	VC-255	VC-256
Sample Name						VC-323	VC-251	VC-252	VC-253	VC-326	VC-327	VC-328	VC-329	VC-255	VC-256
Sample Date						VC-323-D0-22E	VC-251-D0-7.5E	VC-252-D0-7.5E	VC-253-D0-7.5E	VC-326-D0-21E	VC-327-D0.0-21.0E	VC-328-D0-22.5E	VC-329-D0-20.9E	VC-255-D0-7.5E	VC-256-D0-7.5E
Sample Type						10/23/2018	10/23/2018	10/26/2018	10/26/2018	10/25/2018	10/25/2018	10/25/2018	10/25/2018	10/26/2018	10/26/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1843846-14	L1843846-15	L1844234-03	L1844234-01	L1843846-02	L1843846-01	L1843846-04	L1843846-03	L1843846-20	L1843846-18
						0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 20.9 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Volatile Organic Compounds (mg/kg)															
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00016 U	0.00012 U	0.00015 U	0.00018 U	0.00015 U	0.00016 U	0.00015 U	0.00016 U	0.00017 U	0.00018 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00016 U	0.00012 U	0.00015 U	0.00018 U	0.00015 U	0.00016 U	0.00015 U	0.00016 U	0.00017 U	0.00017 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00025 U	0.00019 U	0.00024 U	0.0003 U	0.00024 U	0.00025 U	0.00024 U	0.00026 U	0.00027 U	0.00028 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00014 U	0.0001 U	0.00013 U	0.00016 U	0.00013 U	0.00014 U	0.00013 U	0.00014 U	0.00014 U	0.00015 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00023 U	0.00017 U	0.00021 U	0.00026 U	0.00022 U	0.00022 U	0.00021 U	0.00024 U	0.00024 U	0.00025 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00031 U	0.00023 U	0.00028 U	0.00036 U	0.00029 U	0.0003 U	0.00029 U	0.00032 U	0.00032 U	0.00034 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.00026 U	0.00019 U	0.00024 U	0.0003 U	0.00025 U	0.00026 U	0.00024 U	0.00027 U	0.00027 U	0.00028 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.00095 U	0.00071 U	0.00088 U	0.0011 U	0.0009 U	0.00094 U	0.00089 U	0.00099 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00026 U	0.0002 U	0.00025 U	0.00031 U	0.00025 U	0.00026 U	0.00025 U	0.00028 U	0.00028 U	0.00029 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00014 U	0.0001 U	0.00013 U	0.00016 U	0.00013 U	0.00014 U	0.00013 U	0.00014 U	0.00014 U	0.00015 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00024 U	0.00018 U	0.00023 U	0.00028 U	0.00023 U	0.00024 U	0.00023 U	0.00026 U	0.00026 U	0.00027 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00012 U	0.00008 U	0.00011 U	0.00014 U	0.00011 U	0.00012 U	0.00011 U	0.00012 U	0.00012 U	0.00013 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00014 U	0.0001 U	0.00013 U	0.00016 U	0.00013 U	0.00014 U	0.00013 U	0.00015 U	0.00015 U	0.00016 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00016 U	0.00012 U	0.00015 U	0.00019 U	0.00015 U	0.00016 U	0.00015 U	0.00017 U	0.00017 U	0.00018 U
1,4-Dioxane	7	45	36	210	0.067	0.033 U	0.025 U	0.031 U	0.039 U	0.032 U	0.033 U	0.031 U	0.035 U	0.035 U	0.037 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.0021 U	0.0016 U	0.002 U	0.0025 U	0.002 U	0.0021 U	0.002 U	0.0022 U	0.0022 U	0.0023 U
2-Hexanone	390	1000	6500	NA	0.15	0.0011 U	0.00084 U	0.001 U	0.0013 U	0.0011 U	0.0011 U	0.001 U	0.0012 U	0.0012 U	0.0012 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0012 U	0.00091 U	0.0011 U	0.0014 U	0.0012 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0013 U
Acetone	70000	NA	NA	NA	19	0.0091 J	0.017	0.0042 U	0.0058 J	0.029	0.012	0.019	0.0084 J	0.011	0.005 U
Benzene	3	2.2	16	11	0.0094	0.00016 U	0.00012 U	0.00015 U	0.00018 U	0.00015 U	0.00016 U	0.00015 U	0.00016 U	0.00017 U	0.00017 U
Bromodichloromethane	11	NA	59	NA	0.005	0.0001 U	0.00007 U	0.00009 U	0.00012 U	0.00009 U	0.0001 U	0.00009 U	0.00011 U	0.00011 U	0.00011 U
Bromoform	88	NA	460	NA	0.018	0.00023 U	0.00018 U	0.00022 U	0.00027 U	0.00022 U	0.00023 U	0.00022 U	0.00024 U	0.00025 U	0.00026 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.00055 U	0.00041 U	0.051	0.00064 U	0.00052 U	0.00054 U	0.00052 U	0.00058 U	0.00058 U	0.00061 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.0043 U	0.007 J	0.004 U	0.005 U	0.0041 U	0.0043 U	0.0041 U	0.0045 U	0.006 J	0.0048 U
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00022 U	0.00016 U	0.0002 U	0.00026 U	0.00021 U	0.00022 U	0.00021 U	0.00023 U	0.00023 U	0.00024 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00012 U	0.00009 U	0.00049	0.00014 U	0.00011 U	0.00012 U	0.00011 U	0.00013 U	0.00013 U	0.00013 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00019 U	0.00015 U	0.00018 U	0.00023 U	0.00018 U	0.00019 U	0.00018 U	0.0002 U	0.0002 U	0.00022 U
Chloroethane	NA	NA	NA	NA	NA	0.00043 U	0.00032 U	0.0004 U	0.0005 U	0.00041 U	0.00042 U	0.0004 U	0.00045 U	0.00045 U	0.00047 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00013 U	0.0001 U	0.00057 J	0.00016 U	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00015 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.00089 U	0.00066 U	0.016	0.001 U	0.00084 U	0.00088 U	0.00084 U	0.00092 U	0.00093 U	0.00098 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00017 U	0.00012 U	0.00015 U	0.00019 U	0.00016 U	0.00016 U	0.00016 U	0.00017 U	0.00018 U	0.00018 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00015 U	0.00011 U	0.00014 U	0.00018 U	0.00014 U	0.00015 U	0.00014 U	0.00016 U	0.00016 U	0.00017 U
Cyclohexane	NA	NA	NA	NA	NA	0.00052 U	0.00039 U	0.00048 U	0.0006 U	0.00049 U	0.00051 U	0.00049 U	0.00054 U	0.00054 U	0.00057 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00013 U	0.0001 U	0.00012 U	0.00016 U	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00015 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.00087 U	0.00065 U	0.00081 U	0.001 U	0.00083 U	0.00086 U	0.00082 U	0.00091 U	0.00092 U	0.00096 U
Ethylbenzene	7800	10	130000	48	15	0.00013 U	0.0001 U	0.00077 J	0.00016 U	0.00013 U	0.00013 U	0.00013 U	0.00014 U	0.00014 U	0.00015 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.0001 U	0.00007 U	0.00009 U	0.00012 U	0.00009 U	0.0001 U	0.00009 U	0.00011 U	0.00011 U	0.00011 U
Methyl acetate	78000	NA	NA	NA	22	0.0009 U	0.00068 U	0.00084 U	0.001 U	0.00086 U	0.00089 U	0.00085 U	0.00094 U	0.00095 U	0.001 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.00057 U	0.00043 U	0.00053 U	0.00067 U	0.00054 U	0.00057 U	0.00054 U	0.0006 U	0.0006 U	0.00063 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00019 U	0.00014 U	0.0013 J	0.00022 U	0.00018 U	0.00019 U	0.00018 U	0.0002 U	0.0002 U	0.00021 U
Methylene chloride	50	1400	260	NA	0.013	0.0022 U	0.0016 U	0.002 U	0.0025 U	0.0021 U	0.0022 U	0.002 U	0.0023 U	0.0023 U	0.0024 U
Styrene	16000	NA	260000	NA	2.1	0.00019 U	0.00014 U	0.00017 U	0.00022 U	0.00018 U	0.00018 U	0.00018 U	0.00019 U	0.0002 U	0.0002 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00019 U	0.00014 U	0.00017 U	0.00022 U	0.00018 U	0.00018 U	0.00018 U	0.00019 U	0.0002 U	0.0002 U
Toluene	6300	NA	100000	NA	7.8	0.00052 U	0.00039 U	0.0019	0.0006 U	0.00049 U	0.00051 U	0.00049 U	0.00054 U	0.00054 U	0.00057 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00013 U	0.00009 U	0.00012 U	0.00015 U	0.00012 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00014 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00026 U	0.00019 U	0.00024 U	0.0003 U	0.00025 U	0.00026 U	0.00024 U	0.00027 U	0.00027 U	0.00029 U
Trichloroethene	15	3	79	14	0.0065	0.00013 U	0.00009 U	0.00012 U	0.00015 U	0.00012 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00014 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.00066 U	0.0005 U	0.00062 U	0.00077 U	0.00063 U	0.00065 U	0.00062 U	0.00069 U	0.0007 U	0.00073 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.00066 U	0.00049 U	0.00061 U	0.00077 U	0.00063 U	0.00065 U	0.00062 U	0.00069 U	0.00069 U	0.00073 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00032 U	0.00024 U	0.0003 U	0.00037 U	0.0003 U	0.00031 U	0.0003 U	0.00033 U	0.00034 U	0.00035 U
Xylene (total)	12000	NA	190000	NA	19	0.00028 U	0.00021 U	0.0049	0.00032 U	0.00026 U	0.00027 U	0.00026 U	0.00029 U	0.00029 U	0.0003 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.0091	0.024	0.07693	0.0058	0.029	0.012	0.019	0.0084	0.017	ND

ABBREVIATIONS:
J: Result is less than the reporting limit but greater than the method detection limit.
mg/Kg: milligram per killogram.
U: Not detected; number is the method detection limit.
- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	Nearshore					Nearshore-Raritan									
Sample Name						COMP-A	VC-208	VC-211	VC-214	DEP-1	VC-301	VC-303	VC-304	DEP-3	DEP-4	DEP-5	VC-216	VC-217	VC-218	COMP-G
Sample Date						COMP-A-D0-15-A	VC-208-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5E-A	DEP-1-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E-A	COMP-G-D0-7.5E-A
Sample Type						11/21/2018	11/21/2018	11/21/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/14/2018	11/09/2018	11/08/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1847850-03	L1847850-02	L1847850-01	L1846705-09	L1846902-01	L1846902-05	L1846902-06	L1846705-21	L1846902-02	L1846902-03	L1846902-04	L1846705-10	L1846705-11	L1846705-12	L1846705-01
						0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Volatile Organic Compounds (mg/kg)																				
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.0002 U	0.00025 U	0.00017 U	0.00023 U	0.00019 U	0.00018 U	0.00029 U	0.00023 U	0.0002 U	0.00025 U	0.00022 U	0.00025 U	0.00027 U	0.00025 U	0.00028 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.0002 U	0.00025 U	0.00017 U	0.00023 U	0.00019 U	0.00018 U	0.00029 U	0.00023 U	0.0002 U	0.00025 U	0.00022 U	0.00025 U	0.00027 U	0.00025 U	0.00028 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00032 U	0.0004 U	0.00028 U	0.00037 U	0.0003 U	0.00029 U	0.00046 U	0.00037 U	0.00033 U	0.00041 U	0.00035 U	0.0004 U	0.00043 U	0.0004 U	0.00044 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00017 U	0.00022 U	0.00015 U	0.0002 U	0.00016 U	0.00016 U	0.00025 U	0.0002 U	0.00018 U	0.00022 U	0.00019 U	0.00022 U	0.00023 U	0.00022 U	0.00024 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00028 U	0.00036 U	0.00025 U	0.00033 U	0.00027 U	0.00026 U	0.00041 U	0.00033 U	0.00029 U	0.00036 U	0.00031 U	0.00036 U	0.00038 U	0.00036 U	0.00039 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00038 U	0.00049 U	0.00033 U	0.00045 U	0.00036 U	0.00035 U	0.00056 U	0.00044 U	0.0004 U	0.00049 U	0.00042 U	0.00049 U	0.00052 U	0.00049 U	0.00053 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.00032 U	0.00041 U	0.00028 U	0.00038 U	0.00031 U	0.00029 U	0.00047 U	0.00037 U	0.00033 U	0.00041 U	0.00036 U	0.00041 U	0.00044 U	0.00041 U	0.00045 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0012 U	0.0015 U	0.001 U	0.0014 U	0.0011 U	0.0011 U	0.0017 U	0.0014 U	0.0012 U	0.0015 U	0.0013 U	0.0015 U	0.0016 U	0.0015 U	0.0016 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00033 U	0.00042 U	0.00029 U	0.00039 U	0.00032 U	0.0003 U	0.00048 U	0.00038 U	0.00034 U	0.00042 U	0.00037 U	0.00042 U	0.00045 U	0.00042 U	0.00046 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00017 U	0.00022 U	0.00015 U	0.0002 U	0.00016 U	0.00016 U	0.00025 U	0.0002 U	0.00018 U	0.00022 U	0.00019 U	0.00022 U	0.00023 U	0.00022 U	0.00024 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.0003 U	0.00039 U	0.00027 U	0.00036 U	0.00029 U	0.00028 U	0.00045 U	0.00035 U	0.00032 U	0.00039 U	0.00034 U	0.00039 U	0.00041 U	0.00039 U	0.00043 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00015 U	0.00019 U	0.00013 U	0.00017 U	0.00014 U	0.00014 U	0.00022 U	0.00017 U	0.00015 U	0.00019 U	0.00016 U	0.00019 U	0.0002 U	0.00019 U	0.00021 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00018 U	0.00022 U	0.00015 U	0.00021 U	0.00017 U	0.00016 U	0.00026 U	0.0002 U	0.00018 U	0.00022 U	0.0002 U	0.00022 U	0.00024 U	0.00022 U	0.00024 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.0002 U	0.00026 U	0.00018 U	0.00024 U	0.00019 U	0.00018 U	0.0003 U	0.00024 U	0.00021 U	0.00026 U	0.00022 U	0.00026 U	0.00027 U	0.00026 U	0.00028 U
1,4-Dioxane	7	45	36	210	0.067	0.042 U	0.053 U	0.036 U	0.049 U	0.04 U	0.038 U	0.061 U	0.048 U	0.043 U	0.054 U	0.046 U	0.053 U	0.056 U	0.053 U	0.058 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.036 J-	0.054 J-	0.023 J-	0.15 J-	0.028 J-	0.076 J-	0.096 J-	0.13	0.048 J-	0.07 J-	0.084 J-	0.13 J-	0.12 J-	0.13	0.13 J-
2-Hexanone	390	1000	6500	NA	0.15	0.0016 J	0.0031 J	0.0012 U	0.0016 U	0.0013 U	0.0027 J	0.0033 J	0.0016 U	0.0014 U	0.0026 J	0.0029 J	0.0018 U	0.0019 U	0.0018 U	0.002 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0015 U	0.0019 U	0.0013 U	0.0018 U	0.0014 U	0.0014 U	0.0022 U	0.0018 U	0.0016 U	0.002 U	0.0017 U	0.0019 U	0.002 U	0.0019 U	0.0021 U
Acetone	70000	NA	NA	NA	19	0.35	0.43	0.24	1.2	0.34 J-	1.6	1.5 J-	2.1	1.6 J-	1.5 J-	1.9 J-	1.4	1.2 J	1.7 J-	1.1 J
Benzene	3	2.2	16	11	0.0094	0.0002 U	0.00025 U	0.00017 U	0.00023 U	0.00019 U	0.00018 U	0.00029 U	0.00026 J	0.0002 U	0.00025 U	0.00022 U	0.00025 U	0.00027 U	0.00025 U	0.00028 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00013 U	0.00016 U	0.00011 U	0.00015 U	0.00012 U	0.00012 U	0.00019 U	0.00015 U	0.00013 U	0.00017 U	0.00014 U	0.00016 U	0.00018 U	0.00016 U	0.00018 U
Bromoform	88	NA	460	NA	0.018	0.00029 U	0.00037 U	0.00026 U	0.00034 U	0.00028 U	0.00027 U	0.00043 U	0.00034 U	0.0003 U	0.00038 U	0.00032 U	0.00037 U	0.0004 U	0.00037 U	0.00041 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.00069 U	0.00088 U	0.0006 U	0.00081 U	0.00066 U	0.00063 U	0.001 U	0.0008 U	0.00071 U	0.00089 U	0.00077 U	0.00088 U	0.00093 U	0.00088 U	0.00096 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.0054 U	0.022	0.0047 U	0.026 J-	0.0052 U	0.0049 U	0.0079 U	0.0088 J	0.0056 U	0.0069 U	0.006 U	0.0078 J-	0.0095 J-	0.013 J	0.017 J-
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00027 U	0.00035 U	0.00024 U	0.00032 U	0.00026 U	0.00025 U	0.0004 U	0.00032 U	0.00028 U	0.00035 U	0.0003 U	0.00035 U	0.00037 U	0.00035 U	0.00038 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00015 U	0.00019 U	0.00013 U	0.00018 U	0.00014 U	0.00014 U	0.00022 U	0.00017 U	0.00016 U	0.00019 U	0.00017 U	0.00019 U	0.0002 U	0.00019 U	0.00021 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00024 U	0.00031 U	0.00021 U	0.00028 U	0.00023 U	0.00022 U	0.00036 U	0.00028 U	0.00025 U	0.00031 U	0.00027 U	0.00031 U	0.00033 U	0.00031 U	0.00034 U
Chloroethane	NA	NA	NA	NA	NA	0.00054 U	0.00068 U	0.00047 U	0.00063 U	0.00051 U	0.00049 U	0.00079 U	0.00062 U	0.00056 U	0.00069 U	0.0006 U	0.00068 U	0.00073 U	0.00068 U	0.00075 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00017 U	0.00021 U	0.00014 U	0.0002 U	0.00016 U	0.00015 U	0.0003 J-	0.00032 J	0.00017 U	0.00021 U	0.00019 J-	0.00021 U	0.00022 J-	0.00021 U	0.00027 J-
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.0011 U	0.0014 U	0.00097 U	0.0013 U	0.001 U	0.001 U	0.0016 U	0.0013 U	0.0011 U	0.0014 U	0.0012 U	0.0014 U	0.0015 U	0.0014 U	0.0015 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00021 U	0.00026 U	0.00018 U	0.00024 U	0.0002 U	0.00022 J-	0.0003 U	0.00024 U	0.00021 U	0.00027 U	0.00023 U	0.00026 U	0.00033 J-	0.00026 U	0.0012 J-
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00019 U	0.00024 U	0.00016 U	0.00022 U	0.00018 U	0.00017 U	0.00028 U	0.00022 U	0.00019 U	0.00024 U	0.00021 U	0.00024 U	0.00025 U	0.00024 U	0.00026 U
Cyclohexane	NA	NA	NA	NA	NA	0.00064 U	0.00082 U	0.00056 U	0.00076 U	0.00062 U	0.00059 U	0.00095 U	0.00075 U	0.00067 U	0.00083 U	0.00072 U	0.00082 U	0.00087 U	0.00082 U	0.0009 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00017 U	0.00021 U	0.00014 U	0.0002 U	0.00016 U	0.00015 U	0.00024 U	0.00019 U	0.00017 U	0.00021 U	0.00018 U	0.00021 U	0.00022 U	0.00021 U	0.00023 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.0011 U	0.0014 U	0.00095 U	0.0013 U	0.001 U	0.00099 U	0.0016 U	0.0012 U	0.0011 U	0.0014 U	0.0012 U	0.0014 U	0.0015 U	0.0014 U	0.0015 U
Ethylbenzene	7800	10	130000	48	15	0.00017 U	0.00021 U	0.00015 U	0.0002 J	0.00016 U	0.00015 U	0.00024 U	0.00019 U	0.00017 U	0.00022 U	0.00019 U	0.00021 U	0.00023 U	0.00021 U	0.00023 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00013 U	0.00016 U	0.00011 U	0.00015 U	0.00012 U	0.00012 U	0.00019 U	0.00015 U	0.00013 U	0.00017 U	0.00014 U	0.00016 U	0.00018 U	0.00016 U	0.00018 U
Methyl acetate	78000	NA	NA	NA	22	0.0011 U	0.0014 U	0.00098 U	0.0013 U	0.0011 U	0.001 U	0.0016 U	0.0013 U	0.0012 U	0.0014 U	0.0012 U	0.0014 U	0.0015 U	2.2 J-	0.0016 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.00072 U	0.00091 U	0.00062 U	0.00084 U	0.00068 U	0.00065 U	0.001 U	0.00083 U	0.00074 U	0.00092 U	0.0008 U	0.00091 U	0.00097 U	0.00091 U	0.001 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00024 U	0.0003 U	0.00021 U	0.00028 U	0.00023 U	0.00022 U	0.00035 U	0.00028 U	0.00025 U	0.00031 U	0.00026 U	0.0003 U	0.00032 U	0.0003 U	0.00033 U
Methylene chloride	50	1400	260	NA	0.013	0.0027 U	0.0034 U	0.0024 U	0.0032 U	0.0026 U	0.0025 U	0.004 U	0.0046 J	0.0028 U	0.0035 U	0.003 U	0.0035 U	0.0037 U	0.0035 U	0.0038 U
Styrene	16000	NA	260000	NA	2.1	0.00023 U	0.0003 U	0.0002 U	0.00036 J	0.00022 U	0.00021 U	0.00034 U	0.00027 U	0.00024 U	0.0003 U	0.00026 U	0.0003 U	0.00031 U	0.0003 U	0.00032 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00023 U	0.0003 U	0.0002 U	0.00027 U	0.00022 U	0.00021 U	0.00034 U	0.00027 U	0.00024 U	0.0003 U	0.00026 U	0.0003 U	0.00031 U	0.0003 U	0.00032 U
Toluene	6300	NA	100000	NA	7.8	0.00064 U	0.00082 U	0.00056 U	0.00076 U	0.00062 U	0.00059 U	0.00094 U	0.00075 U	0.00067 U	0.00083 U	0.00072 U	0.00082 U	0.00087 U	0.00082 U	0.0009 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00016 U	0.00021 U	0.00014 U	0.00019 U	0.00016 U	0.00015 U	0.00024 U	0.00019 U	0.00017 U	0.00021 U	0.00018 U	0.00021 U	0.00022 U	0.00021 U	0.00023 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00032 U	0.00041 U	0.00028 U	0.00038 U	0.00031 U	0.0003 U	0.00048 U	0.00038 U	0.00034 U	0.00042 U	0.00036 U	0.00041 U	0.00044 U	0.00041 U	0.00045 U
Trichloroethene	15	3	79	14	0.0065	0.00016 U	0.00021 U	0.00014 U	0.00055 J	0.00016 U	0.00042 J	0.0005 J	0.00045 J	0.00017 U	0.00044 J	0.00053 J	0.00049 J	0.00064 J	0.00038 J	0.0015
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.00082 U	0.001 U	0.00072 U	0.00097 U	0.00079 U	0.00075 U	0.0012 U	0.00096 U	0.00085 U	0.0011 U	0.00092 U	0.001 U	0.0011 U	0.001 U	0.0012 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.00082 U	0.001 U	0.00072 U	0.00097 U	0.00079 U	0.00075 U	0.0012 U	0.00095 U	0.00085 U	0.001 U	0.00092 U	0.001 U	0.0011 U	0.001 U	0.0011 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.0004 U	0.0005 U	0.00035 U	0.00047 U	0.00038 U	0.00036 U	0.00058 U	0.00046 U	0.00041 U	0.00051 U	0.00044 U	0.00051 U	0.00054 U	0.00051 U	0.00056 U
Xylene (total)	12000	NA	190000	NA	19	0.00034 U	0.00044 U	0.0003 U	0.0004 U	0.00033 U	0.00031 U	0.00051 U	0.0004 U	0.00036 U	0.00044 U	0.00038 U	0.00044 U	0.00047 U	0.00044 U	0.00048 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.3876	0.5091	0.263	1.37711	0.368	0.07934	1.6001	2.24443	1.648	1.57304	1.98762	1.53829	1.33069	4.04338	1.24997
Semi-Volatile Organic Compounds (mg/kg)																				
1,2,4,5-Tetrachlorobenzene	23	NA	390	NA	NA	0.024 U	0.026 U	0.022 U	0.031 U	0.023 U	0.026 U	0.031 U	0.032 U	0.031 U	0.029 U	0.031 U	0.031 U	0.032 U	0.033 U	0.032 U
2,2'-oxybis(1-Chloropropane)	3100	NA		NA	1.9	0.026 U	0.029 U	0.025 U	0.034 U	0.025 U	0.029 U	0.034 U	0.035 U	0.034 U	0.032 U	0.034 U	0.034 U	0.035 U	0.036 U	0.035 U
2,3,4,6-Tetrachlorophenol	1900	NA	27000	NA	26	0.046 U	0.05 U	0.044 U	0.06 U	0.044 R	0.05 U	0.061 U	0.062 U	0.06 U	0.057 U	0.06 U	0.059 U	0.061 U	0.063 U	0.062 U
2,4,5-Trichlorophenol	6300	NA	91000	NA	68	0.043 U	0.048 U	0.041 U	0.057 U	0.042 R	0.048 U	0.058 U	0.059 U	0.057 U	0.054 U	0.056 U	0.056 U	0.058 U	0.06 U	0.058 U
2,4,6-Trichlorophenol	49	NA	230	NA	0.86	0.043 U	0.047 U	0.041 U	0.057 U	0.042 R	0.047 U	0.057 U	0.058 U	0.056 U	0.053 U	0.056 U	0.056 U	0.058 U	0.059 U	0.058 U
2,4-Dichlorophenol	190	NA	2700	NA	0.19	0.036 U	0.04 U	0.035 U	0.048 U	0.035 R	0.04 U	0.048 U	0.05 U	0.048 U	0.045 U	0.047 U	0.047 U	0.049 U	0.05 U	0.049 U
2,4-Dimethylphenol	1300	NA	18000	NA	2.3	0.072 U	0.079 U	0.069 U	0.095 U	0.07 R	0.08 U	0.096 U	0.098 U	0.094 U	0.09 U	0.094 U	0.093 U	0.097 U	0.1 U	0.097 U
2,4-Dinitrophenol	130	NA	1800	NA	0.33	0.1 U	0.12 U	0.1 U	0.14 U	0.1 R	0.12 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
2,4-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.037 U	0.041 U	0.036 U	0.05 U	0.036 R	0.042 R	0.05 R	0.051 U	0.049 R	0.047 R	0.049 R	0.049 U	0.05 U	0.052 U	0.05 U
2,6-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.03 U	0.033 U	0.028 U	0.039 U	0.029 U	0.033 U	0.04 U	0.041 U	0.039 U	0.037 U	0.039 U	0.039 U	0.04 U	0.041 U	0.04 U
2-Chloronaphthalene	4800	NA	67000	NA	NA	0.021 U	0.024 U	0.02 U	0.028 U	0.021 U	0.024 U	0.029 U	0.029 U	0.028 U	0.027 U	0.028 U	0.028 U	0.029 U	0.03 U	0.029 U
2-Chlorophenol	390	NA	6500	NA	0.76	0.025 U	0.027 U	0.024 U	0.033 U	0.024 R	0.028 U	0.033 U	0.034 U	0.032 U	0.031 U	0.032 U	0.032 U	0.033 U	0.034 U	0.034 U
2-Methylnaphthalene	240	NA	3300	NA	3.1	0.024 U	0.062 J	0.023 U	0.16 J	0.023 U	0.026 U	0.032 U	0.033 U	0.031 U	0.03 U	0.031 U	0.031 U	0.032 U	0.064 J	0.053 J
2-Methylphenol (o-Cresol)	320	NA	4600	NA	0.77	0.035 U	0.039 U	0.034 U	0.046 U	0.034 R	0.039 U	0.046 U	0.048 U	0.046 U	0.044 U	0.046 U	0.046 U	0.047 U	0.048 U	0.047 U
2-Nitroaniline	NA	NA	NA	NA	NA	0.041 U	0.046 U	0.04 U	0.055 U	0.04 U	0.046 U	0.055 U	0.057 U	0.054 U	0.052 U	0.054 U	0.054 U	0.056 U	0.057 U	0.056 U
2-Nitrophenol	NA	NA	NA	NA	NA	0.037 U	0.041 U	0.035 U	0.049 U	0.036 R	0.041 U	0.049 U	0.05 U	0.048 U	0.046 U	0.048 U	0.048 U	0.05 U	0.051 U	0.05 U
3&4-Methylphenol	NA	NA	NA	NA	NA	0.032 U	0.11 J	0.031 U	0.12 J	0.032 U	0.036 U	0.043 U	0.044 U	0.043 U	0.041 U	0.042 U	0.042 U	0.044 U	0.063 J	0.062 J
3,3'-Dichlorobenzidine	1.2	NA	5.7	NA	3.9	0.058 U	0.064 U	0.055 U	0.076 U	0.056 U	0.064 U	0.077 U	0.079 U	0.076 U	0.072 U	0.076 U	0.075 U	0.078 U	0.08 U	0.078 U
3-Nitroaniline	NA	NA	NA	NA	NA	0.042 U	0.047 U	0.041 U	0.056 U	0.041 U	0.047 U	0.057 U	0.058 U	0.056 U	0.053 U	0.056 U	0.055 U	0.057 U	0.059 U	0.057 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	0.11 U	0.12 U	0.1 U	0.14 U	0.1 R	0.12 R	0.14 R	0.15 U	0.14 R	0.14 R	0.14 R	0.14 U	0.15 U	0.15 U	0.15 U

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name						Nearshore					Nearshore-Raritan									
Sample Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	COMP-A	VC-208	VC-211	VC-214	DEP-1	VC-301	VC-303	VC-304	DEP-3	DEP-4	DEP-5	VC-216	VC-217	VC-218	COMP-G
Sample Date						COMP-A-D0-15-A	VC-208-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5E-A	DEP-1-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E-A	COMP-G-D0-7.5E-A
Sample Type						11/21/2018	11/21/2018	11/21/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/14/2018	11/09/2018	11/08/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1847850-03	L1847850-02	L1847850-01	L1846705-09	L1846902-01	L1846902-05	L1846902-06	L1846705-21	L1846902-02	L1846902-03	L1846902-04	L1846705-10	L1846705-11	L1846705-12	L1846705-01
						0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	0.025 U	0.028 U	0.024 U	0.033 U	0.024 U	0.028 U	0.033 U	0.034 U	0.033 U	0.031 U	0.033 U	0.033 U	0.034 U	0.035 U	0.034 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	0.034 U	0.037 U	0.032 U	0.044 U	0.033 R	0.037 U	0.045 U	0.046 U	0.044 U	0.042 U	0.044 U	0.044 U	0.045 U	0.047 U	0.045 U
4-Chloroaniline	2.7	NA	13	NA	0.23	0.026 U	0.051 J	0.025 U	0.034 U	0.025 U	0.029 U	0.035 U	0.036 U	0.034 U	0.032 U	0.034 U	0.034 U	0.035 U	0.036 U	0.035 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	0.019 U	0.021 U	0.018 U	0.025 U	0.018 U	0.021 U	0.025 U	0.026 U	0.025 U	0.024 U	0.025 U	0.025 U	0.026 U	0.026 U	0.026 U
4-Nitroaniline	27	NA	130	NA	NA	0.093 U	0.1 U	0.09 U	0.12 U	0.091 U	0.1 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.13 U
4-Nitrophenol	NA	NA	NA	NA	NA	0.063 U	0.069 U	0.06 U	0.083 U	0.061 R	0.07 U	0.084 U	0.086 R	0.082 U	0.078 U	0.082 U	0.082 U	0.084 U	0.087 U	0.085 U
Acenaphthene	3600	NA	50000	NA	NA	0.019 U	0.063 J	0.018 U	0.038 J	0.018 U	0.021 U	0.025 U	0.026 U	0.025 U	0.024 U	0.025 U	0.024 U	0.025 U	0.026 U	0.025 U
Acenaphthylene	NA	NA	NA	NA	NA	0.025 U	0.071 J	0.024 U	0.1 J	0.025 U	0.028 U	0.034 U	0.034 U	0.033 U	0.032 U	0.033 U	0.033 U	0.034 U	0.15 J	0.11 J
Acetophenone	7800	NA	130000	NA	3.6	0.024 U	0.026 U	0.023 U	0.031 U	0.023 U	0.026 U	0.031 U	0.032 U	0.031 U	0.029 U	0.031 U	0.031 U	0.032 U	0.033 U	0.032 U
Anthracene	18000	NA	250000	NA	NA	0.02 U	0.15	0.019 U	0.15 J	0.02 U	0.022 U	0.027 U	0.027 U	0.026 U	0.025 U	0.026 U	0.026 U	0.027 U	0.13 J	0.095 J
Atrazine	220	NA	3200	NA	0.33	0.079 U	0.087 U	0.076 U	0.1 U	0.077 U	0.088 U	0.1 U	0.11 U	0.1 U	0.099 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U
Benzaldehyde	170	NA	910	NA	NA	0.047 J	0.12 J	0.034 U	0.19 J	0.034 U	0.051 J	0.064 J	0.12 J	0.046 U	0.063 J	0.072 J	0.12 J	0.1 J	0.17 J	0.14 J
Benzo(a)anthracene	5.1	78000	23	370000	0.71	0.025 U	0.32	0.024 U	0.43	0.025 U	0.028 U	0.034 U	0.035 U	0.033 U	0.032 U	0.033 U	0.033 U	0.052 J	0.3	0.22
Benzo(a)pyrene	0.51	3500	2.3	16000	NA	0.055 U	0.3	0.053 U	0.42	0.054 U	0.061 U	0.073 U	0.075 U	0.072 U	0.069 U	0.072 U	0.072 U	0.074 J	0.46	0.32
Benzo(b)fluoranthene	5.1	78000	23	370000	NA	0.019 U	0.4	0.018 U	0.5	0.018 U	0.021 U	0.025 U	0.026 U	0.025 U	0.024 U	0.025 U	0.024 J	0.096	0.55	0.4
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.026 U	0.23	0.025 U	0.34	0.026 U	0.029 U	0.035 U	0.036 U	0.035 U	0.033 U	0.035 U	0.034 U	0.053 J	0.34	0.22 J
Benzo(k)fluoranthene	51	780000	230	NA	NA	0.016 U	0.13	0.015 U	0.16	0.015 U	0.018 U	0.021 U	0.022 U	0.021 U	0.02 U	0.021 U	0.02 U	0.026 J	0.16	0.12
Biphenyl	87	NA	450	NA	NA	0.052 U	0.058 U	0.05 U	0.069 U	0.051 U	0.058 U	0.07 U	0.072 U	0.068 U	0.065 U	0.068 U	0.068 U	0.07 U	0.072 U	0.071 U
bis(2-Chloroethoxy)methane	190	NA	2700	NA	NA	0.021 U	0.024 U	0.02 U	0.028 U	0.021 U	0.024 U	0.028 U	0.029 U	0.028 U	0.027 U	0.028 U	0.028 U	0.029 U	0.03 U	0.029 U
bis(2-Chloroethyl)ether	0.63	NA	3.3	NA	0.33	0.027 U	0.03 U	0.026 U	0.036 U	0.026 U	0.03 U	0.036 U	0.037 U	0.036 U	0.034 U	0.035 U	0.035 U	0.036 U	0.038 U	0.037 U
bis(2-Ethylhexyl)phthalate	39	NA	180	NA	14	0.043 J	2.6	0.022 U	4	0.027 J	0.055 J	0.036 J	0.032 U	0.031 U	0.044 J	0.041 J	0.03 J	0.1 J	0.18 J	0.69
Butyl benzylphthalate	290	NA	1300	NA	29	0.03 U	0.033 U	0.029 U	0.04 U	0.029 U	0.033 U	0.04 U	0.041 U	0.039 U	0.038 U	0.039 U	0.039 U	0.04 U	0.042 U	0.04 U
Caprolactam	32000	290	460000	1300	16	0.048 U	0.053 U	0.046 U	0.064 U	0.047 U	0.054 U	0.064 U	0.066 U	0.063 U	0.06 U	0.063 U	0.063 U	0.065 U	0.067 U	0.065 U
Carbazole	NA	NA	NA	NA	NA	0.014 U	0.016 U	0.014 U	0.038 J	0.014 U	0.016 U	0.019 U	0.02 U	0.019 U	0.018 U	0.019 U	0.019 U	0.019 U	0.02 U	0.034 J
Chrysene	510	NA	2300	NA	NA	0.023 U	0.34	0.022 U	0.54	0.023 U	0.026 U	0.031 U	0.032 U	0.03 U	0.029 U	0.03 U	0.03 U	0.054 J	0.34	0.24
Dibenz(a,h)anthracene	0.51	7800	2.3	37000	NA	0.026 U	0.059 J	0.025 U	0.082 J	0.025 U	0.029 U	0.035 U	0.036 U	0.034 U	0.032 U	0.034 U	0.034 U	0.035 U	0.078 J	0.056 J
Dibenzofuran	NA	NA	NA	NA	NA	0.02 U	0.031 J	0.019 U	0.042 J	0.019 U	0.022 U	0.026 U	0.027 U	0.026 U	0.025 U	0.026 U	0.026 U	0.027 U	0.03 J	0.027 U
Diethyl phthalate	51000	NA	730000	NA	44	0.02 U	0.022 U	0.02 U	0.027 U	0.02 U	0.023 U	0.027 U	0.028 U	0.027 U	0.026 U	0.027 U	0.027 U	0.028 U	0.028 U	0.028 U
Dimethyl phthalate	NA	NA	NA	NA	NA	0.022 U	0.024 U	0.021 U	0.029 U	0.021 U	0.024 U	0.029 U	0.03 U	0.028 U	0.027 U	0.028 U	0.028 U	0.029 U	0.03 U	0.029 U
Di-n-butylphthalate	6300	NA	91000	NA	NA	0.02 U	0.022 U	0.019 U	0.026 U	0.019 U	0.022 U	0.026 U	0.027 U	0.026 U	0.025 U	0.026 U	0.026 U	0.027 U	0.028 U	0.027 U
Di-n-octyl phthalate	630	NA	9100	NA	NA	0.07 U	0.078 U	0.067 U	0.093 U	0.069 U	0.078 U	0.094 U	0.096 U	0.092 U	0.088 U	0.092 U	0.092 U	0.095 U	0.098 U	0.095 U
Fluoranthene	2400	NA	33000	NA	NA	0.026 U	0.76	0.025 U	0.66	0.025 U	0.029 U	0.034 U	0.035 U	0.034 U	0.032 U	0.034 U	0.034 U	0.06 J	0.38	0.29
Fluorene	2400	NA	33000	NA	NA	0.022 U	0.066 J	0.021 U	0.076 J	0.021 U	0.024 U	0.029 U	0.03 U	0.028 U	0.027 U	0.028 U	0.028 U	0.029 U	0.049 J	0.034 J
Hexachlorobenzene	0.43	NA	2.3	NA	0.17	0.022 U	0.024 U	0.021 U	0.028 U	0.021 U	0.024 U	0.029 U	0.029 U	0.028 U	0.027 U	0.028 U	0.028 U	0.029 U	0.03 U	0.029 U
Hexachlorobutadiene	8.9	NA	47	NA	0.17	0.028 U	0.031 U	0.027 U	0.037 U	0.027 U	0.031 U	0.037 U	0.038 U	0.037 U	0.035 U	0.037 U	0.036 U	0.038 U	0.039 U	0.038 U
Hexachlorocyclopentadiene	470	2.7	7800	NA	2.5	0.14 U	0.16 U	0.14 U	0.19 U	0.14 U	0.16 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.18 U	0.19 U	0.2 U	0.19 R
Hexachloroethane	17	NA	91	NA	0.17	0.036 U	0.04 U	0.035 U	0.048 U	0.036 U	0.04 U	0.049 U	0.05 U	0.048 U	0.046 U	0.048 U	0.048 U	0.049 U	0.051 U	0.049 U
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NA	0.031 U	0.2	0.03 U	0.26	0.031 U	0.035 U	0.042 U	0.043 U	0.041 U	0.039 U	0.041 U	0.041 U	0.052 J	0.33	0.22
Isophorone	570	NA	2700	NA	0.23	0.025 U	0.028 U	0.024 U	0.033 U	0.024 U	0.028 U	0.034 U	0.034 U	0.033 U	0.032 U	0.033 U	0.033 U	0.034 U	0.035 U	0.034 U
Naphthalene	2500	5.7	34000	27	19	0.027 U	0.09 J	0.026 U	0.15 J	0.027 U	0.03 U	0.037 U	0.038 U	0.036 U	0.034 U	0.036 U	0.036 U	0.037 U	0.14 J	0.11 J
Nitrobenzene	160	7.5	2600	36	0.17	0.033 U	0.037 U	0.032 U	0.044 U	0.032 U	0.037 U	0.044 U	0.046 U	0.044 U	0.042 U	0.044 U	0.043 U	0.045 U	0.046 U	0.045 U
N-Nitrosodi-n-propylamine	0.17	NA	0.36	NA	0.17	0.019 U	0.021 U	0.018 U	0.025 U	0.018 U	0.021 U	0.025 U	0.026 U	0.025 U	0.024 U	0.025 U	0.024 U	0.025 U	0.026 U	0.025 U
N-Nitrosodiphenylamine	110	NA	520	NA	1.1	0.018 U	0.02 U	0.018 U	0.024 U	0.018 U	0.02 U	0.024 U	0.025 U	0.024 U	0.023 U	0.024 U	0.024 U	0.025 U	0.025 U	0.025 U
Pentachlorophenol	1	NA	4.4	NA	0.33	0.05 U	0.055 U	0.048 U	0.066 U	0.048 R	0.055 U	0.066 U	0.068 U	0.065 U	0.062 U	0.065 U	0.065 U	0.067 U	0.069 U	0.067 U
Phenanthrene	NA	NA	NA	NA	NA	0.016 U	0.21	0.016 U	0.39	0.016 U	0.018 U	0.022 U	0.022 U	0.021 U	0.02 U	0.021 U	0.021 U	0.029 J	0.17 J	0.14 J
Phenol	19000	39000	270000	NA	21	0.027 U	0.047 J-	0.026 U	0.035 U	0.026 R	0.03 U	0.036 U	0.036 U	0.035 U	0.033 U	0.035 U	0.035 U	0.036 U	0.037 U	0.036 U
Pyrene	1800	NA	25000	NA	NA	0.02 U	0.72	0.019 U	0.97	0.019 U	0.022 U	0.026 U	0.027 U	0.026 U	0.024 J	0.026 U	0.032 J	0.089 J	0.56	0.44
SUM of Semi-Volatile Organic Compounds	NA	NA	NA	NA	NA	0.09	7.13	ND	9.816	0.027	0.106	0.1	0.12	ND	0.131	0.113	0.206	0.785	4.644	3.994
Inorganic Compounds (mg/kg)																				
Aluminum	78000	NA	NA	NA	NA	6660	7420	4680	11600	5360	9310	11800	13700	12400	13000	13100	13200	13800	14000	13200
Antimony	31	NA	520	NA	5.4	0.41 U	2.69 J	0.391 U	3.14 J	0.409 U	0.46 U	0.801 J	3.65 J	0.547 U	0.524 U	0.527 U	0.538 U	0.548 U	1.48 J	0.948 J
Arsenic	19	1100	19	5200	19	5.54	40.2	4.87	58.1	5.18	8.49	10.2	11.4	8.88	8.92	10.6	10.5	14.9	42.2	34.5
Barium	16000	870000	260000	NA	2100	42.2	66.3	38.9	86.9	36.5	45.7	60.1	57.6	65.1	60.3	59.5	55.2	62.6	93.6	86.5
Beryllium	160	2000	2600	9300	0.7	0.313 J	0.41 J	0.206 J	0.69 J	0.57	0.484 J	0.621 J	0.545 J	0.676 J	0.703	0.68 J	0.652 J	0.677 J	0.69 J	0.679 J
Cadmium	71	2600	1100	12000	1.9	0.194 J	0.927 J	0.196 J	1.63	0.226 J	0.375 J	0.497 J	0.471 J	0.475 J	0.468 J	0.513 J	0.51 J	0.591 J	0.915 J	0.99 J
Calcium	NA	NA	NA	NA	NA	41200	47600	40400	55500	33100	41500	46700	51700	50600	49000	53100	46200	52100	56700	53300
Chromium	NA	NA	NA	NA	NA	49.5	90.4	47.6	128	46	59.1	68.1	73	67.6	68.5	72.6	68.4	74.6	98.6	102
Chromium VI (Hexavalent)	NA		NA			0.219 U	0.242 U	0.211 U	0.292 U	0.216 U	0.245 U	0.291 U	0.3 U	0.291 U	0.278 J	0.291 U	0.289 U	0.294 U	0.308 U	0.302 U
Cobalt	23	520	390	2500	90	4.18	5.35	3.07	8.5	5.9	6.13	8.03	8.49	8.85	8.78	8.83	8.7	9.05	9.63	9.21
Copper	3100	NA	52000	NA	910	16.6	118	16	203	18	21.2	25.6	26.6	27.7	27.4	28.4	28.3	42.8	136	122
Iron	NA	NA	NA	NA	NA	15500	21800	15100	25700	10300	18300	23400	27300	23100	23500	24700	23100	24100	25000	25400
Lead	400	NA	800	NA	90	11.7	78.1	10.3	117	11.1	12.6	15.5	17.9	20.7	19.1	17.4	19.2	28.1	102	94.6
Magnesium	NA	NA	NA	NA	NA	3720	3740	2730	5860	3060	5330	6860	7120	6580	6570	7170	7050	7510	7290	6940
Manganese	1900	87000	31000	400000	NA	221	224	174	305	180	299	371	411	419	426	431	379	393	394	392
Mercury	23	520000	390	NA	0.1	0.022 U	1.47	0.022 U	2.47	0.018 U	0.02 U	0.024 U	0.025 U	0.025 J	0.025 J	0.025 U	0.075 J	0.294	2.82	1.72
Nickel	1600	20000	26000	93000	48	21	30.1	19	38.8	18.3	24.7	33.6	31.3	34.5	31	32.9	31.5	34.5	41.3	38.2
Potassium	NA	NA	NA	NA	NA	1560	1470	1260	2440	1400	2340	2690	3200	2820	2820	3180	3140	3340	3100	3000
Selenium	390	NA	6500	NA	11	0.292 J	2.28 J	0.371 J	3.73	0.419 J	0.312 U	0.511 J	1.28 J	0.662 J	0.813 J	0.832 J	0.366 U	0.793 J	2.37 J	1.95 J
Silver	390	NA	6500	NA	0.5	0.306 U	1.19 J	0.292 U	2.35	0.304 U	0.342 U	0.391 U	0.417 U	0.407 U	0.39 U	0.392 U	0.401 U	0.408 U	1.32 J	1.56
Sodium	NA	NA	NA	NA	NA	3170	4570	2800	6940	3090	4520	3550	6200	6790	6480	6190	5730	7080	7630	7390
Thallium	NA	NA	NA	NA	NA	0.34 U	0.379 U	0.324 U	0.444 U	0.339 U	0.381 U	0.435 U	0.464 U	0.453 U	0.434 U	0.437 U	0.446 U	0.454 U	0.472 U	0.446 U
Vanadium	390	170000	6500	800000	NA	37.9	57.6	34.9	75.6	37.9	44.4	53.2	57.5	54.3	55.4	57.3	54.5	58.7	64.6	64.1
Zinc	23000	NA	390000	NA	930	44.3	150	39.4	230	43.5	57.1	73.5	79.3	76.1	73.1	77.8	80.2	97.7	197	191

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	Nearshore					Nearshore-Raritan									
Sample Name						COMP-A	VC-208	VC-211	VC-214	DEP-1	VC-301	VC-303	VC-304	DEP-3	DEP-4	DEP-5	VC-216	VC-217	VC-218	COMP-G
Sample Date						COMP-A-D0-15-A	VC-208-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5-A	DEP-1-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E-A	COMP-G-D0-7.5E-A
Sample Type						11/21/2018	11/21/2018	11/21/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/14/2018	11/09/2018	11/08/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1847850-03	L1847850-02	L1847850-01	L1846705-09	L1846902-01	L1846902-05	L1846902-06	L1846705-21	L1846902-02	L1846902-03	L1846902-04	L1846705-10	L1846705-11	L1846705-12	L1846705-01
						0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
PCBs (mg/kg)																				
Aroclor-1016 (PCB-1016)	NA6	NA	NA	NA	NA	0.0117 U	0.0129 U	0.0107 U	0.0145 U	0.01 U	0.0118 U	0.0146 U	0.0145 U	0.0147 U	0.013 U	0.0149 U	0.0143 U	0.0151 U	0.0147 U	0.0156 U
Aroclor-1221 (PCB-1221)	NA6	NA	NA	NA	NA	0.0132 U	0.0145 U	0.0121 U	0.0164 U	0.0113 U	0.0133 U	0.0165 U	0.0163 U	0.0166 U	0.0147 U	0.0168 U	0.0161 U	0.017 U	0.0166 U	0.0176 U
Aroclor-1232 (PCB-1232)	NA6	NA	NA	NA	NA	0.028 U	0.0308 U	0.0256 U	0.0347 U	0.024 U	0.0282 U	0.035 U	0.0346 U	0.035 U	0.031 U	0.0355 U	0.0341 U	0.036 U	0.0351 U	0.0373 U
Aroclor-1242 (PCB-1242)	NA6	NA	NA	NA	NA	0.0178 U	0.0196 U	0.0163 U	0.303	0.0152 U	0.0179 U	0.0222 U	0.022 U	0.0223 U	0.0197 U	0.0226 U	0.0217 U	0.0229 U	0.0223 U	0.0237 U
Aroclor-1248 (PCB-1248)	NA6	NA	NA	NA	NA	0.0198 U	0.334 P	0.0181 U	0.0245 U	0.017 U	0.02 U	0.0247 U	0.0245 U	0.0248 U	0.022 U	0.0251 U	0.0241 U	0.0255 U	0.0248 U	0.0264 U
Aroclor-1254 (PCB-1254)	NA6	NA	NA	NA	NA	0.0144 U	0.25 P	0.0132 U	0.336	0.0124 U	0.0146 U	0.018 U	0.0178 U	0.0181 U	0.016 U	0.0183 U	0.0176 U	0.0186 U	0.0181 U	0.122 J
Aroclor-1260 (PCB-1260)	NA6	NA	NA	NA	NA	0.0244 U	0.0813 J	0.0223 U	0.115 J	0.0209 U	0.0246 U	0.0305 U	0.0301 U	0.0305 U	0.027 U	0.0309 U	0.0297 U	0.0314 U	0.0306 U	0.0359 J
Aroclor-1262 (PCB-1262)	NA6	NA	NA	NA	NA	0.0168 U	0.0184 U	0.0154 U	0.0208 U	0.0144 U	0.0169 U	0.021 U	0.0207 U	0.021 U	0.0186 U	0.0213 U	0.0204 U	0.0216 U	0.021 U	0.0224 U
Aroclor-1268 (PCB-1268)	NA6	NA	NA	NA	NA	0.0137 U	0.015 U	0.0125 U	0.0169 U	0.0117 U	0.0138 U	0.0171 U	0.0169 U	0.0171 U	0.0152 U	0.0173 U	0.0167 U	0.0176 U	0.0171 U	0.0182 U
SUM of PCBs	0.25	NA	1.1	NA	1.6	ND	0.6653[RC]	ND	0.754[RC]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1579
Other																				
Moisture (%)	NA1	NA	NA	NA	NA	26.9	33.9	24.1	45.2	25.8	34.8	45	46.6	45	42.5	45	44.7	45.5	48	47
Total Solids (%)	NA1	NA	NA	NA	NA	73.1	66.1	75.9	54.8	74.2	65.2	55	53.4	55	57.5	55	55.3	54.5	52	53
Oxidation reduction potential (millivolts)	NA1	NA	NA	NA	NA	27	17	12	31	70	61	59	34	74	71	67	37	45	45	40
pH (lab) (pH units)	NA1	NA	NA	NA	NA	12.5	12.4	12.6	12.2	12.6	12.5	12.3	12	12.4	12.3	12.2	11.9	11.9	11.7	12
Pesticides (mg/kg)																				
4,4'-DDD	2.3	NA	11	NA	0.47	0.00212 U	0.00814 P	0.00212 U	0.00854 IP	0.00194 U	0.00221 U	0.00272 U	0.00288 U	0.00269 U	0.00266 U	0.00275 U	0.003 U	0.00299 U	0.00319 UIP	0.00449 JIP
4,4'-DDE	2	NA	11	NA	0.47	0.00137 U	0.0153 IP	0.00138 U	0.00177 U	0.00125 U	0.00144 U	0.00177 U	0.00186 U	0.00174 U	0.00172 U	0.00178 U	0.00195 U	0.00194 U	0.0252	0.00195 U
4,4'-DDT	1.9	NA	9.5	NA	0.67	0.00477 U	0.00567 U	0.00479 U	0.00617 U	0.00436 U	0.00499 U	0.00614 U	0.00649 U	0.00606 U	0.00599 U	0.0062 U	0.00678 U	0.00674 U	0.00719 U	0.00679 U
Aldrin	0.041	NA	0.21	NA	0.13	0.00209 U	0.00248 U	0.0021 U	0.0027 U	0.00191 U	0.00218 U	0.00269 U	0.00284 U	0.00265 U	0.00262 U	0.00271 U	0.00297 U	0.00295 U	0.00315 U	0.00297 U
alpha-BHC	0.086	NA	0.41	NA	0.0023	0.0007 U	0.00083 U	0.0007 U	0.0009 U	0.00064 U	0.00073 U	0.0009 U	0.00095 U	0.00089 U	0.00088 U	0.00091 U	0.00099 U	0.00099 U	0.00106 U	0.001 U
alpha-Chlordane	NS	NA	NA	NA	NA	0.00207 U	0.00246 U	0.00207 U	0.00267 U	0.00189 U	0.00216 U	0.00266 U	0.00281 U	0.00262 U	0.0026 U	0.00268 U	0.00294 U	0.00292 U	0.00312 U	0.00294 U
beta-BHC	0.3	NA	1.4	NA	0.0046	0.00225 U[R]	0.00267 U[R]	0.00226 U[R]	0.00291 U[R]	0.00206 U[R]	0.00235 U[R]	0.0029 U[R]	0.00306 U[R]	0.00286 U[R]	0.00283 U[R]	0.00292 U[R]	0.0032 U[R]	0.00318 U[R]	0.00339 U[R]	0.0032 U[R]
Chlordane	0.27	NA	1.4	NA	1.4	0.0197 U	0.0234 U	0.0197 U	0.0254 U	0.018 U	0.0206 U	0.0253 U	0.0267 U	0.025 U	0.0247 U	0.0255 U	0.0279 U	0.0278 U	0.0296 U	0.028 U
delta-BHC	NS	NA	NA	NA	NA	0.00116 U	0.00138 U	0.00117 U	0.0126	0.00106 U	0.00122 U	0.0015 U	0.00158 U	0.00148 U	0.00146 U	0.00151 U	0.00165 U	0.00164 U	0.00175 U	0.00165 U
Dieldrin	0.034	NA	0.16	NA	0.024	0.00186 U	0.0022 U	0.00186 U	0.0024 U	0.0017 U	0.00194 U	0.00239 U	0.00252 U	0.00236 U	0.00233 U	0.00241 U	0.00263 U	0.00262 U	0.0028 U	0.00264 U
Endosulfan I	470	NA	7800	NA	NA	0.0014 U	0.00166 U	0.00141 U	0.00181 U	0.00128 U	0.00147 U	0.0018 U	0.00191 U	0.00178 U	0.00176 U	0.00182 U	0.00199 U	0.00198 U	0.00211 U	0.002 U
Endosulfan II	470	NA	7800	NA	NA	0.00198 U	0.00236 U	0.00199 U	0.00762 JIP	0.00181 U	0.00207 U	0.00255 U	0.0027 U	0.00252 U	0.00249 U	0.00258 U	0.00282 U	0.0028 U	0.00299 U	0.00282 U
Endosulfan sulfate	NS	NA	NA	NA	NA	0.00118 U	0.0014 U	0.00118 U	0.00152 U	0.00108 U	0.00123 U	0.00152 U	0.0016 U	0.00149 U	0.00148 U	0.00153 U	0.00167 U	0.00166 U	0.00177 U	0.00168 U
Endrin	19	NA	270	NA	1.6	0.00101 U	0.0012 U	0.00102 U	0.00131 U	0.00092 U	0.00106 U	0.0013 U	0.00138 U	0.00129 U	0.00127 U	0.00132 U	0.00144 U	0.00143 U	0.00153 U	0.00144 U
Endrin aldehyde	NS	NA	NA	NA	NA	0.0026 U	0.00308 U	0.0026 U	0.00336 U	0.00237 U	0.00272 U	0.00334 U	0.00353 U	0.0033 U	0.00326 U	0.00337 U	0.00369 U	0.00367 U	0.00391 U	0.0037 U
Endrin ketone	NS	NA	NA	NA	NA	0.00153 U	0.00182 U	0.00153 U	0.00198 U	0.0014 U	0.0016 U	0.00197 U	0.00208 U	0.00194 U	0.00192 U	0.00198 U	0.00217 U	0.00216 U	0.0023 U	0.00218 U
gamma-BHC (Lindane)	0.57	NA	2.8	NA	0.0035	0.0011 U	0.00131 U	0.00111 U	0.00143 U	0.00101 U	0.00116 U	0.00142 U	0.0015 U	0.0014 U	0.00139 U	0.00144 U	0.00157 U	0.00156 U	0.00166 U	0.00157 U
gamma-Chlordane	0.27	NA	1.4	NA	1.4	0.00196 U	0.00233 U	0.00196 U	0.00253 U	0.00179 U	0.00205 U	0.00252 U	0.00266 U	0.00249 U	0.00246 U	0.00254 U	0.00278 U	0.00277 U	0.00295 U	0.00279 U
Heptachlor	0.15	NA	0.81	NA	0.083	0.00133 U	0.00158 U	0.00133 U	0.00172 U	0.00122 U	0.00139 U	0.00171 U	0.00181 U	0.00169 U	0.00167 U	0.00173 U	0.00189 U	0.00188 U	0.002 U	0.00189 U
Heptachlor epoxide	0.076	NA	0.4	NA	0.081	0.00334 U	0.00396 U	0.00335 U	0.00431 U	0.00305 U	0.00349 U	0.0043 U	0.00454 U	0.00424 U	0.00419 U	0.00434 U	0.00474 UIP	0.00472 U	0.00503 U	0.00475 U
Methoxychlor	320	NA	4600	NA	NA	0.00346 U	0.00411 U	0.00347 U	0.00447 U	0.00316 U	0.00362 U	0.00446 U	0.00471 U	0.0044 U	0.00435 U	0.0045 U	0.00492 U	0.00489 U	0.00522 U	0.00493 U
Toxaphene	0.49	NA	2.3	NA	6.2	0.0312 U	0.037 U	0.0313 U	0.0403 U	0.0285 U	0.0326 U	0.0401 U	0.0424 U	0.0396 U	0.0391 U	0.0405 U	0.0442 U	0.044 U	0.047 U	0.0444 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)

I: The lower value for the two columns has been reported due to obvious interference.

J: Result is less than the reporting limit but greater than the method detection limit.

J-: Value is estimated with a potential low bias.

mg/Kg: milligram per killogram.

P: The RPD between the results for the two columns exceeds the method-specified criteria.

U: Not detected; number is the method detection limit.

Detected values are bold

Shaded values exceed the listed NJ criteria

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	Nearshore-Raritan						Raritan Bay								
Sample Name						VC-222	VC-223	COMP-I	COMP-J	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N	COMP-N	DEP-7	DEP-7	VC-235
Sample Date						VC-222-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E-A	VC-311-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E-A	COMP-M-D0-27E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E-A	COMP-N-D4-22.5E-A	DEP-7-D0-15E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E-A
Sample Type						11/08/2018	11/08/2018	11/09/2018	11/09/2018	11/09/2018	11/09/2018	10/26/2018	10/28/2018	10/26/2018	10/27/2018	10/27/2018	10/26/2018	10/27/2018	10/27/2018	10/28/2018	10/28/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1846705-13	L1846705-14	L1846705-02	L1846705-04	L1846705-03	L1846705-05	L1844053-01	L1844053-03	L1844053-02	L1844053-10	L1844053-11	L1844053-04	L1844053-05	L1844053-08	L1844053-09	L1844053-06
						0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)
Volatile Organic Compounds (mg/kg)																					
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00022 U	0.00025 U	0.00029 U	0.00023 U	0.00018 U	0.00012 U	0.00027 U	0.00019 U	0.00021 U	0.00028 U	0.00026 U	0.0003 U	0.00018 U	0.00024 U	0.0003 U	0.0003 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00022 U	0.00025 U	0.00029 U	0.00022 U	0.00018 U	0.00012 U	0.00027 U	0.00019 U	0.00021 U	0.00027 U	0.00026 U	0.0003 U	0.00018 U	0.00024 U	0.0003 U	0.0003 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00036 U	0.0004 U	0.00047 U	0.00036 U	0.00029 U	0.00019 U	0.00044 U	0.0003 U	0.00034 U	0.00044 U	0.00041 U	0.00048 U	0.00029 U	0.00038 U	0.00048 U	0.00048 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00019 U	0.00022 U	0.00026 U	0.0002 U	0.00016 U	0.0001 U	0.00024 U	0.00016 U	0.00018 U	0.00024 U	0.00022 U	0.00026 U	0.00016 U	0.00021 U	0.00026 U	0.00026 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00032 U	0.00036 U	0.00042 U	0.00032 U	0.00026 U	0.00017 U	0.00039 U	0.00027 U	0.0003 U	0.00039 U	0.00037 U	0.00043 U	0.00026 U	0.00034 U	0.00043 U	0.00043 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00043 U	0.00048 U	0.00057 U	0.00044 U	0.00034 U	0.00023 U	0.00053 U	0.00037 U	0.00041 U	0.00053 U	0.0005 U	0.00058 U	0.00034 U	0.00046 U	0.00058 U	0.00058 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.00036 U	0.00041 U	0.00048 U	0.00037 U	0.00029 U	0.00019 U	0.00044 U	0.00031 U	0.00035 U	0.00045 U	0.00042 U	0.00049 U	0.00029 U	0.00039 U	0.00049 U	0.00049 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0013 U	0.0015 U	0.0018 U	0.0014 U	0.0011 U	0.00071 U	0.0016 U	0.0011 U	0.0013 U	0.0016 U	0.0015 U	0.0018 U	0.0011 U	0.0014 U	0.0018 U	0.0018 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00037 U	0.00042 U	0.00049 U	0.00038 U	0.0003 U	0.0002 U	0.00046 U	0.00032 U	0.00036 U	0.00046 U	0.00043 U	0.0005 U	0.0003 U	0.0004 U	0.0005 U	0.0005 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00019 U	0.00022 U	0.00025 U	0.0002 U	0.00015 U	0.0001 U	0.00024 U	0.00016 U	0.00018 U	0.00024 U	0.00022 U	0.00026 U	0.00015 U	0.0002 U	0.00026 U	0.00026 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00034 U	0.00039 U	0.00045 U	0.00035 U	0.00028 U	0.00018 U	0.00042 U	0.00029 U	0.00033 U	0.00042 U	0.0004 U	0.00046 U	0.00028 U	0.00037 U	0.00046 U	0.00046 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00017 U	0.00019 U	0.00022 U	0.00017 U	0.00013 U	0.00008 U	0.0002 U	0.00014 U	0.00016 U	0.00021 U	0.00019 U	0.00022 U	0.00013 U	0.00018 U	0.00022 U	0.00022 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.0002 U	0.00022 U	0.00026 U	0.0002 U	0.00016 U	0.0001 U	0.00024 U	0.00017 U	0.00019 U	0.00024 U	0.00023 U	0.00027 U	0.00016 U	0.00021 U	0.00026 U	0.00026 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00023 U	0.00026 U	0.0003 U	0.00023 U	0.00018 U	0.00012 U	0.00028 U	0.00019 U	0.00022 U	0.00028 U	0.00026 U	0.00031 U	0.00018 U	0.00024 U	0.00031 U	0.00031 U
1,4-Dioxane	7	45	36	210	0.067	0.047 U	0.053 U	0.062 U	0.048 U	0.038 U	0.025 U	0.058 U	0.04 U	0.045 U	0.058 U	0.054 U	0.063 U	0.038 U	0.05 U	0.063 U	0.063 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.087	0.1	0.087	0.1 J-	0.008 J-	0.0071 J-	0.094	0.068	0.098	0.26	0.11	0.14	0.089	0.22	0.072	0.23
2-Hexanone	390	1000	6500	NA	0.15	0.0032 J	0.0018 U	0.0021 U	0.0016 U	0.0013 U	0.00084 U	0.0019 U	0.0013 U	0.0015 U	0.0019 U	0.0018 U	0.0021 U	0.0013 U	0.0017 U	0.0021 U	0.0021 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0017 U	0.0019 U	0.0022 U	0.0017 U	0.0014 U	0.00091 U	0.0021 U	0.0014 U	0.0016 U	0.0021 U	0.002 U	0.0028 J	0.0014 U	0.0018 U	0.0023 U	0.0023 U
Acetone	70000	NA	NA	NA	19	2	-	1.3	1.3	0.14 J-	0.085 J-	1.3	0.86 J	1	2.5	0.85 J	2.1	0.88 J	1.9	0.61 J	2.6
Benzene	3	2.2	16	11	0.0094	0.00022 U	0.00025 U	0.00029 U	0.00022 U	0.00018 U	0.00012 U	0.00027 U	0.00019 U	0.00021 U	0.00027 U	0.00026 U	0.0003 U	0.00018 U	0.00024 U	0.0003 U	0.0003 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00014 U	0.00016 U	0.00019 U	0.00015 U	0.00012 U	0.00007 U	0.00018 U	0.00012 U	0.00014 U	0.00018 U	0.00017 U	0.0002 U	0.00012 U	0.00016 U	0.0002 U	0.0002 U
Bromoform	88	NA	460	NA	0.018	0.00033 U	0.00037 U	0.00043 U	0.00033 U	0.00026 U	0.00018 U	0.0004 U	0.00028 U	0.00031 U	0.0004 U	0.00038 U	0.00044 U	0.00026 U	0.00035 U	0.00044 U	0.00044 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.00078 U	0.00087 U	0.001 U	0.00079 U	0.00062 U	0.00041 U	0.00095 U	0.00066 U	0.00074 U	0.00096 U	0.0009 U	0.001 U	0.00062 U	0.00083 U	0.001 U	0.001 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.0061 U	0.0068 U	0.008 U	0.0062 U	0.0049 U	0.0032 U	0.0074 U	0.0052 U	0.006 J	0.018	0.0071 U	0.017 J	0.0052 J	0.013 J	0.0082 U	0.02
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00031 U	0.00035 U	0.0004 U	0.00031 U	0.00025 U	0.00016 U	0.00038 U	0.00026 U	0.00029 U	0.00038 U	0.00036 U	0.00041 U	0.00025 U	0.00033 U	0.00041 U	0.00041 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00017 U	0.00019 U	0.00022 U	0.00017 U	0.00014 U	0.00009 U	0.00021 U	0.00014 U	0.00016 U	0.00021 U	0.0002 U	0.00023 U	0.00014 U	0.00018 U	0.00023 U	0.00023 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00027 U	0.00031 U	0.00036 U	0.00028 U	0.00022 U	0.00015 U	0.00034 U	0.00023 U	0.00026 U	0.00034 U	0.00032 U	0.00037 U	0.00022 U	0.00029 U	0.00037 U	0.00037 U
Chloroethane	NA	NA	NA	NA	NA	0.0006 U	0.00068 U	0.0008 U	0.00061 U	0.00048 U	0.00032 U	0.00074 U	0.00052 U	0.00058 U	0.00074 U	0.0007 U	0.00082 U	0.00048 U	0.00064 U	0.00081 U	0.00081 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00024 J	0.00032 J	0.00025 U	0.00019 U	0.00015 U	0.0001 U	0.00023 U	0.00016 U	0.00018 U	0.00023 U	0.00022 U	0.00034 J	0.00015 U	0.0002 U	0.00025 U	0.00025 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.0012 U	0.0014 U	0.0016 U	0.0013 U	0.001 U	0.00066 U	0.0015 U	0.0011 U	0.0012 U	0.0015 U	0.0014 U	0.0017 U	0.001 U	0.0013 U	0.0017 U	0.0017 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.00023 U	0.00059 J	0.00031 U	0.00024 U	0.00019 U	0.00012 U	0.00029 U	0.0002 U	0.00022 U	0.00029 U	0.00027 U	0.00032 U	0.00019 U	0.00025 U	0.00031 U	0.00031 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00021 U	0.00024 U	0.00028 U	0.00021 U	0.00017 U	0.00011 U	0.00026 U	0.00018 U	0.0002 U	0.00026 U	0.00024 U	0.00028 U	0.00017 U	0.00022 U	0.00028 U	0.00028 U
Cyclohexane	NA	NA	NA	NA	NA	0.00073 U	0.00082 U	0.00096 U	0.00074 U	0.00058 U	0.00039 U	0.00089 U	0.00062 U	0.0007 U	0.0009 U	0.00084 U	0.00098 U	0.00058 U	0.00078 U	0.00098 U	0.00097 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00019 U	0.00021 U	0.00025 U	0.00019 U	0.00015 U	0.0001 U	0.00023 U	0.00016 U	0.00018 U	0.00023 U	0.00022 U	0.00025 U	0.00015 U	0.0002 U	0.00025 U	0.00025 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.0012 U	0.0014 U	0.0016 U	0.0012 U	0.00098 U	0.00065 U	0.0015 U	0.001 U	0.0012 U	0.0015 U	0.0014 U	0.0016 U	0.00098 U	0.0013 U	0.0016 U	0.0016 U
Ethylbenzene	7800	10	130000	48	15	0.00019 U	0.00021 U	0.00025 U	0.00019 U	0.00015 U	0.0001 U	0.00023 U	0.00016 U	0.00018 U	0.00023 U	0.00022 U	0.00025 U	0.00015 U	0.0002 U	0.00025 U	0.00025 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00014 U	0.00016 U	0.00019 U	0.00015 U	0.00012 U	0.00007 U	0.00018 U	0.00012 U	0.00014 U	0.00018 U	0.00017 U	0.0002 U	0.00012 U	0.00016 U	0.0002 U	0.0002 U
Methyl acetate	78000	NA	NA	NA	22	0.0013 U	0.0014 U	0.0017 U	0.0013 U	0.001 U	0.00068 U	0.0016 U	0.0011 U	0.0012 U	0.0016 U	0.0015 U	0.0017 U	0.001 U	0.0014 U	0.0017 U	0.0017 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.0008 U	0.00091 U	0.0011 U	0.00082 U	0.00065 U	0.00043 U	0.00099 U	0.00069 U	0.00077 U	0.00099 U	0.00094 U	0.0011 U	0.00065 U	0.00086 U	0.0011 U	0.0011 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00027 U	0.0003 U	0.00035 U	0.00027 U	0.00022 U	0.00014 U	0.00033 U	0.00023 U	0.00026 U	0.00033 U	0.00031 U	0.00036 U	0.00022 U	0.00029 U	0.00036 U	0.00036 U
Methylene chloride	50	1400	260	NA	0.013	0.003 U	0.0034 U	0.004 U	0.0031 U	0.0024 U	0.0016 U	0.044	0.014	0.0089	0.0038 U	0.0036 U	0.014	0.0099	0.042	0.0066 J	0.039
Styrene	16000	NA	260000	NA	2.1	0.00026 U	0.0011 J	0.00034 U	0.00027 U	0.00021 U	0.00014 U	0.00032 U	0.00022 U	0.00025 U	0.00032 U	0.0003 U	0.00035 U	0.00021 U	0.00028 U	0.00035 U	0.00035 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00026 U	0.0003 U	0.00034 U	0.00027 U	0.00021 U	0.00014 U	0.00032 U	0.00022 U	0.00025 U	0.00032 U	0.0003 U	0.00035 U	0.00021 U	0.00028 U	0.00035 U	0.00035 U
Toluene	6300	NA	100000	NA	7.8	0.00072 U	0.00082 U	0.00096 U	0.00074 U	0.00058 U	0.00039 U	0.00089 U	0.00064 J	0.0007 J	0.0009 U	0.00084 U	0.0012 J	0.00058 U	0.00077 U	0.00098 U	0.00097 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00018 U	0.00021 U	0.00024 U	0.00018 U	0.00015 U	0.00009 U	0.00022 U	0.00016 U	0.00018 U	0.00023 U	0.00021 U	0.00025 U	0.00015 U	0.0002 U	0.00025 U	0.00024 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00036 U	0.00041 U	0.00048 U	0.00037 U	0.00029 U	0.00019 U	0.00045 U	0.00031 U	0.00035 U	0.00045 U	0.00042 U	0.00049 U	0.00029 U	0.00039 U	0.00049 U	0.00049 U
Trichloroethene	15	3	79	14	0.0065	0.0002 J	0.0008	0.00024 U	0.00018 U	0.00015 U	0.00009 U	0.00022 U	0.00016 U	0.00018 U	0.00023 U	0.00021 U	0.00025 U	0.00015 U	0.0002 U	0.00025 U	0.00024 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.00093 U	0.001 U	0.0012 U	0.00094 U	0.00074 U	0.0005 U	0.0011 U	0.00079 U	0.00089 U	0.0011 U	0.0011 U	0.0012 U	0.00074 U	0.00099 U	0.0012 U	0.0012 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.00092 U	0.001 U	0.0012 U	0.00094 U	0.00074 U	0.00049 U	0.0011 U	0.00079 U	0.00089 U	0.0011 U	0.0011 U	0.0012 U	0.00074 U	0.00099 U	0.0012 U	0.0012 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00045 U	0.0005 U	0.00059 U	0.00045 U	0.00036 U	0.00024 U	0.00055 U	0.00038 U	0.00043 U	0.00055 U	0.00052 U	0.0006 U	0.00036 U	0.00048 U	0.0006 U	0.0006 U
Xylene (total)	12000	NA	190000	NA	19	0.00039 U	0.00044 U	0.00051 U	0.0004 U	0.00031 U	0.00021 U	0.00048 U	0.00033 U	0.00037 U	0.00048 U	0.00045 U	0.00052 U	0.00031 U	0.00042 U	0.00052 U	0.00052 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	2.09064	0.10281	1.387	1.4	0.148	0.0921	1.438	0.94264	1.1136	2.778	0.96	2.27534	0.9841	2.175	0.6886	2.889
Semi-Volatile Organic Compounds (mg/kg)																					
1,2,4,5-Tetrachlorobenzene	23	NA	390	NA	NA	0.033 U	0.032 U	0.032 U	0.026 U	0.02 U	0.02 U	0.03 U	0.029 U	0.029 U	0.034 U	0.029 U	0.032 U	0.028 U	0.034 U	0.03 U	0.035 U
2,2'-oxybis(1-Chloropropane)	3100	NA		NA	1.9	0.036 U	0.035 U	0.036 U	0.029 U	0.022 U	0.022 U	0.033 U	0.032 U	0.032 U	0.038 U	0.032 U	0.035 U	0.031 U	0.037 U	0.033 U	0.039 U
2,3,4,6-Tetrachlorophenol	1900	NA	27000	NA	26	0.064 U	0.061 U	0.063 U	0.051 U	0.038 U	0.038 U	0.058 U	0.056 U	0.056 U	0.067 U	0.057 U	0.062 U	0.055 U	0.066 U	0.058 U	0.068 U
2,4,5-Trichlorophenol	6300	NA	91000	NA	68	0.06 U	0.058 U	0.059 U	0.048 U	0.036 U	0.036 U	0.055 U	0.053 U	0.054 U	0.063 U	0.054 U	0.059 U	0.052 U	0.062 U	0.055 U	0.064 U
2,4,6-Trichlorophenol	49	NA	230	NA	0.86	0.06 U	0.057 U	0.059 U	0.048 U	0.036 U	0.036 U	0.054 U	0.053 U	0.053 U	0.062 U	0.053 U	0.058 U	0.052 U	0.062 U	0.054 U	0.064 U
2,4-Dichlorophenol	190	NA	2700	NA	0.19	0.051 U	0.049 U	0.05 U	0.04 U	0.03 U	0.03 U	0.046 U	0.045 U	0.045 U	0.053 U	0.045 U	0.049 U	0.044 U	0.052 U	0.046 U	0.054 U
2,4-Dimethylphenol	1300	NA	18000	NA	2.3	0.1 U	0.096 U	0.099 U	0.08 U	0.06 U	0.06 U	0.091 U	0.088 U	0.089 U	0.1 U	0.089 U	0.098 U	0.087 U	0.1 U	0.091 U	0.11 U
2,4-Dinitrophenol	130	NA	1800	NA	0.33	0.15 U	0.14 U	0.14 U	0.12 U	0.088 U	0.088 U	0.13 U	0.13 U	0.13 U	0.15 U	0.13 U	0.14 U	0.13 U	0.15 U	0.13 U	0.16 U
2,4-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.052 U	0.05 U	0.052 U	0.042 U	0.031 U	0.031 U	0.047 U	0.046 U	0.046 U	0.055 U	0.046 U	0.051 U	0.045 U	0.054 U	0.047 U	0.056 U
2,6-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.042 U	0.04 U	0.041 U	0.033 U	0.025 U	0.025 U	0.038 U	0.037 U	0.037 U	0.044 U	0.037 U	0.04 U	0.036 U	0.043 U	0.038 U	0.044 U
2-Chloronaphthalene	4800	NA	67000	NA	NA	0.03 U	0.029 U	0.03 U	0.024 U	0.018 U	0.018 U	0.027 U	0.026 U	0.027 U	0.031 U	0.027 U	0.029 U	0.026 U	0.031 U	0.027 U	0.032 U
2-Chlorophenol	390	NA	6500	NA	0.76	0.035 U	0.033 U	0.034 U	0.028 U	0.021 U	0.021 U	0.031 U	0.03 U	0.031 U	0.036 U	0.031 U	0.034 U	0.03 U	0.036 U	0.031 U	0.037 U
2-Methylnaphthalene	240	NA	3300	NA	3.1	0.045 J	0.032 U	0.033 U	0.027 U	0.02 U	0.02 U	0.03 U	0.029 U	0.03 U	0.088 J	0.03 U	0.064 J	0.029 U	0.06 J	0.03 U	0.046 J
2-Methylphenol (o-Cresol)	320	NA	4600	NA	0.77	0.049 U	0.047 U	0.048 U	0.039 U	0.029 U	0.029 U	0.044 U	0.043 U	0.043 U	0.051 U	0.043 U	0.048 U	0.042 U	0.05 U	0.044 U	0.052 U
2-Nitroaniline	NA	NA	NA	NA	NA	0.058 U	0.055 U	0.057 U	0.046 U	0.035 U	0.034 U	0.052 U	0.051 U	0.051 U	0.06 U	0.051 U	0.056 U	0.05 U	0.06 U	0.052 U	0.062 U
2-Nitrophenol	NA	NA	NA	NA	NA	0.052 U	0.05 U	0.051 U	0.041 U	0.031 U	0.031 U	0.047 U	0.046 U	0.046 U	0.054 U	0.046 U	0.05 U	0.045 U	0.053 U	0.047 U	0.055 U
3&4-Methylphenol	NA	NA	NA	NA	NA	0.06 J	0.044 U	0.045 U	0.036 U	0.027 U	0.027 U	0.041 U	0.04 U	0.04 U	0.11 J	0.04 U	0.073 J	0.04 U	0.081 J	0.041 U	0.073 J
3,3'-Dichlorobenzidine	1.2	NA	5.7	NA	3.9	0.08 U	0.077 U	0.079 U	0.064 U	0.048 U	0.048 U	0.073 U	0.071 U	0.072 U	0.084 U	0.072 U	0.079 U	0.07 U	0.083 U	0.073 U	0.086 U
3-Nitroaniline	NA	NA	NA	NA	NA	0.059 U	0.057 U	0.058 U	0.047 U	0.036 U	0.036 U	0.054 U	0.052 U	0.053 U	0.062 U	0.053 U	0.058 U	0.052 U	0.061 U	0.054 U	0.063 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	0.15 U	0.14 U	0.15 U	0.12 U	0.091 U	0.09 U	0.14 U	0.13 U	0.13 U	0.16 U	0.13 U	0.15 U	0.13 U	0.16 U	0.14 U	0.16 U

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name						Nearshore-Raritan						Raritan Bay									
Sample Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	VC-222	VC-223	COMP-I	COMP-J	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N	COMP-N	DEP-7	DEP-7	VC-235
Sample Date						VC-222-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E-A	VC-311-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E-A	COMP-M-D0-27E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E-A	COMP-N-D4-22.5E-A	DEP-7-D0-15E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E-A
Sample Type						11/08/2018	11/08/2018	11/09/2018	11/09/2018	11/09/2018	11/09/2018	10/26/2018	10/28/2018	10/26/2018	10/27/2018	10/27/2018	10/26/2018	10/27/2018	10/27/2018	10/28/2018	10/28/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1846705-13	L1846705-14	L1846705-02	L1846705-04	L1846705-03	L1846705-05	L1844053-01	L1844053-03	L1844053-02	L1844053-10	L1844053-11	L1844053-04	L1844053-05	L1844053-08	L1844053-09	L1844053-06
						0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	0.035 U	0.034 U	0.034 U	0.028 U	0.021 U	0.021 U	0.032 U	0.031 U	0.031 U	0.037 U	0.031 U	0.034 U	0.03 U	0.036 U	0.032 U	0.037 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	0.047 U	0.045 U	0.046 U	0.038 U	0.028 U	0.028 U	0.042 U	0.041 U	0.042 U	0.049 U	0.042 U	0.046 U	0.041 U	0.048 U	0.042 U	0.05 U
4-Chloroaniline	2.7	NA	13	NA	0.23	0.036 U	0.035 U	0.036 U	0.029 U	0.022 U	0.022 U	0.033 U	0.032 U	0.032 U	0.038 U	0.032 U	0.066 J	0.032 U	0.037 U	0.033 U	0.039 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	0.026 U	0.025 U	0.026 U	0.021 U	0.016 U	0.016 U	0.024 U	0.023 U	0.023 U	0.028 U	0.024 U	0.026 U	0.023 U	0.027 U	0.024 U	0.028 U
4-Nitroaniline	27	NA	130	NA	NA	0.13 U	0.12 U	0.13 U	0.1 U	0.078 U	0.078 U	0.12 U	0.12 U	0.12 U	0.14 U	0.12 U	0.13 U	0.11 U	0.13 U	0.12 U	0.14 U
4-Nitrophenol	NA	NA	NA	NA	NA	0.088 U	0.084 U	0.086 U	0.07 U	0.052 U	0.052 U	0.079 R	0.077 U	0.078 U	0.092 U	0.078 U	0.085 U	0.076 U	0.09 U	0.079 U	0.093 U
Acenaphthene	3600	NA	50000	NA	NA	0.026 U	0.025 U	0.026 U	0.021 U	0.016 U	0.016 U	0.024 U	0.023 U	0.023 U	0.031 J	0.023 U	0.026 U	0.023 U	0.027 U	0.024 U	0.028 U
Acenaphthylene	NA	NA	NA	NA	NA	0.11 J	0.071 J	0.035 U	0.028 U	0.021 U	0.021 U	0.032 U	0.031 U	0.031 U	0.12 J	0.031 U	0.1 J	0.031 U	0.088 J	0.032 U	0.069 J
Acetophenone	7800	NA	130000	NA	3.6	0.033 U	0.032 U	0.032 U	0.026 U	0.02 U	0.02 U	0.03 U	0.029 U	0.029 U	0.034 U	0.029 U	0.032 U	0.029 U	0.034 U	0.03 U	0.035 U
Anthracene	18000	NA	250000	NA	NA	0.082 J	0.063 J	0.028 U	0.022 U	0.017 U	0.017 U	0.025 U	0.025 U	0.025 U	0.13 J	0.025 U	0.11 J	0.024 U	0.1 J	0.025 U	0.079 J
Atrazine	220	NA	3200	NA	0.33	0.11 U	0.1 U	0.11 U	0.088 U	0.066 U	0.066 U	0.1 U	0.097 U	0.098 U	0.12 U	0.098 U	0.11 U	0.096 U	0.11 U	0.1 U	0.12 U
Benzaldehyde	170	NA	910	NA	NA	0.16 J	0.1 J	0.09 J	0.079 J	0.029 U	0.029 U	0.092 J	0.1 J	0.086 J	0.25 J	0.092 J	0.18 J	0.097 J	0.18 J	0.1 J	0.22 J
Benzo(a)anthracene	5.1	78000	23	370000	0.71	0.24	0.17	0.035 U	0.028 U	0.021 U	0.021 U	0.032 U	0.031 U	0.031 U	0.34	0.032 U	0.28	0.031 U	0.31	0.032 U	0.26
Benzo(a)pyrene	0.51	3500	2.3	16000	NA	0.32	0.24	0.076 U	0.061 U	0.046 U	0.046 U	0.07 U	0.068 U	0.068 U	0.44	0.068 U	0.37	0.067 U	0.41	0.07 U	0.34
Benzo(b)fluoranthene	5.1	78000	23	370000	NA	0.37	0.28	0.026 U	0.021 U	0.016 U	0.016 U	0.024 U	0.023 U	0.025 J	0.52	0.023 U	0.4	0.023 U	0.45	0.024 U	0.38
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.22 J	0.17 J	0.036 U	0.03 U	0.022 U	0.022 U	0.034 U	0.033 U	0.033 U	0.27	0.033 U	0.24	0.032 U	0.24 J	0.034 U	0.21 J
Benzo(k)fluoranthene	51	780000	230	NA	NA	0.13	0.1	0.022 U	0.018 U	0.013 U	0.013 U	0.02 U	0.019 U	0.02 U	0.16	0.02 U	0.13	0.019 U	0.14	0.02 U	0.12
Biphenyl	87	NA	450	NA	NA	0.073 U	0.07 U	0.072 U	0.058 U	0.044 U	0.044 U	0.066 U	0.064 U	0.065 U	0.076 U	0.065 U	0.071 U	0.064 U	0.075 U	0.066 U	0.078 U
bis(2-Chloroethoxy)methane	190	NA	2700	NA	NA	0.03 U	0.029 U	0.029 U	0.024 U	0.018 U	0.018 U	0.027 U	0.026 U	0.026 U	0.031 U	0.027 U	0.029 U	0.026 U	0.031 U	0.027 U	0.032 U
bis(2-Chloroethyl)ether	0.63	NA	3.3	NA	0.33	0.038 U	0.036 U	0.037 U	0.03 U	0.023 U	0.023 U	0.034 U	0.033 U	0.034 U	0.04 U	0.034 U	0.037 U	0.033 U	0.039 U	0.034 U	0.04 U
bis(2-Ethylhexyl)phthalate	39	NA	180	NA	14	0.3 J	2.4	0.05 J	0.028 J	0.037 J	0.022 J	0.67	0.088 J	0.35	4.2	0.088 J	2.4	0.13 J	4.3	0.097 J	1
Butyl benzylphthalate	290	NA	1300	NA	29	0.042 U	0.04 U	0.041 U	0.034 U	0.025 U	0.025 U	0.038 U	0.037 U	0.037 U	0.044 U	0.037 U	0.041 U	0.036 U	0.043 U	0.038 U	0.045 U
Caprolactam	32000	290	460000	1300	16	0.067 U	0.065 U	0.066 U	0.054 U	0.04 U	0.04 U	0.061 U	0.059 U	0.06 U	0.07 U	0.06 U	0.066 U	0.058 U	0.07 U	0.061 U	0.072 U
Carbazole	NA	NA	NA	NA	NA	0.02 U	0.019 U	0.02 U	0.016 U	0.012 U	0.012 U	0.018 U	0.018 U	0.018 U	0.021 U	0.018 U	0.021 J	0.017 U	0.021 U	0.018 U	0.021 U
Chrysene	510	NA	2300	NA	NA	0.26	0.18	0.032 U	0.026 U	0.019 U	0.019 U	0.029 U	0.028 U	0.029 U	0.34	0.029 U	0.26	0.028 U	0.3	0.029 U	0.24
Dibenz(a,h)anthracene	0.51	7800	2.3	37000	NA	0.055 J	0.041 J	0.036 U	0.029 U	0.022 U	0.022 U	0.033 U	0.032 U	0.032 U	0.066 J	0.032 U	0.067 J	0.032 U	0.058 J	0.033 U	0.062 J
Dibenzofuran	NA	NA	NA	NA	NA	0.028 U	0.027 U	0.027 U	0.022 U	0.017 U	0.017 U	0.025 U	0.024 U	0.025 U	0.036 J	0.025 U	0.027 U	0.024 U	0.029 U	0.025 U	0.03 U
Diethyl phthalate	51000	NA	730000	NA	44	0.028 U	0.027 U	0.028 U	0.023 U	0.017 U	0.017 U	0.026 U	0.025 U	0.025 U	0.03 U	0.025 U	0.028 U	0.025 U	0.029 U	0.026 U	0.03 U
Dimethyl phthalate	NA	NA	NA	NA	NA	0.03 U	0.029 U	0.03 U	0.024 U	0.018 U	0.018 U	0.027 U	0.027 U	0.027 U	0.032 U	0.027 U	0.029 U	0.026 U	0.031 U	0.027 U	0.032 U
Di-n-butylphthalate	6300	NA	91000	NA	NA	0.028 U	0.027 U	0.027 U	0.022 U	0.017 U	0.017 U	0.025 U	0.024 U	0.025 U	0.029 U	0.025 U	0.028 J	0.024 U	0.029 U	0.025 U	0.03 U
Di-n-octyl phthalate	630	NA	9100	NA	NA	0.098 U	0.094 U	0.097 U	0.078 U	0.059 U	0.059 U	0.089 U	0.087 U	0.087 U	0.1 U	0.087 U	0.096 U	0.085 U	0.1 U	0.089 U	0.1 U
Fluoranthene	2400	NA	33000	NA	NA	0.29	0.22	0.036 U	0.029 U	0.022 U	0.022 U	0.033 U	0.032 U	0.032 U	0.47	0.032 U	0.36	0.031 U	0.44	0.033 U	0.36
Fluorene	2400	NA	33000	NA	NA	0.03 J	0.029 U	0.03 U	0.024 U	0.018 U	0.018 U	0.027 U	0.027 U	0.027 U	0.049 J	0.027 U	0.04 J	0.026 U	0.031 U	0.027 U	0.032 J
Hexachlorobenzene	0.43	NA	2.3	NA	0.17	0.03 U	0.029 U	0.03 U	0.024 U	0.018 U	0.018 U	0.027 U	0.026 U	0.027 U	0.031 U	0.027 U	0.029 U	0.026 U	0.031 U	0.027 U	0.032 U
Hexachlorobutadiene	8.9	NA	47	NA	0.17	0.039 U	0.038 U	0.038 U	0.031 U	0.023 U	0.023 U	0.035 U	0.034 U	0.035 U	0.041 U	0.035 U	0.038 U	0.034 U	0.04 U	0.035 U	0.042 U
Hexachlorocyclopentadiene	470	2.7	7800	NA	2.5	0.2 U	0.19 U	0.2 U	0.16 U	0.12 U	0.12 U	0.18 U	0.18 U	0.18 U	0.21 U	0.18 U	0.19 U	0.17 U	0.2 U	0.18 U	0.21 U
Hexachloroethane	17	NA	91	NA	0.17	0.051 U	0.049 U	0.05 U	0.041 U	0.031 U	0.03 U	0.046 U	0.045 U	0.045 U	0.053 U	0.045 U	0.05 U	0.044 U	0.052 U	0.046 U	0.054 U
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NA	0.21	0.17	0.043 U	0.035 U	0.026 U	0.026 U	0.04 U	0.039 U	0.039 U	0.28	0.039 U	0.23	0.038 U	0.24	0.04 U	0.21
Isophorone	570	NA	2700	NA	0.23	0.035 U	0.034 U	0.035 U	0.028 U	0.021 U	0.021 U	0.032 U	0.031 U	0.031 U	0.037 U	0.031 U	0.034 U	0.031 U	0.036 U	0.032 U	0.038 U
Naphthalene	2500	5.7	34000	27	19	0.089 J	0.059 J	0.038 U	0.031 U	0.023 U	0.023 U	0.035 U	0.034 U	0.034 U	0.13 J	0.034 U	0.1 J	0.033 U	0.1 J	0.035 U	0.082 J
Nitrobenzene	160	7.5	2600	36	0.17	0.046 U	0.045 U	0.046 U	0.037 U	0.028 U	0.028 U	0.042 U	0.041 U	0.041 U	0.049 U	0.042 U	0.045 U	0.04 U	0.048 U	0.042 U	0.05 U
N-Nitrosodi-n-propylamine	0.17	NA	0.36	NA	0.17	0.026 U	0.025 U	0.026 U	0.021 U	0.016 U	0.016 U	0.024 U	0.023 U	0.023 U	0.028 U	0.023 U	0.026 U	0.023 U	0.027 U	0.024 U	0.028 U
N-Nitrosodiphenylamine	110	NA	520	NA	1.1	0.026 U	0.025 U	0.025 U	0.02 U	0.015 U	0.015 U	0.023 U	0.023 U	0.023 U	0.027 U	0.023 U	0.025 U	0.022 U	0.026 U	0.023 U	0.027 U
Pentachlorophenol	1	NA	4.4	NA	0.33	0.069 U	0.066 U	0.068 U	0.055 U	0.042 U	0.041 U	0.063 U	0.061 U	0.062 U	0.072 U	0.062 U	0.068 U	0.06 U	0.072 U	0.063 U	0.074 U
Phenanthrene	NA	NA	NA	NA	NA	0.12 J	0.089 J	0.022 U	0.018 U	0.014 U	0.014 U	0.02 U	0.02 U	0.02 U	0.22	0.02 U	0.16 J	0.02 U	0.17 J	0.02 U	0.15 J
Phenol	19000	39000	270000	NA	21	0.037 U	0.036 U	0.17 J	0.03 U	0.022 U	0.022 U	0.034 U	0.033 U	0.033 U	0.093 J	0.033 U	0.036 U	0.032 U	0.22 J	0.034 U	0.04 U
Pyrene	1800	NA	25000	NA	NA	0.43	0.32	0.027 U	0.022 U	0.016 U	0.016 U	0.025 U	0.024 U	0.025 J	0.52	0.024 U	0.42	0.024 U	0.46	0.025 U	0.4
SUM of Semi-Volatile Organic Compounds	NA	NA	NA	NA	NA	3.521	4.673	0.31	0.107	0.037	0.022	0.762	0.188	0.486	8.863	0.18	6.099	0.227	8.347	0.197	4.333
Inorganic Compounds (mg/kg)																					
Aluminum	78000	NA	NA	NA	NA	13400	13700	13600	9600	6470	5160	13600	16200	15300	13200	13600	13800	14000	13000	15600	14300
Antimony	31	NA	520	NA	5.4	1.17 J	0.632 J	0.558 U	0.462 U	0.334 U	0.341 U	0.868 J	0.509 U	0.51 U	1.69 J	0.506 U	0.952 J	0.516 J	1.21 J	0.53 U	1.59 J
Arsenic	19	1100	19	5200	19	33.9	21.9	11.1	8.51	5.96	4.55	9.37	11.1	11.5	24.8	10.8	22.2	11.2	20.9	11.8	19.2
Barium	16000	870000	260000	NA	2100	87	78.4	58.1	45.7	34	37	58.8	69	66	98.4	55.7	90.7	56.7	86.8	64.2	95.6
Beryllium	160	2000	2600	9300	0.7	0.687 J	0.676 J	0.66 J	0.438 J	0.307 J	0.233 J	0.651 J	0.791	0.738	0.7 J	0.665	0.707 J	0.684	0.66 J	0.766	0.714 J
Cadmium	71	2600	1100	12000	1.9	1.1 J	0.906 J	0.543 J	0.389 J	0.325 J	0.242 J	0.434 J	0.482 J	0.524 J	2.2	0.466 J	1.6	0.503 J	1.7	0.516 J	1.57 J
Calcium	NA	NA	NA	NA	NA	64000	56300	52100	52800	37600	37500	57000	53700	63100	65800	51900	68500	56800	65600	58000	70400
Chromium	NA	NA	NA	NA	NA	106	94.8	74.4	59	56.4	50.6	71.7	80.5	83	174	68.7	140	70.7	138	75.3	140
Chromium VI (Hexavalent)	NA		NA			0.306 U	0.291 U	0.301 U	0.245 U	0.184 U	0.182 U	0.277 U	0.272 U	0.275 U	0.325 U	0.272 U	0.298 U	0.267 U	0.319 U	0.279 U	0.327 U
Cobalt	23	520	390	2500	90	9.33	9.22	8.86	6.5	3.6	4.79	8.6	9.29	8.9	10.2	8.89	9.1	9.28	9.82	9.62	10.7
Copper	3100	NA	52000	NA	910	136	97.6	26.9	22.8	22.8	20.5	27.7	30.8	34.8	159	26.8	120	27.7	114	29.2	120
Iron	NA	NA	NA	NA	NA	24500	23700	25300	17800	16000	10900	26300	32300	31200	30800	28300	30500	28900	28900	30500	29900
Lead	400	NA	800	NA	90	98.9	72	15.7	14	9.23	11	17.4	18.7	21.8	142	16.5	91.2	17.6	102	18.5	116
Magnesium	NA	NA	NA	NA	NA	7200	7230	7740	5470	2760	2930	7780	8680	8400	7570	7570	7580	7430	7590	8270	8210
Manganese	1900	87000	31000	400000	NA	380	381	470	324	155	205	447	533	502	639	432	557	423	573	466	681
Mercury	23	520000	390	NA	0.1	1.58	1.48	0.025 U	0.027 J	0.015 U	0.015 U	0.023 U	0.023 U	0.063 J	2.64	0.023 U	1.66	0.022 U	1.68	0.023 U	1.7
Nickel	1600	20000	26000	93000	48	39.6	38	33.3	25.9	19.9	22.4	32.6	35.4	33.9	46.2	33.1	40.2	34.3	42.2	35.9	45.1
Potassium	NA	NA	NA	NA	NA	3090	3150	3530	2360	968	898	3320	3840	3650	3130	3380	3140	3430	3040	3850	3380
Selenium	390	NA	6500	NA	11	2.54 J	1.81 J	0.734 J	0.657 J	0.369 J	0.232 U	0.786 J	0.965 J	0.899 J	1.89 J	0.958 J	1.82 J	0.761 J	1.58 J	1.34 J	1.78 J
Silver	390	NA	6500	NA	0.5	1.81	1.19 J	0.415 U	0.344 U	0.248 U	0.254 U	0.384 U	0.379 U	0.38 U	4.82	0.376 U	2.91	0.365 U	3.12	0.394 U	3.34
Sodium	NA	NA	NA	NA	NA	7780	6960	7710	4680	1570	1600	7050	7750	6050	9820	4900	8300	4180	7820	4460	10400
Thallium	NA	NA	NA	NA	NA	0.46 U	0.453 U	0.462 U	0.383 U	0.277 U	0.283 U	0.427 U	0.422 U	0.423 U	0.501 U	0.419 U	0.454 U	0.406 U	0.483 U	0.439 U	0.511 U
Vanadium	390	170000	6500	800000	NA	64.4	60.8	57.7	44	40.8	33.4	59.4	63.8	64.8	75.1	56.7	69.8	59.5	68.7	63.5	71.2
Zinc	23000	NA	390000	NA	930	202	162	79.6	64	41.5	239	74	82.6	85.9	291	75.6	210	79.4	228	82.9	251

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)

I: The lower value for the two columns has been reported due to obvious interference.

J: Result is less than the reporting limit but greater than the method detection limit.

J-: Value is estimated with a potential low bias.

mg/Kg: milligram per killogram.

P: The RPD between the results for the two columns exceeds the method-specified criteria.

U: Not detected; number is the method detection limit.

Detected values are bold

Shaded values exceed the listed NJ criteria

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	Nearshore-Raritan						Raritan Bay									
Sample Name						VC-222	VC-223	COMP-I	COMP-J	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N	COMP-N	DEP-7	DEP-7	VC-235
Sample Date						VC-222-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E-A	VC-311-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E-A	COMP-M-D0-27E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E-A	COMP-N-D4-22.5E-A	DEP-7-D0-15E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E-A
Sample Type						11/08/2018	11/08/2018	11/09/2018	11/09/2018	11/09/2018	11/09/2018	10/26/2018	10/28/2018	10/26/2018	10/27/2018	10/27/2018	10/26/2018	10/27/2018	10/27/2018	10/28/2018	10/28/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1846705-13	L1846705-14	L1846705-02	L1846705-04	L1846705-03	L1846705-05	L1844053-01	L1844053-03	L1844053-02	L1844053-10	L1844053-11	L1844053-04	L1844053-05	L1844053-08	L1844053-09	L1844053-06
						0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)
PCBs (mg/kg)																					
Aroclor-1016 (PCB-1016)	NA6	NA	NA	NA	NA	0.0142 U	0.0152 U	0.0148 U	0.0126 U	0.0499 U	0.0087 U	0.0134 U	0.0136 U	0.0146 U	0.0161 U	0.0144 U	0.0156 U	0.0147 U	0.0158 U	0.0149 U	0.0169 U
Aroclor-1221 (PCB-1221)	NA6	NA	NA	NA	NA	0.0161 U	0.0172 U	0.0167 U	0.0143 U	0.0563 U	0.00982 U	0.0151 U	0.0154 U	0.0164 U	0.0182 U	0.0162 U	0.0176 U	0.0166 U	0.0178 U	0.0168 U	0.019 U
Aroclor-1232 (PCB-1232)	NA6	NA	NA	NA	NA	0.034 U	0.0363 U	0.0353 U	0.0302 U	0.119 U	0.0208 U	0.032 U	0.0325 U	0.0348 U	0.0384 U	0.0343 U	0.0372 U	0.0351 U	0.0376 U	0.0356 U	0.0403 U
Aroclor-1242 (PCB-1242)	NA6	NA	NA	NA	NA	0.0216 U	0.0231 U	0.0225 U	0.0192 U	0.0757 U	0.0132 U	0.0204 U	0.0207 U	0.0221 U	0.607	0.0218 U	0.314 P	0.0223 U	0.395	0.0226 U	0.228
Aroclor-1248 (PCB-1248)	NA6	NA	NA	NA	NA	0.0241 U	0.0257 U	0.025 U	0.0213 U	0.0842 U	0.0147 U	0.0226 U	0.023 U	0.0246 U	0.0272 U	0.0243 U	0.0264 U	0.0248 U	0.0266 U	0.0252 U	0.0285 U
Aroclor-1254 (PCB-1254)	NA6	NA	NA	NA	NA	0.102 J	0.0881 J	0.0182 U	0.0156 U	0.0614 U	0.0107 U	0.0165 U	0.0168 U	0.0191 J	0.212	0.0177 U	0.13	0.0181 U	0.215	0.0184 U	0.138
Aroclor-1260 (PCB-1260)	NA6	NA	NA	NA	NA	0.0336 J	0.0316 U	0.0308 U	0.0263 U	0.104 U	0.0181 U	0.0279 U	0.0284 U	0.0303 U	0.0889	0.0299 U	0.0533 J	0.0306 U	0.0636 J	0.031 U	0.0351 U
Aroclor-1262 (PCB-1262)	NA6	NA	NA	NA	NA	0.0204 U	0.0217 U	0.0212 U	0.0181 U	0.0713 U	0.0124 U	0.0192 U	0.0195 U	0.0208 U	0.023 U	0.0206 U	0.0223 U	0.021 U	0.0225 U	0.0213 U	0.0241 U
Aroclor-1268 (PCB-1268)	NA6	NA	NA	NA	NA	0.0166 U	0.0177 U	0.0173 U	0.0147 U	0.0582 U	0.0101 U	0.0156 U	0.0159 U	0.017 U	0.0188 U	0.0168 U	0.0182 U	0.0172 U	0.0184 U	0.0174 U	0.0197 U
SUM of PCBs	0.25	NA	1.1	NA	1.6	0.1356	0.0881	ND	ND	ND	ND	ND	ND	0.0191	0.9079[AC]	ND	0.4973[AC]	ND	0.6736[AC]	ND	0.366[AC]
Other																					
Moisture (%)	NA1	NA	NA	NA	NA	47.7	45.1	46.8	34.7	12.9	12	42.2	41.3	41.8	50.8	41.1	46.4	40	49.8	42.6	51.1
Total Solids (%)	NA1	NA	NA	NA	NA	52.3	54.9	53.2	65.3	87.1	88	57.8	58.7	58.2	49.2	58.9	53.6	60	50.2	57.4	48.9
Oxidation reduction potential (millivolts)	NA1	NA	NA	NA	NA	46	46	33	36	33	25	60	45	54	33	54	29	37	37	40	33
pH (lab) (pH units)	NA1	NA	NA	NA	NA	11.8	11.8	11.8	12.2	12.6	12.6	12.1	12	12	12.2	11.9	12.4	11.9	12.3	12	12.3
Pesticides (mg/kg)																					
4,4'-DDD	2.3	NA	11	NA	0.47	0.0157 P	0.00287 UIP	0.00317 U	0.00249 U	0.00179 U	0.00163 U	0.00273 U	0.00274 U	0.0028 U	0.00498 J	0.00282 U	0.00495 J	0.00268 U	0.00364 J	0.00268 U	0.00322 U
4,4'-DDE	2	NA	11	NA	0.47	0.0224	0.00447 JIP	0.00205 U	0.00162 U	0.00116 U	0.00106 U	0.00177 U	0.00178 U	0.00182 U	0.0107	0.00183 U	0.0144 P	0.00174 U	0.00838 J	0.00174 U	0.00522 J
4,4'-DDT	1.9	NA	9.5	NA	0.67	0.00681 U	0.00647 U	0.00714 U	0.00562 U	0.00404 U	0.00368 U	0.00616 U	0.00618 U	0.00632 U	0.00725 U	0.00635 U	0.00667 U	0.00604 U	0.00885 J	0.00604 U	0.00727 U
Aldrin	0.041	NA	0.21	NA	0.13	0.00298 U	0.00283 U	0.00313 U	0.00246 U	0.00177 U	0.00161 U	0.0027 U	0.0027 U	0.00276 U	0.00317 U	0.00278 U	0.00292 U	0.00264 U	0.00304 U	0.00264 U	0.00318 U
alpha-BHC	0.086	NA	0.41	NA	0.0023	0.001 U	0.00095 U	0.00105 U	0.00082 U	0.00059 U	0.00054 U	0.0009 U	0.0009 U	0.00092 U	0.00107 U	0.00093 U	0.00098 U	0.00088 U	0.00102 U	0.00088 U	0.00107 U
alpha-Chlordane	NS	NA	NA	NA	NA	0.00295 U	0.0028 U	0.00309 U	0.00243 U	0.00175 U	0.00159 U	0.00267 U	0.00268 U	0.00274 U	0.00314 U	0.00275 U	0.00289 U	0.00261 U	0.00301 U	0.00261 U	0.00315 U
beta-BHC	0.3	NA	1.4	NA	0.0046	0.00321 U[R]	0.00305 U[R]	0.00337 U[R]	0.00265 U[R]	0.0019 U	0.00174 U	0.0029 U[R]	0.00291 U[R]	0.00298 U[R]	0.00342 U[C]	0.00299 U[R]	0.00314 U[R]	0.00284 U[R]	0.00328 U[C]	0.00285 U[C]	0.00343 U[R]
Chlordane	0.27	NA	1.4	NA	1.4	0.028 U	0.0267 U	0.0294 U	0.0231 U	0.0166 U	0.0152 U	0.0254 U	0.0254 U	0.026 U	0.0299 U	0.0262 U	0.0275 U	0.0248 U	0.0286 U	0.0249 U	0.0299 U
delta-BHC	NS	NA	NA	NA	NA	0.00166 U	0.00158 U	0.00174 U	0.00137 U	0.00098 U	0.00089 U	0.0015 U	0.0015 U	0.00154 U	0.00176 U	0.00155 U	0.00162 U	0.00147 U	0.00169 U	0.00147 U	0.00177 U
Dieldrin	0.034	NA	0.16	NA	0.024	0.00264 U	0.00252 U	0.00278 U	0.00218 U	0.00157 U	0.00143 U	0.00239 U	0.0024 U	0.00245 U	0.00312 JPI [C]	0.00247 U	0.00259 U	0.00234 U	0.0047 J[C]	0.00234 U	0.00282 UPI
Endosulfan I	470	NA	7800	NA	NA	0.002 U	0.0019 U	0.0021 U	0.00165 U	0.00118 U	0.00108 U	0.00181 U	0.00182 U	0.00186 U	0.00213 U	0.00186 U	0.00196 U	0.00177 U	0.00204 U	0.00177 U	0.00214 U
Endosulfan II	470	NA	7800	NA	NA	0.00283 U	0.00269 U	0.00297 U	0.00233 U	0.00168 U	0.00153 U	0.00256 U	0.00257 U	0.00262 U	0.00301 U	0.00264 U	0.00277 U	0.00251 U	0.00289 U	0.00251 U	0.00302 U
Endosulfan sulfate	NS	NA	NA	NA	NA	0.00168 U	0.0016 U	0.00176 U	0.00138 U	0.00099 U	0.0009 U	0.00152 U	0.00152 U	0.00156 U	0.00179 U	0.00157 U	0.0054	0.00149 U	0.00602 P	0.00149 U	0.00552
Endrin	19	NA	270	NA	1.6	0.00145 U	0.00138 U	0.00152 U	0.00119 U	0.00085 U	0.00078 U	0.00131 U	0.00131 U	0.00134 U	0.00154 U	0.00135 U	0.00142 U	0.00128 U	0.00148 U	0.00128 U	0.00154 U
Endrin aldehyde	NS	NA	NA	NA	NA	0.0037 U	0.00352 U	0.00388 U	0.00306 U	0.0022 U	0.002 U	0.00335 U	0.00336 U	0.00344 U	0.00394 U	0.00345 U	0.00363 U	0.00328 U	0.00378 U	0.00328 U	0.00395 U
Endrin ketone	NS	NA	NA	NA	NA	0.00218 U	0.00207 U	0.00229 U	0.0018 U	0.00129 U	0.00118 U	0.00197 U	0.00198 U	0.00202 U	0.00232 U	0.00203 U	0.00214 U	0.00193 U	0.00223 U	0.00193 U	0.00233 U
gamma-BHC (Lindane)	0.57	NA	2.8	NA	0.0035	0.00158 U	0.0015 U	0.00165 U	0.0013 U	0.00093 U	0.00085 U	0.00143 U	0.00143 U	0.00146 U	0.00168 U	0.00147 U	0.00154 U	0.0014 U	0.00161 U	0.0014 U	0.00168 U
gamma-Chlordane	0.27	NA	1.4	NA	1.4	0.00279 U	0.00266 U	0.00293 U	0.0023 U	0.00166 U	0.00151 U	0.00253 U	0.00254 U	0.00259 U	0.00298 U	0.0026 U	0.00274 U	0.00248 U	0.00285 U	0.00248 U	0.00298 U
Heptachlor	0.15	NA	0.81	NA	0.083	0.0019 U	0.0018 U	0.00199 U	0.00157 U	0.00112 U	0.00102 U	0.00172 U	0.00172 U	0.00176 U	0.00202 U	0.00177 U	0.00186 U	0.00168 U	0.00194 U	0.00168 U	0.00203 U
Heptachlor epoxide	0.076	NA	0.4	NA	0.081	0.00476 U	0.00453 U	0.005 U	0.00393 U	0.00282 U	0.00257 U	0.00431 U	0.00432 U	0.00442 U	0.0189[R]	0.00444 U	0.0139 J[R]	0.00422 U	0.0117 J[R]	0.00422 U	0.00873 J
Methoxychlor	320	NA	4600	NA	NA	0.00494 U	0.0047 U	0.00518 U	0.00408 U	0.00293 U	0.00267 U	0.00447 U	0.00448 U	0.00458 U	0.00526 U	0.00461 U	0.00484 U	0.00438 U	0.00504 U	0.00438 U	0.00527 U
Toxaphene	0.49	NA	2.3	NA	6.2	0.0444 U	0.0423 U	0.0466 U	0.0367 U	0.0263 U	0.024 U	0.0402 U	0.0403 U	0.0412 U	0.0473 U	0.0414 U	0.0435 U	0.0394 U	0.0454 U	0.0394 U	0.0474 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)

I: The lower value for the two columns has been reported due to obvious interference.

J: Result is less than the reporting limit but greater than the method detection limit.

J-: Value is estimated with a potential low bias.

mg/Kg: milligram per killogram.

P: The RPD between the results for the two columns exceeds the method-specified criteria.

U: Not detected; number is the method detection limit.

Detected values are bold

Shaded values exceed the listed NJ criteria

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name						Raritan Bay					Raritan-Chapel							Chapel Hill			
Sample Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244	VC-245	VC-246	COMP-R	VC-247	VC-247	VC-318	VC-318	VC-320	VC-321
Sample Date						VC-235-D13.7-24E-A	COMP-O-D0-2E-A	COMP-O-D2-25E-A	VC-238-D0-28E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E-A	VC-244-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E-A	VC-247-D0-4E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E-A	VC-321-D0-20.5E-A
Sample Type						10/28/2018	10/27/2018	10/27/2018	10/27/2018	10/27/2018	11/14/2018	11/07/2018	11/07/2018	11/07/2018	11/07/2018	10/31/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	11/01/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844053-07	L1844053-12	L1844053-13	L1844053-19	L1844053-18	L1846705-06	L1846705-15	L1846705-16	L1846705-17	L1846705-07	L1844937-04	L1844937-05	L1844937-09	L1844937-10	L1844937-11	L1844937-12
						15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)
Volatile Organic Compounds (mg/kg)																					
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00019 U	0.00041 U	0.00019 U	0.00017 U	0.00022 U	0.00017 U	0.00014 U	0.00016 U	0.00021 U	0.00013 U	0.0002 U	0.00016 U	0.00026 U	0.00016 U	0.00019 U	0.00016 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00019 U	0.00041 U	0.00019 U	0.00017 U	0.00022 U	0.00017 U	0.00014 U	0.00016 U	0.00021 U	0.00013 U	0.0002 U	0.00015 U	0.00025 U	0.00016 U	0.00019 U	0.00016 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.00031 U	0.00066 U	0.00031 U	0.00028 U	0.00035 U	0.00027 U	0.00023 U	0.00026 U	0.00034 U	0.00021 U	0.00032 U	0.00025 U	0.00041 U	0.00025 U	0.00031 U	0.00026 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00017 U	0.00036 U	0.00017 U	0.00015 U	0.00019 U	0.00015 U	0.00013 U	0.00014 U	0.00018 U	0.00011 U	0.00017 U	0.00013 U	0.00022 U	0.00014 U	0.00017 U	0.00014 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00028 U	0.00059 U	0.00028 U	0.00025 U	0.00031 U	0.00024 U	0.00021 U	0.00023 U	0.0003 U	0.00018 U	0.00028 U	0.00022 U	0.00036 U	0.00022 U	0.00028 U	0.00023 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00037 U	0.0008 U	0.00038 U	0.00033 U	0.00043 U	0.00033 U	0.00028 U	0.00031 U	0.00041 U	0.00025 U	0.00039 U	0.0003 U	0.00049 U	0.0003 U	0.00037 U	0.00031 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.00031 U	0.00067 U	0.00032 U	0.00028 U	0.00036 U	0.00028 U	0.00024 U	0.00026 U	0.00035 U	0.00021 U	0.00033 U	0.00025 U	0.00042 U	0.00026 U	0.00032 U	0.00026 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0012 U	0.0025 U	0.0012 U	0.001 U	0.0013 U	0.001 U	0.00087 U	0.00098 U	0.0013 U	0.00078 U	0.0012 U	0.00093 U	0.0015 U	0.00094 U	0.0012 U	0.00097 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00032 U	0.00069 U	0.00032 U	0.00029 U	0.00037 U	0.00028 U	0.00024 U	0.00027 U	0.00036 U	0.00022 U	0.00033 U	0.00026 U	0.00043 U	0.00026 U	0.00032 U	0.00027 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00017 U	0.00036 U	0.00017 U	0.00015 U	0.00019 U	0.00014 U	0.00012 U	0.00014 U	0.00018 U	0.00011 U	0.00017 U	0.00013 U	0.00022 U	0.00014 U	0.00017 U	0.00014 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.0003 U	0.00064 U	0.0003 U	0.00027 U	0.00034 U	0.00026 U	0.00022 U	0.00025 U	0.00033 U	0.0002 U	0.00031 U	0.00024 U	0.00039 U	0.00024 U	0.0003 U	0.00025 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00014 U	0.00031 U	0.00014 U	0.00013 U	0.00016 U	0.00013 U	0.00011 U	0.00012 U	0.00016 U	0.00009 U	0.00015 U	0.00012 U	0.00019 U	0.00012 U	0.00014 U	0.00012 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00017 U	0.00037 U	0.00017 U	0.00015 U	0.0002 U	0.00015 U	0.00013 U	0.00014 U	0.00019 U	0.00012 U	0.00018 U	0.00014 U	0.00023 U	0.00014 U	0.00017 U	0.00014 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.0002 U	0.00042 U	0.0002 U	0.00018 U	0.00023 U	0.00017 U	0.00015 U	0.00017 U	0.00022 U	0.00013 U	0.0002 U	0.00016 U	0.00026 U	0.00016 U	0.0002 U	0.00017 U
1,4-Dioxane	7	45	36	210	0.067	0.04 U	0.087 U	0.041 U	0.036 U	0.046 U	0.036 U	0.03 U	0.034 U	0.045 U	0.027 U	0.042 U	0.033 U	0.054 U	0.033 U	0.041 U	0.034 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.069	0.31	0.091	0.038	0.14	0.013 J-	0.061	0.085	0.11	0.021 J-	0.051	0.026	0.12	0.0025 J	0.042	0.021
2-Hexanone	390	1000	6500	NA	0.15	0.0014 U	0.0029 U	0.0014 U	0.0012 U	0.0016 U	0.0012 U	0.001 U	0.0012 U	0.0015 U	0.00092 U	0.0014 U	0.0011 U	0.0018 U	0.0011 U	0.0014 U	0.0012 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0015 U	0.0032 U	0.0015 U	0.0013 U	0.0048 J	0.0013 U	0.0011 U	0.0012 U	0.0016 U	0.001 U	0.0015 U	0.0012 U	0.002 U	0.0012 U	0.0015 U	0.0012 U
Acetone	70000	NA	NA	NA	19	0.77 J	2.8	0.87 J	0.85 J	0.82 J	0.17 J-	1.2	1.5	1.6	0.21 J-	0.44 U	0.23	1.2	0.15	0.34 U	0.2
Benzene	3	2.2	16	11	0.0094	0.00019 U	0.00041 U	0.00019 U	0.00017 U	0.00022 U	0.00017 U	0.00014 U	0.00016 U	0.00021 U	0.00013 U	0.0002 U	0.00015 U	0.00025 U	0.00016 U	0.00019 U	0.00016 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00013 U	0.00027 U	0.00013 U	0.00011 U	0.00014 U	0.00011 U	0.00009 U	0.00011 U	0.00014 U	0.00008 U	0.00013 U	0.0001 U	0.00017 U	0.0001 U	0.00013 U	0.00011 U
Bromoform	88	NA	460	NA	0.018	0.00028 U	0.00061 U	0.00029 U	0.00026 U	0.00032 U	0.00025 U	0.00021 U	0.00024 U	0.00031 U	0.00019 U	0.0003 U	0.00023 U	0.00038 U	0.00023 U	0.00028 U	0.00024 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.00067 U	0.0014 U	0.00068 U	0.0006 U	0.00077 U	0.00059 U	0.0005 U	0.00057 U	0.00074 U	0.00045 U	0.0007 U	0.00054 U	0.00089 U	0.00055 U	0.00067 U	0.00057 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.0053 U	0.015 J	0.0053 U	0.0058 J	0.007 J	0.0046 U	0.004 U	0.0044 U	0.0058 U	0.0035 U	0.0055 U	0.0042 U	0.007 U	0.0043 U	0.0053 U	0.0044 U
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00026 U	0.00057 U	0.00027 U	0.00024 U	0.0003 U	0.00023 U	0.0002 U	0.00022 U	0.00029 U	0.00018 U	0.00028 U	0.00021 U	0.00035 U	0.00022 U	0.00027 U	0.00022 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00015 U	0.00031 U	0.00015 U	0.00013 U	0.00017 U	0.00013 U	0.00011 U	0.00012 U	0.00016 U	0.00009 U	0.00015 U	0.00012 U	0.00019 U	0.00012 U	0.00015 U	0.00012 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00024 U	0.00051 U	0.00024 U	0.00021 U	0.00027 U	0.00021 U	0.00018 U	0.0002 U	0.00026 U	0.00016 U	0.00025 U	0.00019 U	0.00031 U	0.00019 U	0.00024 U	0.0002 U
Chloroethane	NA	NA	NA	NA	NA	0.00052 U	0.0011 U	0.00053 U	0.00047 U	0.0006 U	0.00046 U	0.00039 U	0.00044 U	0.00058 U	0.00035 U	0.00054 U	0.00042 U	0.00069 U	0.00043 U	0.00052 U	0.00044 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00016 U	0.00035 U	0.00016 U	0.00021 J	0.00018 U	0.00014 U	0.00015 J	0.00018 J	0.00028 J	0.00011 U	0.00033 J	0.00014 J	0.00048 J	0.00013 U	0.00016 U	0.00014 U
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.0011 U	0.0023 U	0.0011 U	0.00097 U	0.0012 U	0.00094 U	0.00081 U	0.00091 U	0.0012 U	0.00073 U	0.0011 U	0.00087 U	0.0014 U	0.00088 U	0.0011 U	0.00091 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.0002 U	0.00043 U	0.0002 U	0.00018 U	0.00023 U	0.00018 U	0.00015 U	0.00017 U	0.00022 U	0.00014 U	0.00021 U	0.00016 U	0.00027 U	0.00016 U	0.0002 U	0.00017 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00018 U	0.00039 U	0.00018 U	0.00016 U	0.00021 U	0.00016 U	0.00014 U	0.00015 U	0.0002 U	0.00012 U	0.00019 U	0.00015 U	0.00024 U	0.00015 U	0.00018 U	0.00015 U
Cyclohexane	NA	NA	NA	NA	NA	0.00063 U	0.0013 U	0.00063 U	0.00056 U	0.00072 U	0.00055 U	0.00047 U	0.00053 U	0.00069 U	0.00042 U	0.00065 U	0.0005 U	0.00083 U	0.00051 U	0.00063 U	0.00053 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00016 U	0.00035 U	0.00016 U	0.00014 U	0.00018 U	0.00014 U	0.00012 U	0.00014 U	0.00018 U	0.00011 U	0.00017 U	0.00013 U	0.00021 U	0.00013 U	0.00016 U	0.00014 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.001 U	0.0023 U	0.0011 U	0.00095 U	0.0012 U	0.00093 U	0.0008 U	0.00089 U	0.0012 U	0.00071 U	0.0011 U	0.00085 U	0.0014 U	0.00086 U	0.0011 U	0.00089 U
Ethylbenzene	7800	10	130000	48	15	0.00016 U	0.00035 U	0.00016 U	0.00015 U	0.00019 U	0.00014 U	0.00012 U	0.00014 U	0.00018 U	0.00011 U	0.00017 U	0.00013 U	0.00022 U	0.00013 U	0.00016 U	0.00014 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00013 U	0.00027 U	0.00013 U	0.00011 U	0.00014 U	0.00011 U	0.00009 U	0.00011 U	0.00014 U	0.00008 U	0.00013 U	0.0001 U	0.00017 U	0.0001 U	0.00013 U	0.00011 U
Methyl acetate	78000	NA	NA	NA	22	0.0011 U	0.0024 U	0.0011 U	0.00099 U	0.0012 U	0.00096 U	0.00083 U	0.00093 U	0.0012 U	0.00074 U	0.0011 U	0.00088 U	0.0014 U	0.0009 U	0.0011 U	0.00093 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.0007 U	0.0015 U	0.0007 U	0.00062 U	0.0008 U	0.00061 U	0.00052 U	0.00059 U	0.00077 U	0.00047 U	0.00072 U	0.00056 U	0.00092 U	0.00057 U	0.0007 U	0.00059 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00023 U	0.0005 U	0.00023 U	0.00021 U	0.00026 U	0.0002 U	0.00018 U	0.0002 U	0.00026 U	0.00016 U	0.00024 U	0.00019 U	0.00031 U	0.00019 U	0.00023 U	0.0002 U
Methylene chloride	50	1400	260	NA	0.013	0.0071	0.0057 U	0.0027 U	0.0024 U	0.003 U	0.0023 U	0.002 U	0.0022 U	0.0029 U	0.0018 U	0.0027 U	0.0021 U	0.0035 U	0.0022 U	0.0026 U	0.0022 U
Styrene	16000	NA	260000	NA	2.1	0.00023 U	0.00048 U	0.00023 U	0.0002 U	0.00026 U	0.0002 U	0.00017 U	0.00073 J	0.00025 U	0.00015 U	0.00024 U	0.00018 U	0.0003 U	0.00018 U	0.00023 U	0.00019 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00023 U	0.00048 U	0.00023 U	0.0002 U	0.00026 U	0.0002 U	0.00017 U	0.00019 U	0.00025 U	0.00015 U	0.00024 U	0.00018 U	0.0003 U	0.00018 U	0.00023 U	0.00019 U
Toluene	6300	NA	100000	NA	7.8	0.00068 J	0.0013 U	0.00063 U	0.00056 U	0.0011 J	0.00055 U	0.00047 U	0.00053 U	0.00069 U	0.00042 U	0.00065 U	0.0005 U	0.00083 U	0.00051 U	0.00063 U	0.00053 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00016 U	0.00034 U	0.00016 U	0.00014 U	0.00018 U	0.00014 U	0.00012 U	0.00013 U	0.00017 U	0.00011 U	0.00016 U	0.00013 U	0.00021 U	0.00013 U	0.00016 U	0.00013 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00032 U	0.00068 U	0.00032 U	0.00028 U	0.00036 U	0.00028 U	0.00024 U	0.00027 U	0.00035 U	0.00021 U	0.00033 U	0.00025 U	0.00042 U	0.00026 U	0.00032 U	0.00027 U
Trichloroethene	15	3	79	14	0.0065	0.00016 U	0.00034 U	0.00016 U	0.00014 U	0.00018 U	0.00014 J	0.00016 J	0.00021 J	0.00032 J	0.00011 U	0.00016 U	0.00013 U	0.00021 U	0.00013 U	0.00016 U	0.00013 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.0008 U	0.0017 U	0.00081 U	0.00072 U	0.00092 U	0.0007 U	0.0006 U	0.00068 U	0.00089 U	0.00054 U	0.00083 U	0.00065 U	0.0011 U	0.00066 U	0.0008 U	0.00068 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.0008 U	0.0017 U	0.00081 U	0.00072 U	0.00092 U	0.0007 U	0.0006 U	0.00068 U	0.00088 U	0.00054 U	0.00083 U	0.00064 U	0.001 U	0.00065 U	0.0008 U	0.00068 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00039 U	0.00083 U	0.00039 U	0.00035 U	0.00044 U	0.00034 U	0.00029 U	0.00033 U	0.00043 U	0.00026 U	0.0004 U	0.00031 U	0.00051 U	0.00032 U	0.00039 U	0.00033 U
Xylene (total)	12000	NA	190000	NA	19	0.00034 U	0.00072 U	0.00034 U	0.0003 U	0.00038 U	0.00029 U	0.00025 U	0.00028 U	0.00037 U	0.00023 U	0.00035 U	0.00027 U	0.00044 U	0.00027 U	0.00034 U	0.00028 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.84678	3.125	0.961	0.89401	0.9729	0.18314	1.26131	1.58612	1.7106	0.231	0.05133	0.25614	1.32048	0.1525	0.042	0.221
Semi-Volatile Organic Compounds (mg/kg)																					
1,2,4,5-Tetrachlorobenzene	23	NA	390	NA	NA	0.029 U	0.036 U	0.029 U	0.03 U	0.028 U	0.021 U	0.023 U	0.023 U	0.026 U	0.02 U	0.026 U	0.02 U	0.026 U	0.019 U	0.021 U	0.021 U
2,2'-oxybis(1-Chloropropane)	3100	NA		NA	1.9	0.032 U	0.039 U	0.032 U	0.033 U	0.031 U	0.024 U	0.026 U	0.026 U	0.028 U	0.022 U	0.029 U	0.022 U	0.029 U	0.021 U	0.023 U	0.023 U
2,3,4,6-Tetrachlorophenol	1900	NA	27000	NA	26	0.056 U	0.069 U	0.057 U	0.057 U	0.055 U	0.041 U	0.045 U	0.045 U	0.049 U	0.039 U	0.051 U	0.039 U	0.051 U	0.037 U	0.041 R	0.04 U
2,4,5-Trichlorophenol	6300	NA	91000	NA	68	0.054 U	0.065 U	0.054 U	0.054 U	0.052 U	0.039 U	0.043 U	0.043 U	0.047 U	0.037 U	0.049 U	0.037 U	0.049 U	0.035 U	0.039 R	0.038 U
2,4,6-Trichlorophenol	49	NA	230	NA	0.86	0.053 U	0.064 U	0.053 U	0.054 U	0.052 U	0.039 U	0.042 U	0.042 U	0.046 U	0.037 U	0.048 U	0.037 U	0.048 U	0.035 U	0.038 R	0.038 U
2,4-Dichlorophenol	190	NA	2700	NA	0.19	0.045 U	0.055 U	0.045 U	0.046 U	0.044 U	0.033 U	0.036 U	0.036 U	0.039 U	0.031 U	0.041 U	0.031 U	0.041 U	0.029 U	0.032 R	0.032 U
2,4-Dimethylphenol	1300	NA	18000	NA	2.3	0.089 U	0.11 U	0.089 U	0.09 U	0.087 U	0.065 U	0.071 U	0.071 U	0.078 U	0.062 U	0.081 U	0.062 U	0.081 U	0.058 U	0.064 R	0.064 U
2,4-Dinitrophenol	130	NA	1800	NA	0.33	0.13 U	0.16 U	0.13 U	0.13 U	0.13 U	0.095 U	0.1 U	0.1 U	0.11 U	0.091 U	0.12 R	0.091 R	0.12 R	0.085 R	0.094 R	0.093 R
2,4-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.046 U	0.056 U	0.047 U	0.047 U	0.045 U	0.034 U	0.037 U	0.037 U	0.041 U	0.032 U	0.042 U	0.032 U	0.042 U	0.03 U	0.034 U	0.033 U
2,6-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.037 U	0.045 U	0.037 U	0.038 U	0.036 U	0.027 U	0.029 U	0.03 U	0.032 U	0.026 U	0.034 U	0.026 U	0.034 U	0.024 U	0.027 U	0.026 U
2-Chloronaphthalene	4800	NA	67000	NA	NA	0.027 U	0.032 U	0.027 U	0.027 U	0.026 U	0.02 U	0.021 U	0.021 U	0.023 U	0.018 U	0.024 U	0.018 U	0.024 U	0.017 U	0.019 U	0.019 U
2-Chlorophenol	390	NA	6500	NA	0.76	0.031 U	0.037 U	0.031 U	0.031 U	0.03 U	0.022 U	0.024 U	0.024 U	0.027 U	0.021 U	0.028 U	0.021 U	0.028 U	0.02 U	0.022 R	0.022 U
2-Methylnaphthalene	240	NA	3300	NA	3.1	0.03 U	0.048 J	0.03 U	0.03 U	0.029 U	0.022 U	0.027 J	0.043 J	0.074 J	0.021 U	0.059 J	0.02 U	0.059 J	0.019 U	0.021 U	0.021 U
2-Methylphenol (o-Cresol)	320	NA	4600	NA	0.77	0.043 U	0.053 U	0.044 U	0.044 U	0.042 U	0.032 U	0.034 U	0.035 U	0.038 U	0.03 U	0.039 U	0.03 U	0.039 U	0.028 U	0.031 R	0.031 U
2-Nitroaniline	NA	NA	NA	NA	NA	0.051 U	0.062 U	0.052 U	0.052 U	0.05 U	0.038 U	0.041 U	0.041 U	0.045 U	0.036 U	0.047 U	0.036 U	0.047 U	0.034 U	0.037 U	0.037 U
2-Nitrophenol	NA	NA	NA	NA	NA	0.046 U	0.056 U	0.046 U	0.047 U	0.045 U	0.034 U	0.036 U	0.037 U	0.04 U	0.032 U	0.042 U	0.032 U	0.042 U	0.03 U	0.033 R	0.033 U
3&4-Methylphenol	NA	NA	NA	NA	NA	0.04 U	0.061 J	0.04 U	0.041 U	0.039 U	0.03 U	0.037 J-	0.051 J-	0.096 J-	0.028 U	0.076 J	0.028 U	0.066 J	0.026 U	0.029 U	0.029 U
3,3'-Dichlorobenzidine	1.2	NA	5.7	NA	3.9	0.072 U	0.087 U	0.072 U	0.073 U	0.07 U	0.052 U	0.057 U	0.057 U	0.063 U	0.05 U	0.065 U	0.05 U	0.065 U	0.047 U	0.052 U	0.051 U
3-Nitroaniline	NA	NA	NA	NA	NA	0.053 U	0.064 U	0.053 U	0.054 U	0.051 U	0.039 U	0.042 U	0.042 U	0.046 U	0.037 U	0.048 U	0.037 U	0.048 U	0.034 U	0.038 U	0.038 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	0.13 U	0.16 U	0.13 U	0.14 U	0.13 U	0.098 U	0.11 U	0.11 U	0.12 U	0.094 U	0.12 U	0.093 U	0.12 U	0.088 U	0.097 R	0.096 U

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	Raritan Bay					Raritan-Chapel							Chapel Hill			
Sample Name						VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244	VC-245	VC-246	COMP-R	VC-247	VC-247	VC-318	VC-318	VC-320	VC-321
Sample Date						VC-235-D13.7-24E-A	COMP-O-D0-2E-A	COMP-O-D2-25E-A	VC-238-D0-28E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E-A	VC-244-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E-A	VC-247-D0-4E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E-A	VC-321-D0-20.5E-A
Sample Type						10/28/2018	10/27/2018	10/27/2018	10/27/2018	10/27/2018	11/14/2018	11/07/2018	11/07/2018	11/07/2018	11/07/2018	10/31/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	11/01/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844053-07	L1844053-12	L1844053-13	L1844053-19	L1844053-18	L1846705-06	L1846705-15	L1846705-16	L1846705-17	L1846705-07	L1844937-04	L1844937-05	L1844937-09	L1844937-10	L1844937-11	L1844937-12
						15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	0.031 U	0.038 U	0.031 U	0.032 U	0.03 U	0.023 U	0.025 U	0.025 U	0.027 U	0.022 U	0.028 U	0.022 U	0.028 U	0.02 U	0.022 U	0.022 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	0.042 U	0.051 U	0.042 U	0.042 U	0.041 U	0.03 U	0.033 U	0.033 U	0.036 U	0.029 U	0.038 U	0.029 U	0.038 U	0.027 U	0.03 R	0.03 U
4-Chloroaniline	2.7	NA	13	NA	0.23	0.032 U	0.039 U	0.032 U	0.033 U	0.031 U	0.024 U	0.026 U	0.026 U	0.028 U	0.022 U	0.029 U	0.022 U	0.029 U	0.021 U	0.023 U	0.023 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	0.023 U	0.029 U	0.024 U	0.024 U	0.023 U	0.017 U	0.019 U	0.019 U	0.02 U	0.016 U	0.021 U	0.016 U	0.021 U	0.015 U	0.017 U	0.017 U
4-Nitroaniline	27	NA	130	NA	NA	0.12 U	0.14 U	0.12 U	0.12 U	0.11 U	0.085 U	0.092 U	0.092 U	0.1 U	0.081 U	0.1 U	0.08 U	0.1 U	0.076 U	0.084 U	0.083 U
4-Nitrophenol	NA	NA	NA	NA	NA	0.078 U	0.095 U	0.078 U	0.079 U	0.076 U	0.057 U	0.062 U	0.062 U	0.068 U	0.054 U	0.071 U	0.054 U	0.071 U	0.051 U	0.056 R	0.056 U
Acenaphthene	3600	NA	50000	NA	NA	0.023 U	0.028 U	0.023 U	0.024 U	0.023 U	0.017 U	0.019 U	0.027 J	0.049 J	0.016 U	0.048 J	0.016 U	0.021 U	0.015 U	0.017 U	0.017 U
Acenaphthylene	NA	NA	NA	NA	NA	0.031 U	0.093 J	0.031 U	0.032 U	0.03 U	0.023 U	0.094 J	0.18	0.25	0.022 U	0.26	0.022 U	0.12 J	0.02 U	0.023 U	0.022 U
Acetophenone	7800	NA	130000	NA	3.6	0.029 U	0.036 U	0.029 U	0.03 U	0.028 U	0.021 U	0.023 U	0.023 U	0.026 U	0.02 U	0.027 U	0.02 U	0.027 U	0.019 U	0.021 U	0.021 U
Anthracene	18000	NA	250000	NA	NA	0.025 U	0.098 J	0.025 U	0.025 U	0.024 U	0.023 J	0.13	0.24	0.38	0.017 U	0.36	0.017 U	0.13 J	0.016 U	0.018 U	0.018 U
Atrazine	220	NA	3200	NA	0.33	0.098 U	0.12 U	0.098 U	0.1 U	0.095 U	0.072 U	0.078 U	0.078 U	0.086 U	0.068 U	0.089 U	0.068 U	0.089 U	0.064 U	0.071 U	0.07 U
Benzaldehyde	170	NA	910	NA	NA	0.093 J	0.21 J	0.093 J	0.1 J	0.083 J	0.032 U	0.086 J	0.097 J	0.13 J	0.03 U	0.1 J	0.03 U	0.15 J	0.028 U	0.032 J	0.031 U
Benzo(a)anthracene	5.1	78000	23	370000	0.71	0.031 U	0.34	0.032 U	0.032 U	0.031 U	0.065 J	0.44	0.78	1.3	0.022 U	1.2	0.022 U	0.37	0.021 U	0.023 U	0.022 U
Benzo(a)pyrene	0.51	3500	2.3	16000	NA	0.068 U	0.44	0.068 U	0.069 U	0.066 U	0.077 J	0.52	1.1	1.6	0.048 U	1.2	0.047 U	0.36	0.045 U	0.049 U	0.049 U
Benzo(b)fluoranthene	5.1	78000	23	370000	NA	0.023 U	0.5	0.023 U	0.024 U	0.023 U	0.085	0.56	1.1	1.7	0.016 U	1.2	0.016 U	0.39	0.015 U	0.017 U	0.017 U
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.033 U	0.26 J	0.033 U	0.033 U	0.032 U	0.042 J	0.3	0.6	0.96	0.023 U	0.7	0.023 U	0.23	0.022 U	0.024 U	0.023 U
Benzo(k)fluoranthene	51	780000	230	NA	NA	0.02 U	0.18	0.02 U	0.02 U	0.019 U	0.026 J	0.19	0.28	0.47	0.014 U	0.43	0.014 U	0.13	0.013 U	0.014 U	0.014 U
Biphenyl	87	NA	450	NA	NA	0.065 U	0.079 U	0.065 U	0.066 U	0.063 U	0.048 U	0.052 U	0.052 U	0.057 U	0.045 U	0.059 U	0.045 U	0.059 U	0.042 U	0.047 U	0.046 U
bis(2-Chloroethoxy)methane	190	NA	2700	NA	NA	0.026 U	0.032 U	0.027 U	0.027 U	0.026 U	0.019 U	0.021 U	0.021 U	0.023 U	0.018 U	0.024 U	0.018 U	0.024 U	0.017 U	0.019 U	0.019 U
bis(2-Chloroethyl)ether	0.63	NA	3.3	NA	0.33	0.034 U	0.041 U	0.034 U	0.034 U	0.033 U	0.025 U	0.027 U	0.027 U	0.029 U	0.023 U	0.03 U	0.023 U	0.031 U	0.022 U	0.024 U	0.024 U
bis(2-Ethylhexyl)phthalate	39	NA	180	NA	14	0.17 J	0.34	0.11 J	0.12 J	0.16 J	0.021 U	0.035 J	0.037 J	0.052 J	0.022 J	0.37	0.058 J	1.3	0.019 U	0.12 J	0.064 J
Butyl benzylphthalate	290	NA	1300	NA	29	0.037 U	0.045 U	0.037 U	0.038 U	0.036 U	0.027 U	0.03 U	0.03 U	0.032 U	0.026 U	0.034 U	0.026 U	0.034 U	0.024 U	0.027 U	0.027 U
Caprolactam	32000	290	460000	1300	16	0.06 U	0.073 U	0.06 U	0.061 U	0.058 U	0.044 U	0.048 U	0.048 U	0.052 U	0.042 U	0.054 U	0.042 U	0.054 U	0.039 U	0.043 U	0.043 U
Carbazole	NA	NA	NA	NA	NA	0.018 U	0.022 U	0.018 U	0.018 U	0.017 U	0.016 J	0.014 U	0.022 J	0.035 J	0.012 U	0.016 U	0.012 U	0.016 U	0.012 U	0.013 U	0.013 U
Chrysene	510	NA	2300	NA	NA	0.029 U	0.31	0.029 U	0.029 U	0.028 U	0.063 J	0.42	0.73	1.1	0.02 U	1	0.02 U	0.32	0.019 U	0.021 U	0.02 U
Dibenz(a,h)anthracene	0.51	7800	2.3	37000	NA	0.032 U	0.066 J	0.032 U	0.033 U	0.032 U	0.024 U	0.078	0.14	0.24	0.022 U	0.19	0.022 U	0.06 J	0.021 U	0.023 U	0.023 U
Dibenzofuran	NA	NA	NA	NA	NA	0.025 U	0.03 U	0.025 U	0.025 U	0.024 U	0.018 U	0.02 U	0.028 J	0.045 J	0.017 U	0.037 J	0.017 U	0.022 U	0.016 U	0.018 U	0.018 U
Diethyl phthalate	51000	NA	730000	NA	44	0.025 U	0.031 U	0.025 U	0.026 U	0.025 U	0.018 U	0.02 U	0.02 U	0.022 U	0.018 U	0.023 U	0.018 U	0.023 U	0.017 U	0.018 U	0.018 U
Dimethyl phthalate	NA	NA	NA	NA	NA	0.027 U	0.033 U	0.027 U	0.027 U	0.026 U	0.02 U	0.021 U	0.021 U	0.023 U	0.019 U	0.024 U	0.019 U	0.024 U	0.018 U	0.019 U	0.019 U
Di-n-butylphthalate	6300	NA	91000	NA	NA	0.025 U	0.03 U	0.025 U	0.025 U	0.024 U	0.018 U	0.02 U	0.02 U	0.022 U	0.017 U	0.022 U	0.017 U	0.022 U	0.016 U	0.018 U	0.018 U
Di-n-octyl phthalate	630	NA	9100	NA	NA	0.087 U	0.11 U	0.088 U	0.089 U	0.085 U	0.064 U	0.07 U	0.07 U	0.076 U	0.061 U	0.079 U	0.061 U	0.079 U	0.057 U	0.063 U	0.062 U
Fluoranthene	2400	NA	33000	NA	NA	0.032 U	0.46	0.032 U	0.033 U	0.031 U	0.091 J	0.62	1.1	1.7	0.022 U	1.4	0.022 U	0.39	0.021 U	0.023 U	0.023 U
Fluorene	2400	NA	33000	NA	NA	0.027 U	0.033 U	0.027 U	0.027 U	0.026 U	0.02 U	0.033 J	0.059 J	0.091 J	0.019 U	0.081 J	0.019 U	0.038 J	0.018 U	0.019 U	0.019 U
Hexachlorobenzene	0.43	NA	2.3	NA	0.17	0.027 U	0.032 U	0.027 U	0.027 U	0.026 U	0.02 U	0.021 U	0.021 U	0.023 U	0.019 U	0.024 U	0.018 U	0.024 U	0.017 U	0.019 U	0.019 U
Hexachlorobutadiene	8.9	NA	47	NA	0.17	0.035 U	0.042 U	0.035 U	0.035 U	0.034 U	0.025 U	0.028 U	0.028 U	0.03 U	0.024 U	0.032 U	0.024 U	0.032 U	0.023 U	0.025 U	0.025 U
Hexachlorocyclopentadiene	470	2.7	7800	NA	2.5	0.18 U	0.22 U	0.18 U	0.18 U	0.17 U	0.13 U	0.14 U	0.14 U	0.15 U	0.12 U	0.16 U	0.12 U	0.16 U	0.12 U	0.13 U	0.13 U
Hexachloroethane	17	NA	91	NA	0.17	0.045 U	0.055 U	0.045 U	0.046 U	0.044 U	0.033 U	0.036 U	0.036 U	0.04 U	0.032 U	0.041 U	0.031 U	0.041 U	0.03 U	0.033 U	0.032 U
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NA	0.039 U	0.29	0.039 U	0.04 U	0.038 U	0.042 J	0.3	0.56	0.88	0.027 U	0.68	0.027 U	0.22	0.026 U	0.028 U	0.028 U
Isophorone	570	NA	2700	NA	0.23	0.031 U	0.038 U	0.031 U	0.032 U	0.03 U	0.023 U	0.025 U	0.025 U	0.027 U	0.022 U	0.028 U	0.022 U	0.028 U	0.02 U	0.022 U	0.022 U
Naphthalene	2500	5.7	34000	27	19	0.034 U	0.082 J	0.034 U	0.035 U	0.033 U	0.025 U	0.091 J	0.14 J	0.24	0.024 U	0.2 J	0.024 U	0.1 J	0.022 U	0.024 U	0.024 U
Nitrobenzene	160	7.5	2600	36	0.17	0.041 U	0.05 U	0.042 U	0.042 U	0.04 U	0.03 U	0.033 U	0.033 U	0.036 U	0.029 U	0.038 U	0.029 U	0.038 U	0.027 U	0.03 U	0.03 U
N-Nitrosodi-n-propylamine	0.17	NA	0.36	NA	0.17	0.023 U	0.028 U	0.023 U	0.024 U	0.023 U	0.017 U	0.019 U	0.019 U	0.02 U	0.016 U	0.021 U	0.016 U	0.021 U	0.015 U	0.017 U	0.017 U
N-Nitrosodiphenylamine	110	NA	520	NA	1.1	0.023 U	0.028 U	0.023 U	0.023 U	0.022 U	0.017 U	0.018 U	0.018 U	0.02 U	0.016 U	0.021 U	0.016 U	0.021 U	0.015 U	0.016 U	0.016 U
Pentachlorophenol	1	NA	4.4	NA	0.33	0.062 U	0.075 U	0.062 U	0.062 U	0.06 U	0.045 U	0.049 U	0.049 U	0.054 U	0.043 U	0.056 U	0.043 U	0.056 U	0.04 U	0.044 R	0.044 U
Phenanthrene	NA	NA	NA	NA	NA	0.02 U	0.17 J	0.02 U	0.02 U	0.02 U	0.039 J	0.22	0.4	0.66	0.014 U	0.59	0.014 U	0.18	0.013 U	0.014 U	0.014 U
Phenol	19000	39000	270000	NA	21	0.033 U	2.6	0.048 J	0.034 U	0.032 U	0.024 U	0.026 U	0.026 U	0.036 J-	0.023 U	0.03 U	0.023 U	0.11 J	0.022 U	0.024 R	0.024 U
Pyrene	1800	NA	25000	NA	NA	0.024 U	0.52	0.024 U	0.025 U	0.036 J	0.11 J	0.85	1.5	2.2	0.017 U	1.6	0.018 J	0.49	0.016 U	0.018 U	0.017 U
SUM of Semi-Volatile Organic Compounds	NA	NA	NA	NA	NA	0.263	7.068	0.251	0.22	0.279	0.679	5.031	9.214	14.288	0.022	11.781	0.076	5.213	ND	0.152	0.064
Inorganic Compounds (mg/kg)																					
Aluminum	78000	NA	NA	NA	NA	14600	12900	13000	13000	11400	5420	6320	6840	9140	4480	6060	5860	7890	4390	5610	4550
Antimony	31	NA	520	NA	5.4	0.808 J	0.867 J	0.521 U	0.514 U	0.486 U	0.373 U	0.403 U	0.387 U	0.428 U	0.361 U	0.449 U	0.348 U	0.465 U	0.33 U	0.349 U	0.84 J
Arsenic	19	1100	19	5200	19	11.2	13.5	10.3	10.3	9.18	4.16	6.41	9.06	12.7	3.49	5.42	10.9	11.3	4.13	5.79	4.39
Barium	16000	870000	260000	NA	2100	59.7	77.9	54.3	55.3	50.5	35.4	43.9	50.7	63.9	33.7	49.7	55.2	72.8	37.8	31.3	33.2
Beryllium	160	2000	2600	9300	0.7	0.726	0.626 J	0.672 J	0.649 J	0.563 J	0.235 J	0.244 J	0.275 J	0.394 J	0.18 J	0.272 J	0.247 J	0.343 J	0.173 J	0.276 J	0.124 J
Cadmium	71	2600	1100	12000	1.9	0.52 J	0.995 J	0.494 J	0.446 J	0.422 J	0.284 J	0.318 J	0.377 J	0.518 J	0.209 J	0.116 U	0.256 J	1.1 J	0.085 U	0.11 J	0.229 J
Calcium	NA	NA	NA	NA	NA	53600	68700	48200	49200	45100	35200	46100	42700	42500	39700	55000	35400	54200	31700	31100	38200
Chromium	NA	NA	NA	NA	NA	71.5	108	70.4	68.7	65.9	44.6	50.2	52.9	64.7	49.3	66.5	49.8	104	55.7	44.8	48.9
Chromium VI (Hexavalent)	NA		NA			0.275 U	0.33 U	0.274 U	0.275 U	0.268 U	0.2 U	0.216 U	0.217 U	0.24 U	0.191 U	0.245 U	0.189 U	0.249 U	19.1	0.194 U	0.194 U
Cobalt	23	520	390	2500	90	9.2	9.82	8.93	8.58	7.74	4.58	4.75	5.23	6.85	4.07	5.54	4.44	6.65	3.78	4.74	3.69
Copper	3100	NA	52000	NA	910	29.1	81	25.5	25	24.8	19.9	26.8	38.1	53	15.9	24.6	43	76.7	15.9	16	16.4
Iron	NA	NA	NA	NA	NA	29100	26800	26400	25800	22500	10800	10100	11000	14700	9090	13000	10900	17100	13700	14200	8380
Lead	400	NA	800	NA	90	19.1	80.9	16.6	16.2	17.1	14.2	31.4	54.2	82.7	7.98	12.8	58.6	71.7	7.89	9.16	9.56
Magnesium	NA	NA	NA	NA	NA	7720	7850	7230	7430	6610	3170	3870	4150	5450	2890	3900	3620	4900	2200	2720	2960
Manganese	1900	87000	31000	400000	NA	444	494	434	429	388	167	233	223	271	170	245	219	364	141	209	162
Mercury	23	520000	390	NA	0.1	0.027 J	1.07	0.023 U	0.023 U	0.036 J	0.148	0.726	1.25	1.98	0.016 U	1.72	0.016 U	1.25	0.015 U	0.016 U	0.016 U
Nickel	1600	20000	26000	93000	48	34.3	39.6	32.5	31.9	29.2	20	21.2	24	29.3	19	25.8	21.3	30	18.9	18.4	17.9
Potassium	NA	NA	NA	NA	NA	3650	2800	3270	3260	2820	1080	1610	1650	2170	1030	1250	1480	2040	983	1310	1140
Selenium	390	NA	6500	NA	11	1.18 J	1.16 J	0.988 J	1.03 J	1.12 J	0.253 U	0.274 U	0.509 J	0.315 J	0.56 J	0.305 U	0.236 U	0.318 J	0.224 U	0.237 U	0.592 J
Silver	390	NA	6500	NA	0.5	0.387 U	1.89	0.388 U	0.383 U	0.362 U	0.278 U	0.3 U	0.288 U	0.318 U	0.268 U	0.334 U	0.421 J	2.06	0.245 U	0.26 U	0.27 U
Sodium	NA	NA	NA	NA	NA	4470	6740	4820	6730	6080	2470	3900	3880	5160	2120	2020	3470	5160	1150	2050	2290
Thallium	NA	NA	NA	NA	NA	0.431 U	0.506 U	0.432 U	0.426 U	0.403 U	0.309 U	0.334 U	0.321 U	0.354 U	0.299 U	0.372 U	0.289 U	0.386 U	0.273 U	0.289 U	0.301 U
Vanadium	390	170000	6500	800000	NA	58.3	63.2	57.2	55.5	51.9	30.5	34.7	37	46.3	29.1	38.5	31.9	49.2	31.7	31.5	29.4
Zinc	23000	NA	390000	NA	930	81.9	197	77.3	74.6	69.8	95.5	63.9	82.3	115	34.8	45.3	82.5	135	27.6	35.4	35.2

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-R-INGESTDERMSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERMSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Raritan Bay					Raritan-Chapel							Chapel Hill			
Sample Name						VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244	VC-245	VC-246	COMP-R	VC-247	VC-247	VC-318	VC-318	VC-320	VC-321
Sample Date						VC-235-D13.7-24E-A	COMP-O-D0-2E-A	COMP-O-D2-25E-A	VC-238-D0-28E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E-A	VC-244-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E-A	VC-247-D0-4E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E-A	VC-321-D0-20.5E-A
Sample Type						10/28/2018	10/27/2018	10/27/2018	10/27/2018	10/27/2018	11/14/2018	11/07/2018	11/07/2018	11/07/2018	11/07/2018	10/31/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	11/01/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844053-07	L1844053-12	L1844053-13	L1844053-19	L1844053-18	L1846705-06	L1846705-15	L1846705-16	L1846705-17	L1846705-07	L1844937-04	L1844937-05	L1844937-09	L1844937-10	L1844937-11	L1844937-12
						15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)
PCBs (mg/kg)																					
Aroclor-1016 (PCB-1016)	NA	NA	NA	NA	NA	0.0136 U	0.0179 U	0.0146 U	0.0146 U	0.0144 U	0.00976 U	0.0109 U	0.0119 U	0.0123 U	0.0098 U	0.00429 U	0.00334 U	0.00436 U	0.00314 U	0.00357 U	0.00341 U
Aroclor-1221 (PCB-1221)	NA	NA	NA	NA	NA	0.0153 U	0.0202 U	0.0165 U	0.0164 U	0.0162 U	0.011 U	0.0123 U	0.0135 U	0.0139 U	0.0111 U	0.00484 U	0.00376 U	0.00492 U	0.00355 U	0.00403 U	0.00385 U
Aroclor-1232 (PCB-1232)	NA	NA	NA	NA	NA	0.0325 U	0.0428 U	0.0349 U	0.0348 U	0.0343 U	0.0233 U	0.026 U	0.0285 U	0.0294 U	0.0234 U	0.0102 U	0.00797 U	0.0104 U	0.0075 U	0.00852 U	0.00814 U
Aroclor-1242 (PCB-1242)	NA	NA	NA	NA	NA	0.0206 U	0.143 P	0.0222 U	0.0221 U	0.0218 U	0.0148 U	0.0166 U	0.0181 U	0.0187 U	0.0149 U	0.00651 U	0.00506 U	0.132	0.00477 U	0.00542 U	0.00518 U
Aroclor-1248 (PCB-1248)	NA	NA	NA	NA	NA	0.023 U	0.0303 U	0.0247 U	0.0246 U	0.0243 U	0.0165 U	0.0184 U	0.0202 U	0.0208 U	0.0166 U	0.00725 U	0.00564 U	0.00736 U	0.00531 U	0.00603 U	0.00576 U
Aroclor-1254 (PCB-1254)	NA	NA	NA	NA	NA	0.0168 U	0.217	0.018 U	0.018 U	0.0177 U	0.012 U	0.0134 U	0.0147 U	0.0152 U	0.0121 U	0.00529 U	0.00411 U	0.0991	0.00387 U	0.0044 U	0.0042 U
Aroclor-1260 (PCB-1260)	NA	NA	NA	NA	NA	0.0283 U	0.0373 U	0.0304 U	0.0304 U	0.0299 U	0.0203 U	0.0227 U	0.0248 U	0.0256 U	0.0204 U	0.00893 U	0.00694 U	0.0343 J	0.00654 U	0.00742 U	0.0071 U
Aroclor-1262 (PCB-1262)	NA	NA	NA	NA	NA	0.0194 U	0.0256 U	0.0209 U	0.0208 U	0.0206 U	0.014 U	0.0156 U	0.0171 U	0.0176 U	0.014 U	0.00614 U	0.00477 U	0.00623 U	0.0045 U	0.0051 U	0.00488 U
Aroclor-1268 (PCB-1268)	NA	NA	NA	NA	NA	0.0159 U	0.0209 U	0.017 U	0.017 U	0.0168 U	0.0114 U	0.0127 U	0.0139 U	0.0144 U	0.0114 U	0.00501 U	0.00389 U	0.00508 U	0.00367 U	0.00416 U	0.00398 U
SUM of PCBs	0.25	NA	1.1	NA	1.6	ND	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2654	ND	ND	ND
Other																					
Moisture (%)	NA	NA	NA	NA	NA	41.8	51.6	41.7	41.9	40.3	19.9	25.9	26.2	33.2	16.3	34.8	15.2	35.7	11.5	17.7	17.7
Total Solids (%)	NA	NA	NA	NA	NA	58.2	48.4	58.3	58.1	59.7	80.1	74.1	73.8	66.8	83.7	65.2	84.8	64.3	88.5	82.3	82.3
Oxidation reduction potential (millivolts)	NA	NA	NA	NA	NA	45	31	37	37	42	25	39	39	37	21	28	20	20	17	17	11
pH (lab) (pH units)	NA	NA	NA	NA	NA	12	12.2	11.9	11.9	12	12.6	12.3	12.4	12.2	12.6	12.3	12.6	12.3	12.5	12.4	12.5
Pesticides (mg/kg)																					
4,4'-DDD	2.3	NA	11	NA	0.47	0.0028 U	0.0034 J	0.0028 U	0.00269 U	0.0027 U	0.00201 U	0.002 U	0.00211 U	0.00231 U	0.00201 U	0.00086 U	0.00065 U	0.00189 J	0.00063 U	0.00065 U	0.00068 U
4,4'-DDE	2	NA	11	NA	0.47	0.00181 U	0.0022 U	0.00181 U	0.00175 U	0.00175 U	0.0013 U	0.0013 U	0.00137 U	0.0015 U	0.0013 U	0.00056 U	0.00042 U	0.00054 U	0.0004 U	0.00042 U	0.00044 U
4,4'-DDT	1.9	NA	9.5	NA	0.67	0.0063 U	0.00767 U	0.0063 U	0.00607 U	0.00608 U	0.00453 U	0.00451 U	0.00475 U	0.00522 U	0.00454 UIP	0.00195 U	0.00147 U	0.00191 U	0.00142 U	0.00148 U	0.00154 U
Aldrin	0.041	NA	0.21	NA	0.13	0.00276 U	0.00336 U	0.00276 U	0.00266 U	0.00266 U	0.00198 U	0.00197 U	0.00208 U	0.00228 U	0.00199 U	0.00085 U	0.00064 U	0.00083 U	0.00062 U	0.00064 U	0.00067 U
alpha-BHC	0.086	NA	0.41	NA	0.0023	0.00092 U	0.00113 U	0.00092 U	0.00089 U	0.00089 U	0.00066 U	0.00066 U	0.0007 U	0.00076 U	0.00066 U	0.00028 U	0.00021 U	0.00028 U	0.0002 U	0.00021 U	0.00022 U
alpha-Chlordane	NA	NA	NA	NA	NA	0.00273 U	0.00332 U	0.00273 U	0.00263 U	0.00263 U	0.00196 U	0.00195 U	0.00206 U	0.00226 U	0.00197 U	0.00084 U	0.00063 U	0.00082 U	0.00061 U	0.00064 U	0.00066 U
beta-BHC	0.3	NA	1.4	NA	0.0046	0.00297 U	0.00362 U	0.00297 U	0.00286 U	0.00286 U	0.00214 U	0.00212 U	0.00224 U	0.00246 U	0.00214 U	0.00091 U	0.00069 U	0.0009 U	0.00067 U	0.00069 U	0.00072 U
Chlordane	0.27	NA	1.4	NA	1.4	0.026 U	0.0316 U	0.026 U	0.025 U	0.025 U	0.0186 U	0.0186 U	0.0196 U	0.0215 U	0.0187 U	0.00802 U	0.00607 U	0.00787 U	0.00586 U	0.00611 U	0.00636 U
delta-BHC	NA	NA	NA	NA	NA	0.00154 U	0.00187 U	0.00154 U	0.00148 U	0.00148 U	0.0011 U	0.0011 U	0.00116 U	0.00127 U	0.0011 U	0.00057 JPI	0.00035 U	0.00046 U	0.00034 U	0.00036 U	0.00037 U
Dieldrin	0.034	NA	0.16	NA	0.024	0.00245 U	0.00298 U	0.00245 U	0.00236 U	0.00236 U	0.00176 U	0.00175 U	0.00185 U	0.00203 U	0.00176 U	0.00119 J	0.00057 U	0.00074 U	0.00055 U	0.00057 U	0.0006 U
Endosulfan I	470	NA	7800	NA	NA	0.00185 U	0.00225 U	0.00185 U	0.00178 U	0.00178 U	0.00133 U	0.00132 U	0.0014 U	0.00153 U	0.00133 U	0.00057 U	0.00043 U	0.00056 U	0.00041 U	0.00043 U	0.00045 U
Endosulfan II	470	NA	7800	NA	NA	0.00262 U	0.00319 U	0.00262 U	0.00252 U	0.00252 U	0.00188 U	0.00187 U	0.00198 U	0.00217 U	0.00189 U	0.0008 U	0.00061 U	0.00079 U	0.00059 U	0.00061 U	0.00064 U
Endosulfan sulfate	NA	NA	NA	NA	NA	0.00155 U	0.00516	0.00156 U	0.0015 U	0.0015 U	0.00112 U	0.00111 U	0.00117 U	0.00129 U	0.00112 U	0.00048 U	0.00036 U	0.00047 U	0.00035 U	0.00036 U	0.00038 U
Endrin	19	NA	270	NA	1.6	0.00134 U	0.00163 U	0.00134 U	0.00129 U	0.00129 U	0.00096 U	0.00095 U	0.00101 U	0.00111 U	0.00096 U	0.00041 U	0.00031 U	0.0004 U	0.0003 U	0.00031 U	0.00032 U
Endrin aldehyde	NA	NA	NA	NA	NA	0.00343 U	0.00417 U	0.00343 U	0.0033 U	0.00331 U	0.00246 U	0.00245 U	0.00259 U	0.00284 U	0.00247 U	0.00106 U	0.0008 U	0.00104 U	0.00077 U	0.0008 U	0.00084 U
Endrin ketone	NA	NA	NA	NA	NA	0.00202 U	0.00246 U	0.00202 U	0.00194 U	0.00194 U	0.00145 U	0.00144 U	0.00152 U	0.00167 U	0.00145 U	0.00062 U	0.00047 U	0.00061 U	0.00045 U	0.00047 U	0.00049 U
gamma-BHC (Lindane)	0.57	NA	2.8	NA	0.0035	0.00146 U	0.00178 U	0.00146 U	0.00141 U	0.00141 U	0.00105 U	0.00104 U	0.0011 U	0.00121 U	0.00105 U	0.00045 U	0.00034 U	0.00044 U	0.00033 U	0.00034 U	0.00035 U
gamma-Chlordane	0.27	NA	1.4	NA	1.4	0.00259 U	0.00315 U	0.00259 U	0.00249 U	0.00249 U	0.00186 U	0.00185 U	0.00195 U	0.00214 U	0.00186 U	0.00079 U	0.0006 U	0.00078 U	0.00058 U	0.0006 U	0.00063 U
Heptachlor	0.15	NA	0.81	NA	0.083	0.00176 U	0.00214 U	0.00176 U	0.00169 U	0.00169 U	0.00126 U	0.00126 U	0.00132 U	0.00145 U	0.00126 U	0.00054 U	0.00041 U	0.00053 U	0.00039 U	0.00041 U	0.00043 U
Heptachlor epoxide	0.076	NA	0.4	NA	0.081	0.00441 U	0.00536 U	0.00441 U	0.00425 U	0.00425 U	0.00317 U	0.00315 U	0.00332 U	0.00365 U	0.00318 U	0.00136 U	0.00103 U	0.00134 U	0.00099 U	0.00104 U	0.00108 U
Methoxychlor	320	NA	4600	NA	NA	0.00457 U	0.00556 U	0.00457 U	0.0044 U	0.00441 U	0.00328 U	0.00327 U	0.00345 U	0.00378 U	0.00329 U	0.00141 U	0.00107 U	0.00138 U	0.00103 U	0.00108 U	0.00112 U
Toxaphene	0.49	NA	2.3	NA	6.2	0.0412 U	0.0501 U	0.0412 U	0.0396 U	0.0397 U	0.0296 U	0.0294 U	0.031 U	0.034 U	0.0296 U	0.0127 U	0.00962 U	0.0125 U	0.00929 U	0.00968 U	0.0101 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
U: Not detected; number is the method detection limit.
Detected values are bold
Shaded values exceed the listed NJ criteria

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-R-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERM-SRS-2021	NJ-R-INHALSRS-2021	NJ-MGWRS-2021	Chapel Hill	Chapel-Ambrose			Ambrose Channel		East of Ambrose	
Sample Name						VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample Date						VC-323-D0-22E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Type						11/01/2018	11/01/2018	11/08/2018	11/07/2018	10/31/2018	10/31/2018	11/02/2018	11/02/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844937-13	L1844937-06	L1846705-18	L1846705-20	L1844937-02	L1844937-03	L1844937-07	L1844937-08
						0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Volatile Organic Compounds (mg/kg)													
1,1,1-Trichloroethane	160000	NA	NA	NA	0.2	0.00019 U	0.00017 U	0.00019 U	0.00018 U	0.0002 U	0.00015 U	0.00019 U	0.00019 U
1,1,2,2-Tetrachloroethane	3.5	NA	18	NA	0.0069	0.00019 U	0.00017 U	0.00019 U	0.00018 U	0.0002 U	0.00015 U	0.00019 U	0.00019 U
1,1,2-Trichloroethane	12	NA	64	NA	0.017	0.0003 U	0.00027 U	0.00031 U	0.00029 U	0.00032 U	0.00024 U	0.0003 U	0.0003 U
1,1-Dichloroethane	120	NA	640	NA	0.24	0.00016 U	0.00015 U	0.00017 U	0.00016 U	0.00018 U	0.00013 U	0.00016 U	0.00016 U
1,1-Dichloroethene	11	52	180	240	0.0069	0.00027 U	0.00024 U	0.00028 U	0.00026 U	0.00029 U	0.00021 U	0.00027 U	0.00027 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.00036 U	0.00033 U	0.00037 U	0.00035 U	0.00039 U	0.00028 U	0.00037 U	0.00036 U
1,2,4-Trichlorobenzene	780	94	13000	NA	0.52	0.00031 U	0.00028 U	0.00032 U	0.00029 U	0.00033 U	0.00024 U	0.00031 U	0.0003 U
1,2-Dibromo-3-chloropropane (DBCP)	0.87	0.026	4.5	0.12	0.005	0.0011 U	0.001 U	0.0012 U	0.0011 U	0.0012 U	0.00088 U	0.0011 U	0.0011 U
1,2-Dibromoethane (Ethylene Dibromide)	0.35	0.085	1.8	0.41	0.005	0.00031 U	0.00028 U	0.00032 U	0.0003 U	0.00034 U	0.00025 U	0.00032 U	0.00031 U
1,2-Dichlorobenzene	6700	NA	110000	NA	11	0.00016 U	0.00014 U	0.00017 U	0.00016 U	0.00017 U	0.00013 U	0.00016 U	0.00016 U
1,2-Dichloroethane	5.8	71	30	320	0.0095	0.00029 U	0.00026 U	0.0003 U	0.00028 U	0.00031 U	0.00023 U	0.00029 U	0.00029 U
1,2-Dichloropropane	19	5.7	98	27	0.0058	0.00014 U	0.00013 U	0.00014 U	0.00014 U	0.00015 U	0.00011 U	0.00014 U	0.00014 U
1,3-Dichlorobenzene	6700	NA	110000	NA	11	0.00017 U	0.00015 U	0.00017 U	0.00016 U	0.00018 U	0.00013 U	0.00017 U	0.00017 U
1,4-Dichlorobenzene	780	NA	13000	NA	1.4	0.00019 U	0.00017 U	0.0002 U	0.00018 U	0.00021 U	0.00015 U	0.0002 U	0.00019 U
1,4-Dioxane	7	45	36	210	0.067	0.039 U	0.036 U	0.041 U	0.038 U	0.042 U	0.031 U	0.04 U	0.039 U
2-Butanone (Methyl Ethyl Ketone)	47000	NA	780000	NA	0.98	0.02	0.016	0.012	0.0054 J	0.043	0.002 U	0.0068 J	0.012
2-Hexanone	390	1000	6500	NA	0.15	0.0013 U	0.0012 U	0.0014 U	0.0013 U	0.0014 U	0.001 U	0.0014 U	0.0013 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	NA	NA	NA	0.0014 U	0.0013 U	0.0015 U	0.0014 U	0.0015 U	0.0011 U	0.0015 U	0.0014 U
Acetone	70000	NA	NA	NA	19	0.19	0.15	0.14	0.063	0.36 U	0.017	0.072	0.11
Benzene	3	2.2	16	11	0.0094	0.00019 U	0.00017 U	0.00019 U	0.00018 U	0.0002 U	0.00015 U	0.00019 U	0.00019 U
Bromodichloromethane	11	NA	59	NA	0.005	0.00012 U	0.00011 U	0.00013 U	0.00012 U	0.00013 U	0.00009 U	0.00012 U	0.00012 U
Bromoform	88	NA	460	NA	0.018	0.00028 U	0.00025 U	0.00028 U	0.00027 U	0.0003 U	0.00022 U	0.00028 U	0.00028 U
Bromomethane (Methyl Bromide)	110	18	1800	82	0.043	0.00065 U	0.00059 U	0.00067 U	0.00063 U	0.0007 U	0.00051 U	0.00066 U	0.00065 U
Carbon disulfide	NA	NA	NA	NA	3.7	0.0051 U	0.0046 U	0.0053 U	0.0049 U	0.0055 U	0.004 U	0.0052 U	0.0051 U
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	0.00026 U	0.00023 U	0.00027 U	0.00025 U	0.00028 U	0.0002 U	0.00026 U	0.00026 U
Chlorobenzene	510	NA	8400	NA	0.64	0.00014 U	0.00013 U	0.00015 U	0.00014 U	0.00015 U	0.00011 U	0.00014 U	0.00014 U
Chlorobromomethane	NA	NA	NA	NA	NA	0.00023 U	0.00021 U	0.00024 U	0.00022 U	0.00025 U	0.00018 U	0.00023 U	0.00023 U
Chloroethane	NA	NA	NA	NA	NA	0.00051 U	0.00046 U	0.00052 U	0.00049 U	0.00055 U	0.0004 U	0.00052 U	0.00051 U
Chloroform (Trichloromethane)	780	590	13000	NA	0.33	0.00016 U	0.0002 J	0.00016 J	0.00017 J	0.00026 J	0.00012 U	0.00016 U	0.00017 J
Chloromethane (Methyl Chloride)	NA	270	NA	1200	NA	0.001 U	0.00094 U	0.0011 U	0.001 U	0.0011 U	0.00082 U	0.0011 U	0.001 U
cis-1,2-Dichloroethene	780	NA	13000	NA	0.35	0.0002 U	0.00018 U	0.0002 U	0.00019 U	0.00021 U	0.00016 U	0.0002 U	0.0002 U
cis-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00018 U	0.00016 U	0.00018 U	0.00017 U	0.00019 U	0.00014 U	0.00018 U	0.00018 U
Cyclohexane	NA	NA	NA	NA	NA	0.00061 U	0.00055 U	0.00063 U	0.00059 U	0.00066 U	0.00048 U	0.00062 U	0.00061 U
Dibromochloromethane	8.3	NA	43	NA	0.005	0.00016 U	0.00014 U	0.00016 U	0.00015 U	0.00017 U	0.00012 U	0.00016 U	0.00016 U
Dichlorodifluoromethane (CFC-12)	16000	NA	260000	NA	38	0.001 U	0.00093 U	0.001 U	0.00099 U	0.0011 U	0.00081 U	0.001 U	0.001 U
Ethylbenzene	7800	10	130000	48	15	0.00016 U	0.00014 U	0.00016 U	0.00015 U	0.00017 U	0.00012 U	0.00016 U	0.00016 U
Isopropylbenzene (Cumene)	7800	NA	130000	NA	22	0.00012 U	0.00011 U	0.00013 U	0.00012 U	0.00013 U	0.00009 U	0.00012 U	0.00012 U
Methyl acetate	78000	NA	NA	NA	22	0.0011 U	0.00096 U	0.0011 U	0.001 U	0.0011 U	0.00084 U	0.0011 U	0.0011 U
Methyl cyclohexane	NA	NA	NA	NA	NA	0.00068 U	0.00061 U	0.0007 U	0.00065 U	0.00073 U	0.00053 U	0.00069 U	0.00068 U
Methyl Tert Butyl Ether	780	140	13000	650	0.25	0.00023 U	0.0002 U	0.00023 U	0.00022 U	0.00024 U	0.00018 U	0.00023 U	0.00022 U
Methylene chloride	50	1400	260	NA	0.013	0.0026 U	0.0023 U	0.0026 U	0.0025 U	0.0028 U	0.002 U	0.0026 U	0.0026 U
Styrene	16000	NA	260000	NA	2.1	0.00022 U	0.0002 U	0.00023 U	0.00021 U	0.00024 U	0.00017 U	0.00022 U	0.00022 U
Tetrachloroethene	330	47	1700	NA	0.0086	0.00022 U	0.0002 U	0.00023 U	0.00021 U	0.00024 U	0.00017 U	0.00022 U	0.00022 U
Toluene	6300	NA	100000	NA	7.8	0.00061 U	0.00055 U	0.00063 U	0.00059 U	0.00066 U	0.00048 U	0.00062 U	0.00061 U
trans-1,2-Dichloroethene	1300	NA	22000	NA	0.56	0.00015 U	0.00014 U	0.00016 U	0.00015 U	0.00016 U	0.00012 U	0.00016 U	0.00015 U
trans-1,3-Dichloropropene	7	4.8	36	23	0.0063	0.00031 U	0.00028 U	0.00032 U	0.0003 U	0.00033 U	0.00024 U	0.00031 U	0.00031 U
Trichloroethene	15	3	79	14	0.0065	0.00015 U	0.00014 U	0.00016 U	0.00015 U	0.00016 U	0.00012 U	0.00016 U	0.00015 U
Trichlorofluoromethane (CFC-11)	23000	NA	390000	NA	29	0.00078 U	0.0007 U	0.0008 U	0.00075 U	0.00084 U	0.00062 U	0.0008 U	0.00078 U
Trifluorotrichloroethane (Freon 113)	NA	NA	NA	NA	NA	0.00078 U	0.0007 U	0.0008 U	0.00075 U	0.00084 U	0.00061 U	0.00079 U	0.00078 U
Vinyl chloride	0.97	1.4	5	6.4	0.0067	0.00038 U	0.00034 U	0.00039 U	0.00036 U	0.0004 U	0.0003 U	0.00038 U	0.00038 U
Xylene (total)	12000	NA	190000	NA	19	0.00033 U	0.00029 U	0.00034 U	0.00032 U	0.00035 U	0.00026 U	0.00033 U	0.00033 U
SUM of Volatile Organic Compounds	NA	NA	NA	NA	NA	0.21	0.1662	0.15216	0.06857	0.04326	0.017	0.0788	0.12217
Semi-Volatile Organic Compounds (mg/kg)													
1,2,4,5-Tetrachlorobenzene	23	NA	390	NA	NA	0.021 U	0.021 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U
2,2'-oxybis(1-Chloropropane)	3100	NA	NA	NA	1.9	0.023 U	0.023 U	0.022 U	0.022 U	0.024 U	0.021 U	0.023 U	0.022 U
2,3,4,6-Tetrachlorophenol	1900	NA	27000	NA	26	0.04 R	0.041 U	0.039 U	0.038 U	0.041 U	0.037 R	0.04 U	0.039 U
2,4,5-Trichlorophenol	6300	NA	91000	NA	68	0.038 R	0.039 U	0.037 U	0.036 U	0.039 U	0.035 R	0.038 U	0.037 U
2,4,6-Trichlorophenol	49	NA	230	NA	0.86	0.037 R	0.038 U	0.036 U	0.036 U	0.039 U	0.035 R	0.038 U	0.037 U
2,4-Dichlorophenol	190	NA	2700	NA	0.19	0.032 U	0.032 U	0.031 U	0.031 U	0.033 U	0.03 R	0.032 U	0.031 U
2,4-Dimethylphenol	1300	NA	18000	NA	2.3	0.063 U	0.064 U	0.061 U	0.06 U	0.065 U	0.058 R	0.063 U	0.062 U
2,4-Dinitrophenol	130	NA	1800	NA	0.33	0.092 R	0.094 R	0.09 U	0.089 U	0.096 R	0.085 R	0.092 R	0.09 R
2,4-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.033 R	0.034 U	0.032 U	0.032 U	0.034 U	0.03 U	0.033 U	0.032 U
2,6-Dinitrotoluene	0.8	NA	3.8	NA	0.27	0.026 U	0.027 U	0.025 U	0.025 U	0.027 U	0.024 U	0.026 U	0.026 U
2-Chloronaphthalene	4800	NA	67000	NA	NA	0.019 U	0.019 U	0.018 U	0.018 U	0.02 U	0.017 U	0.019 U	0.018 U
2-Chlorophenol	390	NA	6500	NA	0.76	0.022 R	0.022 U	0.021 U	0.021 U	0.022 U	0.02 R	0.022 U	0.021 U
2-Methylnaphthalene	240	NA	3300	NA	3.1	0.021 U	0.021 U	0.02 U	0.02 U	0.024 J	0.019 U	0.021 U	0.02 U
2-Methylphenol (o-Cresol)	320	NA	4600	NA	0.77	0.031 U	0.031 U	0.03 U	0.03 U	0.032 U	0.028 R	0.031 U	0.03 U
2-Nitroaniline	NA	NA	NA	NA	NA	0.036 R	0.037 U	0.035 U	0.035 U	0.038 U	0.034 U	0.036 U	0.036 U
2-Nitrophenol	NA	NA	NA	NA	NA	0.032 R	0.033 U	0.032 U	0.031 U	0.034 U	0.03 R	0.032 U	0.032 U
3&4-Methylphenol	NA	NA	NA	NA	NA	0.028 U	0.029 U	0.028 U	0.028 U	0.03 U	0.026 U	0.028 U	0.028 U
3,3'-Dichlorobenzidine	1.2	NA	5.7	NA	3.9	0.05 U	0.052 U	0.049 U	0.049 U	0.052 U	0.047 U	0.051 U	0.05 U
3-Nitroaniline	NA	NA	NA	NA	NA	0.037 U	0.038 U	0.036 U	0.036 U	0.039 U	0.035 U	0.037 U	0.036 U
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	NA	0.095 R	0.097 U	0.092 U	0.091 U	0.098 U	0.088 R	0.095 U	0.093 U

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	NJ-R-INGESTDERMSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERMSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	Chapel Hill	Chapel-Ambrose			Ambrose Channel		East of Ambrose	
Sample Name						VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample Date						VC-323-D0-22E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Type						11/01/2018	11/01/2018	11/08/2018	11/07/2018	10/31/2018	10/31/2018	11/02/2018	11/02/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844937-13	L1844937-06	L1846705-18	L1846705-20	L1844937-02	L1844937-03	L1844937-07	L1844937-08
						0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	0.022 U	0.022 U	0.021 U	0.021 U	0.023 U	0.02 U	0.022 U	0.022 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	NA	0.029 R	0.03 U	0.029 U	0.028 U	0.03 U	0.027 R	0.03 U	0.029 U
4-Chloroaniline	2.7	NA	13	NA	0.23	0.023 U	0.023 U	0.022 U	0.022 U	0.024 U	0.021 U	0.023 U	0.022 U
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	NA	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.015 U	0.017 U	0.016 U
4-Nitroaniline	27	NA	130	NA	NA	0.082 U	0.084 U	0.08 U	0.079 U	0.085 U	0.076 U	0.082 U	0.08 U
4-Nitrophenol	NA	NA	NA	NA	NA	0.055 R	0.056 U	0.054 U	0.053 U	0.057 U	0.051 R	0.055 U	0.054 U
Acenaphthene	3600	NA	50000	NA	NA	0.016 U	0.017 U	0.016 U	0.016 U	0.042 J	0.015 U	0.016 U	0.03 J
Acenaphthylene	NA	NA	NA	NA	NA	0.022 U	0.023 U	0.022 U	0.021 U	0.038 J	0.02 U	0.022 U	0.022 U
Acetophenone	7800	NA	130000	NA	3.6	0.021 U	0.021 U	0.02 U	0.02 U	0.021 U	0.019 U	0.021 U	0.02 U
Anthracene	18000	NA	250000	NA	NA	0.018 U	0.018 U	0.017 U	0.017 U	0.21	0.016 U	0.041 J	0.073 J
Atrazine	220	NA	3200	NA	0.33	0.069 U	0.071 U	0.067 U	0.067 U	0.072 U	0.064 U	0.069 U	0.068 U
Benzaldehyde	170	NA	910	NA	NA	0.056 J	0.036 J	0.03 U	0.03 U	0.032 U	0.028 U	0.031 U	0.03 U
Benzo(a)anthracene	5.1	78000	23	370000	0.71	0.031 J	0.032 J	0.022 U	0.021 U	0.35	0.021 U	0.056 J	0.16
Benzo(a)pyrene	0.51	3500	2.3	16000	NA	0.048 U	0.049 U	0.047 U	0.046 U	0.3	0.045 U	0.053 J	0.16
Benzo(b)fluoranthene	5.1	78000	23	370000	NA	0.032 J	0.036 J	0.016 U	0.016 U	0.35	0.015 U	0.059	0.18
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.023 U	0.024 U	0.023 U	0.022 U	0.16	0.022 U	0.041 J	0.1 J
Benzo(k)fluoranthene	51	780000	230	NA	NA	0.014 U	0.016 J	0.013 U	0.013 U	0.12	0.013 U	0.023 J	0.065
Biphenyl	87	NA	450	NA	NA	0.046 U	0.047 U	0.045 U	0.044 U	0.048 U	0.042 U	0.046 U	0.045 U
bis(2-Chloroethoxy)methane	190	NA	2700	NA	NA	0.019 U	0.019 U	0.018 U	0.018 U	0.02 U	0.017 U	0.019 U	0.018 U
bis(2-Chloroethyl)ether	0.63	NA	3.3	NA	0.33	0.024 U	0.024 U	0.023 U	0.023 U	0.025 U	0.022 U	0.024 U	0.023 U
bis(2-Ethylhexyl)phthalate	39	NA	180	NA	14	0.02 U	0.46	0.027 J	0.023 J	0.044 J	0.025 J	0.038 J	0.02 U
Butyl benzylphthalate	290	NA	1300	NA	29	0.026 U	0.027 U	0.026 U	0.025 U	0.027 U	0.024 U	0.026 U	0.026 U
Caprolactam	32000	290	460000	1300	16	0.042 U	0.043 U	0.041 U	0.041 U	0.044 U	0.039 U	0.042 U	0.042 U
Carbazole	NA	NA	NA	NA	NA	0.012 U	0.013 U	0.012 U	0.012 U	0.015 J	0.012 U	0.013 U	0.018 J
Chrysene	510	NA	2300	NA	NA	0.023 J	0.028 J	0.02 U	0.02 U	0.31	0.019 U	0.05 J	0.14
Dibenz(a,h)anthracene	0.51	7800	2.3	37000	NA	0.023 U	0.023 U	0.022 U	0.022 U	0.042 J	0.021 U	0.023 U	0.022 U
Dibenzofuran	NA	NA	NA	NA	NA	0.017 U	0.018 U	0.017 U	0.017 U	0.031 J	0.016 U	0.017 U	0.017 U
Diethyl phthalate	51000	NA	730000	NA	44	0.018 U	0.018 U	0.017 U	0.017 U	0.019 U	0.017 U	0.018 U	0.018 U
Dimethyl phthalate	NA	NA	NA	NA	NA	0.019 U	0.019 U	0.018 U	0.018 U	0.02 U	0.018 U	0.019 U	0.018 U
Di-n-butylphthalate	6300	NA	91000	NA	NA	0.017 U	0.018 U	0.017 U	0.017 U	0.018 U	0.016 U	0.018 U	0.017 U
Di-n-octyl phthalate	630	NA	9100	NA	NA	0.062 U	0.063 U	0.06 U	0.059 U	0.064 U	0.057 U	0.062 U	0.06 U
Fluoranthene	2400	NA	33000	NA	NA	0.028 J	0.05 J	0.022 U	0.022 U	0.64	0.021 U	0.11 J	0.34
Fluorene	2400	NA	33000	NA	NA	0.019 U	0.019 U	0.018 U	0.018 U	0.064 J	0.018 U	0.019 U	0.027 J
Hexachlorobenzene	0.43	NA	2.3	NA	0.17	0.019 U	0.019 U	0.018 U	0.018 U	0.02 U	0.018 U	0.019 U	0.018 U
Hexachlorobutadiene	8.9	NA	47	NA	0.17	0.024 U	0.025 U	0.024 U	0.024 U	0.026 U	0.023 U	0.024 U	0.024 U
Hexachlorocyclopentadiene	470	2.7	7800	NA	2.5	0.12 R	0.13 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U
Hexachloroethane	17	NA	91	NA	0.17	0.032 U	0.033 U	0.031 U	0.031 U	0.033 U	0.03 U	0.032 U	0.031 U
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NA	0.028 U	0.028 U	0.027 U	0.026 U	0.17	0.026 U	0.036 J	0.092
Isophorone	570	NA	2700	NA	0.23	0.022 U	0.022 U	0.022 U	0.021 U	0.023 U	0.02 U	0.022 U	0.022 U
Naphthalene	2500	5.7	34000	27	19	0.024 U	0.024 U	0.023 U	0.023 U	0.12 J	0.022 U	0.024 U	0.029 J
Nitrobenzene	160	7.5	2600	36	0.17	0.029 U	0.03 U	0.028 U	0.028 U	0.03 U	0.027 U	0.029 U	0.029 U
N-Nitrosodi-n-propylamine	0.17	NA	0.36	NA	0.17	0.016 U	0.017 U	0.016 U	0.016 U	0.017 U	0.015 U	0.016 U	0.016 U
N-Nitrosodiphenylamine	110	NA	520	NA	1.1	0.016 U	0.016 U	0.016 U	0.016 U	0.017 U	0.015 U	0.016 U	0.016 U
Pentachlorophenol	1	NA	4.4	NA	0.33	0.043 R	0.044 U	0.042 U	0.042 U	0.045 U	0.04 R	0.044 U	0.043 U
Phenanthrene	NA	NA	NA	NA	NA	0.014 U	0.028 J	0.014 U	0.014 U	0.44	0.013 U	0.087 J	0.26
Phenol	19000	39000	270000	NA	21	0.023 R	0.024 U	0.023 U	0.022 U	0.024 U	0.022 R	0.023 U	0.023 U
Pyrene	1800	NA	25000	NA	NA	0.035 J	0.061 J	0.017 U	0.016 U	0.56	0.016 U	0.11 J	0.33
SUM of Semi-Volatile Organic Compounds	NA	NA	NA	NA	NA	0.205	0.747	0.027	0.023	4.03	0.025	0.704	2.004
Inorganic Compounds (mg/kg)													
Aluminum	78000	NA	NA	NA	NA	3790	3190	2890	2510	3860	2180	3140	3260
Antimony	31	NA	520	NA	5.4	1.03 J	0.362 U	0.357 U	0.35 U	0.375 U	0.339 U	0.355 U	0.343 U
Arsenic	19	1100	19	5200	19	4.1	3.61	2.75	2.26	3.2	3.13	4.26	4.94
Barium	16000	870000	260000	NA	2100	34.1	34.1	31.9	27.7	33.2	27.9	32.4	33.1
Beryllium	160	2000	2600	9300	0.7	0.056 J	0.095 J	0.075 J	0.055 J	0.138 J	0.08 J	0.112 J	0.126 J
Cadmium	71	2600	1100	12000	1.9	0.158 J	0.152 J	0.094 J	0.09 U	0.097 U	0.088 U	0.092 U	0.088 U
Calcium	NA	NA	NA	NA	NA	37300	43100	36600	33400	37100	33900	36800	39500
Chromium	NA	NA	NA	NA	NA	45.2	50.7	44.1	39.8	41.8	41.8	45	48.1
Chromium VI (Hexavalent)	NA	NA	NA	NA	NA	0.193 U	0.196 U	0.19 U	1.39	0.2 U	17.4	0.191 U	0.19 U
Cobalt	23	520	390	2500	90	3.06	3.76	2.34	1.78 J	2.76	1.29 J	2.66	2.8
Copper	3100	NA	52000	NA	910	15	22.8	15	13.1	15	12.1	17.1	16.2
Iron	NA	NA	NA	NA	NA	6480	4850	3400	2770	6330	3480	5620	7060
Lead	400	NA	800	NA	90	9.38	20.7	10.8	6.52	13	6.94	19.2	18.4
Magnesium	NA	NA	NA	NA	NA	2580	2340	2190	1920	2680	1660	2390	2380
Manganese	1900	87000	31000	400000	NA	147	333	340	134	161	123	147	161
Mercury	23	520000	390	NA	0.1	0.017 J	0.158	0.018 J	0.016 U	0.142	0.015 U	0.067 J	0.096
Nickel	1600	20000	26000	93000	48	16	19.4	15.1	13.8	15.4	13.2	15.5	16.9
Potassium	NA	NA	NA	NA	NA	928	772	688	599	1080	986	849	861
Selenium	390	NA	6500	NA	11	0.482 J	0.246 U	0.385 J	0.238 U	0.255 U	0.23 U	0.241 U	0.233 U
Silver	390	NA	6500	NA	0.5	0.262 U	0.362 J	0.266 U	0.261 U	0.279 U	0.253 U	0.264 U	0.255 U
Sodium	NA	NA	NA	NA	NA	998	2450	2080	1780	2910	2070	2400	2480
Thallium	NA	NA	NA	NA	NA	0.292 U	0.3 U	0.296 U	0.29 U	0.311 U	0.281 U	0.294 U	0.284 U
Vanadium	390	170000	6500	800000	NA	26.2	27.1	24.3	21.2	25.3	21	27.2	28.4
Zinc	23000	NA	390000	NA	930	31.2	49.2	30.3	80.4	29.3	19.9	37.8	34.7

TABLE 6
SUMMARY OF AMENDED SEDIMENT DATA QUALITY - BULK CHEMISTRY ANALYSESE
(SVOCs, EPH, INORGANICS, PCBs and PESTICIDES)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name						Chapel Hill	Chapel-Ambrose			Ambrose Channel		East of Ambrose	
Sample Name	NJ-R-INGESTDERMSRS-2021	NJ-R-INHALSRS-2021	NJ-NR-INGESTDERMSRS-2021	NJ-NR-INHALSRS-2021	NJ-MGWSRS-2021	VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample Date						VC-323-D0-22E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Type						11/01/2018	11/01/2018	11/08/2018	11/07/2018	10/31/2018	10/31/2018	11/02/2018	11/02/2018
Lab Sample ID						Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)						L1844937-13	L1844937-06	L1846705-18	L1846705-20	L1844937-02	L1844937-03	L1844937-07	L1844937-08
						0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
PCBs (mg/kg)													
Aroclor-1016 (PCB-1016)	NA6	NA	NA	NA	NA	0.00346 U	0.00344 U	0.0091 U	0.0091 U	0.00352 U	0.00328 U	0.00344 U	0.00333 U
Aroclor-1221 (PCB-1221)	NA6	NA	NA	NA	NA	0.0039 U	0.00388 U	0.0103 U	0.0103 U	0.00397 U	0.0037 U	0.00388 U	0.00376 U
Aroclor-1232 (PCB-1232)	NA6	NA	NA	NA	NA	0.00825 U	0.00821 U	0.0217 U	0.0217 U	0.0084 U	0.00784 U	0.00822 U	0.00795 U
Aroclor-1242 (PCB-1242)	NA6	NA	NA	NA	NA	0.00525 U	0.012 J	0.0138 U	0.0138 U	0.00534 U	0.00498 U	0.00522 U	0.00505 U
Aroclor-1248 (PCB-1248)	NA6	NA	NA	NA	NA	0.00584 U	0.00581 U	0.0154 U	0.0154 U	0.00594 U	0.00555 U	0.00581 U	0.00562 U
Aroclor-1254 (PCB-1254)	NA6	NA	NA	NA	NA	0.00426 U	0.0159 J	0.0112 U	0.0112 U	0.00434 U	0.00404 U	0.00424 U	0.0041 U
Aroclor-1260 (PCB-1260)	NA6	NA	NA	NA	NA	0.0072 U	0.00715 U	0.0189 U	0.0189 U	0.00732 U	0.00683 U	0.00716 U	0.00693 U
Aroclor-1262 (PCB-1262)	NA6	NA	NA	NA	NA	0.00494 U	0.00492 U	0.013 U	0.013 U	0.00503 U	0.0047 U	0.00492 U	0.00476 U
Aroclor-1268 (PCB-1268)	NA6	NA	NA	NA	NA	0.00403 U	0.00401 U	0.0106 U	0.0106 U	0.0041 U	0.00383 U	0.00402 U	0.00388 U
SUM of PCBs	0.25	NA	1.1	NA	1.6	ND	0.0279	ND	ND	ND	ND	ND	ND
Other													
Moisture (%)	NA1	NA	NA	NA	NA	17.1	18.2	15.7	15.2	20.2	11.4	16.3	15.6
Total Solids (%)	NA1	NA	NA	NA	NA	82.9	81.8	84.3	84.8	79.8	88.6	83.7	84.4
Oxidation reduction potential (millivolts)	NA1	NA	NA	NA	NA	9.7	20	25	19	23	19	20	19
pH (lab) (pH units)	NA1	NA	NA	NA	NA	12.5	12.5	12.3	12.4	12.5	12.6	12.5	12.1
Pesticides (mg/kg)													
4,4'-DDD	2.3	NA	11	NA	0.47	0.00067 U	0.00066 U	0.00183 U	0.00184 U	0.0007 U	0.00062 U	0.00067 U	0.00064 U
4,4'-DDE	2	NA	11	NA	0.47	0.00043 U	0.00152 J	0.00119 U	0.00119 U	0.00046 U	0.0004 U	0.00043 U	0.00082 J
4,4'-DDT	1.9	NA	9.5	NA	0.67	0.00152 U	0.0015 U	0.00413 U	0.00414 U	0.0016 U	0.00141 U	0.00152 U	0.00145 U
Aldrin	0.041	NA	0.21	NA	0.13	0.00066 U	0.00065 U	0.00181 U	0.00182 U	0.0007 U	0.00061 U	0.00066 U	0.00063 U
alpha-BHC	0.086	NA	0.41	NA	0.0023	0.00022 U	0.00022 U	0.0006 U	0.00061 U	0.00023 U	0.0002 U	0.00022 U	0.00021 U
alpha-Chlordane	NS	NA	NA	NA	NA	0.00065 U	0.00065 U	0.00179 U	0.0018 U	0.00069 U	0.00061 U	0.00065 U	0.00062 U
beta-BHC	0.3	NA	1.4	NA	0.0046	0.00071 U	0.0007 U	0.00195 U	0.00195 U	0.00075 U	0.00066 U	0.00188 J	0.00068 U
Chlordane	0.27	NA	1.4	NA	1.4	0.00625 U	0.00618 U	0.017 U	0.0171 U	0.00659 U	0.00583 U	0.00626 U	0.00598 U
delta-BHC	NS	NA	NA	NA	NA	0.00037 U	0.00036 U	0.00101 U	0.00101 U	0.00039 U	0.00034 U	0.00037 U	0.00035 U
Dieldrin	0.034	NA	0.16	NA	0.024	0.00059 U	0.00058 U	0.0016 U	0.00161 U	0.00062 U	0.00055 U	0.00059 U	0.00056 U
Endosulfan I	470	NA	7800	NA	NA	0.00044 U	0.00044 U	0.00121 U	0.00122 U	0.00047 U	0.00041 U	0.00044 U	0.00042 U
Endosulfan II	470	NA	7800	NA	NA	0.00063 U	0.00062 U	0.00172 U	0.00172 U	0.00121 J	0.00058 U	0.00063 U	0.0006 U
Endosulfan sulfate	NS	NA	NA	NA	NA	0.00037 U	0.00037 U	0.00102 U	0.00102 U	0.00039 U	0.00034 U	0.00037 U	0.00035 U
Endrin	19	NA	270	NA	1.6	0.00032 U	0.00032 J	0.00087 U	0.00088 U	0.00034 U	0.0003 U	0.00032 U	0.0003 U
Endrin aldehyde	NS	NA	NA	NA	NA	0.00082 U	0.00081 U	0.00225 U	0.00226 U	0.00087 U	0.00077 U	0.00082 U	0.00078 U
Endrin ketone	NS	NA	NA	NA	NA	0.00048 U	0.00048 U	0.00132 U	0.00133 U	0.00051 U	0.00045 U	0.00048 U	0.00046 U
gamma-BHC (Lindane)	0.57	NA	2.8	NA	0.0035	0.00035 U	0.00034 U	0.00095 U	0.00096 U	0.00037 U	0.00032 U	0.00035 U	0.00033 U
gamma-Chlordane	0.27	NA	1.4	NA	1.4	0.00062 U	0.00061 U	0.0017 U	0.0017 U	0.00065 U	0.00058 U	0.00062 U	0.00059 U
Heptachlor	0.15	NA	0.81	NA	0.083	0.00106	0.00041 U	0.00115 U	0.00116 U	0.00044 U	0.00039 U	0.00042 U	0.00142 P
Heptachlor epoxide	0.076	NA	0.4	NA	0.081	0.00106 U	0.00105 U	0.00289 U	0.0029 U	0.00112 U	0.00098 U	0.00106 U	0.00101 U
Methoxychlor	320	NA	4600	NA	NA	0.0011 U	0.00109 U	0.003 U	0.00301 U	0.00116 U	0.00103 U	0.0011 U	0.00105 U
Toxaphene	0.49	NA	2.3	NA	6.2	0.00991 U	0.00979 U	0.027 U	0.0271 U	0.0104 U	0.00923 U	0.00992 U	0.00947 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)

I: The lower value for the two columns has been reported due to obvious interference.

J: Result is less than the reporting limit but greater than the method detection limit.

J-: Value is estimated with a potential low bias.

mg/Kg: milligram per killogram.

P: The RPD between the results for the two columns exceeds the method-specified criteria.

U: Not detected; number is the method detection limit.

Detected values are bold

Shaded values exceed the listed NJ criteria

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Nearshore					Nearshore-Raritan								
Sample Name		COMP-A	VC-208	VC-211	VC-214	DEP-1	VC-301	VC-303	VC-304	DEP-3	DEP-4	DEP-5	VC-216	VC-217	VC-218
Sample Date		COMP-A-D0-15-A	VC-208-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5-A	DEP-1-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E-A
Sample Type		11/21/2018	11/21/2018	11/21/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/14/2018	11/09/2018
Lab Sample ID		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)		L1847850-03	L1847850-02	L1847850-01	L1846705-09	L1846902-01	L1846902-0	L1846902-06	L1846705-21	L1846902-02	L1846902-03	L1846902-04	L1846705-10	L1846705-11	L1846705-12
Top Depth		0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (f	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Bottom Depth		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		15	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
SPLP Inorganics (ug/L)															
Aluminum	NA	650	684	391	907	481	730	1020	910	1010	1110	986	1080	896	1010
Antimony	120	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U
Arsenic	60	1.65 U	5.18	1.65 U	6.69	1.65 U	1.65 U	1.65 U	1.82 J	1.65 U	1.7 J	1.66 J	1.66 J	2.09 J	4.88 J
Barium	120000	93.1	115	231	67	97.5	53.4	56.2	50.2	57.9	40.6	42.9	46.4	54.9	44.7
Beryllium	20	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U
Cadmium	80	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U
Calcium	NA	210000	254000	352000	218000	262000	194000	168000	142000	169000	179000	153000	156000	156000	158000
Chromium	NA	190	22.9	221	25.7	164	191	165	166	93	99.8	171	146	144	55.1
Cobalt	2000	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.77 J	1.75 J	2.46 J	1.83 J	1.85 J	1.63 U	1.63 U
Copper	26000	16.8	121	7.64 J	182	11.8	19.6	22.1	31	29.9	31.3	32.9	33.5	47.8	125
Iron	NA	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U
Lead	100	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U
Magnesium	NA	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U
Manganese	NA	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
Mercury	40	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
Nickel	2000	21.4	52.8	6.62 J	69.9	13.4 J	21.3	26.4	30.8	41.7	45.3	35.6	36.4	35	62.8
Potassium	NA	27700	23900	28600	25000	25100	30200	31300	30000	29700	29500	31000	32600	32800	28700
Selenium	800	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U
Silver	800	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U
Sodium	NA	130000	172000	99900	210000	109000	158000	190000	162000	216000	199000	158000	188000	235000	203000
Thallium	NA	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U
Vanadium	NA	15.7 U	15.7 U	15.7 U	22.2 J	15.7 U	15.7 U	22.5 J	26.5 J	22.1 J	24.3 J	32.1 J	31.6 J	33.9 J	24 J
Zinc	40000	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U
SPLP PCBs (ug/L)															
Aroclor-1016 (PCB-1016)	NA	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.024 U	0.022 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.05 U	0.046 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	0.036 U	0.036 U	0.036 U	0.053 J	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.039 U	0.036 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.049 U	0.046 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.018 U	0.017 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.037 U	0.034 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.036 U	0.033 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.034 U	0.032 U	0.032 U
SUM of SPLP PCBs	NA	-	-	-	0.053	-	-	-	-	-	-	-	-	-	-
SPLP Pesticide (ug/L)															
4,4'-DDD	2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	2	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
4,4'-DDT	2	0.004 U	0.005 JP	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.017 JP	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Aldrin	0.8	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
alpha-BHC	0.4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
alpha-Chlordane	10	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
beta-BHC	0.8	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Chlordane	10	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
delta-BHC	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dieldrin	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endosulfan I	NA	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Endosulfan II	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan sulfate	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	40	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endrin aldehyde	NA	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
Endrin ketone	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
gamma-BHC (Lindane)	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
gamma-Chlordane	10	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Heptachlor	1	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Heptachlor epoxide	4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Methoxychlor	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Toxaphene	40	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U
SPLP Semi-Volatile Organics (ug/L)															
1,2,4,5-Tetrachlorobenzene	NA	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
2,2'-oxybis(1-Chloropropane)	6000	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
2,3,4,6-Tetrachlorophenol	4000	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2,4,5-Trichlorophenol	14000	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2,4,6-Trichlorophenol	400	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Nearshore					Nearshore-Raritan								
Sample Name		COMP-A-D0-15-A	VC-208-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5E-A	DEP-1-D0-7.5E-A	VC-301-REV-D0-7	VC-303-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E-A
Sample Date		11/21/2018	11/21/2018	11/21/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/14/2018	11/09/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1847850-03	L1847850-02	L1847850-01	L1846705-09	L1846902-01	L1846902-0	L1846902-06	L1846705-21	L1846902-02	L1846902-03	L1846902-04	L1846705-10	L1846705-11	L1846705-12
Sample Depth (bgs)		0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Top Depth		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bottom Depth		15	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
2,4-Dichlorophenol	400	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
2,4-Dimethylphenol	2000	1.6 U	1.6 U	1.6 U	1.6 J	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
2,4-Dinitrophenol	800	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
2,4-Dinitrotoluene	NA	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
2,6-Dinitrotoluene	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Chloronaphthalene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Chlorophenol	800	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
2-Methylnaphthalene	600	0.06 U	0.06 U	0.06 U	0.11	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
2-Methylphenol (o-Cresol)	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Nitrophenol	NA	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
3&4-Methylphenol	NA	1.1 U	1.3 J	1.1 U	1.4 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
3,3'-Dichlorobenzidine	600	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Nitroaniline	NA	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4,6-Dinitro-2-methylphenol	NA	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
4-Bromophenyl phenyl ether	NA	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
4-Chloro-3-methylphenol	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Chloroaniline	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
4-Chlorophenyl phenyl ether	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Nitroaniline	NA	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
4-Nitrophenol	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Acenaphthene	NA	0.04 U	0.3	0.04 J	0.09 J	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Acenaphthylene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Acetophenone	14000	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Anthracene	NA	0.02 U	0.14	0.03 J	0.06 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Atrazine	60	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzaldehyde	NA	1.1 U	2.4 J	1.1 U	3.4 J	1.1 U	1.4 J	1.8 J	2.1 J	1.3 J	1.8 J	2.2 J	2.2 J	2.1 J	2.9 J
Benzo(a)anthracene	2	0.02 U	0.05 J	0.02 U	0.02 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(a)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(b)fluoranthene	NA	0.02 U	0.02 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(g,h,i)perylene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(k)fluoranthene	NA	0.02 U	0.02 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Biphenyl	NA	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
bis(2-Chloroethoxy)methane	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
bis(2-Chloroethyl)ether	140	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
bis(2-Ethylhexyl)phthalate	60	0.91 U	0.91 U	0.91 U	5.9	4.2	2.8 J	2 J	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Butyl benzylphthalate	2000	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Caprolactam	80000	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Carbazole	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Chrysene	NA	0.02 U	0.04 J	0.02 U	0.02 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dibenz(a,h)anthracene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dibenzofuran	NA	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U
Diethyl phthalate	120000	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Dimethyl phthalate	NA	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Di-n-butylphthalate	NA	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Di-n-octyl phthalate	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Fluoranthene	NA	0.01 U	0.23	0.02 J	0.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene	NA	0.02 U	0.16	0.05 J	0.11	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Hexachlorobenzene	0.4	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Hexachlorobutadiene	20	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Hexachlorocyclopentadiene	800	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Hexachloroethane	140	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Indeno(1,2,3-cd)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Isophorone	800	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Naphthalene	6000	0.04 U	0.09 JB	0.06 JB	0.08 J	0.04 U	0.04 J	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.27
Nitrobenzene	120	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
N-Nitrosodi-n-propylamine	200	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
N-Nitrosodiphenylamine	200	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Pentachlorophenol	6	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U
Phenanthrene	NA	0.02 U	0.11	0.04 J	0.32	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Phenol	40000	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	NA	0.01 U	0.19	0.02 J	0.21	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 JB	0.08 JB
SUM of SPLP Semi-Volatile Organics	NA	-	5.05	0.26	13.45	4.2	4.24	3.8	2.1	1.3	1.8	2.2	2.2	2.11	3.25
SPLP Volatile Organic Compounds (ug/L)															
1,1,1-Trichloroethane	600	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Nearshore					Nearshore-Raritan								
Sample Name		COMP-A	VC-208	VC-211	VC-214	DEP-1	VC-301	VC-303	VC-304	DEP-3	DEP-4	DEP-5	VC-216	VC-217	VC-218
		COMP-A-D0-15-A	VC-208-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5E-A	DEP-1-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E-A
Sample Date		11/21/2018	11/21/2018	11/21/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/15/2018	11/15/2018	11/15/2018	11/14/2018	11/14/2018	11/09/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1847850-03	L1847850-02	L1847850-01	L1846705-09	L1846902-01	L1846902-0	L1846902-06	L1846705-21	L1846902-02	L1846902-03	L1846902-0	L1846705-10	L1846705-11	L1846705-12
Sample Depth (bgs)		0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Top Depth		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bottom Depth		15	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
1,1,2,2-Tetrachloroethane	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,1,2-Trichloroethane	60	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethane	1000	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1-Dichloroethene	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-Trichlorobenzene	NA	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trichlorobenzene	180	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.4	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.6	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,2-Dichlorobenzene	12000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,2-Dichloroethane	40	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloropropane	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	12000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dichlorobenzene	1500	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dioxane	8	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U
2-Butanone (Methyl Ethyl Ketone)	6000	3.2 J	4.8 J	1.9 U	4.4 J	3.5 J	3.4 J	3.2 J	4.1 J	4.3 J	4.1 J	4.2 J	4.2 J	3.2 J	5.2
2-Hexanone	800	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 J	0.52 U	0.52 U	0.6 J	0.57 J	0.52 U	0.52 U	0.52 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA3	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U
Acetone	120000	26	34	16	37	35	29	29	38	37	36	37	36	29	44
Benzene	20	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Bromodichloromethane	20	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Bromoform	80	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromomethane (Methyl Bromide)	200	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Carbon disulfide	14000	0.94 J	2.8 J	0.32 J	2.2 J	0.39 J	0.57 J	0.46 J	0.88 J	0.84 J	0.59 J	0.66 J	0.57 J	0.92 J	1.2 J
Carbon tetrachloride	20	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chlorobenzene	1000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Chlorobromomethane	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chloroethane	NA3	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform (Trichloromethane)	1400	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 J	0.22 U	0.22 U
Chloromethane (Methyl Chloride)	NA3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	NA	0.19 U	0.19 U	0.19 U	0.21 J	0.19 U	0.19 U	0.19 U	0.31 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
cis-1,3-Dichloropropene	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cyclohexane	NA3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Dibromochloromethane	20	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane (CFC-12)	20000	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Ethylbenzene	14000	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Isopropylbenzene (Cumene)	14000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Methyl acetate	140000	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Methyl cyclohexane	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl Tert Butyl Ether	1400	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Methylene chloride	60	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Styrene	2000	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Toluene	12000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	2000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
trans-1,3-Dichloropropene	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.75	0.18 U	0.18 U	0.18 U	0.31 J	0.2 J	0.18 U
Trichlorofluoromethane (CFC-11)	40000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	20	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
Xylene (total)	20000	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.35 J	0.33 U	0.33 U	0.33 U	0.33 U
SUM of SPLP Volatile Organic Compounds	NA	30.14	41.6	16.32	43.81	38.89	33.49	32.66	44.04	42.74	41.61	41.86	41.31	33.32	50.4
SYNTHETIC PRECIPITATION LEACHING PROCEDURE (pH units)															
pH, Extraction Post-Filtration	NA	11.7	11.8	11.8	11.5	11.9	11.6	11.4	11.5	11.5	11.6	11.5	11.4	11.6	11.4

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.
- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Nearshore-Raritan							Raritan Bay					
Sample Name		COMP-G	VC-222	VC-223	COMP-I	COMP-J	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N
Sample Name		COMP-G-D0-7.5E-A	VC-222-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E-A	VC-311-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E-A	COMP-M-D0-27E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E-A
Sample Date		11/08/2018	11/08/2018	11/08/2018	11/09/2018	11/09/2018	11/09/2018	11/09/2018	10/26/2018	10/28/2018	10/26/2018	10/27/2018	10/27/2018	10/26/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1846705-01	L1846705-13	L1846705-14	L1846705-02	L1846705-04	L1846705-03	L1846705-05	L1844053-01	L1844053-03	L1844053-02	L1844053-10	L1844053-11	L1844053-04
Sample Depth (bgs)		0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)
Top Depth		0	0	0	0	0	0	0	0	0	0	0	14	0
Bottom Depth		7.5	7.5	7.5	7.5	7.5	7.5	7.5	20.5	28	27	14	27	4
SPLP Inorganics (ug/L)														
Aluminum	NA	1190	1010	1110	803	932	944	654	1460	1150	996	719	985	792
Antimony	120	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.5 J	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U
Arsenic	60	4 J	3.78 J	2.79 J	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	2.5 J	5.38	2.21 J	4.25 J
Barium	120000	62.2	55.4	50.2	77.5	77.6	371	386	49.5	29.8	22.1	53	22.1	47.2
Beryllium	20	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U
Cadmium	80	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U
Calcium	NA	177000	173000	167000	132000	192000	414000	455000	151000	125000	123000	191000	105000	194000
Chromium	NA	58	68.1	86.6	113	165	194	230	130	138	139	53.2	139	62
Cobalt	2000	1.63 U	1.63 U	1.74 J	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	4.15 J	1.63 U	2.12 J
Copper	26000	129	162	124	19.3	25.8	7.15 J	5.02 J	27.3	22.6	25.5	251	19.3	190
Iron	NA	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U
Lead	100	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U
Magnesium	NA	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U
Manganese	NA	4.4 U	4.4 U	4.4 U	4.4 U	8.13 J	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
Mercury	40	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.056 J	0.066 J	0.068 J	0.061 J	0.057 J	0.07 J
Nickel	2000	68.4	79.4	63.4	22.6	26.9	5.56 U	5.56 U	27.3	26	27.4	90.4	22.6	82.1
Potassium	NA	33400	32500	32100	32400	31800	21100	22300	34400	35400	35800	25500	33100	29200
Selenium	800	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U
Silver	800	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U
Sodium	NA	250000	258000	197000	245000	151000	67000	76300	200000	205000	173000	224000	141000	205000
Thallium	NA	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U
Vanadium	NA	28.6 J	27.2 J	29.1 J	33.6 J	15.7 U	15.7 U	15.7 U	35.2 J	47 J	61.1	36 J	80.3	27.2 J
Zinc	40000	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U
SPLP PCBs (ug/L)														
Aroclor-1016 (PCB-1016)	NA	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U
SUM of SPLP PCBs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP Pesticide (ug/L)														
4,4'-DDD	2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	2	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
4,4'-DDT	2	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.009 J	0.004 U	0.004 U	0.004 U	0.013 J
Aldrin	0.8	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
alpha-BHC	0.4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
alpha-Chlordane	10	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
beta-BHC	0.8	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Chlordane	10	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
delta-BHC	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dieldrin	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endosulfan I	NA	0.003 U	0.003 UIP	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Endosulfan II	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan sulfate	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	40	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endrin aldehyde	NA	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.013 J
Endrin ketone	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
gamma-BHC (Lindane)	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
gamma-Chlordane	10	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Heptachlor	1	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Heptachlor epoxide	4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Methoxychlor	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Toxaphene	40	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U
SPLP Semi-Volatile Organics (ug/L)														
1,2,4,5-Tetrachlorobenzene	NA	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
2,2'-oxybis(1-Chloropropane)	6000	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
2,3,4,6-Tetrachlorophenol	4000	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2,4,5-Trichlorophenol	14000	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2,4,6-Trichlorophenol	400	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Nearshore-Raritan							Raritan Bay					
		COMP-G	VC-222	VC-223	COMP-I	COMP-J	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N
Sample Name		COMP-G-D0-7.5E-A	VC-222-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E-A	VC-311-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E-A	COMP-M-D0-27E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E-A
Sample Date		11/08/2018	11/08/2018	11/08/2018	11/09/2018	11/09/2018	11/09/2018	11/09/2018	10/26/2018	10/28/2018	10/26/2018	10/27/2018	10/27/2018	10/26/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1846705-01	L1846705-13	L1846705-14	L1846705-02	L1846705-04	L1846705-03	L1846705-05	L1844053-01	L1844053-03	L1844053-02	L1844053-10	L1844053-11	L1844053-04
Sample Depth (bgs)		0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)
Top Depth		0	0	0	0	0	0	0	0	0	0	0	14	0
Bottom Depth		7.5	7.5	7.5	7.5	7.5	7.5	7.5	20.5	28	27	14	27	4
2,4-Dichlorophenol	400	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
2,4-Dimethylphenol	2000	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
2,4-Dinitrophenol	800	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
2,4-Dinitrotoluene	NA	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
2,6-Dinitrotoluene	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Chloronaphthalene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Chlorophenol	800	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
2-Methylnaphthalene	600	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
2-Methylphenol (o-Cresol)	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Nitrophenol	NA	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
3&4-Methylphenol	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
3,3'-Dichlorobenzidine	600	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Nitroaniline	NA	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4,6-Dinitro-2-methylphenol	NA	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
4-Bromophenyl phenyl ether	NA	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
4-Chloro-3-methylphenol	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Chloroaniline	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
4-Chlorophenyl phenyl ether	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Nitroaniline	NA	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
4-Nitrophenol	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Acenaphthene	NA	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Acenaphthylene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Acetophenone	14000	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Anthracene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 J
Atrazine	60	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzaldehyde	NA	3 J	3.5 J	3.5 J	1.8 J	1.7 J	1.1 U	1.1 U	1.9 J	1.6 J	2 J	5.3	2.2 J	3.4 J
Benzo(a)anthracene	2	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(a)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(b)fluoranthene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(g,h,i)perylene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(k)fluoranthene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Biphenyl	NA	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
bis(2-Chloroethoxy)methane	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
bis(2-Chloroethyl)ether	140	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
bis(2-Ethylhexyl)phthalate	60	0.91 U	1 J	5.2	0.91 U	0.91 U	0.91 U	0.91 U	4.9	0.91 U	10	0.91 U	0.91 U	3.6
Butyl benzylphthalate	2000	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Caprolactam	80000	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Carbazole	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Chrysene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dibenz(a,h)anthracene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dibenzofuran	NA	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U
Diethyl phthalate	120000	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Dimethyl phthalate	NA	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Di-n-butylphthalate	NA	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Di-n-octyl phthalate	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Fluoranthene	NA	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 J	0.01 U	0.03 J
Fluorene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.05 J	0.02 U	0.05 J
Hexachlorobenzene	0.4	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Hexachlorobutadiene	20	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Hexachlorocyclopentadiene	800	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Hexachloroethane	140	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Indeno(1,2,3-cd)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Isophorone	800	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Naphthalene	6000	0.05 J	0.05 J	0.05 J	0.04 U	0.04 J	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.05 J	0.04 U	0.08 J
Nitrobenzene	120	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
N-Nitrosodi-n-propylamine	200	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
N-Nitrosodiphenylamine	200	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Pentachlorophenol	6	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U
Phenanthrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.04 J
Phenol	40000	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	NA	0.01 U	0.07 JB	0.05 JB	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.03 J	0.01 U	0.05 J
SUM of SPLP Semi-Volatile Organics	NA	3.05	4.62	8.8	1.8	1.74	-	-	6.8	1.6	12	5.45	2.2	7.27
SPLP Volatile Organic Compounds (ug/L)														
1,1,1-Trichloroethane	600	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Nearshore-Raritan							Raritan Bay					
		COMP-G	VC-222	VC-223	COMP-I	COMP-J	VC-311	COMP-K	COMP-L	VC-229	COMP-M	DEP-6	DEP-6	COMP-N
Sample Name		COMP-G-D0-7.5E-A	VC-222-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E-A	VC-311-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E-A	COMP-M-D0-27E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E-A
Sample Date		11/08/2018	11/08/2018	11/08/2018	11/09/2018	11/09/2018	11/09/2018	11/09/2018	10/26/2018	10/28/2018	10/26/2018	10/27/2018	10/27/2018	10/26/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1846705-01	L1846705-13	L1846705-14	L1846705-02	L1846705-04	L1846705-03	L1846705-05	L1844053-01	L1844053-03	L1844053-02	L1844053-10	L1844053-11	L1844053-04
Sample Depth (bgs)		0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)	0 - 4 (ft)
Top Depth		0	0	0	0	0	0	0	0	0	0	0	14	0
Bottom Depth		7.5	7.5	7.5	7.5	7.5	7.5	7.5	20.5	28	27	14	27	4
1,1,2,2-Tetrachloroethane	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,1,2-Trichloroethane	60	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethane	1000	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1-Dichloroethene	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-Trichlorobenzene	NA	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trichlorobenzene	180	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.4	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.6	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,2-Dichlorobenzene	12000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,2-Dichloroethane	40	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloropropane	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	12000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dichlorobenzene	1500	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dioxane	8	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U
2-Butanone (Methyl Ethyl Ketone)	6000	4.8 J	5.4	5.4	2.8 J	3.2 J	1.9 U	1.9 U	4.6 J	2.6 J	3.8 J	7	3 J	7.4
2-Hexanone	800	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U
Acetone	120000	38	44	47	28	34	7.2	5	34	24	28	53	23	47
Benzene	20	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Bromodichloromethane	20	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Bromoform	80	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromomethane (Methyl Bromide)	200	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Carbon disulfide	14000	1.9 J	1.2 J	0.94 J	1 J	0.54 J	0.3 U	0.3 U	1.2 J	1 J	1.3 J	0.92 J	0.92 J	1.4 J
Carbon tetrachloride	20	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chlorobenzene	1000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Chlorobromomethane	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chloroethane	NA	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform (Trichloromethane)	1400	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane (Methyl Chloride)	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
cis-1,3-Dichloropropene	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cyclohexane	NA	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Dibromochloromethane	20	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane (CFC-12)	20000	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Ethylbenzene	14000	0.17 U	0.41 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Isopropylbenzene (Cumene)	14000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Methyl acetate	140000	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Methyl cyclohexane	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl Tert Butyl Ether	1400	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Methylene chloride	60	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	14	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Styrene	2000	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.34 J	0.18 U	0.18 U	0.28 JB	0.18 U	0.18 U	0.18 U	0.18 U
Toluene	12000	0.2 U	1.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	2000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
trans-1,3-Dichloropropene	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Trichlorofluoromethane (CFC-11)	40000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	20	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
Xylene (total)	20000	0.33 U	3.6	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SUM of SPLP Volatile Organic Compounds	NA	44.7	55.71	53.34	31.8	37.74	7.54	5	53.8	27.88	33.1	60.92	26.92	55.8
SYNTHETIC PRECIPITATION LEACHING PROCEDURE (pH units)														
pH, Extraction Post-Filtration	NA	11.6	11.5	11.6	11.5	11.6	11.9	11.7	11.8	11.4	11.4	11.4	11.3	11.5

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.
- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Raritan Bay									Raritan-Chapel				
Sample Name		COMP-N	DEP-7	DEP-7	VC-235	VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244	VC-245	VC-246	COMP-R
		COMP-N-D4-22.5E-A	DEP-7-D0-15E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E-A	VC-235-D13.7-24E-A	COMP-O-D0-2E-A	COMP-O-D2-25E-A	VC-238-D0-28E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E-A	VC-244-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E-A
Sample Date		10/27/2018	10/27/2018	10/28/2018	10/28/2018	10/28/2018	10/27/2018	10/27/2018	10/27/2018	10/27/2018	11/14/2018	11/07/2018	11/07/2018	11/07/2018	11/07/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1844053-05	L1844053-08	L1844053-09	L1844053-06	L1844053-07	L1844053-12	L1844053-13	L1844053-19	L1844053-18	L1846705-06	L1846705-15	L1846705-16	L1846705-17	L1846705-07
Sample Depth (bgs)		4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)
Top Depth		4	0	15	0	15.3	0	3	0	0	0	0	0	0	4.9
Bottom Depth		22.5	15	20	15.3	24	3	25	28	23	10.5	5	4.9	4.8	10.5
SPLP Inorganics (ug/L)															
Aluminum	NA	1010	819	749	784	850	1290	954	1030	1470	546	637	571	730	450
Antimony	120	7.04 J	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	31.5 J	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U
Arsenic	60	3.24 J	3.3 J	1.72 J	3.29 J	1.81 J	2.25 J	2.53 J	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U
Barium	120000	28.2	50	22.5	52	19.7	58	25.9	26.6	32.4	299	158	156	106	389
Beryllium	20	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U
Cadmium	80	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U
Calcium	NA	114000	194000	114000	197000	112000	185000	113000	118000	137000	418000	289000	285000	219000	404000
Chromium	NA	129	63	160	50.8	139	76.2	122	165	144	228	170	121	108	233
Cobalt	2000	1.63 U	3.1 J	1.63 U	4.03 J	1.63 U	4.61 J	1.63 U	1.63 U	1.63 U	1.63 U	1.93 J	1.63 U	2.65 J	1.63 U
Copper	26000	20.2	184	20.4	200	17.1	146	16.9	19.8	23.5	11.4	55.3	54.3	83.3	10.1
Iron	NA	271 J	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U
Lead	100	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U
Magnesium	NA	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U
Manganese	NA	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
Mercury	40	0.061 J	0.063 J	0.065 J	0.059 J	0.058 J	0.062 J	0.055 J	0.064 J	0.066 J	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U
Nickel	2000	19 J	88.4	16.1 J	86.2	19 J	78.5	17.5 J	17.6 J	25.9	6.23 J	43.6	42.8	54.5	5.56 U
Potassium	NA	33100	27600	30000	27500	32400	32100	36300	33900	34600	22100	27800	26900	30400	19700
Selenium	800	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U
Silver	800	3.76 J	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U
Sodium	NA	126000	198000	106000	234000	107000	232000	157000	206000	204000	93000	141000	136000	178000	78500
Thallium	NA	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.48 J	1.43 U	1.43 U	1.43 U
Vanadium	NA	70.6	33.4 J	67.8	25.1 J	80.6	33 J	71.1	51.8	44.1 J	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U
Zinc	40000	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U
SPLP PCBs (ug/L)															
Aroclor-1016 (PCB-1016)	NA	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U
SUM of SPLP PCBs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP Pesticide (ug/L)															
4,4'-DDD	2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	2	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
4,4'-DDT	2	0.008 J	0.011 J	0.004 U	0.004 U	0.007 J	0.018 J	0.004 U	0.007 J	0.004 U	0.004 U	0.004 U	0.004 U	0.014 J	0.004 U
Aldrin	0.8	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
alpha-BHC	0.4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
alpha-Chlordane	10	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
beta-BHC	0.8	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Chlordane	10	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
delta-BHC	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dieldrin	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endosulfan I	NA	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Endosulfan II	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan sulfate	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	40	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endrin aldehyde	NA	0.008 U	0.008 U	0.008 U	0.016 J	0.008 U	0.011 J	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
Endrin ketone	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
gamma-BHC (Lindane)	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
gamma-Chlordane	10	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Heptachlor	1	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Heptachlor epoxide	4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Methoxychlor	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Toxaphene	40	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U
SPLP Semi-Volatile Organics (ug/L)															
1,2,4,5-Tetrachlorobenzene	NA	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
2,2'-oxybis(1-Chloropropane)	6000	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
2,3,4,6-Tetrachlorophenol	4000	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2,4,5-Trichlorophenol	14000	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2,4,6-Trichlorophenol	400	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Raritan Bay									Raritan-Chapel				
Sample Name		COMP-N	DEP-7	DEP-7	VC-235	VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244	VC-245	VC-246	COMP-R
		COMP-N-D4-22.5E-A	DEP-7-D0-15E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E-A	VC-235-D13.7-24E-A	COMP-O-D0-2E-A	COMP-O-D2-25E-A	VC-238-D0-28E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E-A	VC-244-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E-A
Sample Date		10/27/2018	10/27/2018	10/28/2018	10/28/2018	10/28/2018	10/27/2018	10/27/2018	10/27/2018	10/27/2018	11/14/2018	11/07/2018	11/07/2018	11/07/2018	11/07/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1844053-05	L1844053-08	L1844053-09	L1844053-06	L1844053-07	L1844053-12	L1844053-13	L1844053-19	L1844053-18	L1846705-06	L1846705-15	L1846705-16	L1846705-17	L1846705-07
Sample Depth (bgs)		4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)
Top Depth		4	0	15	0	15.3	0	3	0	0	0	0	0	0	4.9
Bottom Depth		22.5	15	20	15.3	24	3	25	28	23	10.5	5	4.9	4.8	10.5
2,4-Dichlorophenol	400	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
2,4-Dimethylphenol	2000	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
2,4-Dinitrophenol	800	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
2,4-Dinitrotoluene	NA	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
2,6-Dinitrotoluene	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Chloronaphthalene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Chlorophenol	800	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
2-Methylnaphthalene	600	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
2-Methylphenol (o-Cresol)	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Nitrophenol	NA	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
3&4-Methylphenol	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
3,3'-Dichlorobenzidine	600	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Nitroaniline	NA	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4,6-Dinitro-2-methylphenol	NA	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
4-Bromophenyl phenyl ether	NA	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
4-Chloro-3-methylphenol	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Chloroaniline	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
4-Chlorophenyl phenyl ether	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Nitroaniline	NA	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
4-Nitrophenol	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Acenaphthene	NA	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Acenaphthylene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Acetophenone	14000	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Anthracene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 J	0.02 J	0.02 U
Atrazine	60	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzaldehyde	NA	1.6 J	3.5 J	1.8 J	4.8 J	2.1 J	3.2 J	1.9 J	2 J	1.9 J	1.1 U	2.1 J	2.4 J	3.2 J	1.1 U
Benzo(a)anthracene	2	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(a)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(b)fluoranthene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(g,h,i)perylene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(k)fluoranthene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Biphenyl	NA	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
bis(2-Chloroethoxy)methane	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
bis(2-Chloroethyl)ether	140	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
bis(2-Ethylhexyl)phthalate	60	0.91 U	0.91 U	1.2 J	1.6 J	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	1.5 J	0.91 U	0.91 U	0.91 U	0.98 J
Butyl benzylphthalate	2000	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Caprolactam	80000	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Carbazole	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Chrysene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dibenz(a,h)anthracene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dibenzofuran	NA	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U
Diethyl phthalate	120000	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Dimethyl phthalate	NA	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Di-n-butylphthalate	NA	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Di-n-octyl phthalate	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Fluoranthene	NA	0.01 U	0.02 J	0.01 U	0.02 J	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.03 J	0.03 J	0.03 J	0.01 U
Fluorene	NA	0.02 U	0.04 J	0.02 U	0.04 J	0.02 U	0.02 U	0.02 U	0.02 U	0.03 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Hexachlorobenzene	0.4	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Hexachlorobutadiene	20	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Hexachlorocyclopentadiene	800	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Hexachloroethane	140	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Indeno(1,2,3-cd)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Isophorone	800	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Naphthalene	6000	0.04 U	0.07 J	0.04 U	0.07 J	0.04 U	0.05 J	0.04 U	0.04 U	0.04 U	0.04 U	0.05 J	0.07 J	0.13	0.04 U
Nitrobenzene	120	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
N-Nitrosodi-n-propylamine	200	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
N-Nitrosodiphenylamine	200	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Pentachlorophenol	6	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U
Phenanthrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.03 J	0.04 J	0.03 J	0.02 U
Phenol	40000	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	NA	0.01 U	0.02 J	0.01 U	0.03 J	0.01 U	0.02 J	0.01 U	0.01 U	0.01 U	0.08 J	0.21	0.46	0.4	0.01 U
SUM of SPLP Semi-Volatile Organics	NA	1.6	3.65	3	6.56	2.1	3.27	1.9	2	1.93	1.58	2.42	3.02	3.81	0.98
SPLP Volatile Organic Compounds (ug/L)															
1,1,1-Trichloroethane	600	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.9

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Raritan Bay									Raritan-Chapel				
		COMP-N	DEP-7	DEP-7	VC-235	VC-235	COMP-O	COMP-O	VC-238	COMP-P	COMP-Q	VC-244	VC-245	VC-246	COMP-R
Sample Name		COMP-N-D4-22.5E-A	DEP-7-D0-15E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E-A	VC-235-D13.7-24E-A	COMP-O-D0-2E-A	COMP-O-D2-25E-A	VC-238-D0-28E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E-A	VC-244-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E-A
Sample Date		10/27/2018	10/27/2018	10/28/2018	10/28/2018	10/28/2018	10/27/2018	10/27/2018	10/27/2018	10/27/2018	11/14/2018	11/07/2018	11/07/2018	11/07/2018	11/07/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1844053-05	L1844053-08	L1844053-09	L1844053-06	L1844053-07	L1844053-12	L1844053-13	L1844053-19	L1844053-18	L1846705-06	L1846705-15	L1846705-16	L1846705-17	L1846705-07
Sample Depth (bgs)		4 - 22.5 (ft)	0 - 15 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	0 - 3 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 23 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)
Top Depth		4	0	15	0	15.3	0	3	0	0	0	0	0	0	4.9
Bottom Depth		22.5	15	20	15.3	24	3	25	28	23	10.5	5	4.9	4.8	10.5
1,1,2,2-Tetrachloroethane	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,1,2-Trichloroethane	60	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethane	1000	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1-Dichloroethene	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-Trichlorobenzene	NA	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trichlorobenzene	180	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.4	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.6	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,2-Dichlorobenzene	12000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.41 J	0.18 U	0.18 U
1,2-Dichloroethane	40	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloropropane	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	12000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dichlorobenzene	1500	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dioxane	8	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U
2-Butanone (Methyl Ethyl Ketone)	6000	3.2 J	5.8	2 J	6.1	2.7 J	5.6	3 J	2.4 J	3.3 J	1.9 U	3.8 J	4.6 J	5.4	1.9 U
2-Hexanone	800	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U
Acetone	120000	26	42	18	47	22	44	24	20	28	11	37	41	47	8.8
Benzene	20	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Bromodichloromethane	20	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Bromoform	80	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromomethane (Methyl Bromide)	200	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Carbon disulfide	14000	1.3 J	1.4 J	1 J	1.4 J	1.1 J	0.51 J	1.2 J	1.1 J	1.1 J	0.3 U	0.3 U	0.32 J	0.53 J	0.3 U
Carbon tetrachloride	20	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chlorobenzene	1000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Chlorobromomethane	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chloroethane	NA	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform (Trichloromethane)	1400	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane (Methyl Chloride)	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 J	0.19 U	0.19 U	0.19 U	0.19 U
cis-1,3-Dichloropropene	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cyclohexane	NA	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Dibromochloromethane	20	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane (CFC-12)	20000	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Ethylbenzene	14000	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Isopropylbenzene (Cumene)	14000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Methyl acetate	140000	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Methyl cyclohexane	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl Tert Butyl Ether	1400	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Methylene chloride	60	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Styrene	2000	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Toluene	12000	0.2 U	0.36 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	2000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
trans-1,3-Dichloropropene	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.57	0.18 U	0.44 J	0.55	2.4
Trichlorofluoromethane (CFC-11)	40000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	20	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
Xylene (total)	20000	0.33 U	0.64 J	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
SUM of SPLP Volatile Organic Compounds	NA	30.5	50.2	21	54.5	25.8	50.11	28.2	23.5	32.4	11.81	40.8	46.77	53.48	12.1
SYNTHETIC PRECIPITATION LEACHING PROCEDURE (pH units)															
pH, Extraction Post-Filtration	NA	11.3	11.6	11.3	11.5	11.3	11.5	11.4	11.4	11.5	11.8	11.7	11.7	11.6	11.9

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.
- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Raritan-Chapel		Chapel Hill			Chapel Hill		Chapel-Ambrose			Ambrose Channel		East of Ambrose	
Sample Name		VC-247	VC-247	VC-318	VC-318	VC-320	VC-321	VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample Date		VC-247-D0-4E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E-A	VC-321-D0-20.5E-A	VC-323-D0-22E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Type		10/31/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	11/01/2018	11/01/2018	11/01/2018	11/08/2018	11/07/2018	10/31/2018	10/31/2018	11/02/2018	11/02/2018
Lab Sample ID		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)		L1844937-04	L1844937-05	L1844937-09	L1844937-10	L1844937-11	L1844937-12	L1844937-13	L1844937-06	L1846705-18	L1846705-20	L1844937-02	L1844937-03	L1844937-07	L1844937-08
Top Depth		0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Bottom Depth		0	4.7	0	3.7	0	0	0	0	0	0	0	0	0	0
		4.7	21.5	3.7	21.5	19	20.5	22	7.5	7.5	7.5	21	22.5	7.5	7.5
SPLP Inorganics (ug/L)															
Aluminum	NA	772	495	834	848	650	538	512	512	433	338	589	428	620	555
Antimony	120	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U	5.01 J	4.29 U	4.29 U	4.29 U	4.29 U	4.29 U
Arsenic	60	1.65 U	1.65 U	1.65 J	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U	1.65 U
Barium	120000	105	452	117	296	123	272	351	495	649	715	239	607	407	476
Beryllium	20	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U
Cadmium	80	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U	0.599 U
Calcium	NA	235000	488000	220000	405000	336000	384000	461000	451000	499000	537000	324000	516000	475000	486000
Chromium	NA	97	207	74.4	260	166	163	202	98.8	174	320	159	308	255	152
Cobalt	2000	1.89 J	1.63 U	3.8 J	1.63 U	1.63 U	1.63 U	1.63 U	2.03 J	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U
Copper	26000	89.4	9 J	197	3.84 U	9.34 J	14.9	14	45.4	20.2	9.62 J	24.6	3.84 U	11.9	9.1 J
Iron	NA	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U	191 U
Lead	100	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	3.43 U	4.12 J	3.87 J	3.43 U	3.43 U	3.43 U	4.39 J	4.63 J
Magnesium	NA	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U	242 U
Manganese	NA	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	6.87 J	4.4 U
Mercury	40	0.039 U	0.039 U	0.039 U	0.039 U	0.039 U	0.039 U	0.039 U	0.039 U	0.091 U	0.091 U	0.039 U	0.039 U	0.039 U	0.039 U
Nickel	2000	57.2	5.56 U	95.5	5.56 U	11.6 J	12.2 J	5.56 U	50.3	12.8 J	5.56 U	32.3	5.56 U	8.14 J	6.06 J
Potassium	NA	23900	20800	24600	19700	24200	21900	17400	20200	17900	18900	21500	22800	20100	19100
Selenium	800	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U	17.3 U
Silver	800	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U
Sodium	NA	109000	52800	150000	45400	77400	83500	38100	89600	74800	75100	113000	76300	92400	82600
Thallium	NA	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U	1.43 U
Vanadium	NA	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U	15.7 U
Zinc	40000	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U
SPLP PCBs (ug/L)															
Aroclor-1016 (PCB-1016)	NA	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U
SUM of SPLP PCBs	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPLP Pesticide (ug/L)															
4,4'-DDD	2	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	2	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
4,4'-DDT	2	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.01 J	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Aldrin	0.8	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
alpha-BHC	0.4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
alpha-Chlordane	10	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
beta-BHC	0.8	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Chlordane	10	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U
delta-BHC	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dieldrin	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endosulfan I	NA	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Endosulfan II	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan sulfate	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	40	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Endrin aldehyde	NA	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
Endrin ketone	NA	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
gamma-BHC (Lindane)	0.6	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
gamma-Chlordane	10	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
Heptachlor	1	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Heptachlor epoxide	4	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Methoxychlor	NA	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U	0.007 U
Toxaphene	40	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U
SPLP Semi-Volatile Organics (ug/L)															
1,2,4,5-Tetrachlorobenzene	NA	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
2,2'-oxybis(1-Chloropropane)	6000	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
2,3,4,6-Tetrachlorophenol	4000	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2,4,5-Trichlorophenol	14000	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2,4,6-Trichlorophenol	400	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Raritan-Chapel		Chapel Hill			Chapel Hill		Chapel-Ambrose			Ambrose Channel		East of Ambrose	
		VC-247	VC-247	VC-318	VC-318	VC-320	VC-321	VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample Name		VC-247-D0-4E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E-A	VC-321-D0-20.5E-A	VC-323-D0-22E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Date		10/31/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	11/01/2018	11/01/2018	11/01/2018	11/08/2018	11/07/2018	10/31/2018	10/31/2018	11/02/2018	11/02/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1844937-04	L1844937-05	L1844937-09	L1844937-10	L1844937-11	L1844937-12	L1844937-13	L1844937-06	L1846705-18	L1846705-20	L1844937-02	L1844937-03	L1844937-07	L1844937-08
Sample Depth (bgs)		0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Top Depth		0	4.7	0	3.7	0	0	0	0	0	0	0	0	0	0
Bottom Depth		4.7	21.5	3.7	21.5	19	20.5	22	7.5	7.5	7.5	21	22.5	7.5	7.5
2,4-Dichlorophenol	400	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
2,4-Dimethylphenol	2000	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
2,4-Dinitrophenol	800	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
2,4-Dinitrotoluene	NA	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
2,6-Dinitrotoluene	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Chloronaphthalene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Chlorophenol	800	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
2-Methylnaphthalene	600	0.06 U	0.06 U	0.07 J	0.06 U	0.06 U	0.06 U	0.1	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
2-Methylphenol (o-Cresol)	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Nitroaniline	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Nitrophenol	NA	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
3&4-Methylphenol	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
3,3'-Dichlorobenzidine	600	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Nitroaniline	NA	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4,6-Dinitro-2-methylphenol	14	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
4-Bromophenyl phenyl ether	NA	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
4-Chloro-3-methylphenol	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Chloroaniline	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
4-Chlorophenyl phenyl ether	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
4-Nitroaniline	NA	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
4-Nitrophenol	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Acenaphthene	NA	0.08 J	0.04 U	0.05 J	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.24	0.04 U	0.04 U	0.04 U
Acenaphthylene	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Acetophenone	14000	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Anthracene	NA	0.07 J	0.02 U	0.03 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.21	0.02 U	0.02 U	0.02 U
Atrazine	60	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzaldehyde	NA	2.8 J	1.1 U	3.5 J	1.1 U	1.1 U	1.1 U	1.1 U	1.2 J	1.1 U	1.1 U	1.1 J	1.1 U	1.1 U	1.1 U
Benzo(a)anthracene	2	0.04 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 J	0.02 U	0.02 U	0.03 J	0.02 U	0.02 U	0.02 U
Benzo(a)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(b)fluoranthene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(g,h,i)perylene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(k)fluoranthene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Biphenyl	NA	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
bis(2-Chloroethoxy)methane	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
bis(2-Chloroethyl)ether	140	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
bis(2-Ethylhexyl)phthalate	60	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	2.4 J	0.91 U	3.2	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Butyl benzylphthalate	2000	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Caprolactam	80000	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Carbazole	NA	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Chrysene	NA	0.04 J	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 J	0.02 U	0.02 U	0.02 U
Dibenz(a,h)anthracene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Dibenzofuran	NA	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U
Diethyl phthalate	120000	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Dimethyl phthalate	NA	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
Di-n-butylphthalate	NA	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Di-n-octyl phthalate	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Fluoranthene	NA	0.22	0.01 U	0.05 J	0.01 U	0.01 U	0.01 U	0.01 U	0.03 J	0.01 U	0.01 U	0.38	0.02 J	0.02 J	0.04 J
Fluorene	NA	0.04 J	0.02 U	0.04 J	0.02 U	0.02 U	0.02 U	0.02 J	0.02 U	0.02 U	0.02 U	0.2	0.02 U	0.02 U	0.02 U
Hexachlorobenzene	0.4	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Hexachlorobutadiene	20	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Hexachlorocyclopentadiene	800	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Hexachloroethane	140	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Indeno(1,2,3-cd)pyrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Isophorone	800	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Naphthalene	6000	0.05 J	0.04 U	0.32	0.04 U	0.04 U	0.04 U	0.58	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrobenzene	120	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
N-Nitrosodi-n-propylamine	200	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
N-Nitrosodiphenylamine	200	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
Pentachlorophenol	6	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U
Phenanthrene	NA	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.84	0.02 U	0.02 U	0.02 U
Phenol	40000	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pyrene	NA	0.55	0.02 J	0.09 J	0.01 U	0.01 U	0.01 U	0.02 J	0.04 J	0.02 JB	0.01 U	0.3	0.02 J	0.04 J	0.09 J
SUM of SPLP Semi-Volatile Organics	NA	3.89	0.02	4.15	-	-	-	3.12	1.29	3.22	-	3.32	0.04	0.06	0.13
SPLP Volatile Organic Compounds (ug/L)															
1,1,1-Trichloroethane	600	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	2.9	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U

TABLE 7
SUMMARY OF AMENDED SEDIMENT SPLP ANALYSES
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ,

Location Name	Soil Leachate Remediation Standard - Migration to Groundwater 2021 (MGWleachate) (µg/L)	Raritan-Chapel		Chapel Hill			Chapel Hill		Chapel-Ambrose			Ambrose Channel		East of Ambrose	
		VC-247	VC-247	VC-318	VC-318	VC-320	VC-321	VC-323	VC-251	VC-252	VC-253	COMP-S	COMP-T	VC-255	VC-256
Sample Name		VC-247-D0-4E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E-A	VC-321-D0-20.5E-A	VC-323-D0-22E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Date		10/31/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	11/01/2018	11/01/2018	11/01/2018	11/08/2018	11/07/2018	10/31/2018	10/31/2018	11/02/2018	11/02/2018
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID		L1844937-04	L1844937-05	L1844937-09	L1844937-10	L1844937-11	L1844937-12	L1844937-13	L1844937-06	L1846705-18	L1846705-20	L1844937-02	L1844937-03	L1844937-07	L1844937-08
Sample Depth (bgs)		0 - 4.7 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Top Depth		0	4.7	0	3.7	0	0	0	0	0	0	0	0	0	0
Bottom Depth		4.7	21.5	3.7	21.5	19	20.5	22	7.5	7.5	7.5	21	22.5	7.5	7.5
1,1,2,2-Tetrachloroethane	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,1,2-Trichloroethane	60	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethane	1000	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	1.6	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1-Dichloroethene	20	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-Trichlorobenzene	NA	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2,4-Trichlorobenzene	180	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.4	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.6	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,2-Dichlorobenzene	12000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.34 J	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,2-Dichloroethane	40	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloropropane	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-Dichlorobenzene	12000	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dichlorobenzene	1500	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,4-Dioxane	8	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U
2-Butanone (Methyl Ethyl Ketone)	6000	3.8 J	1.9 U	6.7	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Hexanone	800	0.52 U	0.52 U	0.98 J	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U
Acetone	120000	32	8.6	50	1.5 U	18	8.2	8.1	15	6.7	4.4 J	14	1.5 U	5.8	4.8 J
Benzene	20	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Bromodichloromethane	20	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Bromoform	80	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromomethane (Methyl Bromide)	200	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Carbon disulfide	14000	0.77 J	0.3 U	1.1 J	0.3 U	0.53 J	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.47 J	0.3 U	0.3 U	0.3 U
Carbon tetrachloride	20	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chlorobenzene	1000	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Chlorobromomethane	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chloroethane	NA	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform (Trichloromethane)	1400	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Chloromethane (Methyl Chloride)	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
cis-1,3-Dichloropropene	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cyclohexane	NA	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Dibromochloromethane	20	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Dichlorodifluoromethane (CFC-12)	20000	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Ethylbenzene	14000	0.17 U	0.18 J	0.19 J	0.17 U	0.17 U	0.64	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.86	0.17 U	0.17 U
Isopropylbenzene (Cumene)	14000	0.28 J	0.19 U	0.19 U	0.19 U	0.32 J	0.42 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.41 J	0.19 U	0.19 U
Methyl acetate	140000	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Methyl cyclohexane	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl Tert Butyl Ether	1400	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Methylene chloride	60	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.99 J	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Styrene	2000	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.47 J	0.4 J	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Toluene	12000	0.2 U	0.2 U	0.33 J	0.2 U	0.2 U	0.2 U	0.2 U	0.36 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	2000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
trans-1,3-Dichloropropene	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	20	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.39 J	0.18 U	0.18 U	0.18 U
Trichlorofluoromethane (CFC-11)	40000	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Vinyl chloride	20	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
Xylene (total)	20000	0.4 J	0.36 J	0.73 J	0.33 U	0.33 U	5.3	0.33 U	0.34 J	0.33 U	0.33 U	0.33 U	5.9	0.33 U	0.33 U
SUM of SPLP Volatile Organic Compounds	NA	37.25	9.14	60.03	-	18.85	14.56	8.1	22	7.1	4.79	14.47	7.17	5.8	4.8
SYNTHETIC PRECIPITATION LEACHING PROCEDURE (pH units)															
pH, Extraction Post-Filtration	NA	11.7	12	11.8	12.1	12	11.8	11.8	12	11.7	11.8	11.8	11.9	12	12.1

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.
- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.

FIGURES

Kings County

Lower Bay

Richmond County

Middlesex County

Queens County

Offshore Study Area

Rockaway Delivery Lateral

25.00

35.00

35.49

20.00

New York

New Jersey

30.00

Latitude/Longitude:
N 40.523683, W 73.861886

15.00

12.00

Raritan Bay

Latitude/Longitude:
N 40.464547, W 74.264950

Middlesex County

Monmouth County

Sandy Hook Bay

Atlantic Ocean

- Milepost for Offshore Study Area
- Offshore Study Area (5,000-ft)
- NY/NJ Boundary
- Lower NY Bay Lateral
- Rockaway Delivery Lateral
- Maintained Navigation Channel

0 1 Miles

0 1,000 Meters

Latitude/Longitude Coordinates - GCS North American Datum 1983
Bathymetric elevation contours are at 20-foot intervals
Sources: ESRI 2015; E&E 2003 Williams 2015; NOAA ENC 2013 (Chart # 12327 and # 12326); NJDEP Digital Data Series Bathymetric Data 2006

NOTES

NOTE: All sampling will remain within the depicted study area.

SITE LOCATION

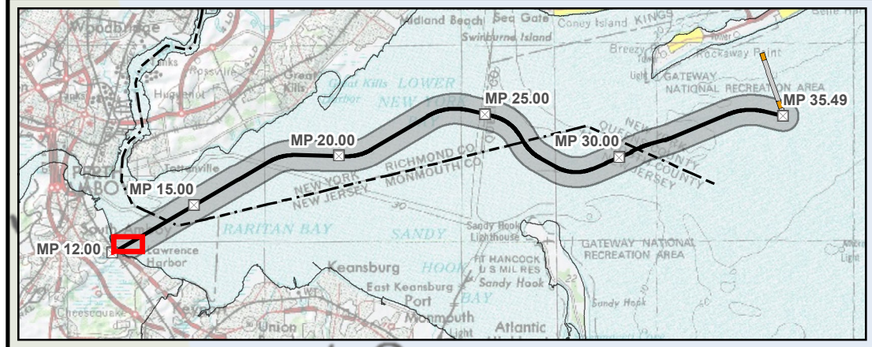


FIGURE 1
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
RARITAN BAY AND LOWER NEW YORK BAY STUDY AREA
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW JERSEY, NEW YORK

Williams

Revision Date: 8/29/2018

C:\Users\anichols\Documents\ArcGIS\Packages\Fig01_Offshore_StudyArea_11x17_EAC44B88-FC29-48FE-8AB6-EC8B17B7A7EC\v105\Fig01_Offshore_StudyArea_11x17.mxd



Vibracore Boring and Sample Name

Existing Sample Sites

Milepost

Proposed Raritan Bay Loop

Lower NY Bay Lateral

0 300 600

SCALE IN FEET

NOTES

1. *All locations and dimensions are approximate.*

2. *Base Map Source: National Oceanic and Atmospheric Administration (NOAA)*

SITE LOCATION

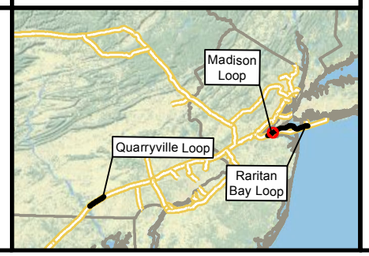
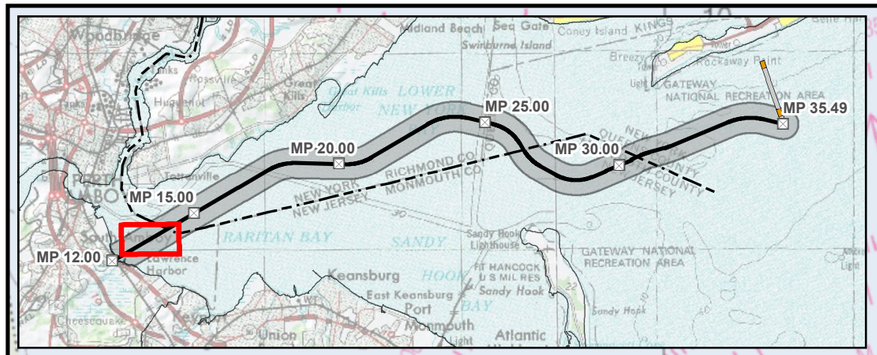


FIGURE 2
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
NEARSHORE AREA
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW JERSEY

Williams

Revision Date: 1/15/2019

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VC216
VC-216-D0-7.5E
VC217
VC-217-D0-7.5E
DEP5R
DEP-5-REV-D0-7.5E
VC5
MP 14.00
DEP4R
DEP-4-REV-D0-7.5E
VC4
DEP3
DEP-3-D0-7.5E
MP 13.50
VC304
VC-304-D0-7.5E
VC3-ALT
VC303
VC-303-D0-7.5E
MP 13.00
VC301R
VC-301-REV-D0-7.5E
VC2
DEP1
DEP-1-D0-7.5E
VC214
VC-214-D0-7.5E
VC211
VC-211-D0-7.5E
VC1-ALT
VC 1B-ALT
VC208
VC-208-D0-7.5E
VC205
COMP-A-D0-15E
MP 12.50
VC204

- Vibracore Boring and Sample Name
- Existing Sample Sites
- Milepost
- Proposed Raritan Bay Loop
- NY/NJ Boundary
- Lower NY Bay Lateral

0 600 1,200
SCALE IN FEET

NOTES

1. All locations and dimensions are approximate.

2. Base Map Source: National Oceanic and Atmospheric Administration (NOAA)

SITE LOCATION

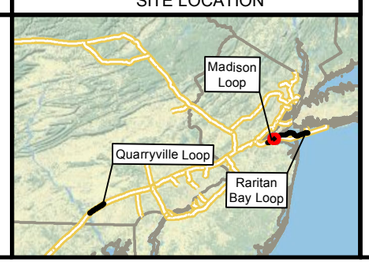
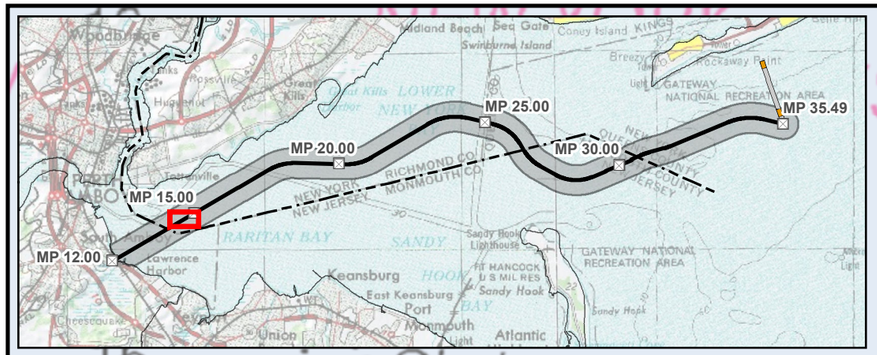


FIGURE 3
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
BETWEEN NEARSHORE AREA AND RARITAN BAY CHANNEL
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW JERSEY/NEW YORK

Williams

Revision Date: 1/15/2019

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VC223
VC-223-D0-7.5E

MP 15.00

VC222
VC-222-D0-7.5E

VC221
COMP-G-D0-7.5E

VC7

VC220
COMP-G-D0-7.5E

VC219
COMP-G-D0-7.5E

MP 14.50

VC218
VC-218-D0-7.5E

VC6

VC217
VC-217-D0-7.5E

VC216
VC-216-D0-7.5E

2 Obstn

- Vibracore Boring and Sample Name
- Existing Sample Sites
- Milepost
- Proposed Raritan Bay Loop

N

0 300 600

SCALE IN FEET

NOTES

1. All locations and dimensions are approximate.

2. Base Map Source: National Oceanic and Atmospheric Administration (NOAA)

SITE LOCATION

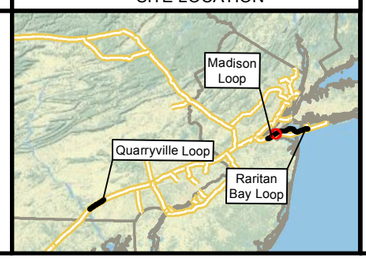
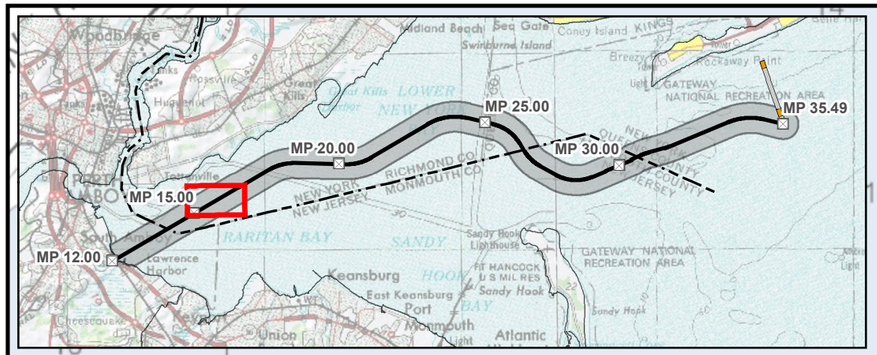


FIGURE 4
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
BETWEEN NEARSHORE AREA AND RARITAN BAY CHANNEL
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW YORK

Williams

Revision Date: 1/15/2019

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Vibracore Boring and Sample Name

Existing Sample Sites

Milepost

Proposed Raritan Bay Loop

N

0 600 1,200

SCALE IN FEET

NOTES

1. *All locations and dimensions are approximate.*

2. *Base Map Source: National Oceanic and Atmospheric Administration (NOAA)*

SITE LOCATION

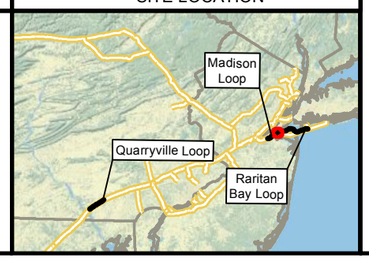
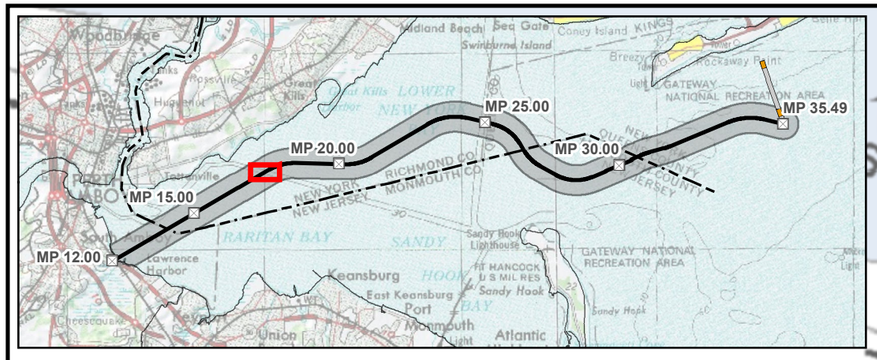


FIGURE 5
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
BETWEEN NEARSHORE AREA AND RARITAN BAY CHANNEL
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW YORK

Williams

Revision Date: 1/15/2019

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Vibracore Boring and Sample Name

Existing Sample Sites

Milepost

Proposed Raritan Bay Loop

N

0 300 600

SCALE IN FEET

NOTES

1. *All locations and dimensions are approximate.*

2. *Base Map Source: National Oceanic and Atmospheric Administration (NOAA)*

SITE LOCATION

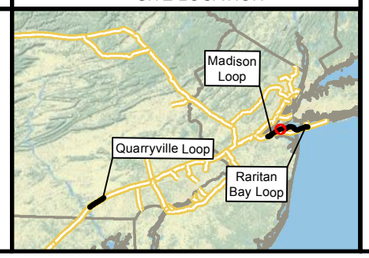
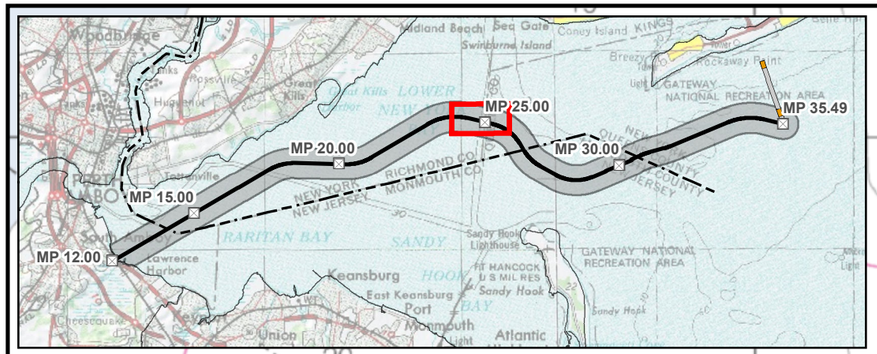


FIGURE 6
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
RARITAN BAY CHANNEL AND TRANSITIONS
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW YORK

Williams

Revision Date: 1/15/2019

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Vibracore Boring and Sample Name

Existing Sample Sites

Milepost

Proposed Raritan Bay Loop

0 600 1,200

SCALE IN FEET

NOTES

1. *All locations and dimensions are approximate.*

2. *Base Map Source: National Oceanic and Atmospheric Administration (NOAA)*

SITE LOCATION

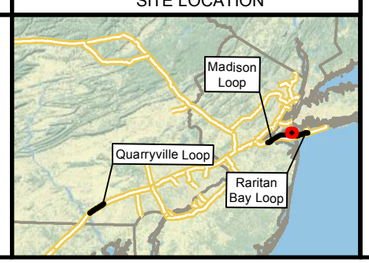
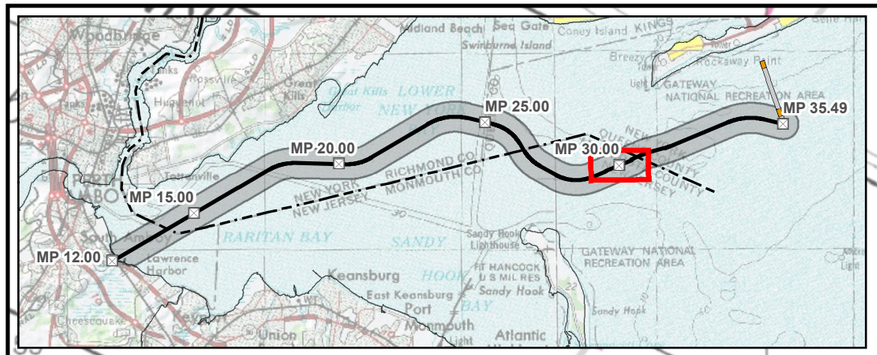


FIGURE 7
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
CHAPEL HILL CHANNEL AND TRANSITIONS
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW YORK

Williams

Revision Date: 1/15/2019

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- Vibracore Boring and Sample Name
- Existing Sample Sites
- Milepost
- Proposed Raritan Bay Loop
- NY/NJ Boundary
- Lower NY Bay Lateral

0 600 1,200
SCALE IN FEET

NOTES

1. *All locations and dimensions are approximate.*
2. *Base Map Source: National Oceanic and Atmospheric Administration (NOAA)*

SITE LOCATION

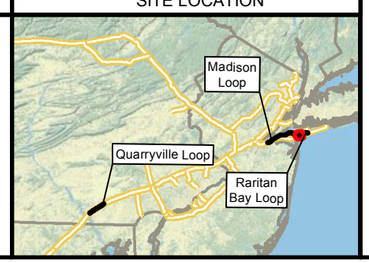
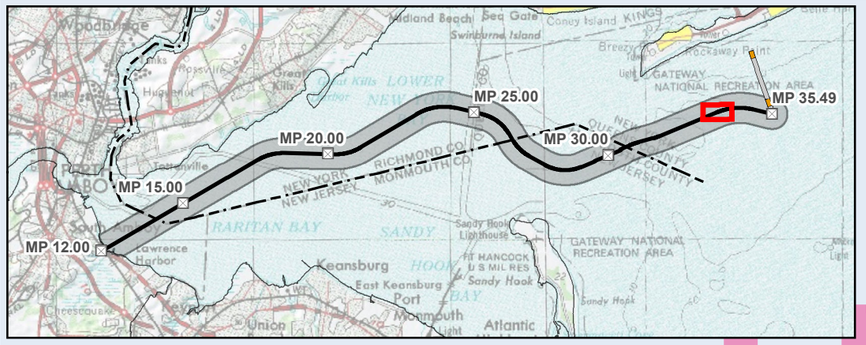


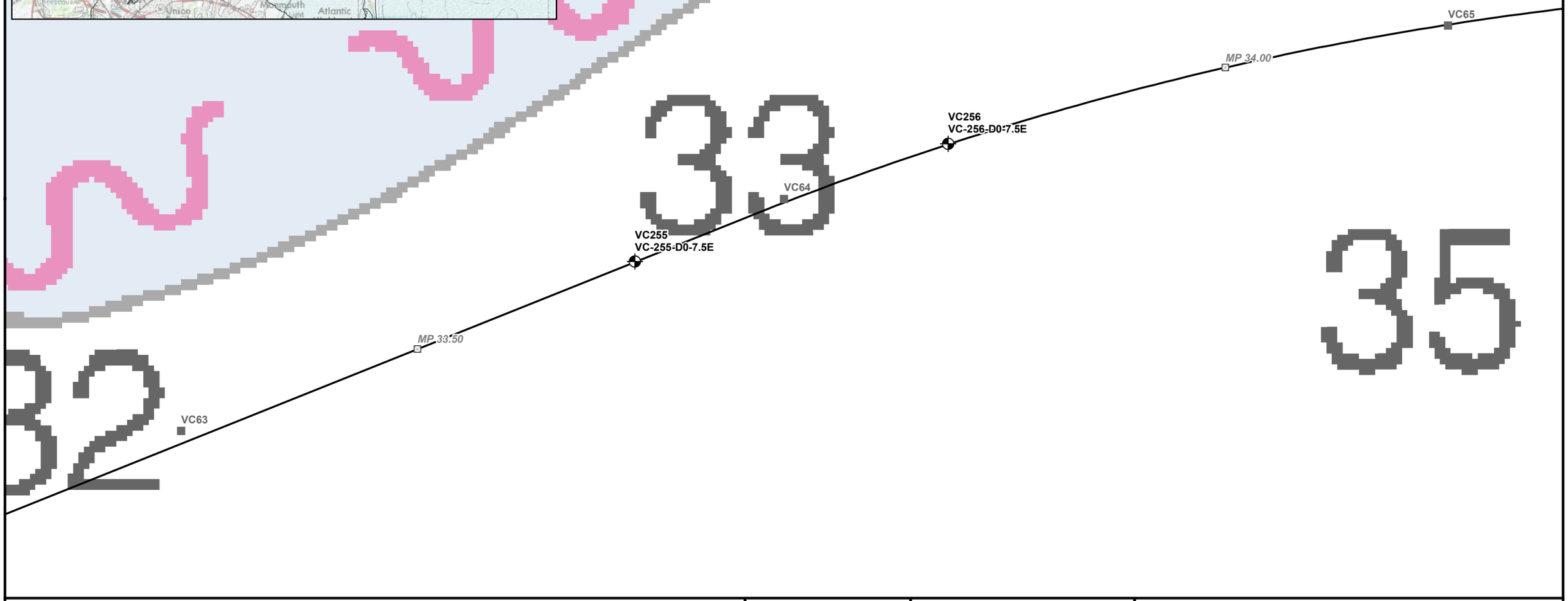
FIGURE 8
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
AMBROSE CHANNEL
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW JERSEY

Williams

Revision Date: 1/15/2019

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Vibracore Boring and Sample Name

Existing Sample Sites

Milepost

Proposed Raritan Bay Loop

N

0 300 600

SCALE IN FEET

NOTES

1. *All locations and dimensions are approximate.*

2. *Base Map Source: National Oceanic and Atmospheric Administration (NOAA)*

SITE LOCATION

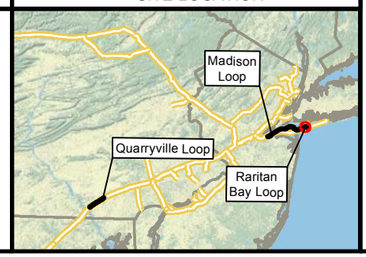


FIGURE 9
TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SAMPLE LOCATIONS
EAST OF AMBROSE CHANNEL
NORTHEAST SUPPLY ENHANCEMENT PROJECT
NEW YORK

Williams

Revision Date: 1/15/2019

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APPENDIX A

Approved Sediment Sampling and Analysis Plan (SSAP)

HALEY ALDRICH

NEW JERSEY DREDGING PROJECTS
SEDIMENT SAMPLING AND ANALYSIS PLAN (SSAP) TEMPLATE

VERSION 3.0

Before completing this SSAP template, please determine if the proposed project qualifies for any of the testing exclusions identified in N.J.A.C. 7:7 Appendix G and contact the Department's Office of Dredging and Sediment Technology to receive a confirmation that the testing exclusion is applicable to the project.

The major objective of a SSAP is to accurately characterize the horizontal and vertical distribution of the physical/geotechnical properties and contaminant concentrations of the sediment to be dredged.

This document serves as the template to develop the SSAP for a proposed dredging project. It identifies the information required by the Department to review, and ultimately approve, the SSAP for the project. The required information must be provided to the Department by entering it into the spaces provided on this template, and submitting two hard copies and one CD of the additional required documents.

The SSAP for a dredging project must be approved by the Department prior to the collection and analysis of any sediment samples. Once the final SSAP has been approved by the Department, the applicant may conduct sampling in conformance with the plan. **If the applicant collects and analyzes any sediment samples without the approval of NJDEP-ODST, it is done at risk, as any such samples may or may not be considered by the Department in making regulatory decisions regarding the proposed project.**

For additional information, see *The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters* found in Appendix G of the Coastal Zone Management Rules (N.J.A.C. 7:7). Appendix G can be accessed at: http://www.nj.gov/dep/landuse/lawsregs.html. This SSAP template incorporates much of what is required to be submitted by applicants in Appendix G as part of the permit application for a dredging project; however, additional information may be required on a project-specific basis.

Complete pages 2-6, 11-12 of the SSAP template, attach any additional required documents, and send the complete draft SSAP package to 501 E. State Street, Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420. Please include an electronic (MS Word) copy in the CD requested on page 3 of this document.

Approval of the SSAP will be indicated by the signature of Department staff on page 12 of the completed template.

If you have any questions, please contact the Department's Office of Dredging and Sediment Technology at (609) 984-6216.

Office of Dredging and Sediment Technology
Division of Land Use Regulation
Sediment Sampling and Analysis Plan (SSAP) File Number Request Form

Site Info:

Project Description: Transco Pipeline **Location:** Raritan Bay NJ/NY

Applicant Info:

Applicant Name: Williams Transcop		
Phone Number: 713/215-200	**Email Address:**	
Address: 2800 Post Oak Boulevard (77056) P.O. Box 1396		
City: Houston	**State:** Texas	**Zip:** 77251

Agent Info (if any):

Agent Name: Scott Horner		
Phone Number: 713-215-4953	**Email Address:** Scott.Horner@williams.com	
Address: same as applicant		
City:	**State:**	**Zip:**

Proposed Dredging Plan

Method of dredging: ☐ Hydraulic ☒ Mechanical

Type of dredging: ☐ Maintenance (N.J.A.C. 7:7-12.6) ☒ New Dredging (N.J.A.C. 7:7-12.7)

Proposed Dredged Material & Water Management Alternative(s)

Check applicable box(es) and identify location(s) in the space provided.

Upland Placement:

☐ Confined Disposal Facility

☒ Processed Dredged Material Facility (Mixed with Portland Cement)

☐ Beneficial Use at Site Remediation Project or Landfill

☐ Other Beneficial Use: _____

_____

Dewatering Method:

☐ Upland Temporary Dewatering Area (Ex; hay bales/silt fences)

☐ Confined Disposal Facility

☒ Barge/Scow Dewatering

☐ Geotubes

☐ Filter Press

☐ Other Dewatering Method: _____

_____

Dredge Material Management Location (street address and provide State plane coordinates): (Please any relevant information for identifying the site such as CDF name if applicable)

This SSAP is designed to characterize sediments for the placement of dredge material at an upland disposal facility using the structural fill protocol. The applicant has identified areas along the route of the proposed pipeline that may be placed at HARS based on previous analytical data. However, this SAP was designed to characterize all material that would be dredged to install the pipeline. If desired, the applicant may run the analysis for all samples labeled *UPL* in the table listed on pages 7-12 and hold the samples labeled *HARS* within the limits identified in the Dredge Manual conducted in accordance with a certified New Jersey Laboratory.

Sediment Core Sample Locations

* Depth of Collection is project depth (plus proposed overdredge) in Normal Water Surface equivalent.

Provide the information in the following table (expand as needed):

Sample ID Number	Location: Planned X	Location: Planned Y	Project Depth NWSL	Potential Placement
VC204	559550.629806	595338.948463	15	UPL
VC205	559590.648787	595408.245732	15	UPL
VC301	561772.826385	596644.744655	7.5	HARS
VC303	562618.248188	597132.744924	7.5	HARS
VC304	563462.968023	597620.335247	7.5	HARS
DEP 3	564323.202420	598116.881437	7.5	HARS
DEP 4	565183.873023	598613.669860	7.5	HARS
DEP 5	566157.415679	599175.618399	7.5	HARS
VC219	569095.774839	600871.698819	7.5	UPL
VC220	569618.427696	601173.384634	7.5	UPL
VC221	570138.907597	601473.816174	7.5	UPL
VC307	571908.423668	602495.216689	7.5	HARS
VC308	572672.605817	602936.318103	7.5	HARS
VC309	573440.499747	603379.562032	7.5	HARS
VC310	574852.703357	604194.714558	7.5	HARS
VC311	575633.267246	604645.271844	7.5	HARS
DEP2	574218.90026	603828.870574	7.5	HARS
VC312	576325.961551	605045.113894	7.5	HARS
VC313	577187.105958	605542.179020	7.5	HARS
VC314	577969.844235	605993.991406	7.5	HARS
VC225	581859.210557	608169.708297	7.5	UPL
VC227	582047.170652	608278.202026	14	UPL
VC228	582235.155614	608386.710004	20.5	UPL
VC230	582611.125261	608603.725963	27	UPL
VC230B	582671.917787	608570.680814	27	UPL
VC230A	582550.529264	608645.566177	27	UPL
VC232	582970.334191	608811.067499	22.5	UPL
VC232B	582896.223342	608849.153036	22.5	UPL
VC232A	583033.723342	608781.097480	22.5	UPL
VC237	583552.863930	609147.313179	25	UPL
VC237B	583467.056675	609174.153036	25	UPL
VC237A	583635.806675	609115.819703	25	UPL
VC239	583929.571435	609363.030975	23	UPL
VC240	584121.010298	609465.307837	16	UPL
VC242	584314.980419	609562.278032	9	UPL

VC315	615069.706267	617935.130151	10.5	HARS
VC316	615879.634266	617869.379296	10.5	HARS
VC317	616877.672845	617685.194434	10.5	HARS
VC326	640094.420549	608813.866100	21	HARS
VC327	640110.173372	608777.087341	21	HARS
VC328	643993.208187	610449.086679	25	HARS
VC329	644008.056736	610411.928734	25	HARS
VC216	567506.131802	599954.124662	7.5	UPL
VC217	568069.106725	600279.085190	7.5	UPL
VC218	568580.995405	600574.557703	7.5	UPL
VC222	570647.026687	601767.112804	7.5	UPL
VC223	571072.770934	602012.871605	7.5	UPL
VC247	618900.543817	617198.246094	UPL 0-4' HARS 4'-21.5'	UPL & HARS
VC251	621315.259702	616620.301787	7.5	UPL
VC252	621982.211495	616410.508872	7.5	UPL
VC253	622616.191475	616139.477531	7.5	UPL
VC318	619363.082789	617089.549202	21.5'	HARS
VC320	619723.604466	617003.148193	19.0'	HARS
VC323	620443.396551	616830.644747	22.0'	HARS
VC321	620083.774073	616916.830682	20.5'	HARS
VC235	583432.274157	609077.706663	24	UPL
VC229	582423.140265	608495.217982	28	UPL
VC238	583740.848697	609255.821168	28	UPL
VC208	559958.784091	595597.643046	7.5	UPL
VC211	560363.343455	595831.163798	7.5	UPL
VC214	560767.036074	596064.184256	7.5	UPL
DEP1	561251.102735	596343.595197	7.5	UPL
DEP6	582790.423327	608707.219767	27	UPL
DEP7	583164.035862	609010.188347	20	UPL
VC244	617291.452925	617586.029376	UPL 0-4' HARS 4'-10.5'	UPL & HARS
VC245	617877.707061	617445.529499	UPL 0-4' HARS 4'-10.5'	UPL & HARS
VC246	618364.370963	617328.898045	UPL 0-4' HARS 4'-10.5'	UPL & HARS
VC255	659962.694326	616596.019066	7.5	UPL
VC256	660925.778309	616963.942792	7.5	UPL

Note: The latitude and longitude of the planned sample locations can be approximated using NJ Geoweb or a similar mapping application. All coordinates shall be in the **NJ State Plane Coordinate System**.

Planned Core Sample Compositing Scheme

Request Department to identify core sample compositing scheme? ☒ Yes ☐ No

Please refer to Section D of Chapter III of Appendix G for core composite guidance and rationale.

Provide the information in the following table (expand table as needed):

Composite Sample ID Number	Core Sample ID Numbers
A	VC204, VC205
D	VC301, VC303, VC304
E	DEP 3, DEP 4, DEP 5
G	VC219, VC220, VC221
I	VC307, VC308, VC309
J	VC310, VC311, DEP2
K	VC312, VC313, VC314
L	VC225, VC227, VC228
M	VC230, VC230A, VC230B
N	VC232, VC232A, VC232B
O	VC237, VC237A, VC237B
P	VC239, VC240, VC242
Q	VC315, VC316, VC317
R – HARS Layer	VC244, VC245, VC246
S	VC326, VC327
T	VC328, VC329
DISCRETE	VC208 - VC211 – VC214 - VC216 - VC217 - VC218 – VC222 – VC223 - VC229 - VC235 - VC238 VC247 - VC251 - VC252 - VC253 - VC255 – VC256 – VC318 - VC320 – VC321 – VC323 - DEP1 – DEP6 – DEP7 VC244 – UPL Layer, VC245 – UPL Layer, VC246 – UPL Layer

Required Sediment Sampling Tests

Tier I - Physical/geotechnical (Required for all projects)

- ☒ Grain size distribution (ASTM D422 or D4381)
- ☒ Total Organic Carbon (USEPA 440.0)
- ☒ Water Content (ASTMD653, D2216, or D4643)

Representative subsamples of each homogenized core sample (or distinct strata) and composite analytical sample are collected and analyzed for grain size distribution, Total Organic Carbon (TOC), and percent moisture. Samples are also subjected Bulk Sediment Chemistry, Elutriate, Effluent (Modified) Elutriate, SPLP, and/or biological testing as specified below.

Excluding the cores listed below, individual sediment core samples comprised of greater than **90% sand** (analyzed using the **hydrometer** method) are excluded from **Tier II Testing** (chemical and biological testing), and must not be composited with other sediment samples.

Cores to undergo Tier II testing regardless of grain size:
VC204, VC205, VC208, VC211, VC214, DEP1

Tier II - Bulk Sediment Chemistry	☒
Tier II - Effluent (Modified) Elutriate	☐
Tier II - Elutriate	☐
Tier III - Sequential Batch Leaching Test	☐
Tier III - Synthetic Precipitation Leaching Procedure	☐
Tier III - Biological – Toxicity	☐
Tier III - Biological – Bioaccumulation	☐

Structural Fill Protocol (addition of Portland cement to raw dredge material and analysis for bulk sediment chemistry and SPLP) ☒

- Note that all compounds identified on the following page for Bulk Sediment Chemistry must also be performed for amended material and SPLP. Please see Sampling Plan Implementation Requirement #20 for additional information.

Notes:

Transco may hold samples for analysis of EPH or dioxins at all location at their own discretion.

**** It is the responsibility of the applicant to determine any additional testing requirements for any proposed management site that is not included in this sampling plan.****

Bulk Sediment Chemistry Analysis

☒ Semi-Volatile Compounds
☒ Volatiles (VOCs)
☐ Polychlorinated dibenzo dioxins and furans (PCDDs and PCDFs; 17 congeners)
☒ Polychlorinated biphenyls (PCBs): ☒ Aroclors or ☐ PCB Congeners (209)
☒ Organochlorine Pesticides
☒ Inorganics (including hexavalent and trivalent chrome)

Effluent (Modified) Elutriate Analysis

☐ Semi-Volatile Compounds
☐ Volatiles (VOCs)
☐ Polychlorinated dibenzo dioxins and furans (PCDDs and PCDFs; 17 congeners)
☐ Polychlorinated biphenyls (PCBs): ☐ Aroclors or ☐ PCB Congeners (209)
☐ Organochlorine Pesticides
☐ Inorganics (including hexavalent and trivalent chrome)

Analytical Requirements

All analytical procedures must be conducted by a laboratory certified by the Department to conduct that procedure pursuant to the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18) or the National Environmental Laboratory Accreditation Program (NELAP). Current certification status should be verified with the Office of Quality Assurance (609) 292-3950.

The achieved analytical detection limits for all contaminants in the Target Analyte List must be less than the applicable regulatory criteria and guidance values to which the data will be compared when evaluating the potential impacts of the proposed project. Where the Practical Quantitation Limit (PQL) for a contaminant is greater than the applicable regulatory criteria, the analytical detection limit must not exceed the PQL.

-Bulk Sediment Chemistry/Upland Placement – NJDEP Residential Soil Remediation Standards
http://www.nj.gov/dep/rules/rules/njac7_26d.pdf

-Bulk Sediment Chemistry/Aquatic Placement – NJDEP Ecological Screening Criteria
http://www.nj.gov/dep/srp/guidance/ecoscreening/

-Elutriate and Effluent (Modified) Elutriate – NJDEP Surface Water Quality Standards (acute and chronic; saline and/or freshwater, as appropriate)
http://www.nj.gov/dep/rules/rules/njac7_9b.pdf

-Leaching tests – NJDEP Ground Water Quality Standards
http://www.nj.gov/dep/rules/rules/njac7_9c.pdf

Sampling Plan Implementation Requirements

If implementation of the approved SSAP does not provide data that are representative of, or fully characterizes, the sediment to be dredged, the Department may require the collection and analyses of additional sediment samples.

Sediment core sampling collection procedures must be consistent with those in the NJDEP Field Sampling Procedures Manual (2005), available at http://www.state.nj.us/dep/srp/guidance/fspm/ .

(1) The Department must be notified of any deviations from the approved SSAP prior to the homogenizing, compositing, and analysis of the collected sediment samples.

(2) All sediment core sample collection activities must be properly documented. Detailed field notes/observations during sampling must be documented in a field sampling log book.

(3) NJDEP GPS Data Collection Standards must be used for positioning methods when locating all sampling points. *New Jersey Department of Environmental Protection, 2011. NJDEP GPS Data Collection Standards for GIS Data Development, June 8, 2011, 11 pp.*

(4) All sampling equipment must be properly cleaned before and after the collection of each individual sediment core sample.

(5) An inert plastic liner must be used in conjunction with each sediment core sampling device; this plastic liner must not be reused.

(6) All individual sediment core samples are to be taken to the sediment characterization depth, as specified in this document, and not any deeper.

(7) When collecting sediment core samples, the project applicant must ensure that a sufficient volume of sediment is collected to conduct all of the tests (physical and geotechnical, chemical, biological) specified in the approved SSAP.

(8) Individual sediment core samples must be photographed prior to homogenization, with the sample identification number, a length scale, and date included in the photograph.

(9) Provide core logs showing the depth of sampling (below the sediment surface and Mean Low Water) and a qualitative description of the sediment for each individual sediment core sample.

(10) Only sediment core samples collected correctly may be homogenized, composited, and analyzed.

(11) Individual sediment core samples may be homogenized in their entirety for analysis provided that there no distinct strata (apparent grain size distribution, composition, and visual characteristics) present that are greater than two (2) feet in depth. The Department shall be notified of any sediment core samples that show grain size stratification prior to homogenizing.

(12) The entire sediment core sample (or distinct strata, when present) must be homogenized – "representative" sub-samples of a non-homogenized sediment core sample must not be collected, composited, and analyzed.

(13) Individual sediment core samples may be composited only if the grain size distribution of the sediment is similar. Individual samples should not be composited if the percentage clay, silt, or sand differ by more than 20%. The Department shall be notified of any sediment core samples that show varying grain size distribution prior to compositing samples.

(14) Representative subsamples of each homogenized core sample (or distinct strata) are combined in equal proportions (by mass) to form the composite analytical sample.

(15) The sample preservation requirements and holding times for each analysis, as specified in the analytical methods used, must be adhered to, or proposed alternatives approved by the Department prior to analysis.

(16) Sample Chain of Custody requirements must be consistent with those specified in the NJDEP Field Sampling Procedures Manual (2005).

(17) If implementation of the approved SSAP does not provide data that are representative of, or fully characterizes, the sediment to be dredged, the Department may require the collection and analyses of additional sediment samples.

(18) Analytical laboratories must follow all of the required QA/QC procedures specified in the analytical methods used. Any deviations from these procedures must be documented and justified in the Analytical Data Report.

(19) All routine procedures associated with the sampling, handling, transport, storage, preservation, and analysis of the sediment should be specified in Standard Operating Procedure (SOP) documents maintained by the parties actually collecting and analyzing the sediment.

(20) For Structural Fill Protocol, each core/composite sample/vertically stratified sample, a sample of the processed dredged material product will be created by combining measured amounts of proposed additive with a pre-weighed sample of the sediments to be dredged. The mixing time will, to the greatest extent possible, replicate the residence time in the blending facility/operation to be used in the actual full-scale project. The ratio of proposed additive to composite sediment sample, by weight, will be recorded. The dredged material product to be tested will be formed using the "recipe" (proportions of dredged material and proposed additive) which replicates the actual dredged material product to be used as structural fill on the site. The dredged material product will be pulverized, and each composite sample will be subjected to bulk sediment analyses.

The dredged material product samples will be pulverized, and each sample subjected to a Synthetic Precipitation Leaching Procedure (SPLP) using the USEPA Method 1312.

A final report, including the results of the raw sediment and dredged material product testing, will be submitted to the Department in a series of three (3) summary data tables: Raw sediment bulk sediment chemistry, Dredged material product bulk sediment chemistry, Dredged material product SPLP results.

Sample Collection/Homogenization/Composition

Identify the organizations that will conduct the following activities (if known):

Sediment samples will be collected by: To Be Determined – By Applicant

Sediment samples will be homogenized by: To Be Determined – By Applicant

Sediment samples will be composited by: To Be Determined – By Applicant

Reporting Requirements

The sediment data package must be included in the Waterfront Development Permit application. Any data package submitted to the Department shall comply with the QA/QC requirements outlined in Appendix B of the Dredging Manual. The package must be provided to the Department on a CD, or be made available electronically.

In addition, a data summary table of the results in a spreadsheet must be provided with the data package. The data summary table must present a comparison of the bulk sediment chemistry results to the Department's Residential and Non-residential Soil Remediation Standards. Where required, modified elutriate results shall be compared to the New Jersey Surface Water Quality Criteria and SPLP results shall be compared to the New Jersey Ground Water Quality Standards. The summary tables must present data with identical units and highlight all results that exceed applicable criteria. **Units for bulk sediment chemistry must be presented in milligrams per kilogram (mg/kg).**

- Dioxin data must be presented using current World Health Organization Toxic Equivalency Factors (WHO TEFs) with the calculated Toxic Equivalency (TEQ).
- PCB aroclor data must provide a summation for detected analytes.
- PCB congener data must be presented individually and summed.

One (1) hard copy of the data summary tables and one (1) FULL electronic copy of the QA/QC must be provided.

SSAP Certifications

☑ I certify that I provided accurate information and will comply with the requirements listed in the approved Sediment Sampling and Analysis Plan.

Printed Name: JOSEPH E DEAL

Signature:

Date: 10 OCTOBER 2018

Department Review and Approval (Department signature upon approval)

☒ The Department hereby approves the Sediment Sampling and Analysis Plan dated for implementation.

NJDEP File No.	0000-01-1001.3 DRG180001
Department Staff:	Magda Usarek-Witek
Date:	October 9, 2018
Signature:	

APPENDIX B

Alpine Survey Report

Survey Report for
Haley & Aldrich

Title:
Upland Disposal Vibracore Program

Project:
Williams/Transco NESE Upland Disposal Project
Raritan Bay & New York Harbor

Survey Date:
October – November 2018

Project Number:
1853

Report Status:
Revision 02

Submittal Data:
16 January 2019

EXECUTIVE SUMMARY

Alpine Ocean Seismic Survey, Inc. (Alpine) completed an offshore vibracoring and sediment sampling program in support of Transcontinental Pipeline Company, LLC (Williams) Northeast Supply Enhancement (NESE) project. This program was completed under contract to Haley & Aldrich (H&A). The purpose of the sediment collection was to acquire geo-environmental samples to support regulatory permitting. To this end selected portions of the route were sampled using a vibracore and this report presents the methods and results of that portion of the overall survey.

Alpine utilized two vessels to conduct the Vibracore sediment sampling. The first, the RV *Shearwater*, a 110 foot research vessel owned and operated by Alpine, collected samples at a total of 87 sites. The second vessel, the RV *George*, Alpine's 24 foot trailerable purpose built pontoon deck boat, used a Mini-Vibracore system to collect an additional 4 vibracores in extremely shallow water near the Morgan, NJ shoreline. Alpine determined the location of each sample using RTK corrected GPS signals. Water depths at each site were measured and corrected for tidal variation based on the NOAA Water Level Gauge at Sandy Hook, New Jersey.

This report includes a discussion of the field procedures and schedule of operations. The report appendices include the detailed location information and chartlets of the sampling stations and the penetration graphs of the cores. The final gINT logs and color photographs of the split cores will be published by H&A and provided as part of their reporting under separate cover.

SERVICE WARRANTY

USE OF THIS REPORT

This report has been prepared with due care and diligence and with the skill reasonably expected of a reputable contractor experienced in the types of work carried out under the contract and as such the findings in this report are based on an interpretation of data which is a matter of opinion on which professionals may differ and unless clearly stated is not a recommendation of any course of action.

Alpine has prepared this report for the client(s) and project and project owner identified on the front cover in fulfilment of its contractual obligations under the contract and the only liabilities Alpine accept are those contained therein.

Please be aware that further distribution of this report, in whole or part, or the use of the data for a purpose not expressly stated within the contractual work scope is at the client's sole risk and Alpine recommends that this disclaimer be included in any such distribution.

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GLOSSARY OF ABBREVIATIONS

Abbreviation	Meaning
BML	Below Mudline
cfm	Cubic feet per minute
DGPS	Differential Global Positioning System
ft	feet
g	gallon
HDD	Horizontal Directional Drilling
HP	Horsepower
HSE	Health, Safety, and Environment
in	inch
kW	Kilowatt
m	meter
MLLW	Mean Lower Low Water
mm	Millimeter
NAD83	North American Datum of 1983
NESE	Northeast Supply Enhancement
NJ	New Jersey
NOAA	National Oceanic and Atmospheric Administration
NY	New York
NYSNet	New York State Network
oz.	ounce
PEP	Project Execution Plan
QA/QC	Quality Assurance/Quality Control
RTK	Real Time Kinematic
RV	Research Vessel
t	ton
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
usft	United States Survey Feet
VC	Vibracore
WD	Water Depth
WGS84	World Geodetic System 1984

1. INTRODUCTION

1.1 Description

Transco, a subsidiary of Williams Partners, L.P., is proposing to expand its existing interstate natural gas pipeline system in Pennsylvania and New Jersey and its existing offshore natural gas pipeline system in New Jersey and New York waters to support National Grid's long-term growth, reliability and flexibility needs.

The offshore portion of the proposed Northeast Supply Enchantment Project (NESE Project) includes a new 26-inch-diameter pipeline that would extend from the borough of Sayreville shoreline in Middlesex County, New Jersey, to the Rockaway Transfer Point, which is the interconnection point between Transco's existing Rockaway Delivery Lateral and the Lower New York Bay Lateral in New York waters. The new offshore pipeline, referred to as the "Raritan Bay Loop," would extend approximately 23.33 statute miles east-northeast across Raritan Bay and Lower New York Bay to the Rockaway Transfer Point, located in the Atlantic Ocean approximately 3 statute miles seaward of Rockaway, New York.

To support the design and evaluation of the Project, Transco collected sediment located along the proposed offshore route and analyzed the geotechnical and chemical characteristics in late 2016/early 2017. Findings from the sampling and analyses identified elevated concentrations of contaminants in potential dredge materials, necessitating further assessment of clamshell dredging prisms for the suitability of either: 1) in-ocean disposal at the Historic Area Remediation Site (HARS); or 2) upland disposal at an approved receiving facility.

For areas to be excavated using a clamshell dredge west of the New York/New Jersey state boundary near the Ambrose Channel crossing, Transco submitted a request to the USACE NYD DMMS for approval to dispose of suitable dredged material in the HARS under Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (Section 103 request), consistent with the Site Management and Monitoring Plan for the Historic Area Remediation Site, request dated September 15, 2017. Transco subsequently conducted additional sampling and analyses in early 2018 to evaluate the suitability of identified dredge material within the proposed prisms for HARS disposal. Sampling and analyses conducted also addressed the geotechnical and chemical characteristics of sediment within the Raritan Bay Channel and Chapel Hill Channel at depths deeper than what were sampled previously.

Concurrent with HARS suitability sampling and analyses, Transco implemented additional sampling and analyses of sediments (this project) within the proposed clamshell dredging areas, with the goal of this additional sampling and analysis to pre-characterize potential clamshell dredge materials prior to dredging activities. Pre-dredge characterization activities will provide a basis for waste characterization and suitability for upland disposal.

1.2 Purpose

Alpine Ocean Seismic Survey, Inc. (Alpine) was retained by Halley & Aldrich (H&A) to conduct geo-environmental sampling and provide support for in-field core logging, sediment subsampling and sample transfer from the vessel to the shore, with the resulting data to be used to support permitting and design of the project.

The field work was:

1. Arranged into four classes based on the vibracore rig to be used, the vessel needed and the tidal accessibility of the proposed station;
    a. Class 1 = 30-Foot Vibracore Rig, water depths greater than 15 feet MLLW
    b. Class 2 = 20-Foot Vibracore, in water depths greater than 14 feet MLLW
    c. Class 3 = 20-Foot Vibracore, water depths less than 14 feet MLLW but greater than 8 feet MLLW which limits accessibility to the time period around high tide
    d. Class 4 = 15-Foot Portable Vibracore, operated off a small pontoon deck boat in water depths less than 8 feet MLLW.
2. Arranged in sequential order based on rig type and position along the proposed pipeline, starting from the Morgan Shoreline and progressing west to east.
3. Vibracores were collected starting with Class 1 (30-footers) followed by a rig switch and then Class 2 through 3 (20-footers) samples. Class 4 (small boat) was completed as a separate operation.
4. The pickup and transfer of sediment samples from the RV *Shearwater* to the shore-side dock was conducted using a separate crew boat
5. Vibracores from Stations 204, 205, 208 and 211 were completed from a secondary boat, RV *George*, since the water depths are too shallow to support the RV *Shearwater*.

A total of 69 stations were sampled. Of these 69 stations the *Shearwater* collected the cores at 65 of them, with 27 stations sampled using the 30-foot rig and the remaining 38 stations using the shorter 20-foot rig. The last four stations in shallow water were sampled using a 15-foot long mini-vibracore rig using the RV *George*.

All samples collected on the *Shearwater* were split open, photographed and described by Alpine onboard the vessel immediately after collection and then sampled by H&A personnel.

Following completion of the *Shearwater* operations, the last four stations were sampled using a Mini-Vibracore system. These four cores were collected one at a time and transported to shore where the cores were processed, and sampled by a combined Alpine and H&A team. Sample handling and subsequent physical and chemical analyses of all the samples were conducted through H&A. This report details the vibratory coring program.

Figure 1.1 shows the overall layout of the work area along with the core locations. There are six additional figures in Section 2 of Appendix A which show details of the core locations, with each core site numbered for reference.

1.3 Fieldwork Summary

Table 1 Summary of Field Operations

Date	Tasks Accomplished
Primary Shearwater Operations	
Oct. 17, 2018	Mobilize RV *Shearwater* at Liberty Landing Marina
Oct. 18, 2018	Steam to work area in Raritan Bay: Attempt to anchor on site at 1130 hrs due to high winds and seas in work area. 11:30: Anchor cable parts; anchor and chain lost on sea floor; wait on site until released by US Coast Guard around 1800 hrs. Steam to CME dock to take on new anchor, chain and cable in AM. Note: anchor found and recovered by others under Alpine supervision on Oct 26, 2018
Oct. 19, 2018	08:00-17:00: Load new anchor cable and chain; cable load tested and certified. 17:30: steam back to work site and anchor overnight
Oct. 20, 2018	Complete sampling at 7 sites (VC-225, 227, 228, 230A, 230, 230B and 229)
Oct. 21, 2018	Standby; anchored on site due to high winds in work area.
Oct. 22, 2018	Complete sampling at 9 sites (DEP-6, VC-232B, 232, 232A, 237, 237A, 237B, 235 and DEP-7)
Oct. 23, 2018	Complete sampling at 10 sites (VC-242, 240, 239, 238, 318, 320, 321, 323, 247 and VC-251).
Oct. 24, 2018	Standby; anchored on site due to high winds in work area.
Oct. 25, 2018	Complete sampling at 4 sites (VC-326, 327, 328 and 329)
Oct. 26, 2018	Complete sampling at 7 sites (VC-256, 255, 253,252, 246, 245 and 244). Shorten Vibracore to 20 foot rig
Oct. 27, 2018	Standby; anchored on site due to high winds and rain in work area
Oct. 28, 2018	Complete sampling at 14 sites (VC-314, 313, 312, 311, 310, DEP-2, VC-309, 308, 307, 223, 222, 221, 220 and 219).
Oct. 29, 2018	Complete sampling at 8 sites (VC-214, 216, 217, 218, 304, 315, 316 and 317)
Oct. 30, 2018	Complete sampling at 3 sites (VC-301, DEP-4 and DEP 5) by 14:30. Anchor at site on standby awaiting approval from NJDEP to adjust the locations of the three final sampling sites.

Date	Tasks Accomplished
Oct. 31, 2018	Complete sampling at 3 sites (VC-303, DEP-1 and DEP-3). Coring operations complete. Vessel returns to Liberty Landing Marina. Vessel secured at dock ~ 18:00 hrs.
Nov. 1, 2018	Offload equipment and & demobilize *Shearwater*
Small Boat and Mini-Vibracore Operations at Morgan Landing	
Nov. 11, 2018	Mobilize pontoon boat RV *George* and Mini-Vibracore to work site
Nov. 11, 2018	Conduct core sampling at 4 sites (VC-211, 208, 205 and 204)
Nov. 12, 2018	Demobilize RV *George*

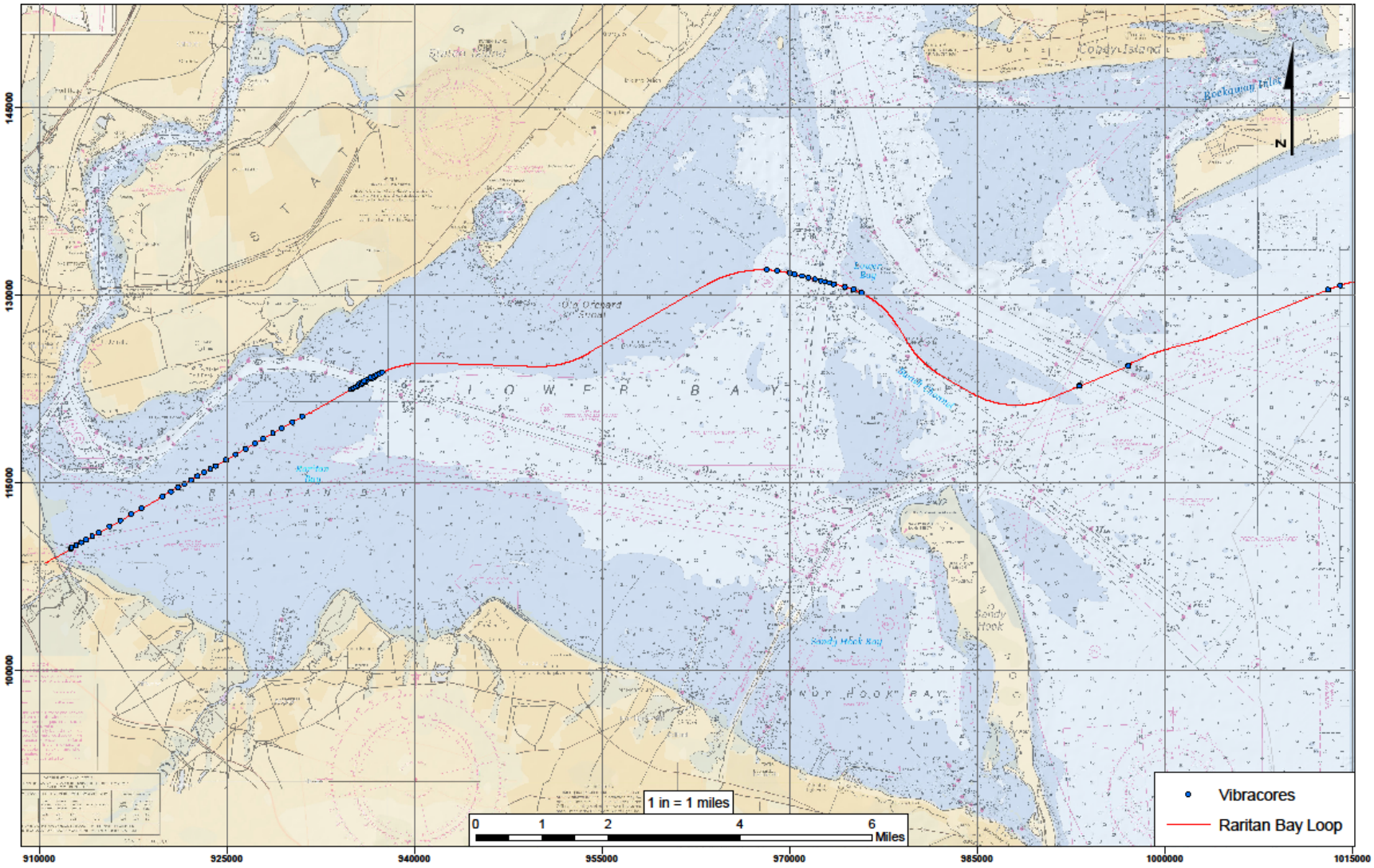


Figure 1 Location Map

2. VESSEL SUMMARY

The RV *Shearwater* was used for the Vibracore sampling program in water depths greater than 12 feet. The Vibracore was deployed from an A-frame located on rear of the starboard side of the vessel. The Vibracore was deployed using both a dedicated winch and the vessel's "cherry picker" crane. The *Shearwater* is powered by a pair of independently controlled omni-directional thrusters. Using these, and the bow thruster when needed, the vessel can be maneuvered to and held on station during all sampling operations without anchoring. The vessel sleeps up to 22 personnel, including ship's crew, allowing it to stay on site overnight.



Figure 2 RV *Shearwater*

For the shallow water work, Alpine employed a purpose built 24-foot RV *George* pontoon deck work boat. This vessel, operated dock-to-dock on a daylight only basis, is setup to collect mini-vibracores. Typically, these cores are limited to a maximum of 10-feet, however for this project, the mini-system was modified and lengthened to 15-feet in order to satisfy regulatory requirements. The *George* is an outboard powered open boat and when rigged for coring can only accommodate a total of three persons onboard.



Figure 3 RV *George*

3. SAFETY

Safety standards and procedures on board all Alpine vessels adhere to company policy which operates under the guidance of Alpine's Health and Safety Manual for Marine Operations and is administered by the company's Health and Safety Officer. To maintain these standards every crew member was given a safety induction upon joining the vessel and regular toolbox meetings were also conducted prior to back deck operations, equipment deployment and recovery.

Prior to the start of the H&A NESE Program survey operations onboard the *RV Shearwater* and the RV *George*, an "All Hands" safety induction of all vessel and scientific crew was carried out by Alpine's HSE Manager and the Vessel Master in coordination with safety representatives for the project from Williams and H&A.

During the entire survey operation, including both survey vessels, a total of 32 toolbox meetings were completed.

3.1 Exposure Hours

The survey and marine crew together totaled 17 persons for the majority of the Vibracore operations conducted on the *Shearwater*, including the on-board representatives. There was a total of six persons involved during the small boat operations. The total number of exposure hours starting with the onsite mobilization on 17 October 2018 until the offshore portion of the survey was complete on 1 November, 2018, along with the small boat operations conducted on November 11 and 12, 2018, was 3,456 hours. During this time there were no lost time incidents, no injurious incidents, and no occurrences that resulted in damage to the environment. There was one equipment incident at the beginning of the field work when the anchor cable on the *Shearwater* parted on the first day. The anchor and lost anchor chain were subsequently recovered.

4. CREW LISTS

4.1 RV *Shearwater*

The following personnel were present on board the survey vessel during mobilization and survey operations.

Table 2 Field Personnel; RV *Shearwater*

Alpine Scientists	
Party Chief & Chief Geologist	Chuck Dill
Deck Manager	T.J. Malgieri
Alpine Vessel Crew	
Master	Mike Porter
Second Captain	Ron Worley
Third Captain	Paul Coughlin
Engineer	Sean Kelleher
Deck Hand	Various
Vibracore Team (Alpine Personnel)	
Vibracore Technician	Dario Mancha
Williams and H&A Team	
Williams Representative	Alvin Hebert
Haley & Aldrich	Cody Smith
Haley & Aldrich	Nathan Casiraro
AIS PSO Team[1]	
PSO Observer	Emma Fowler

4.2 RV *George*

The following personnel were present on board the small boat operations during mobilization and survey operations or were onshore conducting core sampling operations

Table 3 Field Personnel; RV *George*

Alpine Scientists	
Chief Geologist	Chuck Dill
Vibracore Lead	T.J. Malgieri
Vessel Crew	
Captain	William Rottner
Williams and H&A Team	
Williams Representative	Alvin Hebert
Haley & Aldrich	Cody Smith

[1] A.I.S., Inc., of Marion, Massachusetts, was hired by Williams to provide onboard Protected Species Observers (PSO).

Haley & Aldrich	Nathan Casiraro
AIS PSO Team[2]	
PSO Observer	Emma Fowler

[2] See note 1.

5. SURVEY PROCEDURES

5.1 General

The survey consisted of performing Vibracore sampling for collection of sediment samples to be analyzed and was conducted under control of H&A.

The Vibracores were advanced to between ~7 and ~30 feet below the mudline (BML), depending on analysis required. The rate and depth of penetration of all the Vibracores were monitored in real time on deck using the Alpine Corelog system. Some of the cores collected east of Ambrose Channel encountered refusal on dense sand and gravel at depths of less than 22 feet.

Prior to use on each core, the Vibracore cutting edge and core retainer were decontaminated based on a strict cleaning procedure. The decontamination procedure consisted of a salt water rinse to remove any loose sediment, followed by a soap and water wash, a rinse with deionized water, a rinse with 1% Nitric acid, and a final rinse with deionized water. After a quick air dry the components were ready for use. A new core liner was used for each sample.

When ready, the rigged and prepared Vibracoring apparatus was lowered over the side, following a strict marine/wildlife mitigation procedure, and the sample was collected. The rig was then returned to the surface and secured alongside the vessel. After being secured, the cutting edge was removed from the bottom of the core pipe along with the core retainer. The liner was then removed by manually pulling it out of the steel core pipe. Following the liner's removal from the core pipe it was measured and capped. The tube of sediment was then moved to the bow of the *Shearwater* for logging, processing and sampling.

The liner was placed in a trough on deck and split longitudinally on two opposite sides. One of the two cuts halves were then placed on deck for photographing and description by Alpine personnel while the other half was sampled for chemical and geotechnical analysis by the H&A personnel.

All samples collected on board were labeled and then placed in either a refrigerator or freezer, as appropriate, on the vessel prior to being transferred to the Miller's Launch dock by crew boat routinely, using iced coolers. A lab courier took possession of the samples at the dock and transported them to the lab.

The geological descriptions obtained by Alpine's geologist during the onboard processing were entered into a gINT log format and forwarded to H&A who could add the additional data obtained from their laboratory analyses. The project gINT logs have been provided to H&A and will be provided as part of their reporting under separate cover. All cores were photographed in color at two foot intervals in the field and those photographs will be included with H&S's report. Penetration graphs are in Appendix B.

5.2 Project Survey Parameters

Table 4 Project Geodetics

Project Geodesy		
Geodetic Parameters	Spheroid	NAD83
	Datum	NAD83
	Semi-major Axis	6,378,137.00000 m
	Semi-Minor Axis	6,356,752.31414 m
	Inverse Flattening	298.257222101
Projection Parameter	Projection	State Plane Coordinate System
	Grid	New York Long Island (FIPS 3104)
	First Standard Parallel	40.66667° N
	Second Standard Parallel	41.03333° N
	Central Meridian	74 ° W
	Origin Latitude	40.16667° N
	False Northing	0 ft
	False Easting	984,250 ft
	Scale factor on CM	1
	Unit of Measurement	US Survey Feet

5.3 Survey Units

All units, measurements, and depths were made in feet.

5.4 Vertical Datum

The vertical datum for this project is MLLW (NAD83). Recorded depths were tidally corrected using the NOAA recorded tides at Sandy Hook, NJ (Station 8531680).

5.5 Equipment Installation, Testing, and Configuration on Shearwater

The navigation antenna was installed above the bridge of the RV *Shearwater*. The GPS antenna was then interfaced to the onboard navigational computer, which was equipped with Hypack software and continuously provided location and vessel heading to the steering console of the *Shearwater*. The vessel shape and the offset from the navigation antenna to the A-frame used to deploy the Vibracore were entered into Hypack to provide an accurate representation of the vessel setup. The captain was then able to maneuver the vessel to each proposed sampling location.

GPS positioning was obtained using an Applanix POS MV as the primary positioning system. RTK corrections were provided by NYSNet over a cellular data connection. A secondary Hemisphere VS110 DGPS Compass received differential corrections from the USCG and acted as a secondary/backup positioning system.

The following table includes the results from the navigation check, with the RTK GPS observed coordinates compared with known/established points. The grid coordinates are in State Plane, NAD83, New York Long Island, US Survey Feet.

Table 5 Navigation Check Results

Navigation Check Results			
	Known	Observed	Δ
Latitude	40 59 46.95464 N	40 59 46.95378 N	
Longitude	73 56 55.15758 W	73 56 55.15800 W	
Grid – N	302290.72' ft	302290.86' ft	-0.14'
Grid -- E	998423.72' ft	998423.69' ft	0.03'

5.6 Survey Equipment and Methods; R/V Shearwater

5.6.1 Vessel Layout

The RV *Shearwater* provided a suitable platform for the offshore portion of the project where water depths exceeded 12 feet. The maneuverability of the vessel with the ability to efficiently deploy and recover the vibracore along with adequate space and sleeping quarters for the personnel made the *Shearwater* a perfect partner for the operation. The Vibracore sampling was conducted off the starboard side A-frame. Core processing took place up front on the bow.

5.6.2 Vessel Specifications

Table 6 Specifications of RV *Shearwater*

Vessel Type	Multi-Role Survey
Tonnage	Under 200 t
Length, overall	110 ft
Beam	39 ft
Draft	9 ft
Main Engines	2 x John Deere 6125 AFM – 526 HP each
Generator	2 x John Deere – 135 kW each
Bow Thruster	Thrustmaster 100 HP
Fuel capacity	13800 g
Fresh Water Storage	5000 g
Desalination System	Up to 900 gallons per day

Electronics	Furuno Radar, Applanix POS MV GPS, Heading and IMU, 2 x Echo sounders, VHF Comms- 2x Icom IC-M504; Sat. Phone – Intellian v80G VSAT
Special features	Accommodation for 22; 2 moon pools; 14 Ton Max capacity crane; 5-ton fixed A-frame; Survey equipment winch -2500 m capacity at 11mm diameter; 2 x Life Raft

5.6.3 Vessel and Equipment Navigation

An Applanix POS MV was used as the primary positioning system. RTK corrections were provided by NYSNet over a cellular data connection. A secondary Hemisphere VS110 DGPS Compass received differential corrections from the USCG and acted as a backup positioning system. Both the primary and secondary positions were input into Alpine's Hypack navigational software. All position fixes were recorded in Hypack and were output as target files.

Prior to installation on the *Shearwater*, the primary positioning system was calibrated and checked against a known benchmark, as highlighted in Section 5.5.

5.6.4 Alpine Model P Vibracore



Figure 4 Alpine Model P Vibracore

A pneumatically powered Alpine Vibracore system, configured to collect 20 or 30 feet long cores, was used to obtain the sediment samples during the H&A project. The system is powered by a 375 cfm air compressor via a set of three air hoses, as shown in Figure 4. The Vibracore support tower for the 20 foot core consists of a 25 foot long Aluminum H beam with a set of four support legs. The core barrel is twenty feet long and holds a 20 foot long clear lexan core liner for recovery of the sediment samples. In order to collect cores to 30 feet in length, a ten foot long aluminum beam is bolted to the top of the 25 foot beam with a set of joiner plates and a ten foot long section of steel core barrel is attached to the bottom of the 20 foot barrel using a threaded steel pipe coupling. A ten foot section of the core liner was then spliced onto a twenty foot section to extend the liner to the full 30 feet.

The rate and depth of penetration of each core was monitored and recorded on deck at each sample site using the Alpine CoreLog system. This system uses an underwater sensor mounted on the Vibracore head to determine the depth of penetration. The underwater sensor is connected to an onboard computer via a seven conductor data cable. The penetration data is combined with the computer's clock to generate a graph of rate of penetration measured in seconds per foot. The header of the graph contains sample location in Latitude-Longitude and local state grid X-Y coordinates, along with start and end time, depth of penetration and water depth. Changes in the rate of penetration with depth are a measure of changes in sediment

density and are useful in determining the actual depth below sea floor to significant sediment changes seen in the core.

5.7 Survey Equipment and Methods; RV *George*



Figure 5 RV *George* Deploying Model M Vibracore

5.7.1 Vessel Layout

The RV *George* provided a suitable platform for the inshore shallow water portion of the project where water depths were less than 12 feet at low water. The RV *George* is capable of operations in water depths as little as three feet while retaining the ability to efficiently deploy and recover the Mini-Vibracore. As can be seen in the figure above, the vibracoring operations were conducted off the bow using a purpose built A-frame. Immediately following collection, each core was returned to the project marina dock for processing by H&A.

5.7.2 Vessel Specifications

Table 7 Specifications of RV *George*

R/V *George*	
Builder	Pronaubec, Inc., St. Joseph DE, Quebec, Canada
Model	Southland Luxuria 2400
Name	MV *George*
NJ Vessel Registration	NJ1574GW
Hull Specifications	Deck Work Boat
Length / Width / Draft	24’ / 8’ / 2’6”

Engines	1 x 115 horsepower 4 cycle Mercury Outboard Engine
Fuel Tanks	2x 6 gal plastic portable gas cans
USCG Weight Specification Plate	Maximum 22 Persons / 3104 lbs Persons, Motors, Gear / 140HP Maximum
Cruising Speed/ Survey speed	15Kts / 2-4Kts
Communications	Fixed VHF: Uniden Marine VHF Radio
Marine Navigation	Lowrance HDS7 GPS Chart Plotter with US waters SD Card

5.7.3 Vessel and Equipment Navigation

A Hemisphere VS110 DGPS Compass received differential corrections from the USCG for positioning during this portion of the project while also providing vessel heading data to the navigation computer. The antenna was mounted on the starboard bow and the offset to a point directly under the bow A-frame was set in the navigation computer. The proposed navigation positions for the four shallow water cores were input into Alpine's Hypack navigational software prior to start of the work, along with the layout of the vessel with offsets. All as-taken position fixes were recorded in Hypack and were output as target files.

5.7.4 Alpine Model M Vibracore

A pneumatically powered Alpine Model M Mini-Vibracore system, configured to collect cores up to 15 feet in length, was used to obtain the sediment samples during the inshore portion of the H&A project. The system is powered by a 60 cfm air compressor via a set of three air hoses. Due to limitations of the A-Frame on the *George*, which was designed to collect cores up to a maximum of ten feet in length, modifications to the operational methodology had to be made. Since the 15-foot core barrel could not be fully lifted under the nominal 12-ft high A-Frame, the normal vibracore frame support beam was removed. Without this support beam the Alpine penetrometer system could not be used. Without this system the depth and rate of penetration was determined manually for each core by marking the primary lifting cable and recording the amount of cable paid out during coring.

After the Vibracore had penetrated to the required depth or had encountered refusal, the core pipe was pulled out of the sea floor and the Vibracore was secured to the vessel for the short trip back to the dock. The core liner was then removed from the core pipe and carried to a location on shore for processing. The mini-Vibracore liners were then split longitudinally and opened for examination. One half of each core was used for description and photographing by Alpine personnel while the other half was sampled by the H&A personnel. All sediment samples were placed in appropriate sample jars which were then placed in coolers. A courier for the chemical analysis lab picked up the coolers at the job site and delivered them to the lab.

6. POST SAMPLING ACTIVITIES

6.1 Sediment Sample Processing

6.1.1 Chemical Analysis Samples

The sediment samples which were collected in the field by H&A for chemical analysis were all forwarded under chain of custody prepared by Alpine and H&A to Alpha Analytical. The results of those chemical analyses were reported directly to H&A.

6.1.2 Geotechnical Analysis Samples

All of the Vibracores collected for the project were split, sampled and described in the field. Alpine prepared a description of each core in the field, including pocket penetrometer and hand torvane testing at one-foot intervals. Representative sediment samples were collected by H&A, who forwarded those samples to TerraSense laboratory for analysis of various geotechnical parameters, including grain size. Those analytical results were reported by the lab directly to H&A.

6.2 Geological Logs

The geological descriptions developed by Alpine in the field were used to generate a gINT form "boring log" for each Vibracore. The log includes the rate of penetration for each sample interval, the depth range for each sample, and the type of sample collected. These initial gINT logs were forwarded by Alpine to H&A for further refinement and additional of laboratory results. The field core log includes the location of the boring as determined by RTK GPS in the field, along with the corrected water depth and bottom elevation for the site. The project gINT logs have been provided to H&A. The final gINT logs and color photographs will be published by H&A and provided as part of their reporting under separate cover.

APPENDICES

APPENDIX A Station Locations

1. Table of Final As-Cored Locations
    a. RV *Shearwater*
    b. RV *George*
2. Detailed Sampling Station Charts

1. Table of Final As Cored Locations
    a. RV *Shearwater*
    b. RV George

Vibracores Collected Using the RV *Shearwater*

VC ID	Run No.	Date	Julian Date	Start Time (EST)	Stop Time (EST)	Proposed X-Easting (ft)	Proposed Y-Northing (ft)	As Sampled X-Easting (ft)	As Sampled Y-Northing (ft)	Delta (ft)	Raw Water Depth (ft)	Elevation MLLW (ft)	Penetration (ft)	Recovery (ft)
DEP1	1	10/31/2018	304	12:32:15	12:32:39	914266.25	110737.80	914266.91	110737.33	0.8	14.3	9.1	7.76	6.17
DEP2	1	10/28/2018	301	11:37:15	11:38:15	927277.81	118150.04	927277.74	118151.39	1.4	9.0	14.2	7.74	7.75
DEP3	1	10/31/2018	304	11:58:54	11:59:32	917348.72	112493.78	917350.18	112494.78	1.8	16.0	11.3	7.65	7.08
DEP4R	1	10/30/2018	303	13:16:22	13:17:24	918187.79	112956.80	918189.16	112955.66	1.8	17.0	11.5	7.61	7.59
DEP5R	1	10/30/2018	303	13:33:07	13:33:48	919875.53	113933.22	919875.91	113936.31	3.1	17.9	12.4	7.76	6.92
DEP6	1	10/22/2018	295	08:37:48	08:39:40	935877.82	122980.11	935879.14	122979.85	1.3	41.4	38.4	27.06	27.00
DEP7	1	10/22/2018	295	16:01:31	16:02:29	936253.18	123280.98	936249.98	123280.01	3.3	42.6	38.1	20.26	18.67
VC214	1	10/29/2018	302	09:54:56	09:55:45	913780.55	110461.11	913780.35	110461.12	0.2	13.2	8.2	7.86	7.42
VC216	1	10/29/2018	302	08:49:34	08:50:22	920542.40	114313.10	920546.80	114312.79	4.4	15.7	12.2	7.64	7.25
VC217	1	10/29/2018	302	08:30:32	08:31:22	921107.27	114634.89	921108.14	114633.11	2.0	15.9	13.1	7.70	7.67
VC218	1	10/29/2018	302	08:11:25	08:12:09	921620.89	114927.48	921620.70	114928.68	1.2	16.1	13.6	7.69	8.17
VC219	1	10/28/2018	301	13:05:57	13:06:45	922137.40	115221.72	922140.04	115220.35	3.0	16.3	14.3	7.52	7.17
VC220	1	10/28/2018	301	14:47:39	14:48:22	922661.82	115520.46	922665.63	115522.17	4.2	16.9	14.8	7.92	7.67
VC221	1	10/28/2018	301	14:28:03	14:28:48	923184.05	115817.96	923189.92	115820.54	6.4	17.4	14.4	7.80	7.58
VC222	1	10/28/2018	301	13:57:17	13:58:25	923693.89	116108.40	923695.87	116108.82	2.0	17.8	14.3	7.59	7.75
VC223	1	10/28/2018	301	13:35:09	13:36:08	924121.07	116351.76	924121.94	116350.96	1.2	18.5	14.5	7.77	7.50
VC225	1	10/20/2018	293	09:16:07	09:18:31	934943.47	122447.84	934946.46	122452.07	5.2	19.4	17.3	7.50	7.50
VC227	1	10/20/2018	293	10:30:08	10:32:18	935132.06	122555.28	935132.88	122555.28	0.8	18.6	17.3	14.22	15.00
VC228	1	10/20/2018	293	11:25:18	11:27:07	935320.68	122662.73	935318.81	122659.12	4.1	18.4	17.4	21.36	18.90
VC229	1	10/20/2018	293	15:52:25	15:54:41	935509.30	122770.18	935516.79	122769.84	7.5	22.2	17.9	28.90	23.00
VC230	1	10/20/2018	293	13:58:09	13:59:40	935697.92	122877.63	935696.74	122880.39	3.0	31.5	29.3	27.64	24.00
VC230A	1	10/20/2018	293	13:17:54	13:21:24	935637.55	122919.81	935637.91	122921.32	1.5	31.5	29.9	27.02	29.25
VC230B	1	10/20/2018	293	15:00:47	15:03:21	935758.53	122844.23	935762.39	122850.32	7.2	32.2	28.9	27.13	28.00
VC232	1	10/22/2018	295	10:22:12	10:25:02	936058.33	123082.95	936059.13	123083.06	0.8	47.7	46.2	22.82	20.67
VC232A	1	10/22/2018	295	11:40:24	11:46:27	936121.56	123052.61	936122.86	123056.16	3.8	46.1	45.1	23.07	22.50
VC232B	1	10/22/2018	295	09:07:00	09:10:00	935984.43	123121.46	935986.51	123122.29	2.2	49.4	46.9	22.50	22.00
VC235	1	10/22/2018	295	15:03:23	15:04:29	936521.83	123346.98	936522.00	123347.61	0.6	34.3	31.8	24.23	21.30
VC237	1	10/22/2018	295	13:44:50	13:46:10	936642.83	123415.91	936646.56	123432.37	16.9	21.3	19.3	25.72	25.67
VC237A	1	10/22/2018	295	14:24:51	14:26:10	936725.60	123383.94	936725.19	123388.69	4.8	23.3	21.0	25.97	25.67
VC237B	1	10/22/2018	295	13:20:59	13:22:06	936557.16	123443.24	936557.57	123446.60	3.4	23.1	30.3	25.74	27.17
VC238	2	10/23/2018	296	09:11:19	09:13:10	936831.44	123523.36	936831.39	123523.56	0.2	24.5	19.5	28.86	24.75
VC239	1	10/23/2018	296	08:35:11	08:36:08	937020.79	123629.51	937021.99	123628.61	1.5	23.4	17.9	24.26	20.50
VC240	1	10/23/2018	296	08:05:55	08:56:51	937212.83	123730.70	937214.44	123732.20	2.2	23.5	17.8	16.12	15.50
VC242	1	10/23/2018	296	07:47:12	07:47:56	937407.37	123826.58	937406.83	123827.25	0.9	23.2	17.6	10.54	10.00
VC244	3	10/26/2018	299	15:40:51	15:41:51	970432.11	131663.73	970439.58	131668.50	8.9	21.3	21.3	10.68	8.17
VC245	3	10/26/2018	299	14:34:05	15:35:05	971017.61	131519.89	971012.78	131523.40	6.0	22.9	21.9	11.91	9.17
VC246	1	10/26/2018	299	13:35:36	13:36:16	971503.65	131400.49	971503.46	131395.93	4.6	24.7	22.7	11.07	8.92
VC247	1	10/23/2018	296	11:17:24	11:02:30	972039.12	131266.79	972037.82	131266.38	1.4	27.1	24.6	21.60	18.00
VC251	1	10/23/2018	296	14:57:56	14:59:40	974450.74	130675.10	974446.59	130671.43	5.5	19.2	18.2	9.23	7.25
VC252	1	10/26/2018	299	13:06:56	13:07:54	975116.55	130461.51	975122.45	130457.40	7.2	19.0	16.5	8.03	7.08
VC253	1	10/26/2018	299	12:42:30	12:44:01	975749.04	130186.86	975756.87	130189.89	8.4	19.7	16.7	8.43	8.00
VC255	1	10/26/2018	299	08:56:36	08:58:46	1013100.72	130431.75	1013100.55	130432.14	0.4	38.9	32.9	8.11	6.42
VC256	1	10/26/2018	299	08:33:44	08:34:55	1014065.95	130794.24	1014065.56	130795.63	1.4	39.5	33.7	7.76	6.17
VC301R	2	10/30/2018	303	12:55:02	12:55:43	914797.38	111025.40	914794.17	111025.04	3.2	24.9	9.1	8.00	7.50
VC303	1	10/31/2018	304	12:16:19	12:16:54	915638.01	111519.25	915637.70	111518.36	0.9	15.3	10.3	7.72	7.42
VC304	1	10/29/2018	302	10:54:42	10:55:25	916485.58	112002.08	916484.28	112001.78	1.3	15.2	9.4	7.72	7.67
VC307	1	10/28/2018	301	13:14:15	13:15:00	924959.54	116829.40	924958.82	116830.22	1.1	19.2	14.7	7.68	7.08
VC308	1	10/28/2018	301	12:55:36	12:56:30	925726.30	117266.20	925726.37	117267.82	1.6	19.4	14.4	7.74	7.92

VC ID	Run No.	Date	Julian Date	Start Time (EST)	Stop Time (EST)	Proposed X-Easting (ft)	Proposed Y-Northing (ft)	As Sampled X-Easting (ft)	As Sampled Y-Northing (ft)	Delta (ft)	Raw Water Depth (ft)	Elevation MLLW (ft)	Penetration (ft)	Recovery (ft)
VC309	1	10/28/2018	301	12:38:03	12:38:53	926496.78	117705.12	926497.83	117705.54	1.1	19.4	13.6	7.70	7.58
VC310	1	10/28/2018	301	11:13:54	11:14:44	927913.75	118512.32	927913.18	118511.40	1.1	17.6	11.6	7.71	7.42
VC311	1	10/28/2018	301	10:50:36	10:50:02	928696.94	118958.48	928697.75	118960.99	2.6	15.6	9.6	7.64	7.50
VC312	1	10/28/2018	301	10:30:31	10:31:39	929391.97	119354.42	929392.54	119352.18	2.3	16.7	10.7	7.76	6.00
VC313	1	10/28/2018	301	10:07:50	10:09:02	930256.02	119846.63	930256.23	119847.47	0.9	19.1	13.2	7.65	6.08
VC314	2	10/28/2018	301	09:36:56	09:37:36	931041.39	120294.04	931036.21	120303.90	11.1	20.1	14.9	7.58	5.33
VC315	2	10/29/2018	302	13:45:34	13:46:35	968212.17	132025.47	968210.72	132031.94	6.6	25.5	20.7	12.59	9.83
VC316	2	10/29/2018	302	14:29:44	14:30:39	969021.79	131955.12	969022.72	131951.95	3.3	25.0	21.0	10.75	7.25
VC317	2	10/29/2018	302	15:27:36	15:28:20	970018.86	131765.25	970014.31	131761.32	6.0	23.4	20.8	10.41	8.42
VC318	1	10/23/2018	296	12:32:17	12:37:45	972501.08	131155.46	972501.24	131152.65	2.8	34.3	30.3	21.80	20.67
VC320	1	10/23/2018	296	13:05:34	13:09:51	972861.13	131067.01	972862.71	131065.88	1.9	35.9	35.4	19.08	19.30
VC321	1	10/23/2018	296	13:36:08	13:37:26	973220.84	130978.64	973221.28	130979.56	1.0	33.3	33.1	20.98	18.25
VC323	1	10/23/2018	296	14:21:14	14:23:33	973580.00	130890.40	973577.61	130889.40	2.6	28.0	27.7	22.34	17.25
VC326	1	10/25/2018	298	08:49:44	08:51:04	993187.03	122761.61	993185.94	122763.05	1.8	44.6	38.6	22.16	19.67
VC327	1	10/25/2018	298	08:17:35	08:19:20	993202.57	122724.74	993199.35	122723.89	3.3	42.8	36.9	22.58	19.50
VC328	1	10/25/2018	298	15:27:27	15:37:15	997095.36	124374.86	997098.34	124375.97	3.2	16.4	16.3	22.63	18.75
VC329	1	10/25/2018	298	09:30:00	09:42:00	997109.99	124337.61	997108.01	124336.67	2.2	22.1	16.2	20.95	25.42

Time is referenced to local time (Eastern Standard Time)

Station positions are referenced to the New York State Plane, Long Island, NAD83 Feet

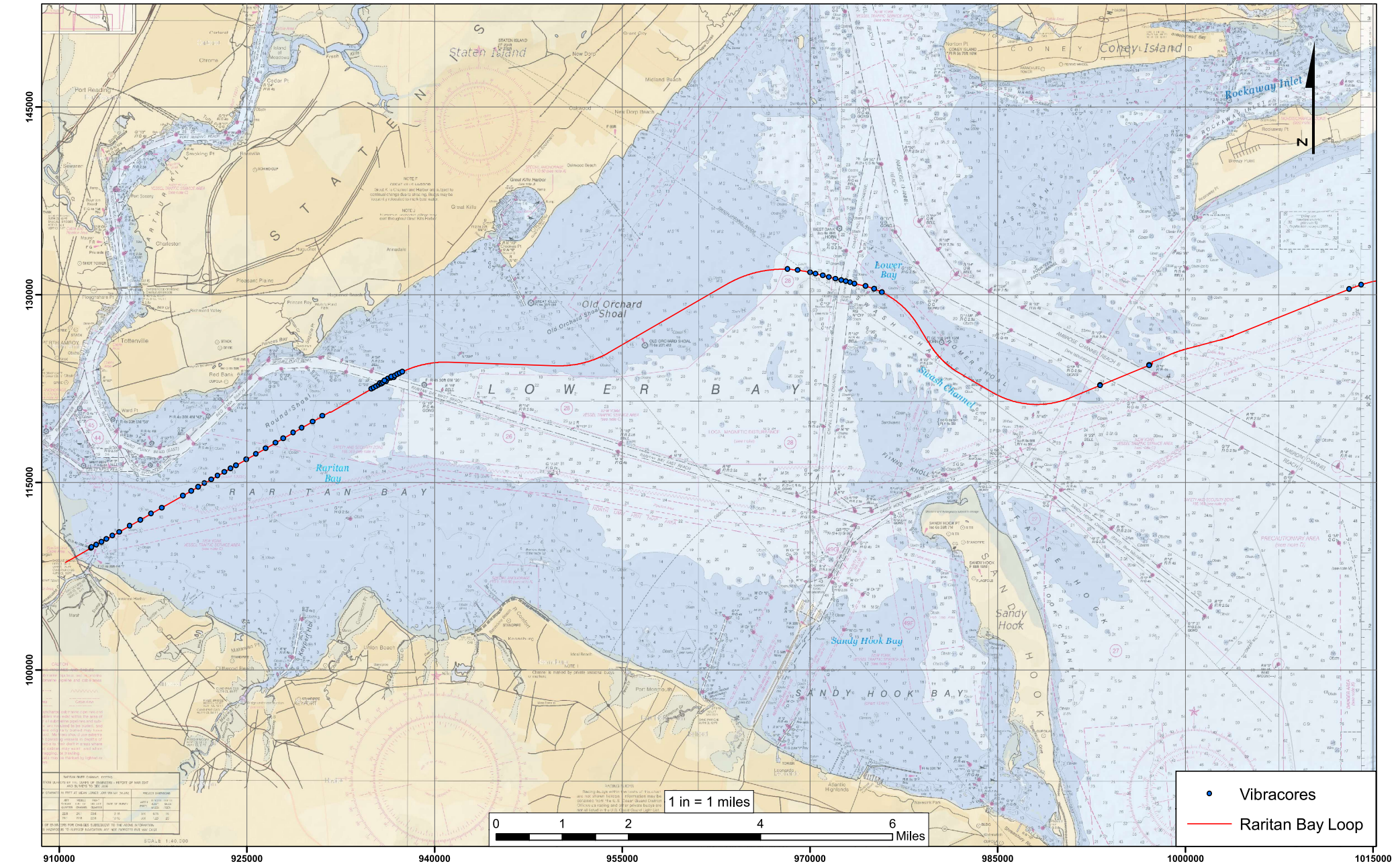
Vibracores Collected Using the RV *George*

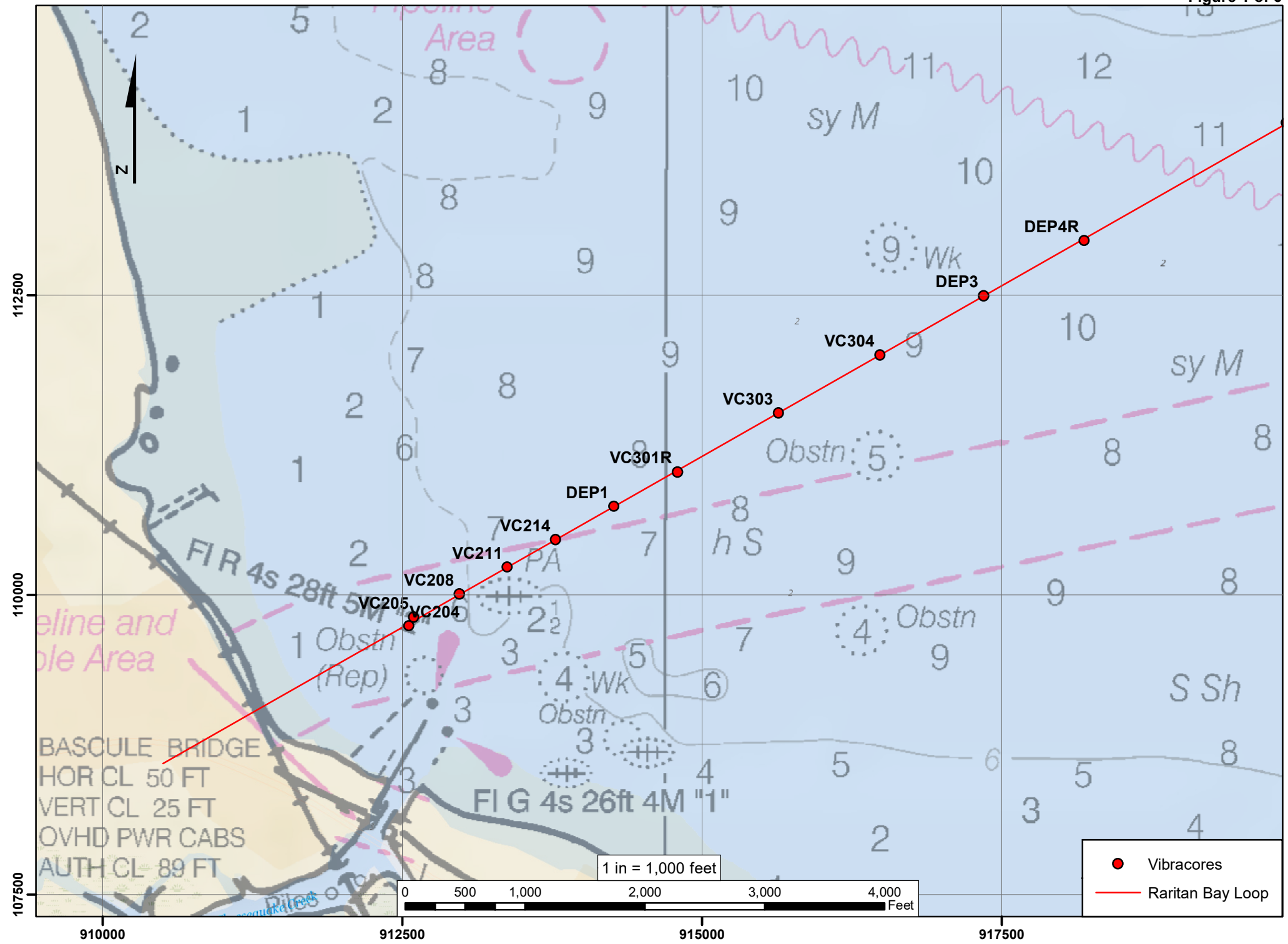
VC ID	Run No.	Date	Julian Date	Start Time (EST)	Stop Time (EST)	Proposed X-Easting (ft)	Proposed Y-Northing (ft)	As Sampled X-Easting (ft)	As Sampled Y-Northing (ft)	Delta (ft)	Raw Water Depth (ft)	Elevation MLLW (ft)	Penetration (ft)	Recovery (ft)
VC204	1	11/12/2018	316	10:46:30	10:48:30	912559.90	109742.72	912556.06	109742.34	3.9	7.6	7.1	14.00	11.75
VC205	1	11/12/2018	316	12:52:15	12:54:30	912600.32	109811.80	912597.27	109814.64	4.2	8.4	6.5	15.00	10.83
VC208	1	11/12/2018	316	14:32:54	14:34:30	912969.56	109999.12	912975.11	110006.95	9.6	11.5	7.8	8.00	7.42
VC211	1	11/12/2018	316	16:36:44	16:38:30	913375.49	110230.37	913376.80	110230.19	1.3	12.9	8.0	8.00	7.92

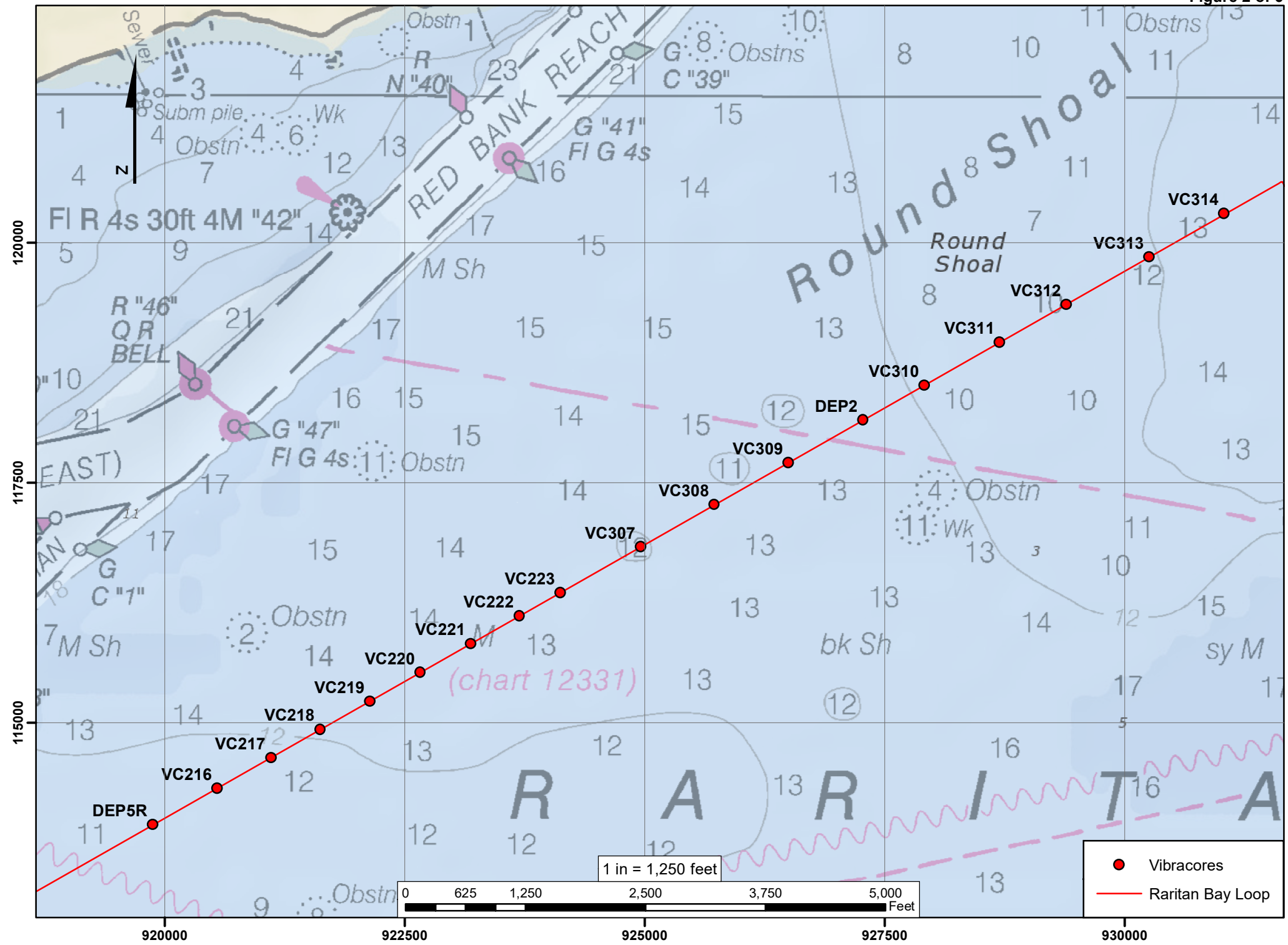
Time is referenced to local time (Eastern Standard Time)

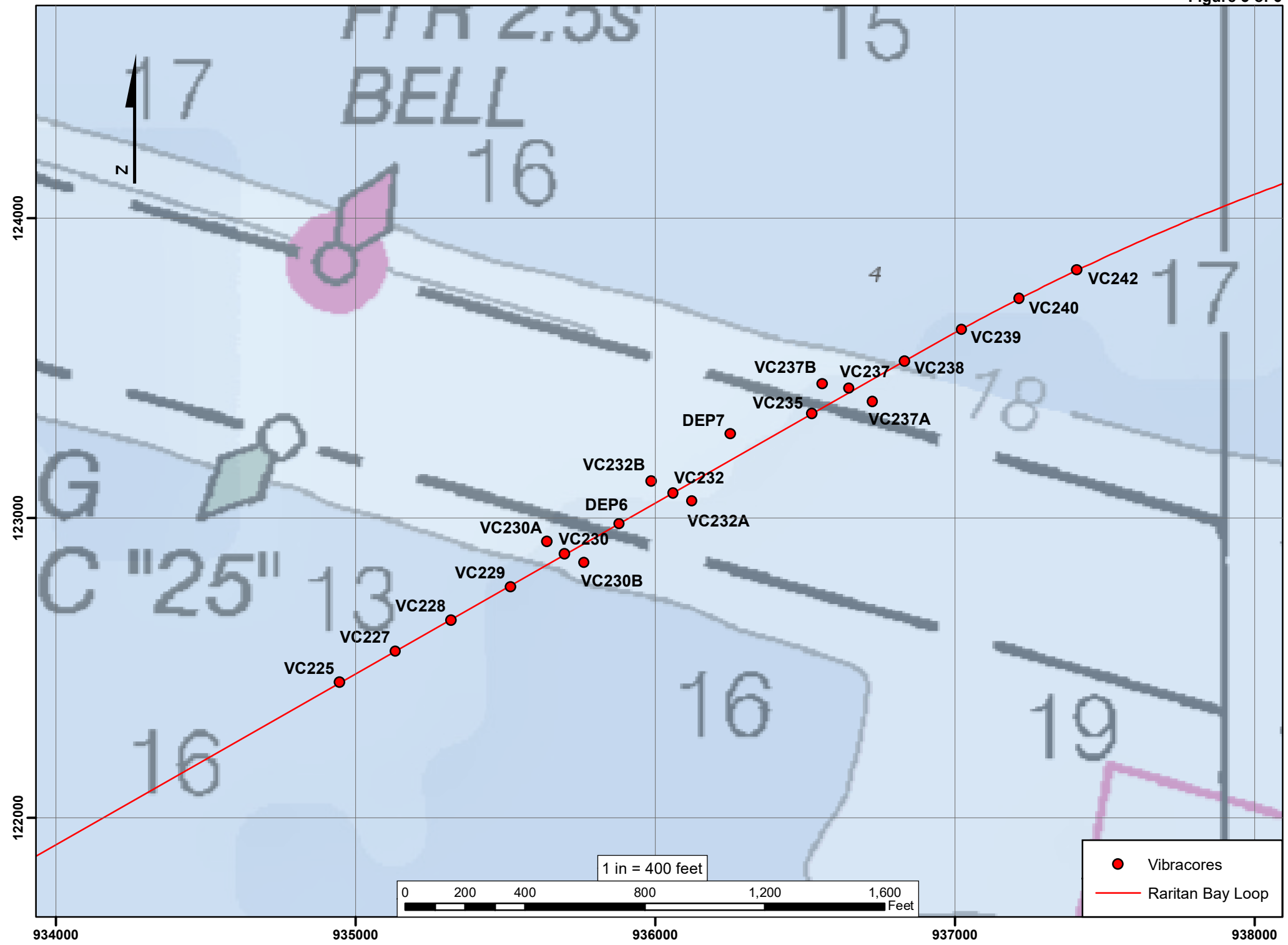
Station positions are referenced to the New York State Plane, Long Island, NAD83 Feet

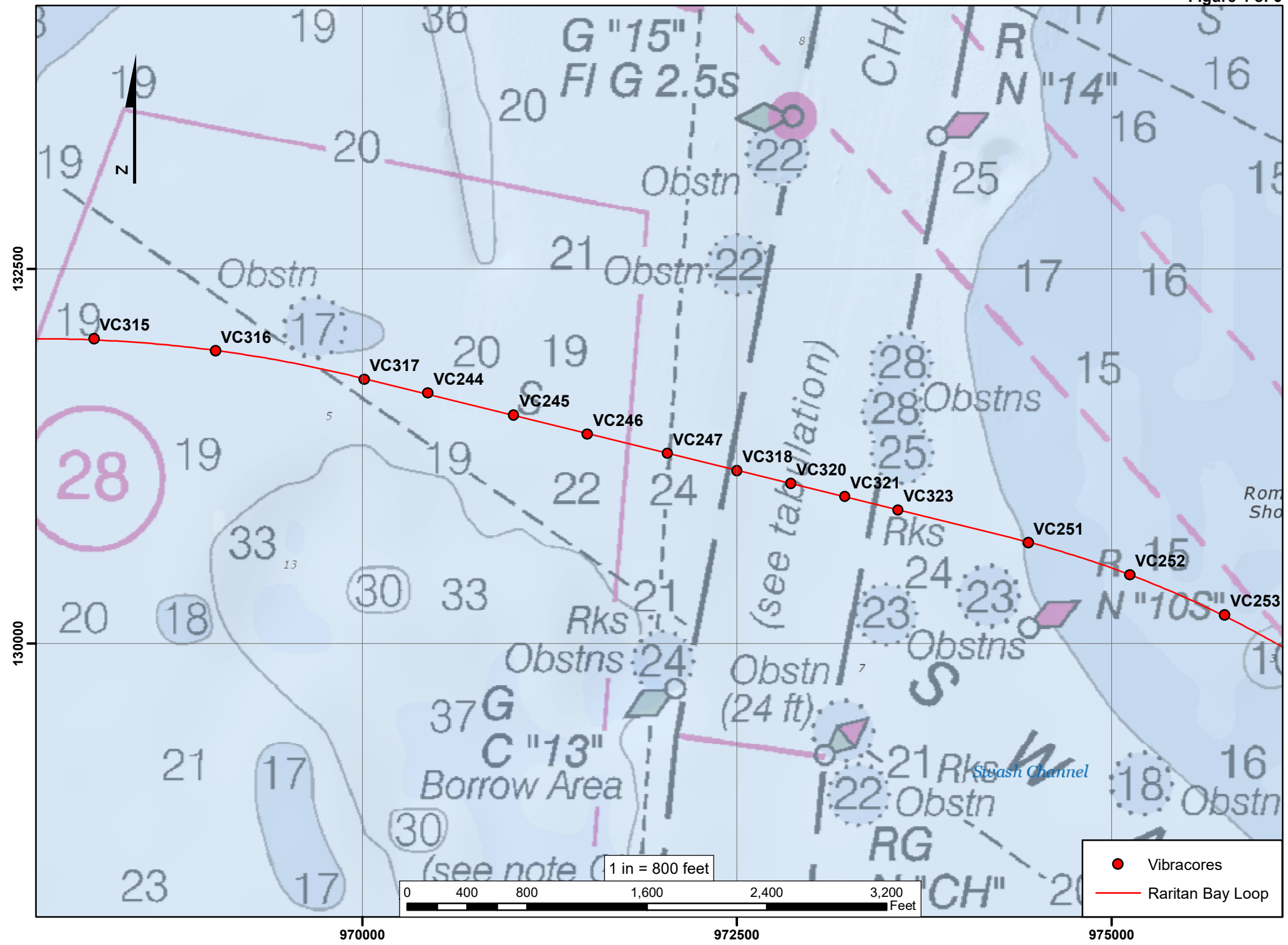
2. Detailed Sampling Station Charts

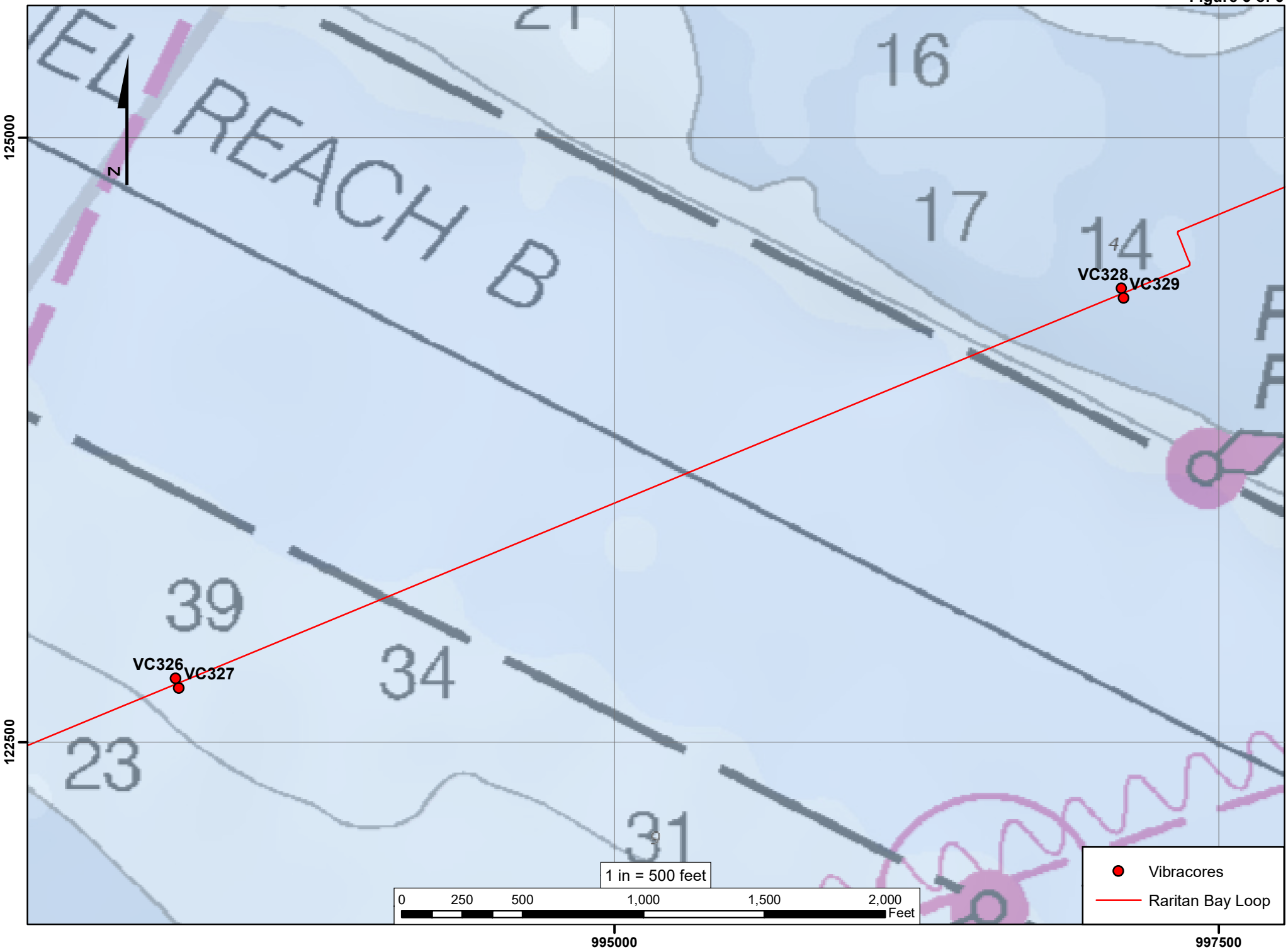

Staten Island
Coney Island
Rockaway Inlet
Lower Bay
Old Orchard Shoal
Swash Channel
Round Shoal
Raritan Bay
Sandy Hook Bay
Sandy Hook
L O W E R B A Y
R A R I T A N B A Y
S A N D Y H O O K B A Y
1 in = 1 miles
0 1 2 4 6
Miles
Vibracores
Raritan Bay Loop
145000
130000
115000
100000
910000
925000
940000
955000
970000
985000
1000000
1015000

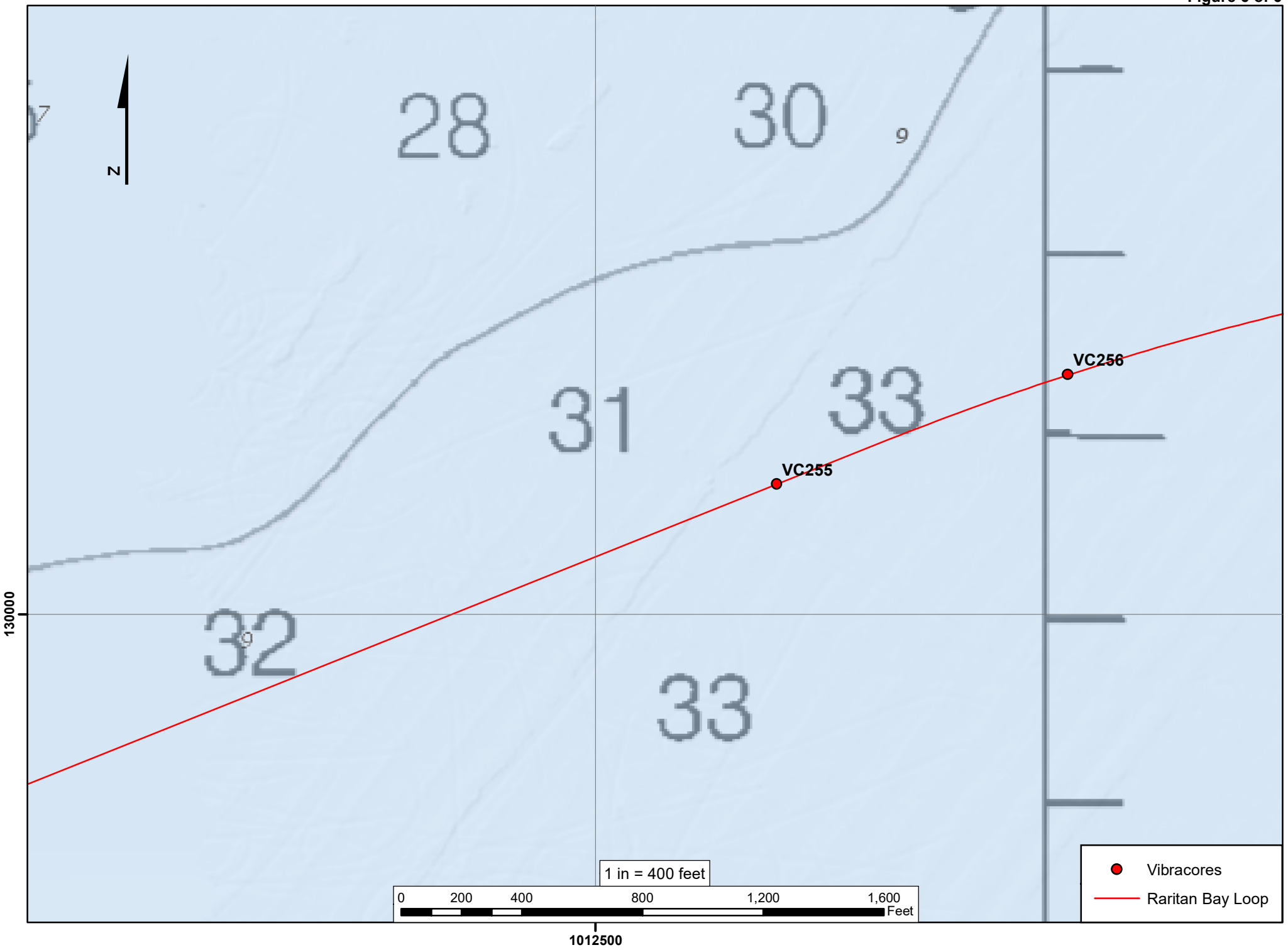

DEP4R
DEP3
VC304
VC303
VC301R
DEP1
VC214
VC211
VC208
VC205
VC204
Fl R 4s 28ft 5M "1"
Fl G 4s 26ft 4M "1"
BASCULE BRIDGE
HOR CL 50 FT
VERT CL 25 FT
OVHD PWR CABS
AUTH CL 89 FT
Obstn
(Rep)
Wk
PA
h S
S Sh
sy M
Area
1 in = 1,000 feet
0 500 1,000 2,000 3,000 4,000
Feet
Vibracores
Raritan Bay Loop
112500
110000
107500
910000
912500
915000
917500


VC314
VC313
VC312
VC311
VC310
DEP2
VC309
VC308
VC307
VC223
VC222
VC221
VC220
VC219
VC218
VC217
VC216
DEP5R
RED BANK REACH
Round Shoal
Round Shoal
Fl R 4s 30ft 4M "42"
R "46" Q R BELL
G "47" Fl G 4s
G "41" Fl G 4s
R "40"
G "39"
G "1" C "1"
Subm pile
Wk
Obstn
Obstns
M Sh
bk Sh
sy M
(chart 12331)
R A R I T A
N
1 in = 1,250 feet
0 625 1,250 2,500 3,750 5,000
Feet
Vibracores
Raritan Bay Loop
120000
117500
115000
920000
922500
925000
927500
930000


VC242
VC240
VC239
VC238
VC237
VC237B
VC237A
VC235
DEP7
VC232B
VC232
VC232A
DEP6
VC230A
VC230
VC230B
VC229
VC228
VC227
VC225
BELL
17
16
15
18
19
13
"25"
N
124000
123000
122000
934000
935000
936000
937000
938000
1 in = 400 feet
0
200
400
800
1,200
1,600
Feet
Vibracores
Raritan Bay Loop


VC315
VC316
VC317
VC244
VC245
VC246
VC247
VC318
VC320
VC321
VC323
VC251
VC252
VC253
G "15"
Fl G 2.5s
R
N "14"
Obstn
Obstns
(see tabulation)
Rks
Obstn
(24 ft)
G
C "13"
Borrow Area
Stuyvesant Channel
RG
"CH"
N "10S"
1 in = 800 feet
0 400 800 1,600 2,400 3,200
Feet
Vibracores
Raritan Bay Loop
132500
130000
970000
972500
975000


REACH B
16
17
14
39
34
23
31
VC326
VC327
VC328
VC329
N
125000
122500
995000
997500
1 in = 500 feet
0
250
500
1,000
1,500
2,000
Feet
Vibracores
Raritan Bay Loop


N
28
30
9
31
33
32
33
VC256
VC255
130000
1012500
1 in = 400 feet
0
200
400
800
1,200
1,600
Feet
Vibracores
Raritan Bay Loop

APPENDIX B Penetration Graphs

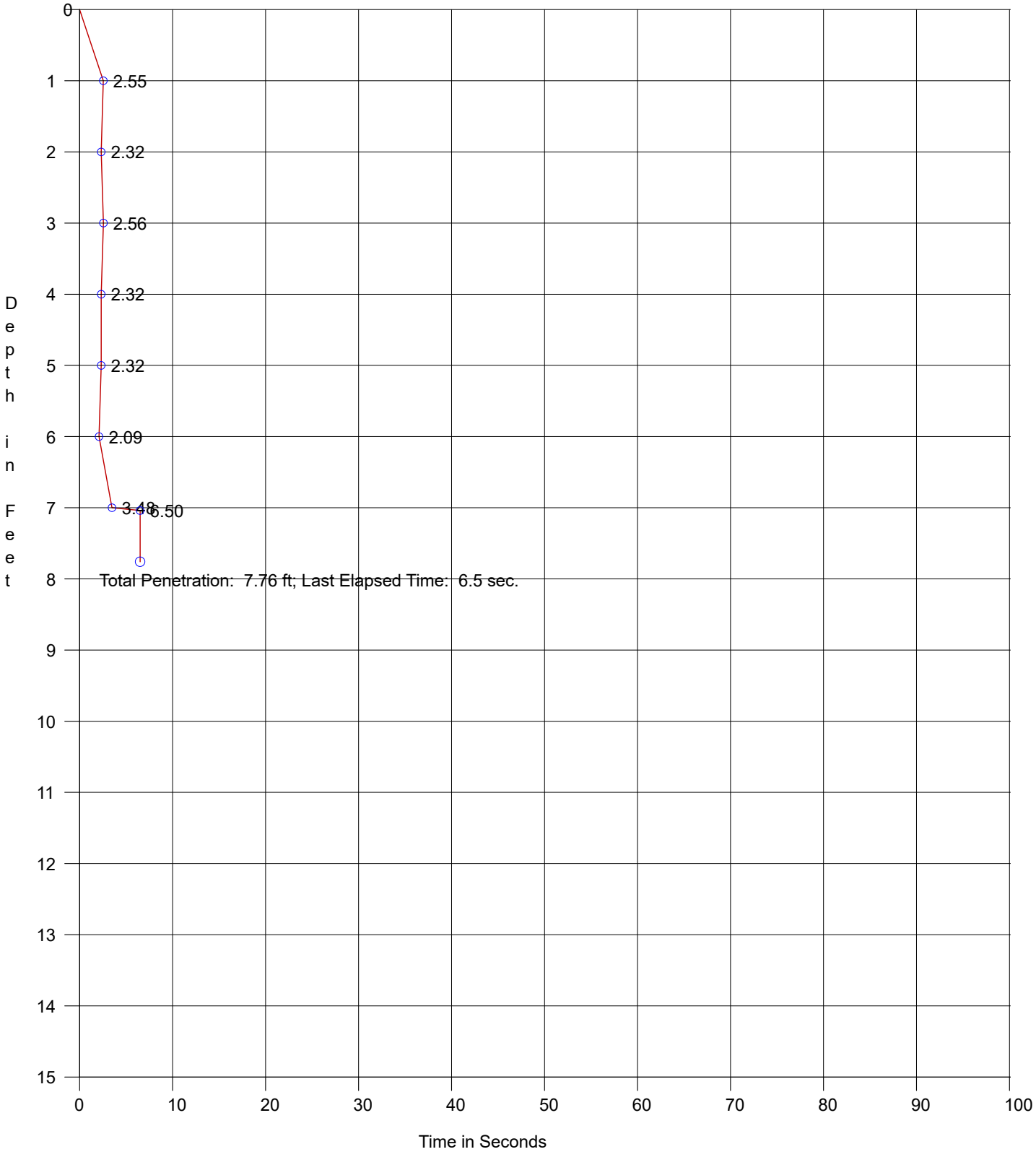
Penetration Graph for Core No. DEP1, Run 1

Date: 31/10/2018
Start Time:16:32:15
End Time: 16:32:39

Penetration: 7.76ft
Recovery: 6.17 ft
W. D. Corrected: 9.1 ft
W. D. Raw: 14.335 ft

Easting: 914266.91
Northing: 110737.33
Coord. System:
NYSP LI

Lat: 40°28'13.2485"N
Long: -074°15'05.4885"W
Datum: Mudline



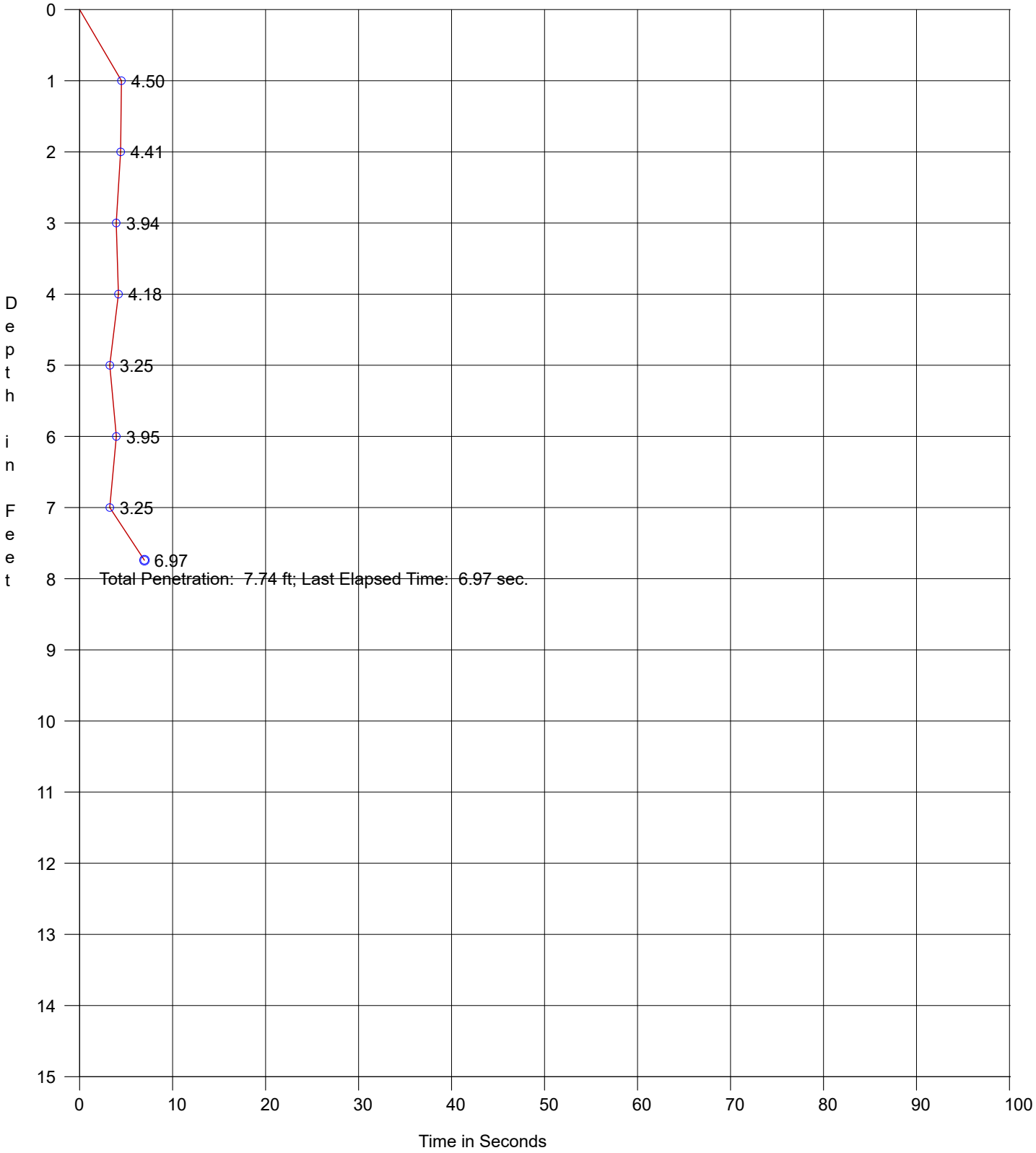
Penetration Graph for Core No. DEP2, Run 1

Date: 26/10/2018
Start Time: 15:37:15
End Time: 15:38:15

Penetration: 7.74 ft
Recovery: 7.75 ft
W. D. Corrected: 14.2 ft
W. D. Raw: 20.035 ft

Easting: 927277.74
Northing: 118151.39
Coord. System:
NYSP LI

Lat: 40°29'26.8441"N
Long: -074°12'17.3706"W
Datum: Mudline



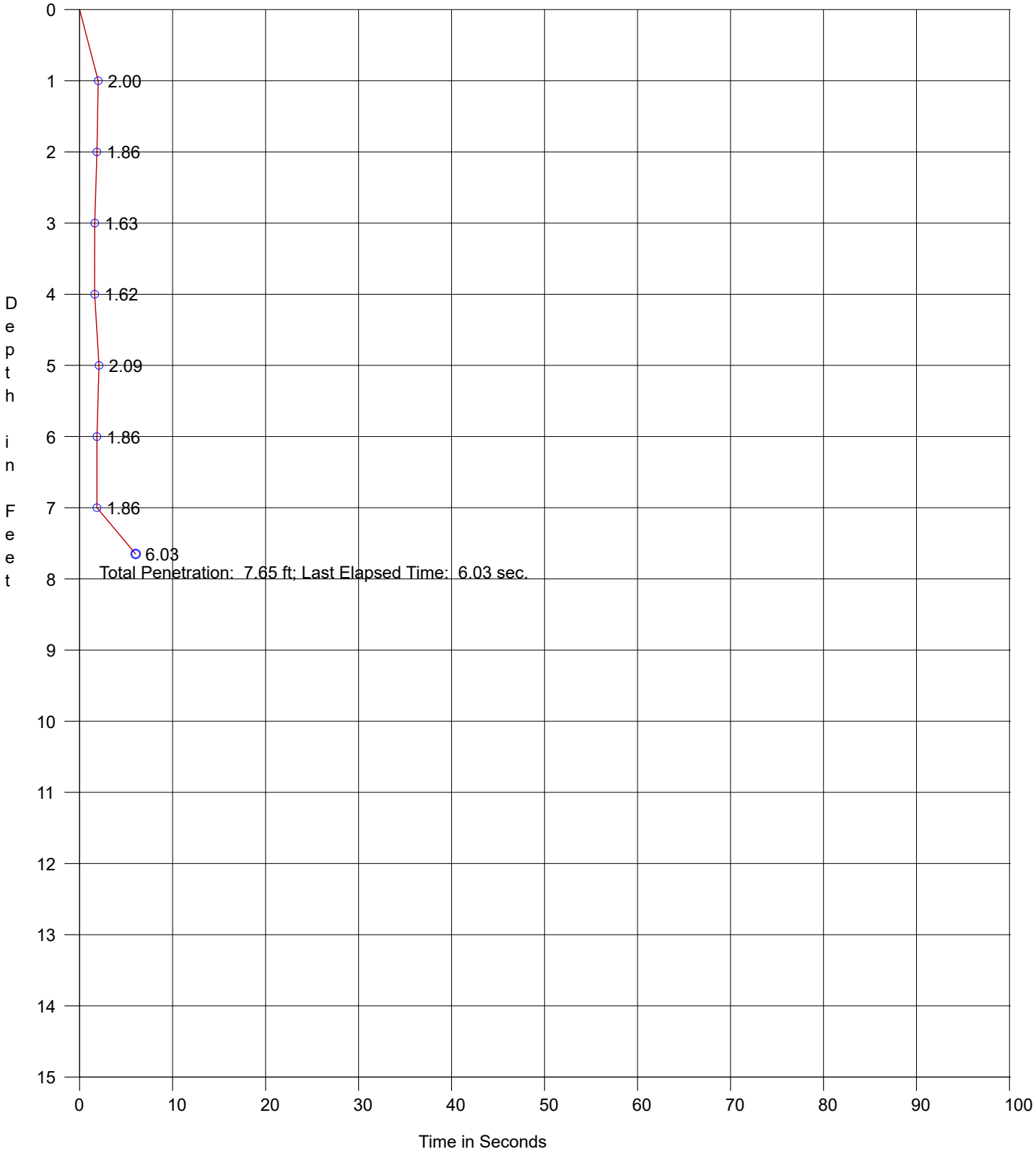
Penetration Graph for Core No. DEP3, Run 1

Date: 31/10/2018
Start Time: 15:58:54
End Time: 15:59:32

Penetration: 7.65 ft
Recovery: 7.08 ft
W. D. Corrected: 11.3 ft
W. D. Raw: 16.035 ft

Easting: 917350.18
Northing: 112494.78
Coord. System:
NYSP LI

Lat: 40°28'30.7000"N
Long: -074°14'25.6577"W
Datum: Mudline



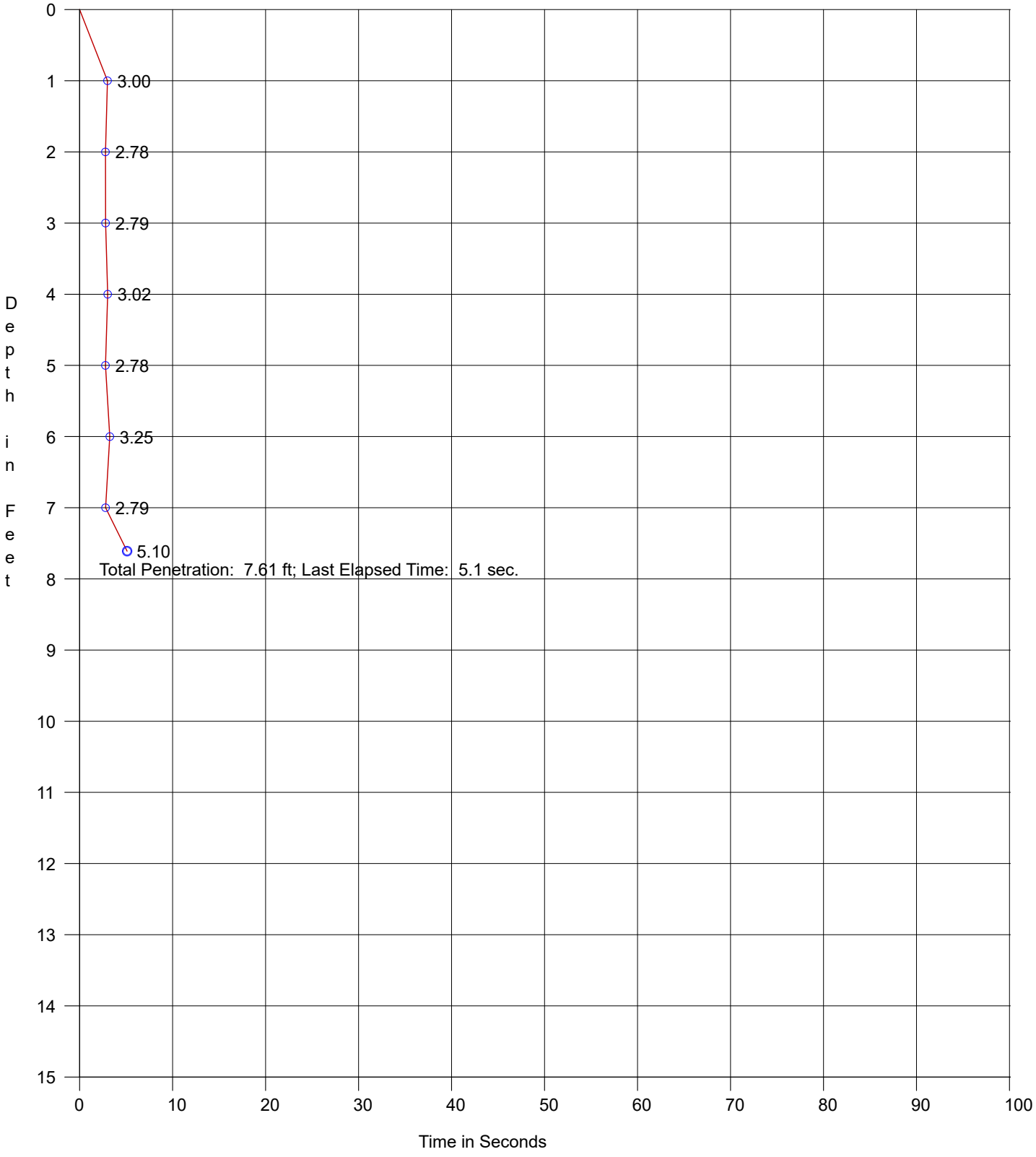
Penetration Graph for Core No. DEP4R, Run 1

Date: 30/10/2018
Start Time: 17:16:22
End Time: 17:17:26

Penetration: 7.61 ft
Recovery: 7.59 ft
W. D. Corrected: 11.5 ft
W. D. Raw: 17.035 ft

Easting: 918189.16
Northing: 112955.66
Coord. System:
NYSP LI

Lat: 40°28'35.2767"N
Long: -074°14'14.8178"W
Datum: Mudline



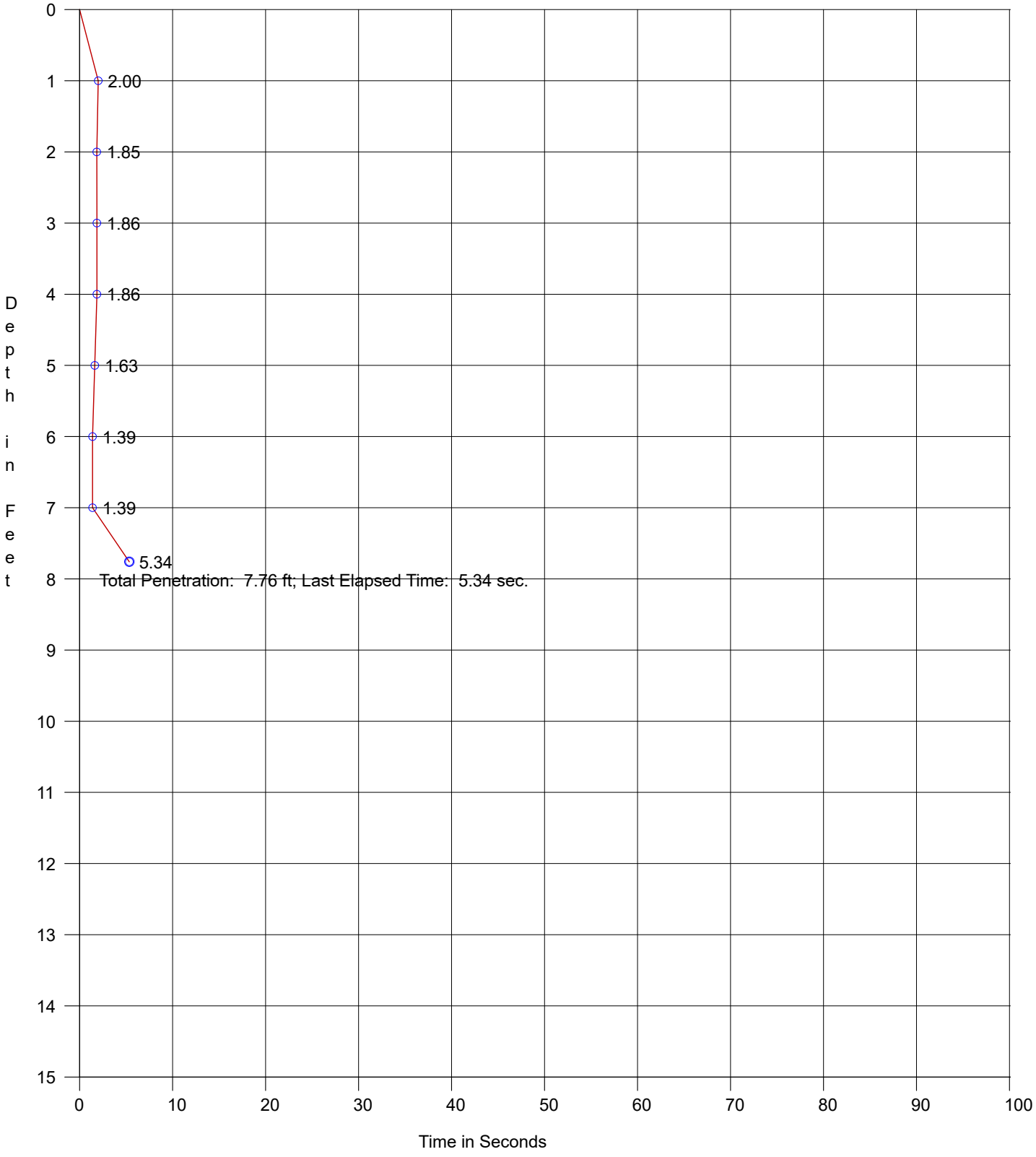
Penetration Graph for Core No. DEP5R, Run 1

Date: 30/10/2018
Start Time: 17:33:07
End Time: 17:33:48

Penetration: 7.76 ft
Recovery: 6.92 ft
W. D. Corrected: 12.4 ft
W. D. Raw: 17.935 ft

Easting: 919875.91
Northing: 113936.31
Coord. System:
NYSP LI

Lat: 40°28'45.0114"N
Long: -074°13'53.0251"W
Datum: Mudline



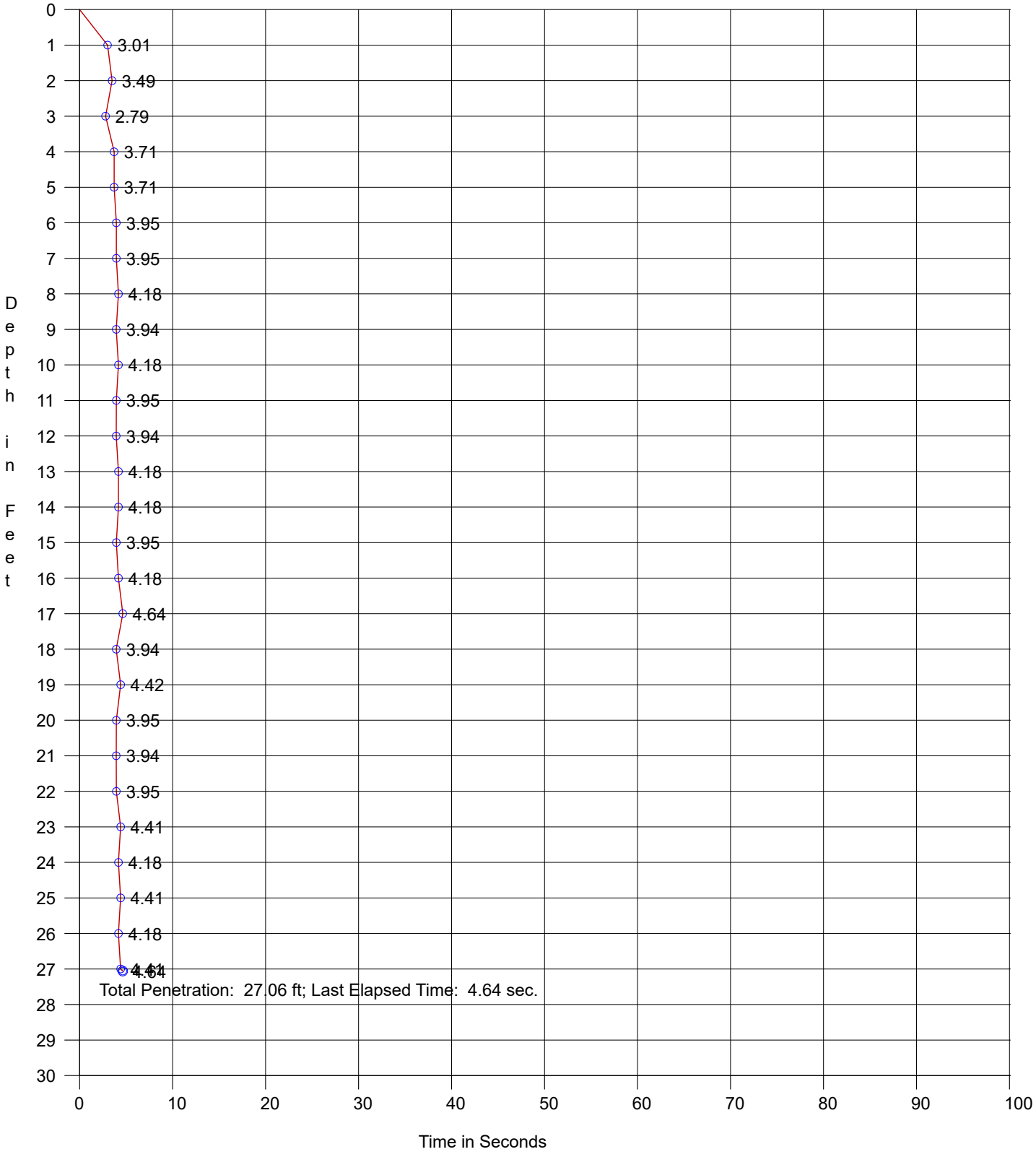
Penetration Graph for Core No. DEP 6, Run 1A

Date: 22/10/2018
Start Time: 12:37:48
End Time: 12:39:40

Penetration: 27.06 ft
Recovery: 27.00 ft
W. D. Corrected: 28.4 ft
W. D. Raw: 41.435

Easting: 935879.14
Northing: 122979.85
Coord. System:
NYSP LI

Lat: 40°30'14.7395"N
Long:-074°10'26.1703"W
Datum: Mudline



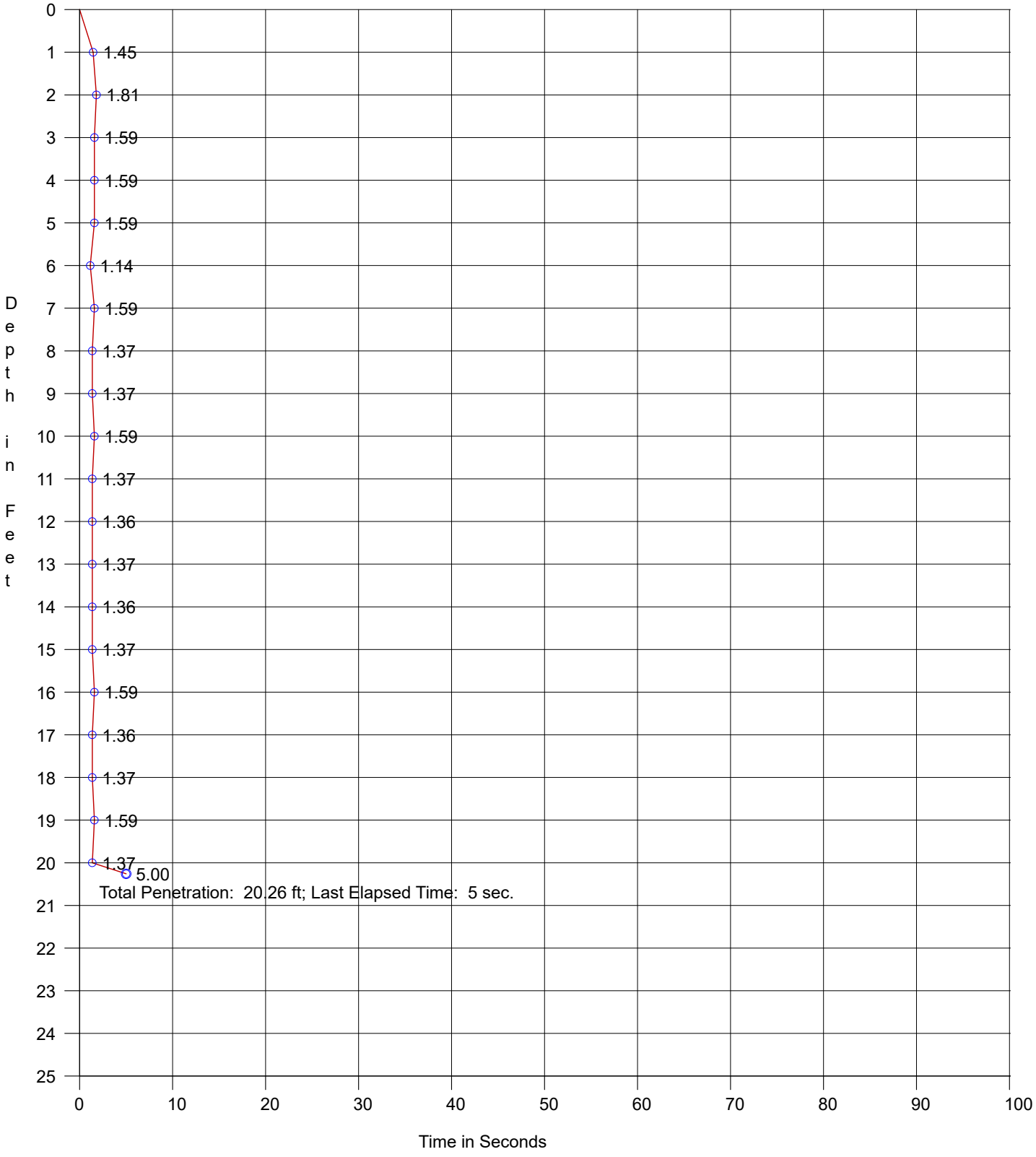
Penetration Graph for Core No. DEP7, Run 1

Date: 22/10/2018
Start Time: 20:01:31
End Time: 20:02:29

Penetration: 20.26 ft
Recovery: 18.67 ft
W. D. Corrected: 38.1 ft
W. D. Raw: 42.635

Easting: 936249.98
Northing: 123280.01
Coord. System:
NYSP LI

Lat:40°30'17.7127"N
Long:-074°10'21.3773"W
Datum: Mudline



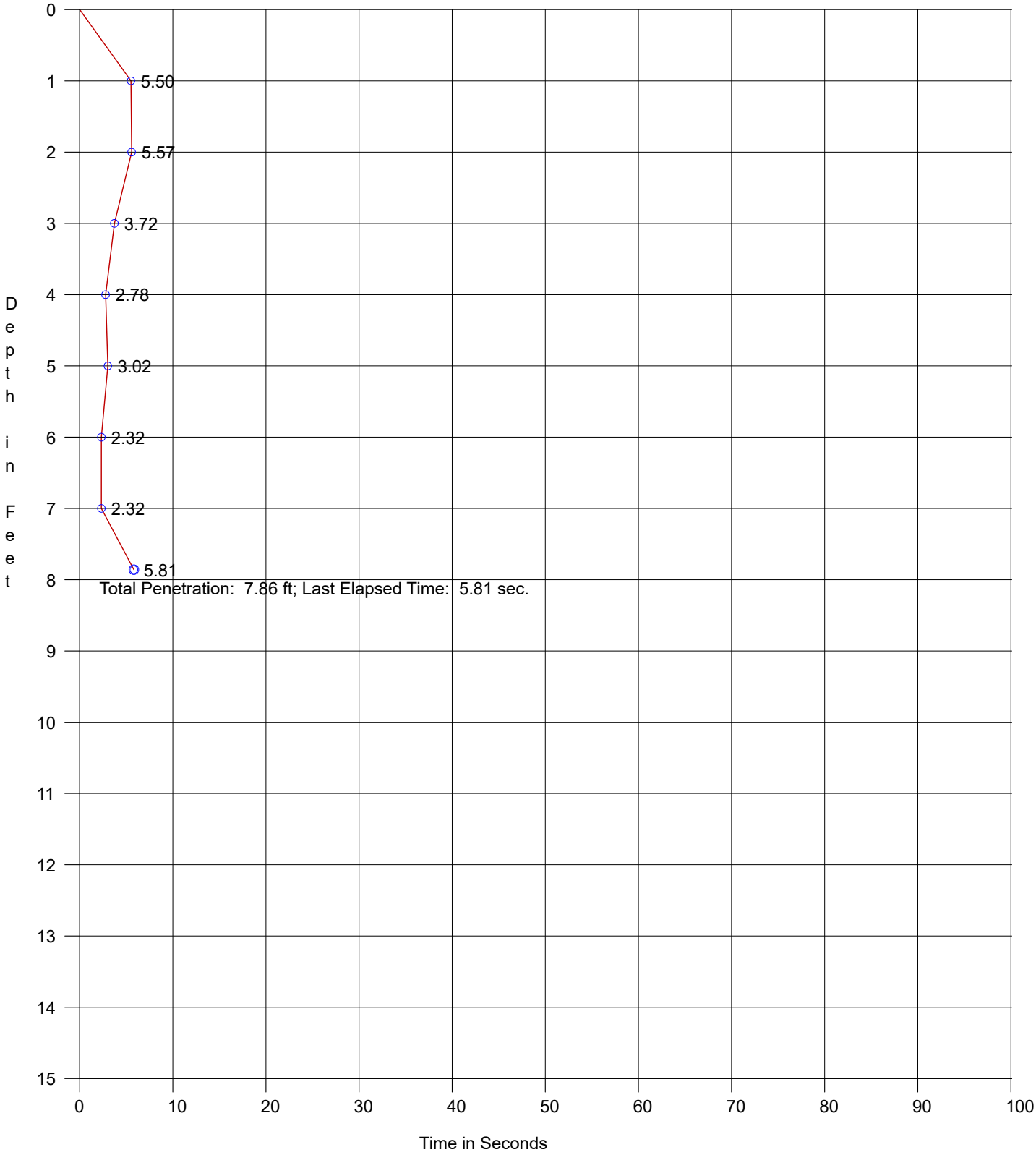
Penetration Graph for Core No. VC214, Run 1

Date: 29/10/2018
Start Time: 13:54:56
End Time: 13:55:45

Penetration: 7.86 ft
Recovery: 7.42 ft
W. D. Corrected: 8.2 ft
W. D. Raw: 13.235 ft

Easting: 913780.35
Northing: 110461.12
Coord. System:
NYSP LI

Lat: 40°28'10.5053"N
Long:-074°15'11.7736"W
Datum: Mudline



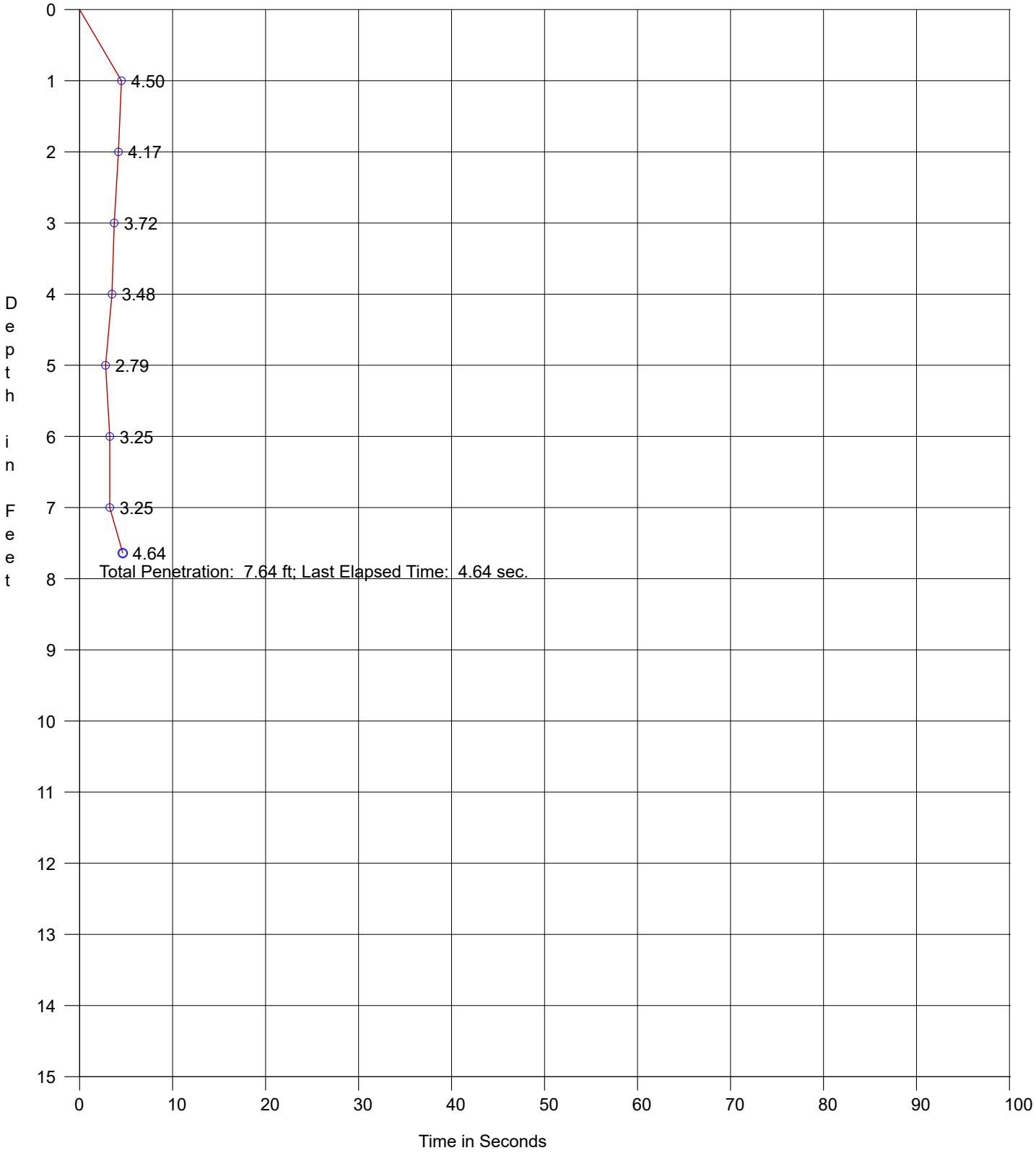
Penetration Graph for Core No. VC216, Run 1

Date: 29/10/2018
Start Time: 12:49:34
End Time: 12:50:22

Penetration: 7.64 ft
Recovery: 7.25 ft
W. D. Corrected: 12.2 ft
W. D. Raw: 15.735 ft

Easting: 920546.80
Northing: 114312.79
Coord. System:
NYSP LI

Lat: 40°28'48.7490"N
Long: -074°13'44.3563"W
Datum: Mudline



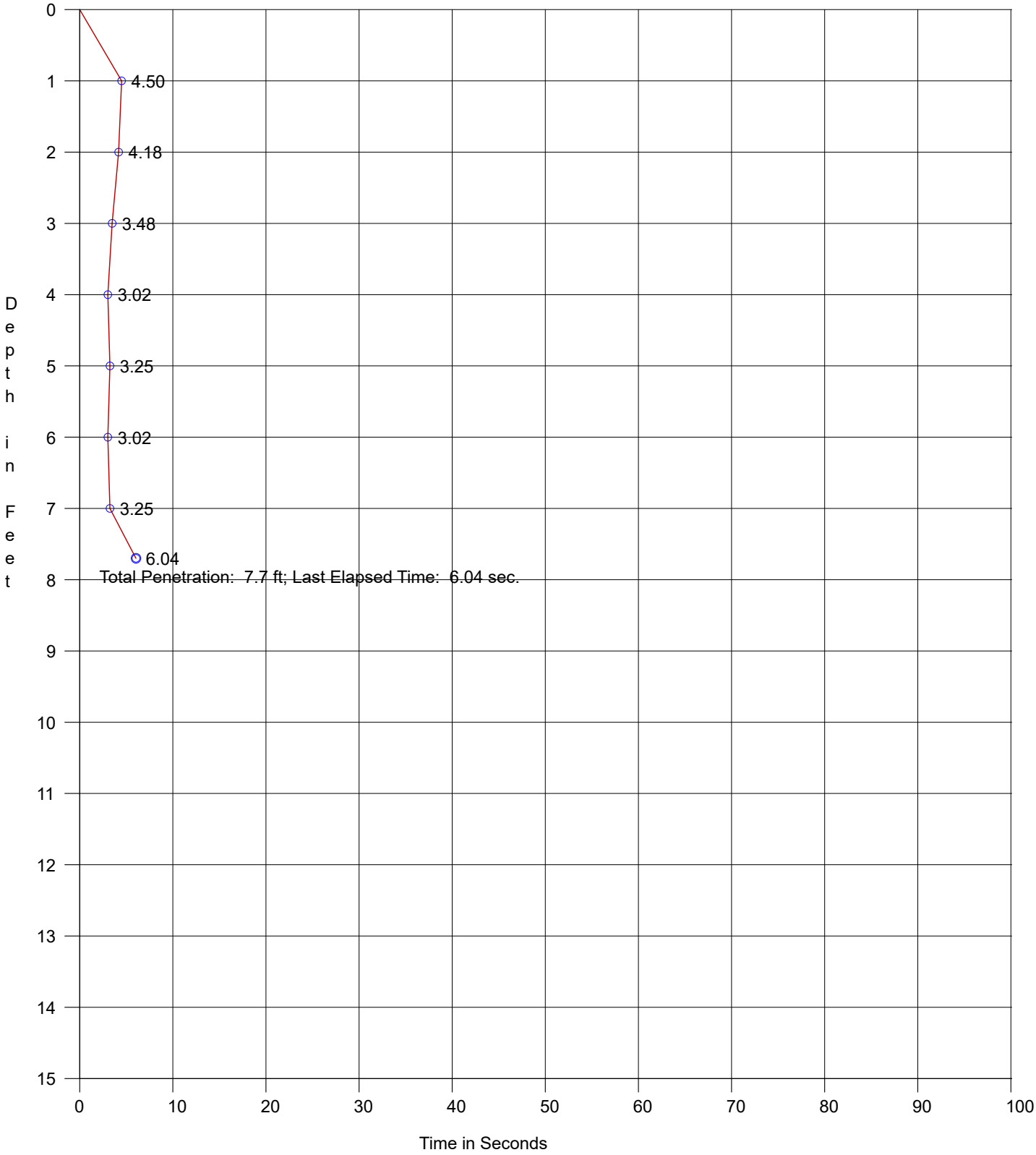
Penetration Graph for Core No. VC217, Run 1

Date: 29/10/2018
Start Time: 12:30:32
End Time: 12:31:22

Penetration: 7.70 ft
Recovery: 7.67 ft
W. D. Corrected: 13.1 ft
W. D. Raw: 15.935 ft

Easting: 921108.14
Northing: 114633.11
Coord. System:
NYSP LI

Lat: 40°28'51.9286"N
Long: -074°13'37.1030"W
Datum: Mudline



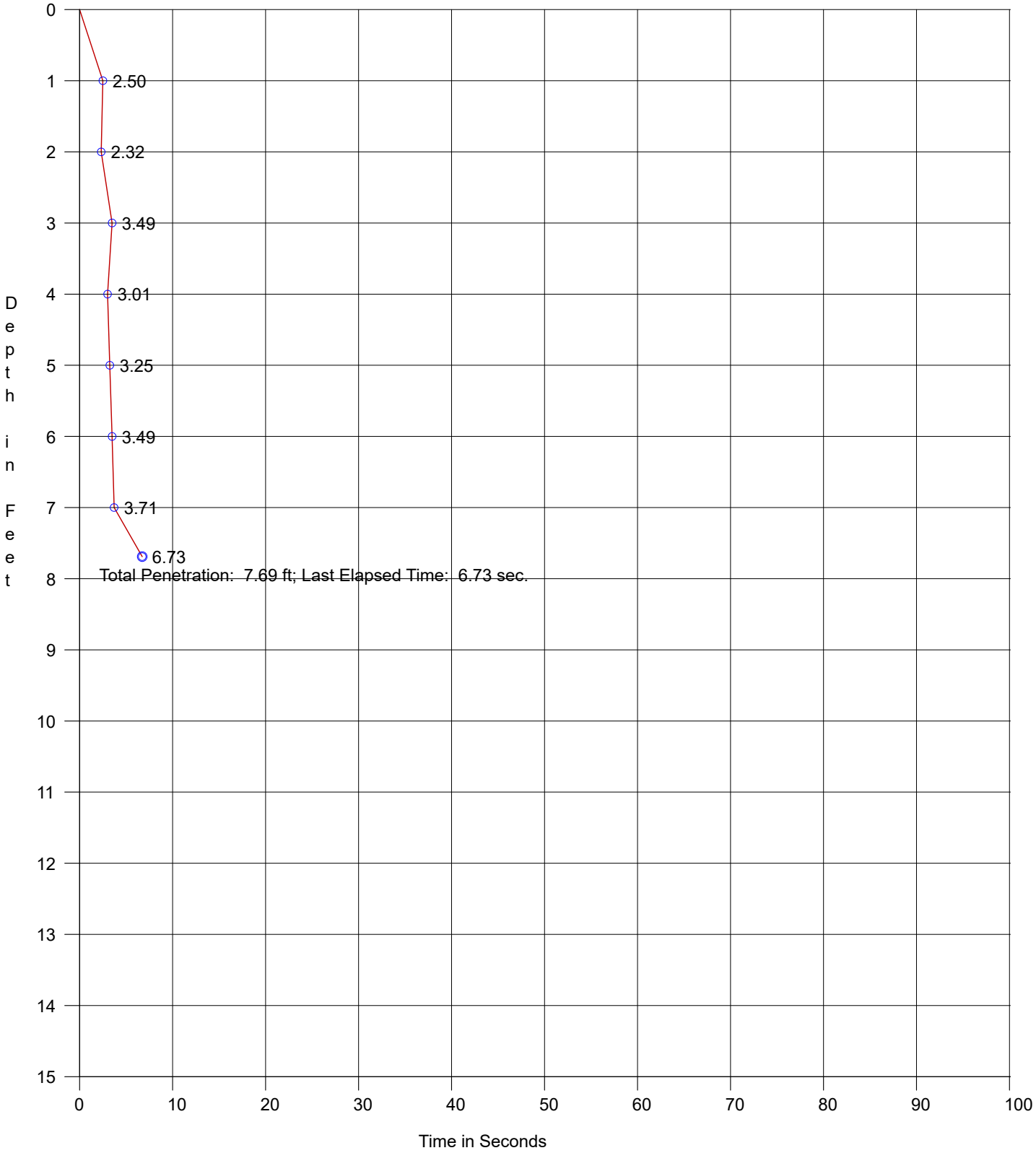
Penetration Graph for Core No. VC218, Run 1

Date: 29/10/2018
Start Time: 12:11:25
End Time: 12:12:09

Penetration: 7.69 ft
Recovery: 8.17 ft
W. D. Corrected: 13.6 ft
W. D. Raw: 16.135 ft

Easting: 921620.70
Northing: 114928.68
Coord. System:
NYSP LI

Lat: 40°28'54.8623"N
Long: -074°13'30.4800"W
Datum: Mudline



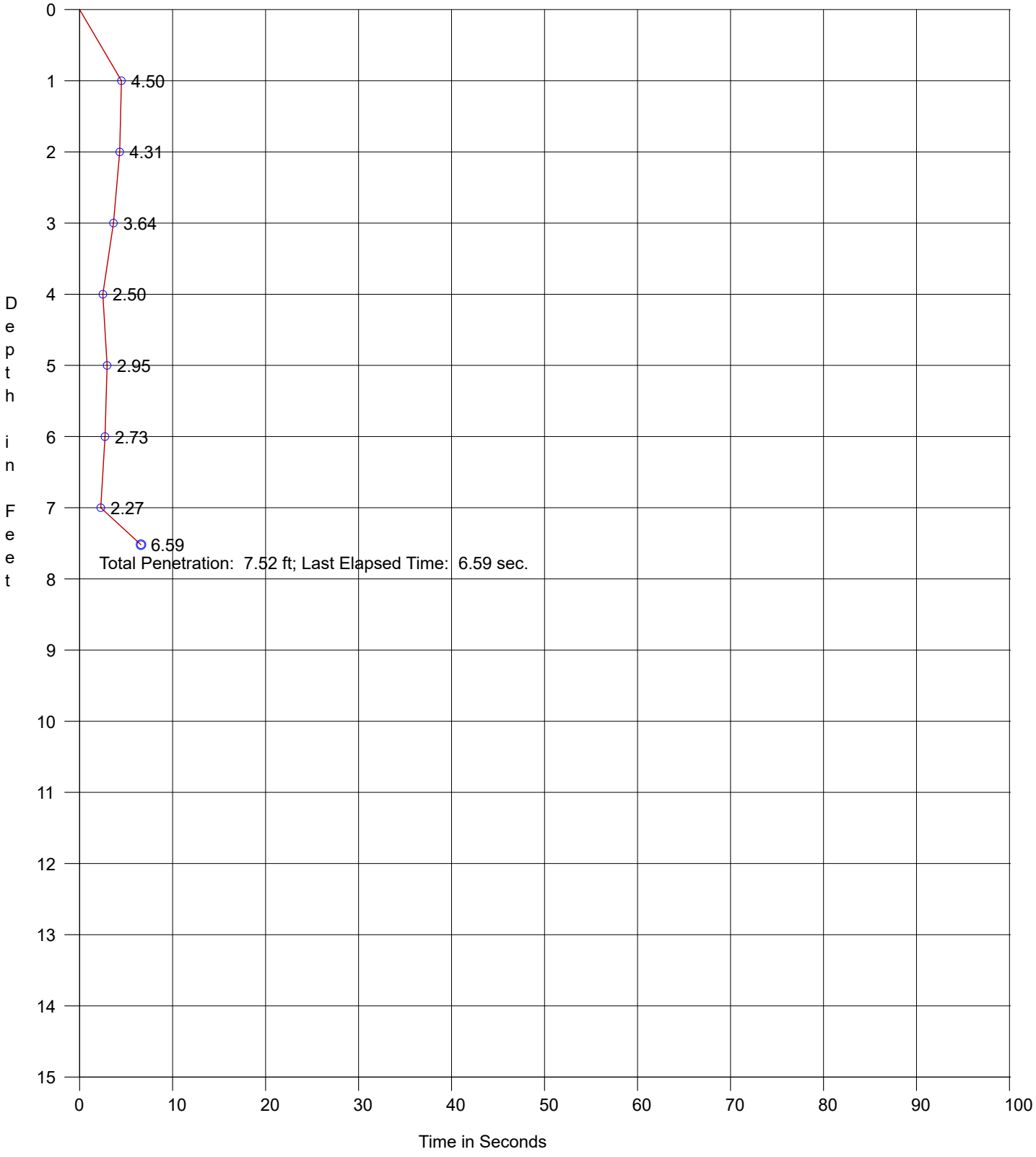
Penetration Graph for Core No. VC219, Run 1

Date: 26/10/2018
Start Time: 19:05:57
End Time: 19:06:45

Penetration: 7.52 ft
Recovery: 7.17 ft
W. D. Corrected: 14.3 ft
W. D. Raw: 16.335 ft

Easting: 922140.04
Northing: 115220.35
Coord. System:
NYSP LI

Lat: 40°28'57.7575"N
Long: -074°13'23.7689"W
Datum: Mudline



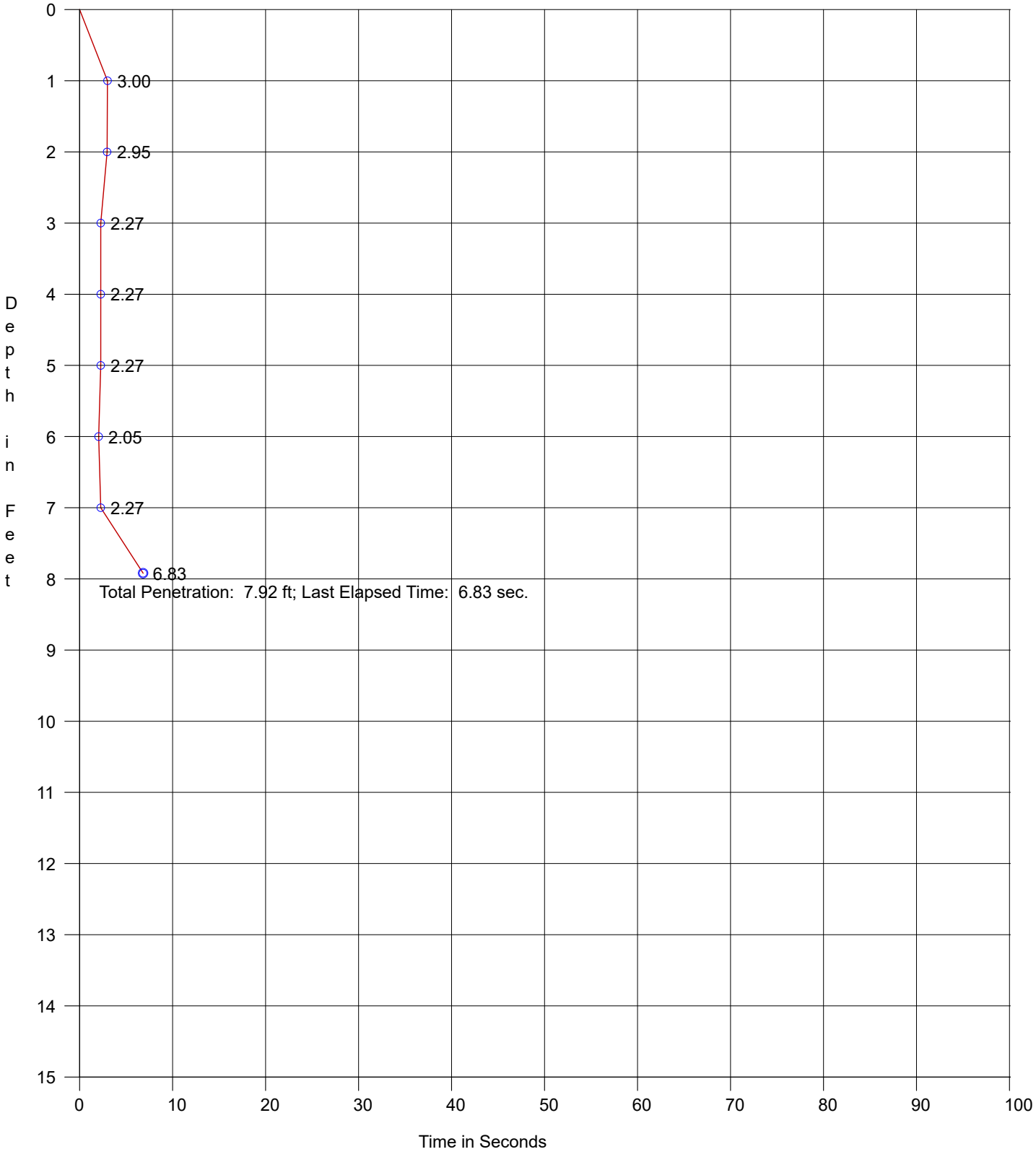
Penetration Graph for Core No. VC220, Run 1

Date: 26/10/2018
Start Time: 18:47:39
End Time: 18:48:22

Penetration: 7.92 ft
Recovery: 7.67 ft
W. D. Corrected: 14.8 ft
W. D. Raw: 16.935 ft

Easting: 922665.63
Northing: 115522.17
Coord. System:
NYSP LI

Lat: 40°29'00.7531"N
Long: -074°13'16.9771"W
Datum: Mudline



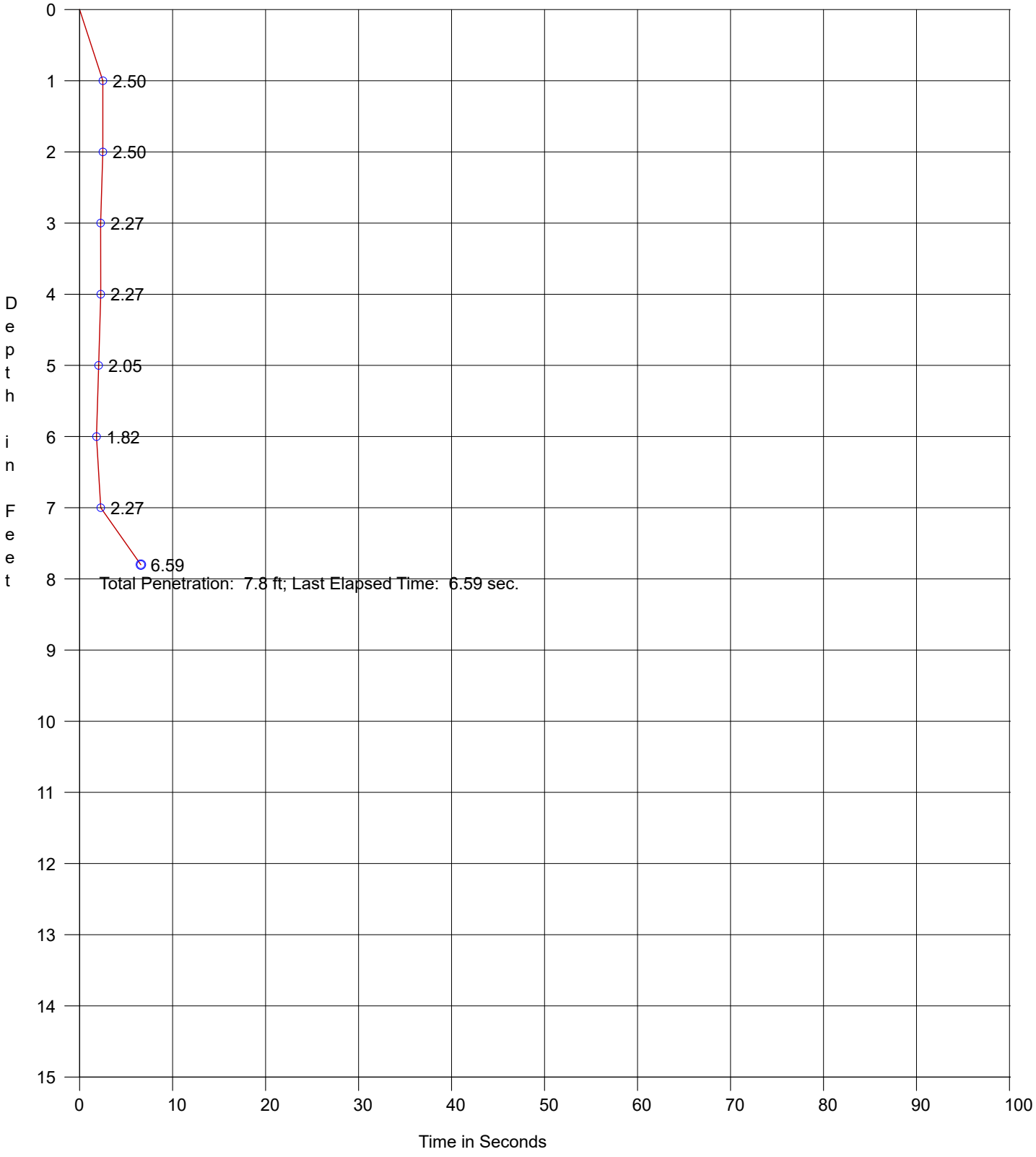
Penetration Graph for Core No. VC221, Run 1

Date: 26/10/2018
Start Time: 18:28:03
End Time: 18:28:48

Penetration: 7.80 ft
Recovery: 7.58 ft
W. D. Corrected: 14.4 ft
W. D. Raw: 17.435 ft

Easting: 923189.92
Northing: 115820.54
Coord. System:
NYSP LI

Lat: 40.484441
Long: -74.219383
Datum: Mudline



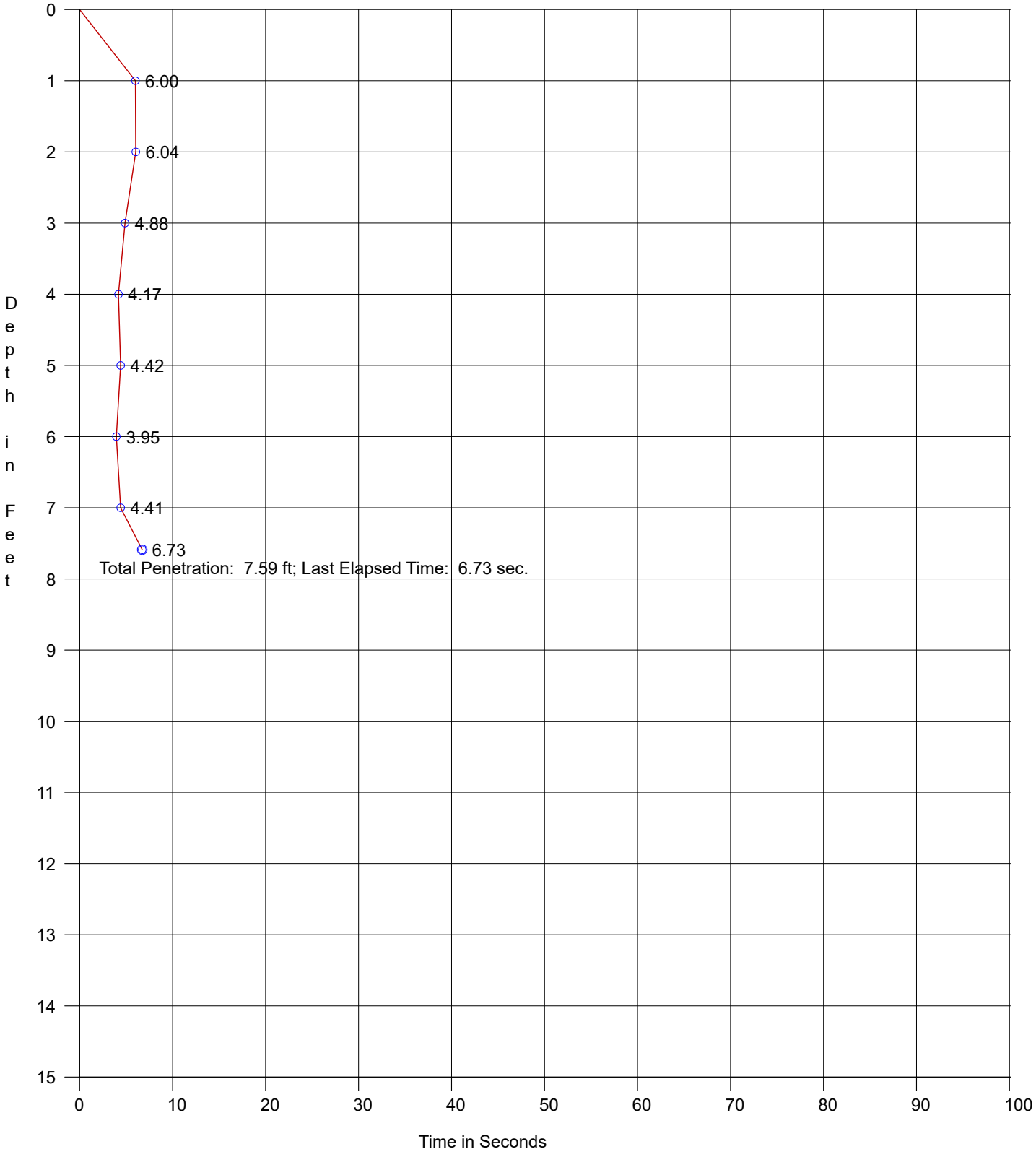
Penetration Graph for Core No. VC222, Run 1

Date: 26/10/2018
Start Time: 17:57:17
End Time: 17:58:25

Penetration: 7.59 ft
Recovery: 7.75 ft
W. D. Corrected: 14.3 ft
W. D. Raw: 17.835 ft

Easting: 923695.87
Northing: 116108.82
Coord. System:
NYSP LI

Lat: 40°29'06.5755"N
Long: -074°13'03.6635"W
Datum: Mudline



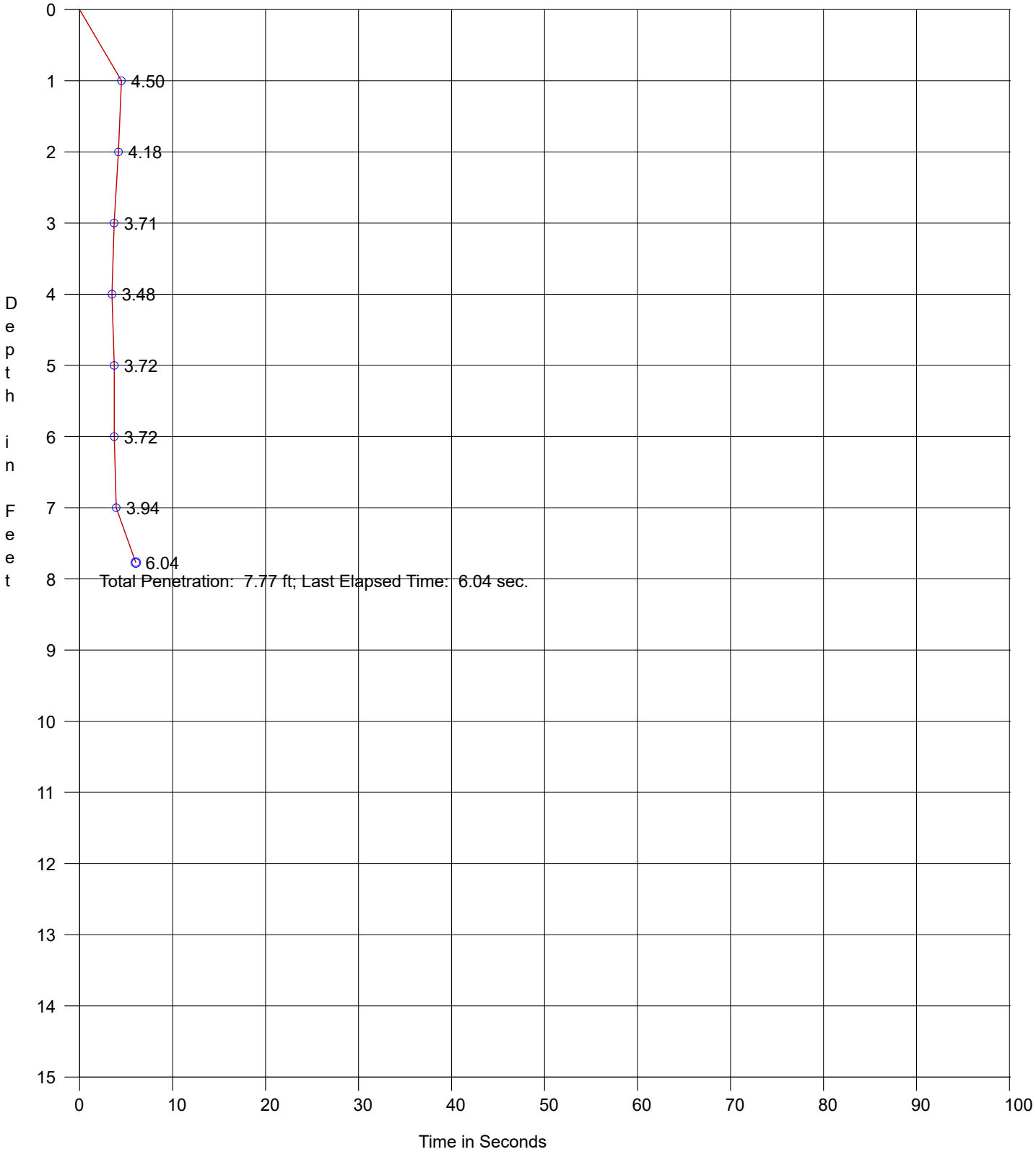
Penetration Graph for Core No. VC223, Run 1

Date: 26/10/2018
Start Time: 17:35:09
End Time: 17:36:08

Penetration: 7.77 ft
Recovery: 7.50 ft
W. D. Corrected: 14.5 ft
W. D. Raw: 18.535 ft

Easting: 924121.94
Northing: 116350.96
Coord. System:
NYSP LI

Lat: 40°29'08.9786"N
Long: -074°12'58.1572"W
Datum: Mudline



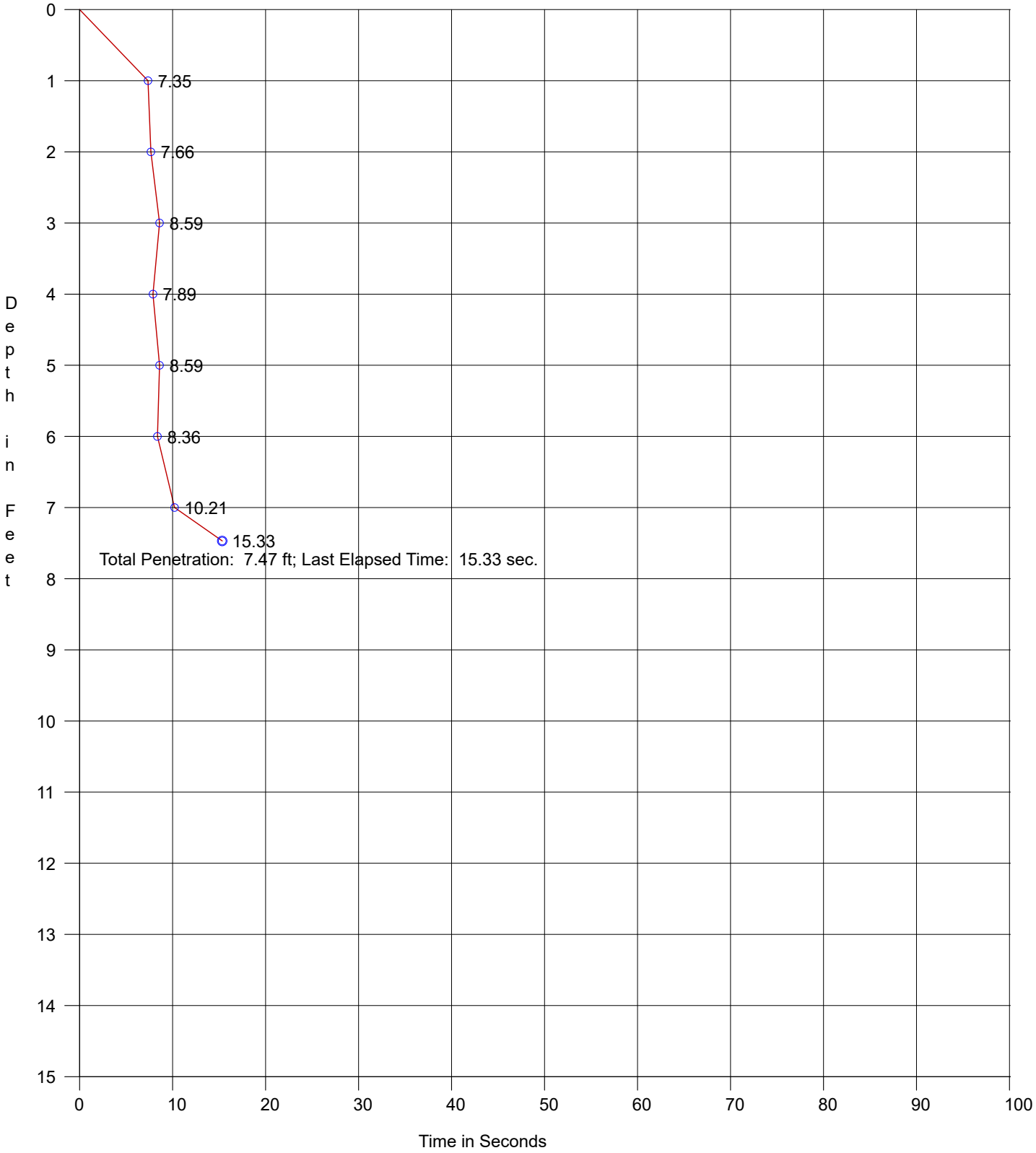
Penetration Graph for Core No. VC225, Run 1

Date: 20/10/2018
Start Time: 13:16:07
End Time: 13:18:31

Penetration: 7.47 ft
Recovery: 7.5 ft
W. D. Corrected: 17.3 ft
W. D. Raw: 19.435 ft

Easting: 934943.47
Northing: 122447.84
Coord. System:
NYSP LI

Lat: 40°30'09.4640"N
Long: -074°10'38.2687"W
Datum: Mudline



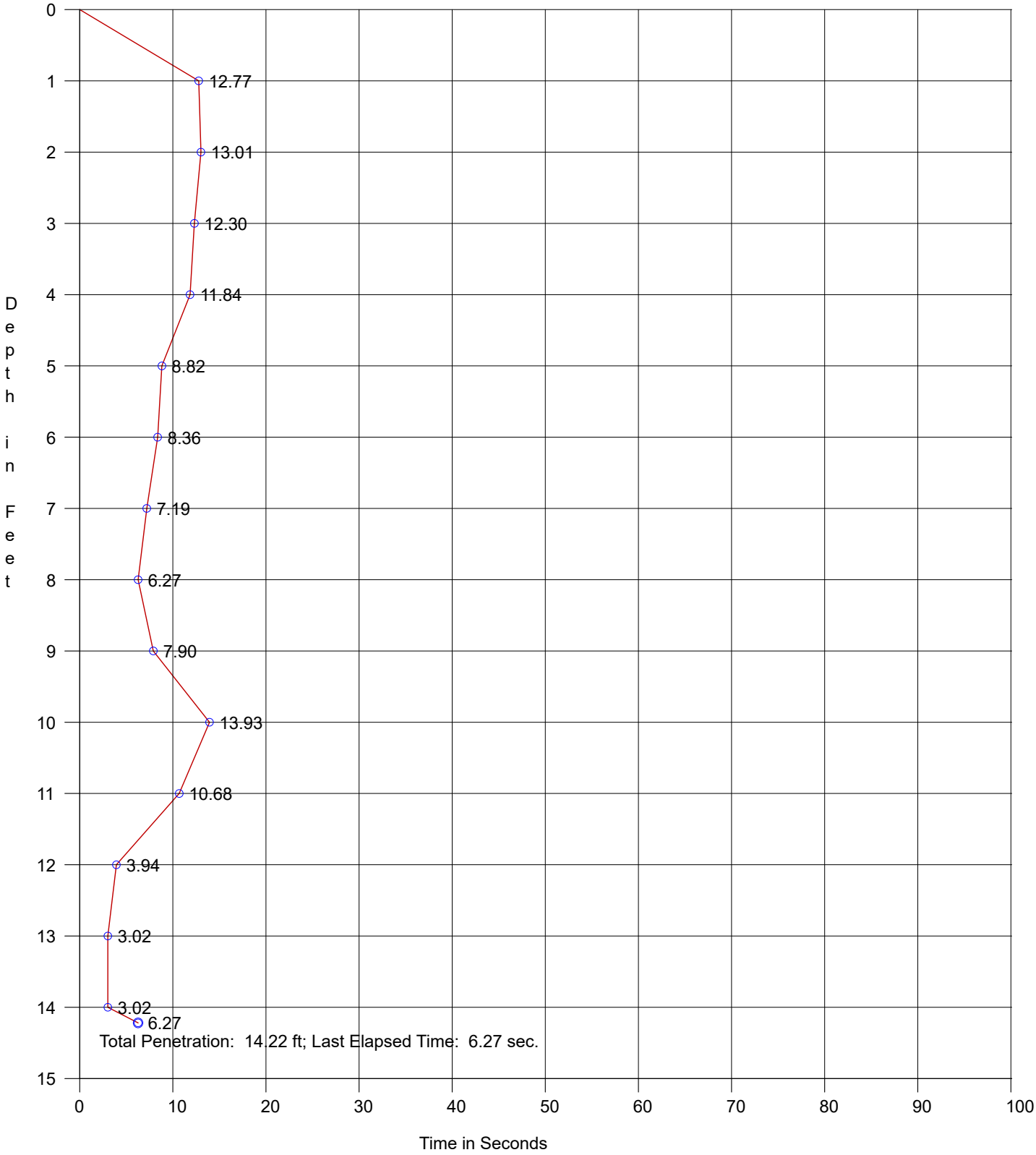
Penetration Graph for Core No. VC227, Run 1

Date: 20/10/2018
Start Time: 14:30:08
End Time: 14:32:18

Penetration: 14.22 ft
Recovery: 15.00 ft
W. D. Corrected: 17.3 ft
W. D. Raw: 18.635 ft

Easting: 935132.88
Northing: 122555.28
Coord. System:
NYSP LI

Lat: 40°30'10.5294"N
Long: -074°10'35.8197"W
Datum: Mudline



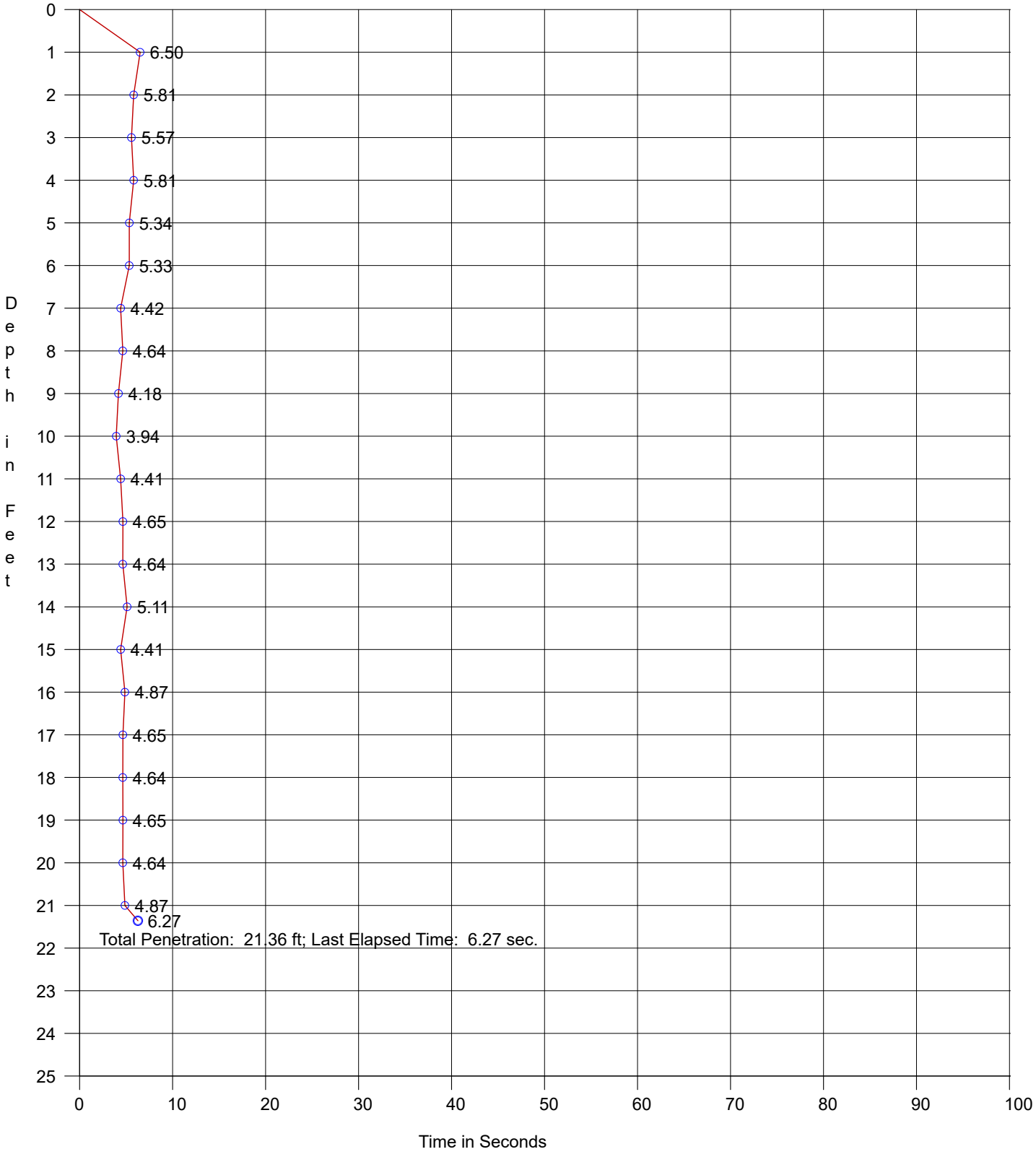
Penetration Graph for Core No. VC228, Run 1

Date: 20/10/2018
Start Time: 15:25:18
End Time: 15:27:07

Penetration: 21.36 ft
Recovery: 18.90 ft
W. D. Corrected: 17.4 ft
W. D. Raw: 18.435ft

Easting: 935318.81
Northing: 122659.12
Coord. System:
NYSP LI

Lat: 40°30'11.5592"N
Long: -074°10'33.4155"W
Datum: Mudline



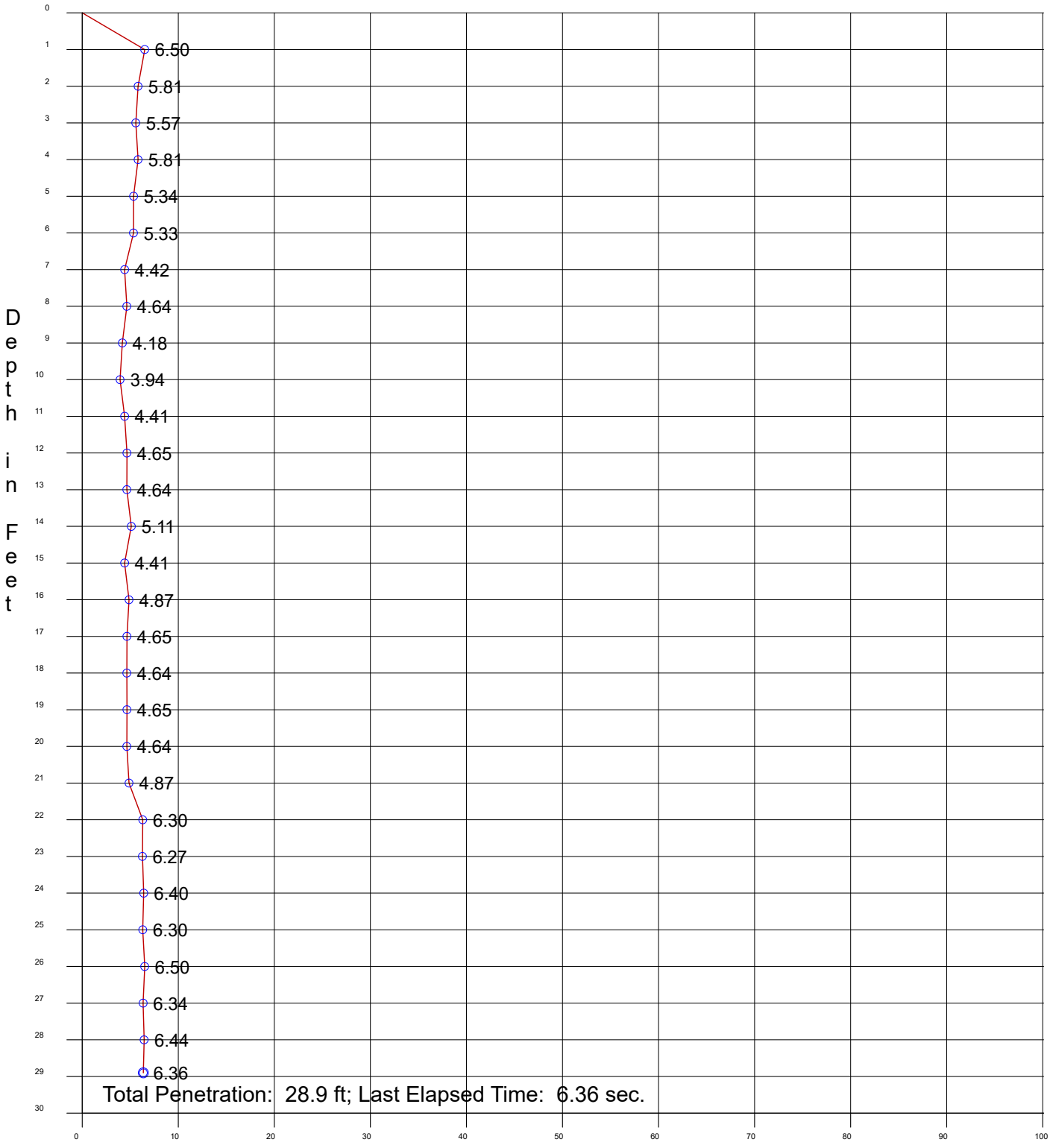
Penetration Graph for Core No. VC229, Run 1

Date: 20/10/2018
Start Time: 15:25:18
End Time: 15:27:07

Penetration: 28.9 ft
Recovery: 23.00 ft
W. D. Corrected: 17.4 ft
W. D. Raw: 17.935 ft

Easting: 935516.79
Northing: 122769.84
Coord. System:
NYSP LI

Lat: 40°30'12.6571"N
Long: -074°10'30.8555"W
Datum: Mudline



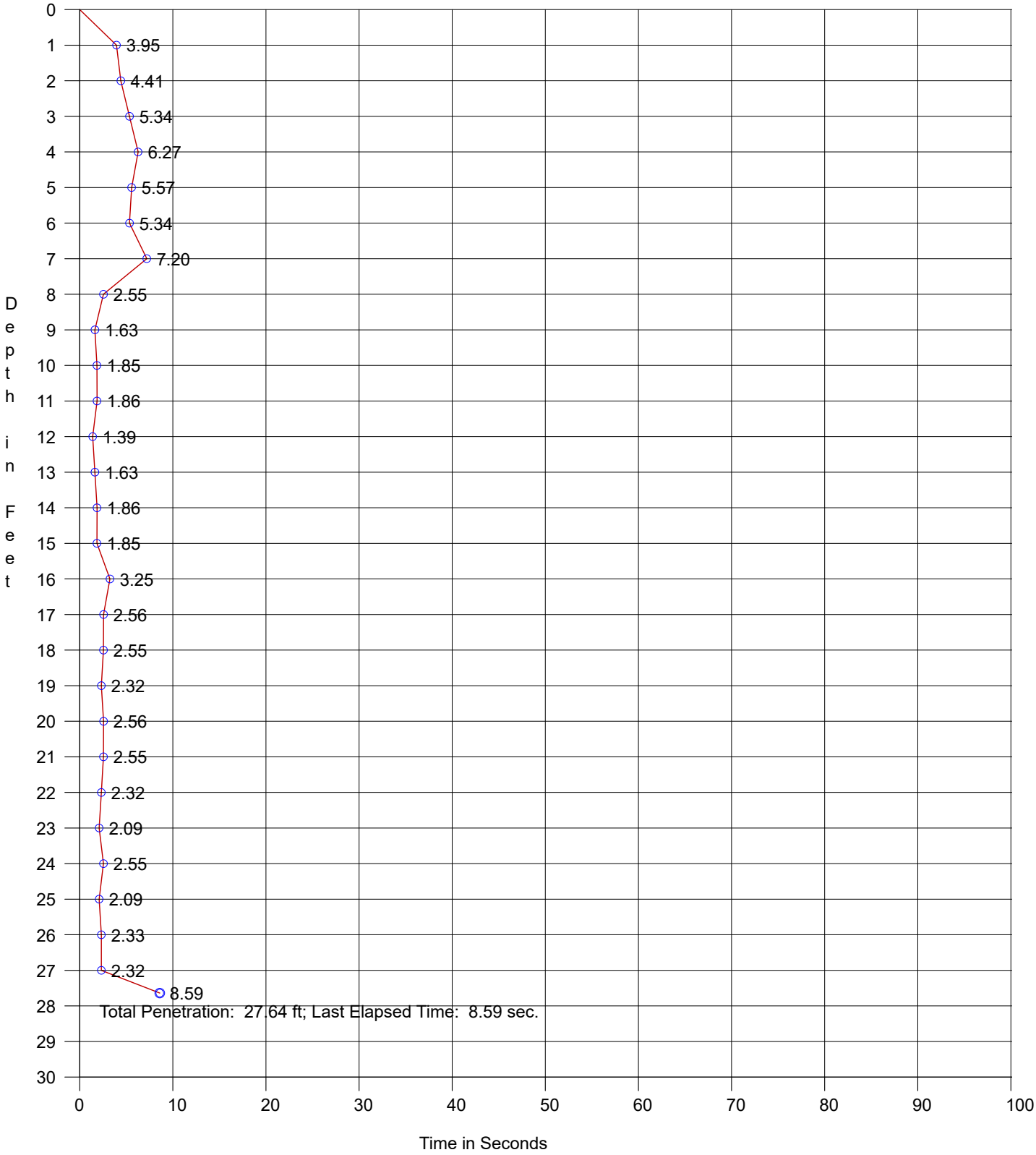
Penetration Graph for Core No. VC230, Run 1

Date: 20/10/2018
Start Time: 17:58:09
End Time: 17:59:40

Penetration: 27.64 ft
Recovery: 29.25
W. D. Corrected:
W. D. Raw: 31.535

Easting: 935696.74
Northing:122880.39
Coord. System:
NYSP LI

Lat: 40°30'13.7531"N
Long:-074°10'28.5289"W
Datum: Mudline



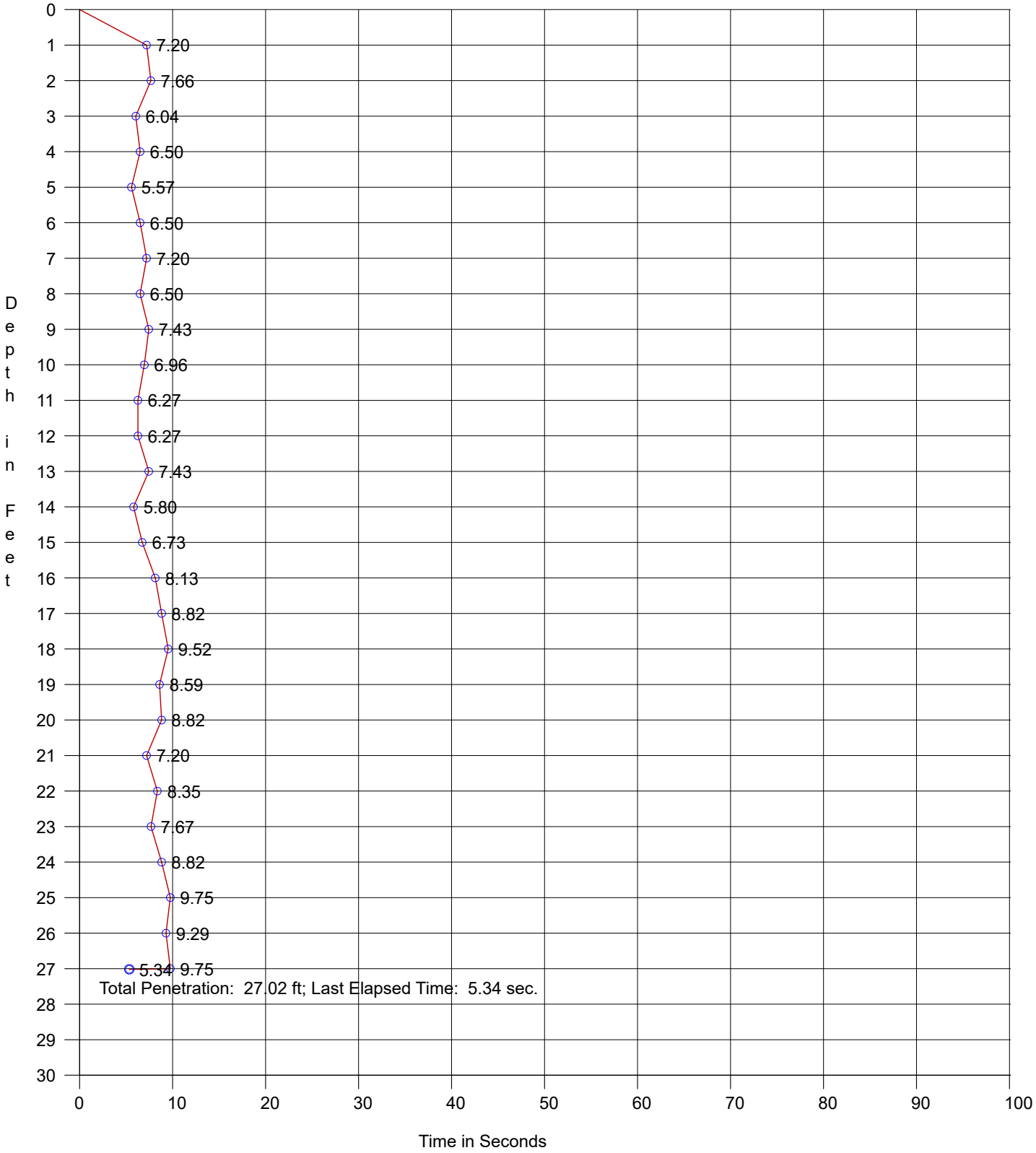
Penetration Graph for Core No. VC230A, Run 1

Date: 20/10/2018
Start Time: 17:17:54
End Time: 17:21:24

Penetration: 27.02 ft
Recovery: 29.25 ft
W. D. Corrected: 29.3 ft
W. D. Raw: 31.535

Easting: 935637.91
Northing: 122921.32
Coord. System:
NYSP LI

Lat: 40°30'14.1564"N
Long:-074°10'29.2915"W
Datum: Mudline



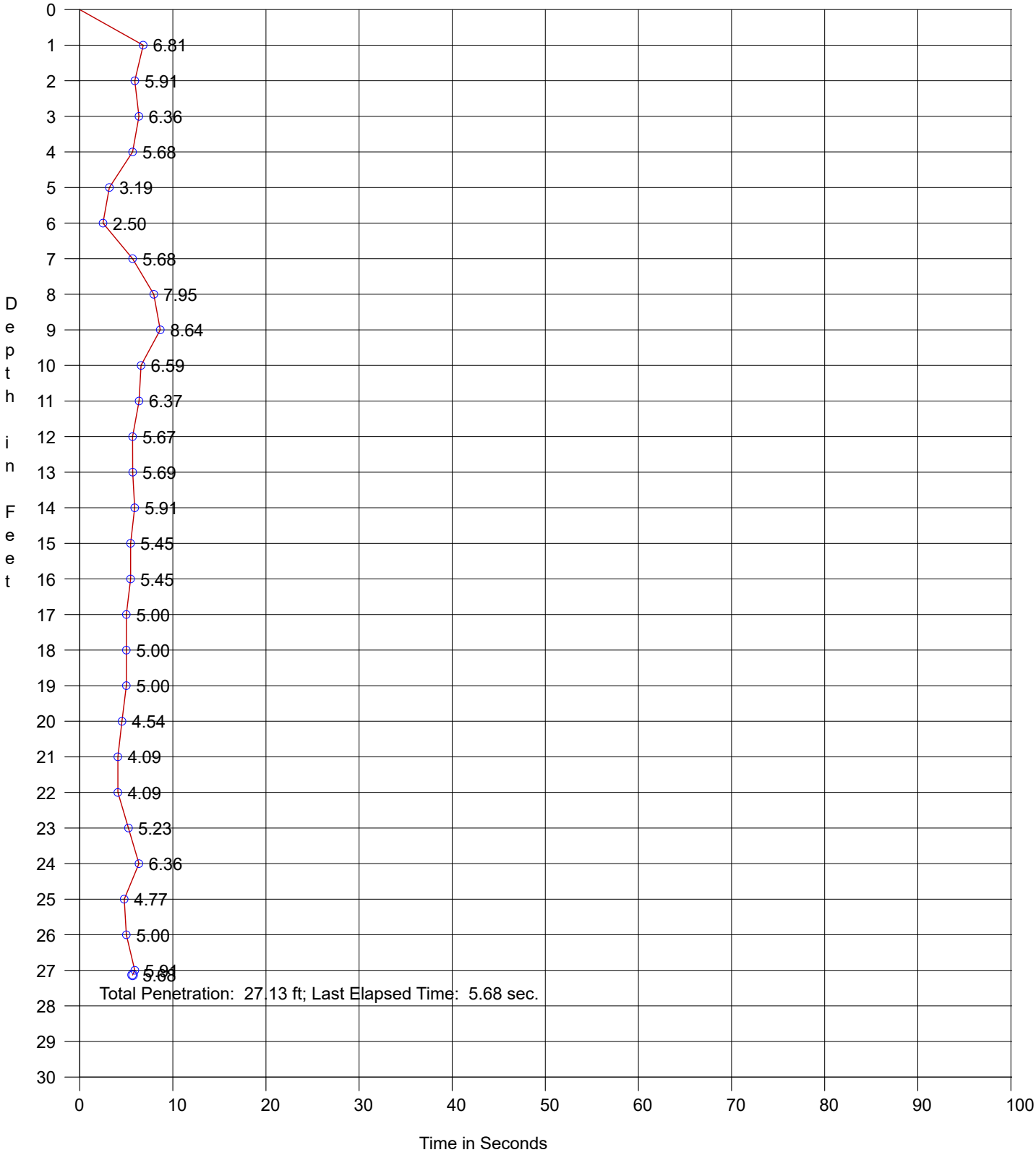
Penetration Graph for Core No. VC230B, Run 1

Date: 20/10/2018
Start Time: 19:00:47
End Time: 19:03:21

Penetration: 27.13 ft
Recovery: 28.00 ft
W. D. Corrected: 28.9 ft
W. D. Raw: 32.235

Easting: 935762.39
Northing: 122850.32
Coord. System:
NYSP LI

Lat: 40°30'13.4573"N
Long:-074°10'27.6783"W
Datum: Mudline



Total Penetration: 27.13 ft; Last Elapsed Time: 5.68 sec.

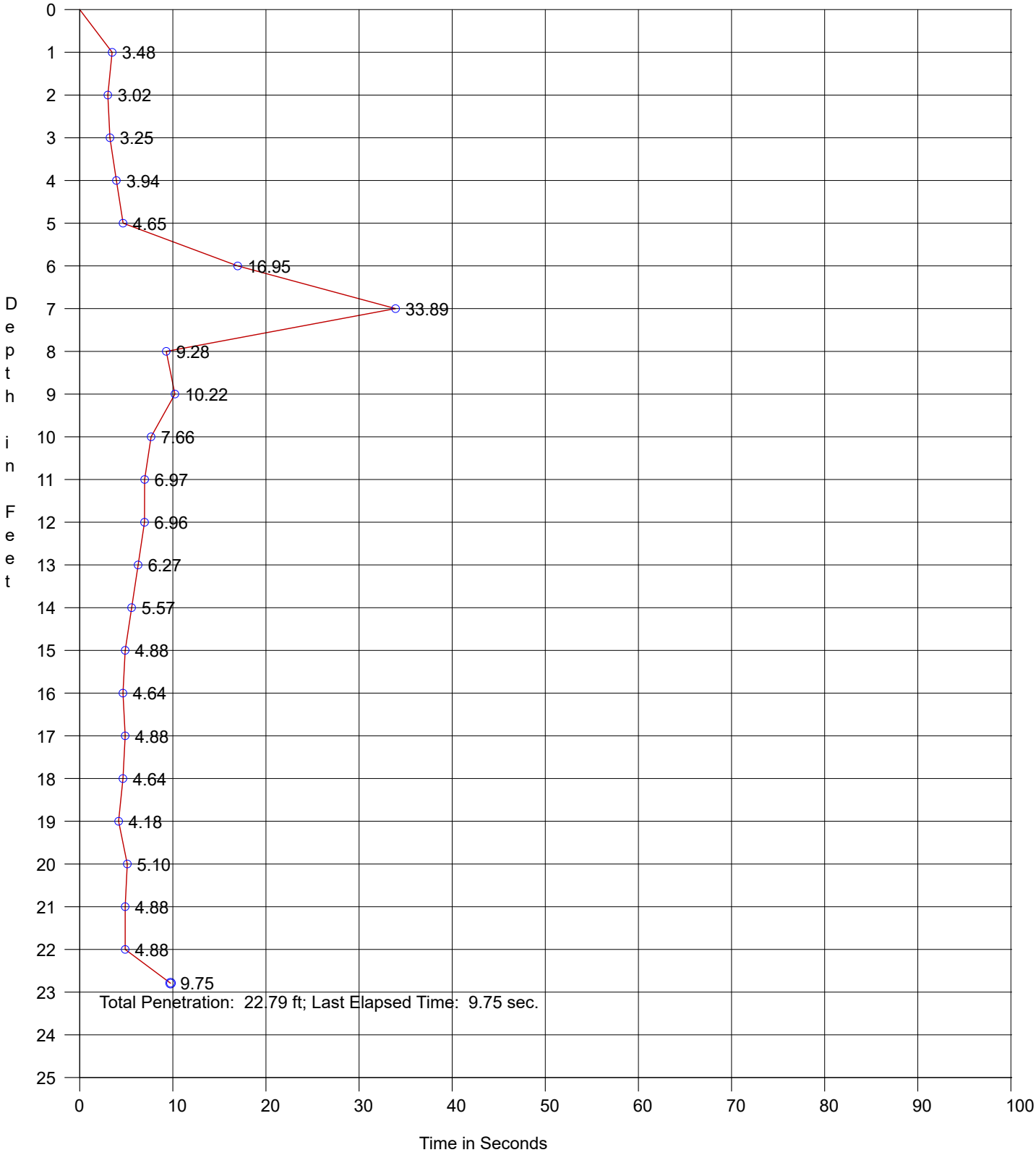
Penetration Graph for Core No. VC232, Run 1

Date: 22/10/2018
Start Time: 14:22:12
End Time: 14:25:02

Penetration: 22.79 ft
Recovery: 20.67 ft
W. D. Corrected: 46.2 ft
W. D. Raw: 47.735

Easting: 936059.13
Northing: 123083.06
Coord. System:
NYSP LI

Lat: 40°30'15.7629"N
Long:-074°10'23.8429"W
Datum: Mudline



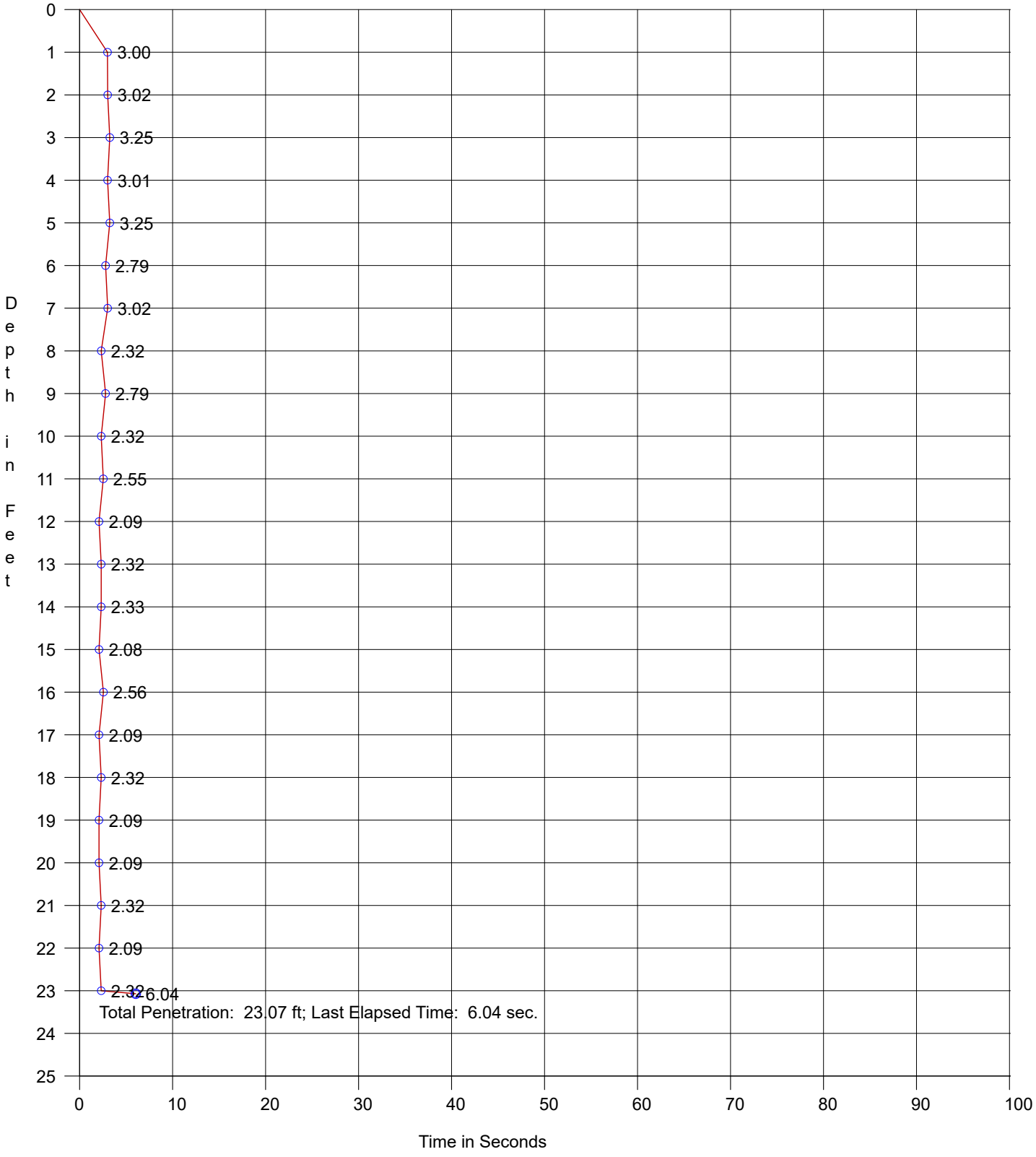
Penetration Graph for Core No. VC232A, Run 1

Date: 22/10/2018
Start Time: 15:40:24
End Time: 15:46:17

Penetration: 23.07 ft
Recovery: 22.50 ft
W. D. Corrected: 45.1 ft
W. D. Raw: 46.135ft

Easting: 936122.86
Northing: 123056.16
Coord. System:
NYSP LI

Lat: 40°30'15.4983"N
Long: -074°10'23.0172"W
Datum: Mudline



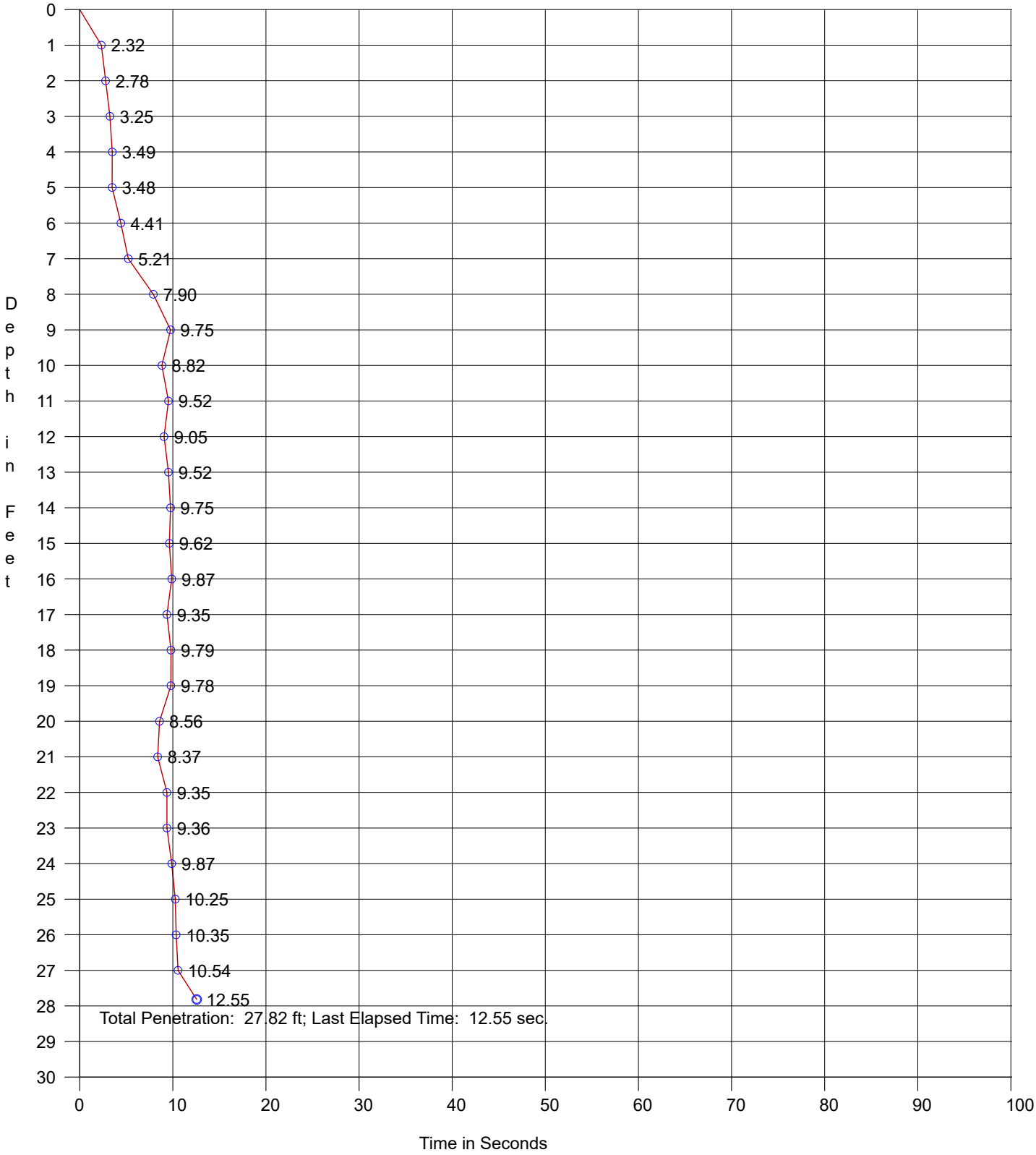
Penetration Graph for Core No. VC232B, Run 1

Date: 22/10/2018
Start Time: 13:07:31
End Time: 13:10:13

Penetration: 27.82 ft
Recovery: 22.00 ft
W. D. Corrected: 46.90 ft
W. D. Raw: 9.00 ft

Easting: 936013.27
Northing: 123160.36
Coord. System:
NYSP LI

Lat: 40.504590
Long: -74.173455
Datum: Mudline



* Please note the penetration graph is incorrect due to equipment failure. Penetration is 22.5, based on table and gINT logs. Equipment failure for raw water depth as well.

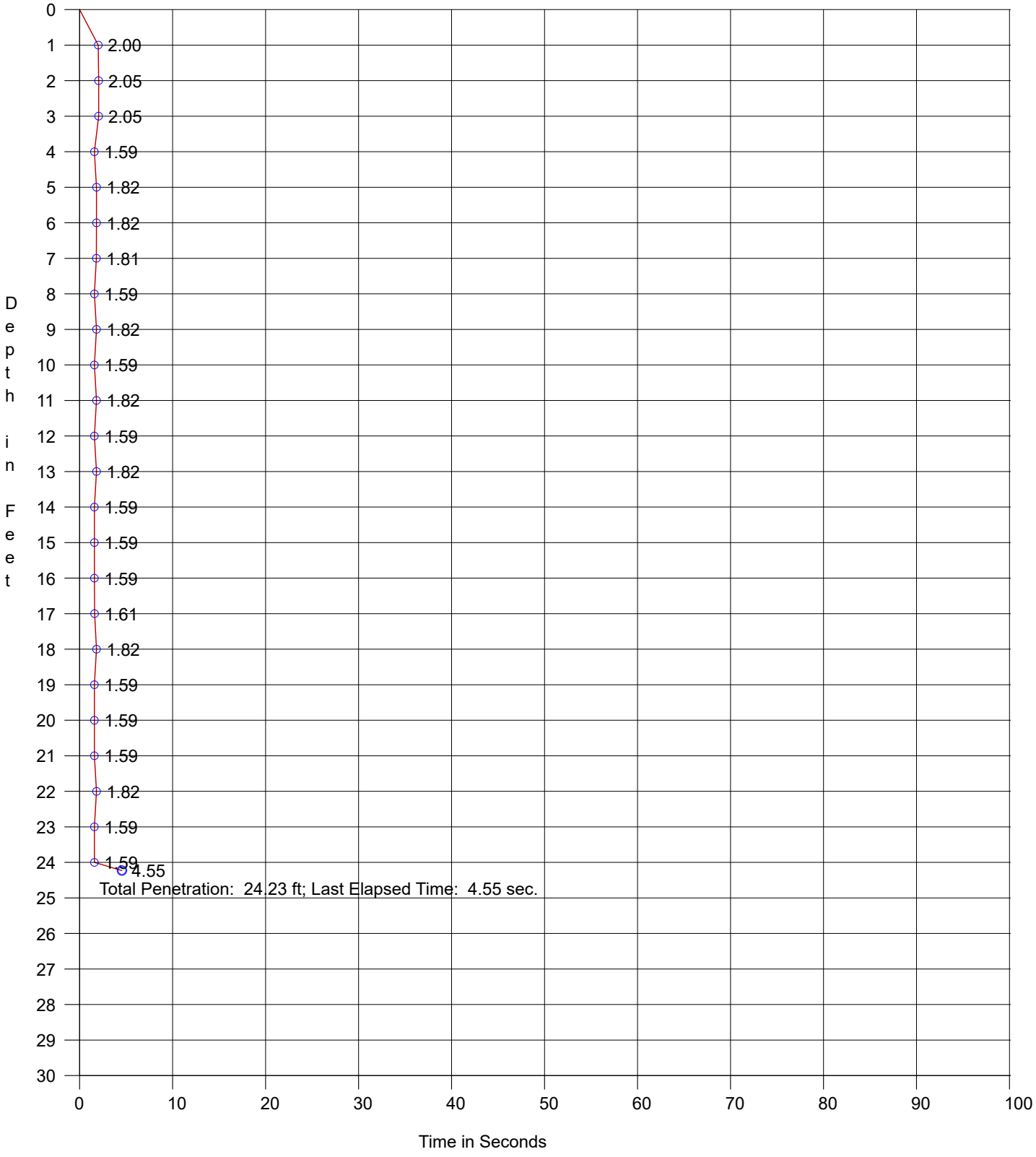
Penetration Graph for Core No. VC235, Run 1

Date: 22/10/2018
Start Time: 19:03:23
End Time: 19:04:29

Penetration: 24.23 ft
Recovery: 21.30 ft
W. D. Corrected: 31.8 ft
W. D. Raw: 35.335 ft

Easting: 936522.00
Northing: 123347.61
Coord. System:
NYSP LI

Lat: 40°30'18.3860"N
Long:-074°10'17.8577"W
Datum: Mudline



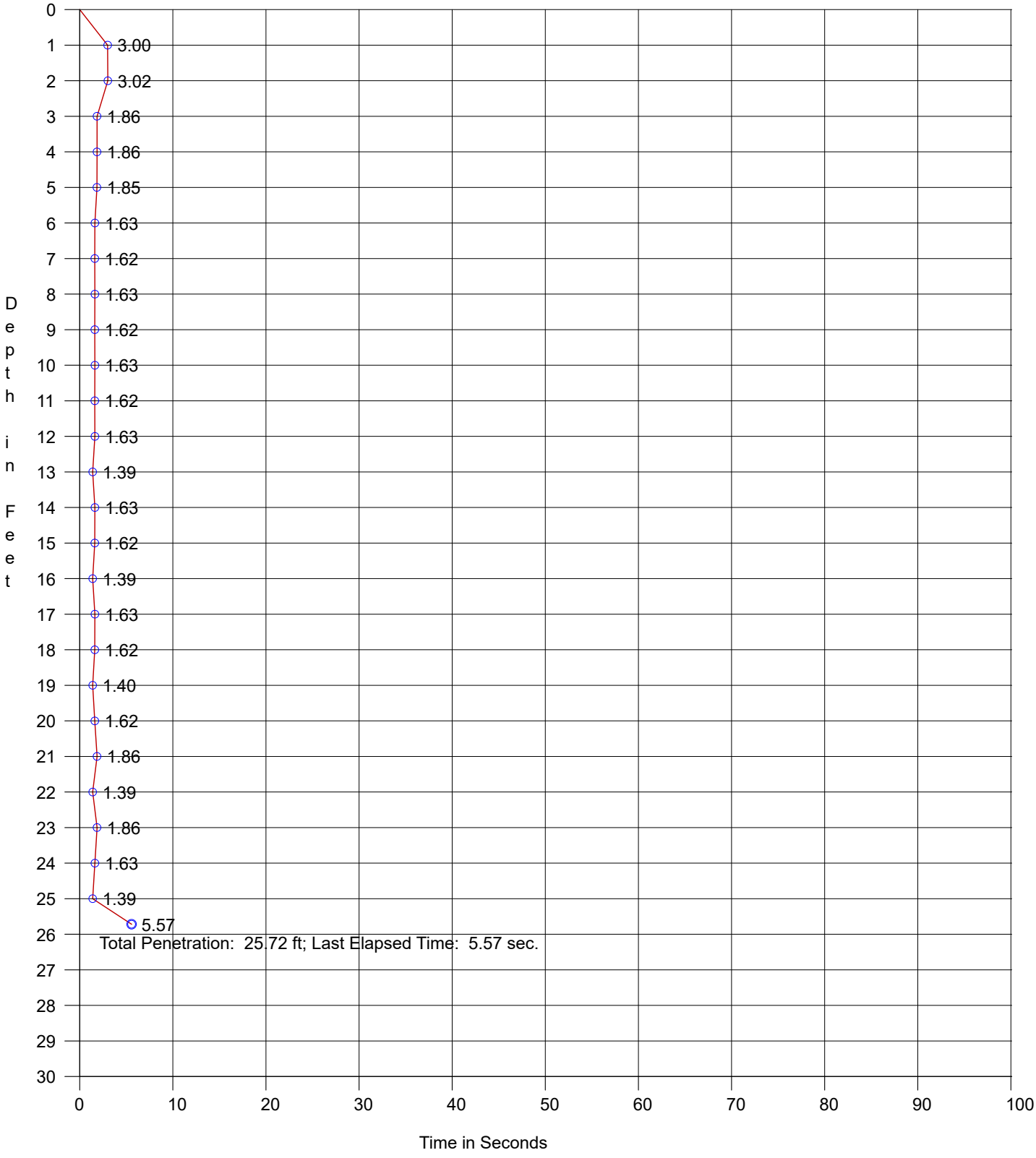
Penetration Graph for Core No. VC237, Run 1

Date: 22/10/2018
Start Time: 17:44:50
End Time: 17:46:10

Penetration: 25.72 ft
Recovery: 25.67 ft
W. D. Corrected: 19.3 ft
W. D. Raw: 21.335

Easting: 936646.56
Northing: 123432.37
Coord. System:
NYSP LI

Lat: 40°30'19.2259"N
Long:-074°10'16.2473"W
Datum: Mudline



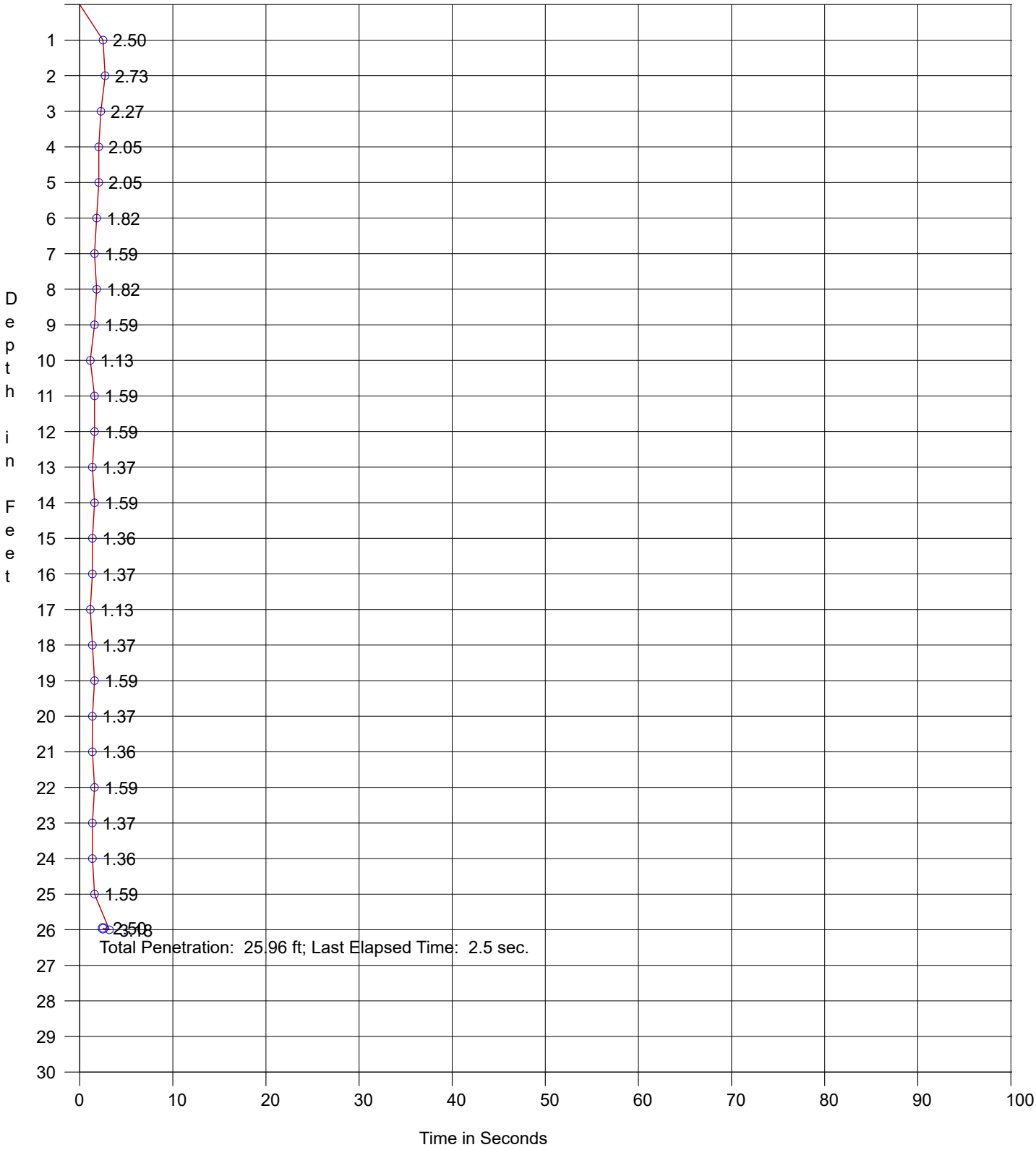
Penetration Graph for Core No. VC237A, Run 1

Date: 22/10/2018
Start Time: 18:24:51
End Time: 18:26:10

Penetration: 25.96 ft
Recovery: 25.67 ft
W. D. Corrected: 21.0 ft
W. D. Raw: 23.935ft

Easting: 936725.19
Northing: 123388.69
Coord. System:
NYSP LI

Lat: 40°30'18.7958"N
Long:-074°10'15.2283"W
Datum: Mudline



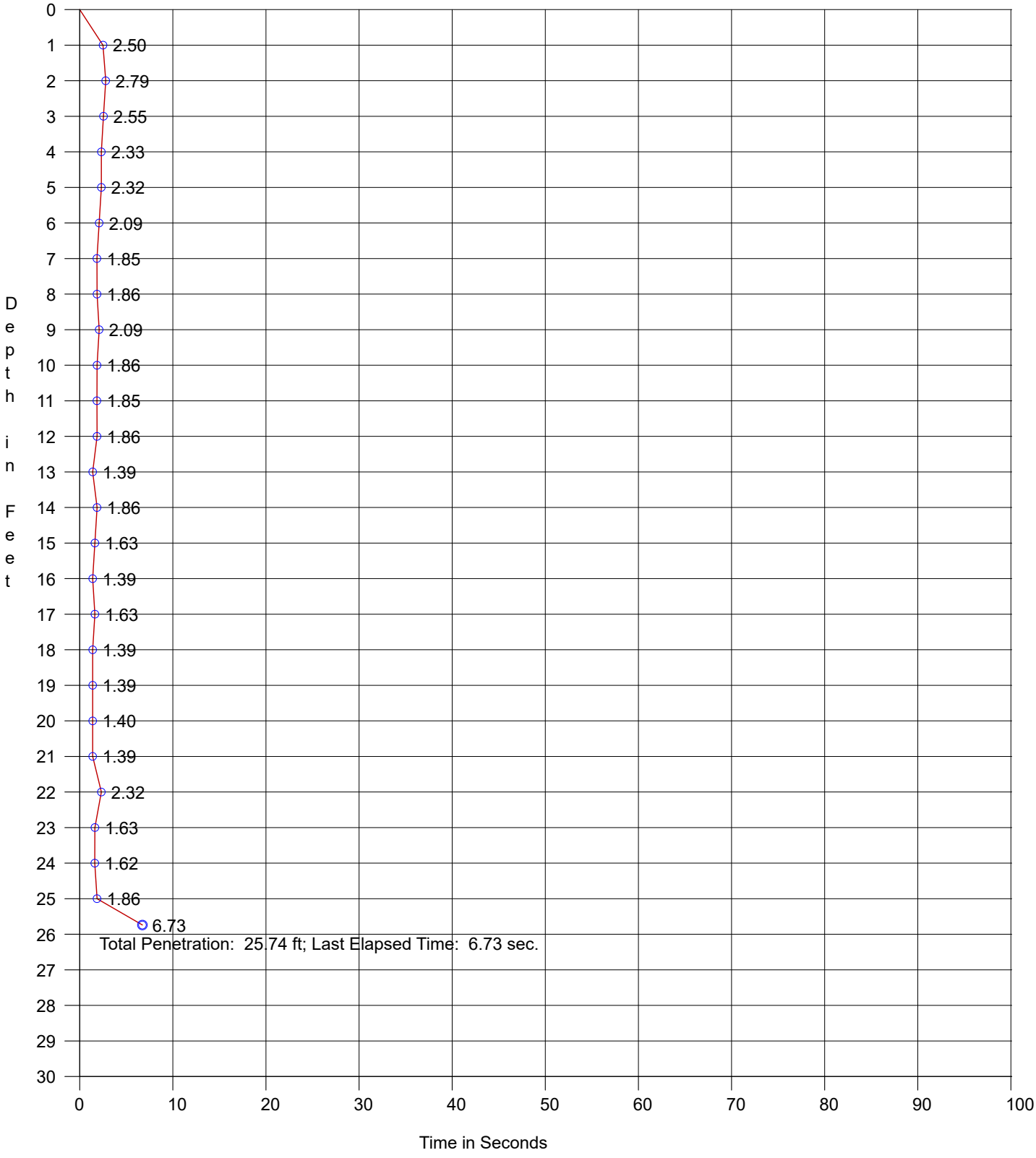
Penetration Graph for Core No. VC237B, Run 1

Date: 22/10/2018
Start Time: 17:20:59
End Time: 17:22:06

Penetration: 25.74 ft
Recovery: 27.17 ft
W. D. Corrected: 30.3 ft
W. D. Raw: 32.135 ft

Easting: 936557.57
Northing: 123446.60
Coord. System:
NYSP LI

Lat: 40°30'19.3648"N
Long:-074°10'17.3997"W
Datum: Mudline



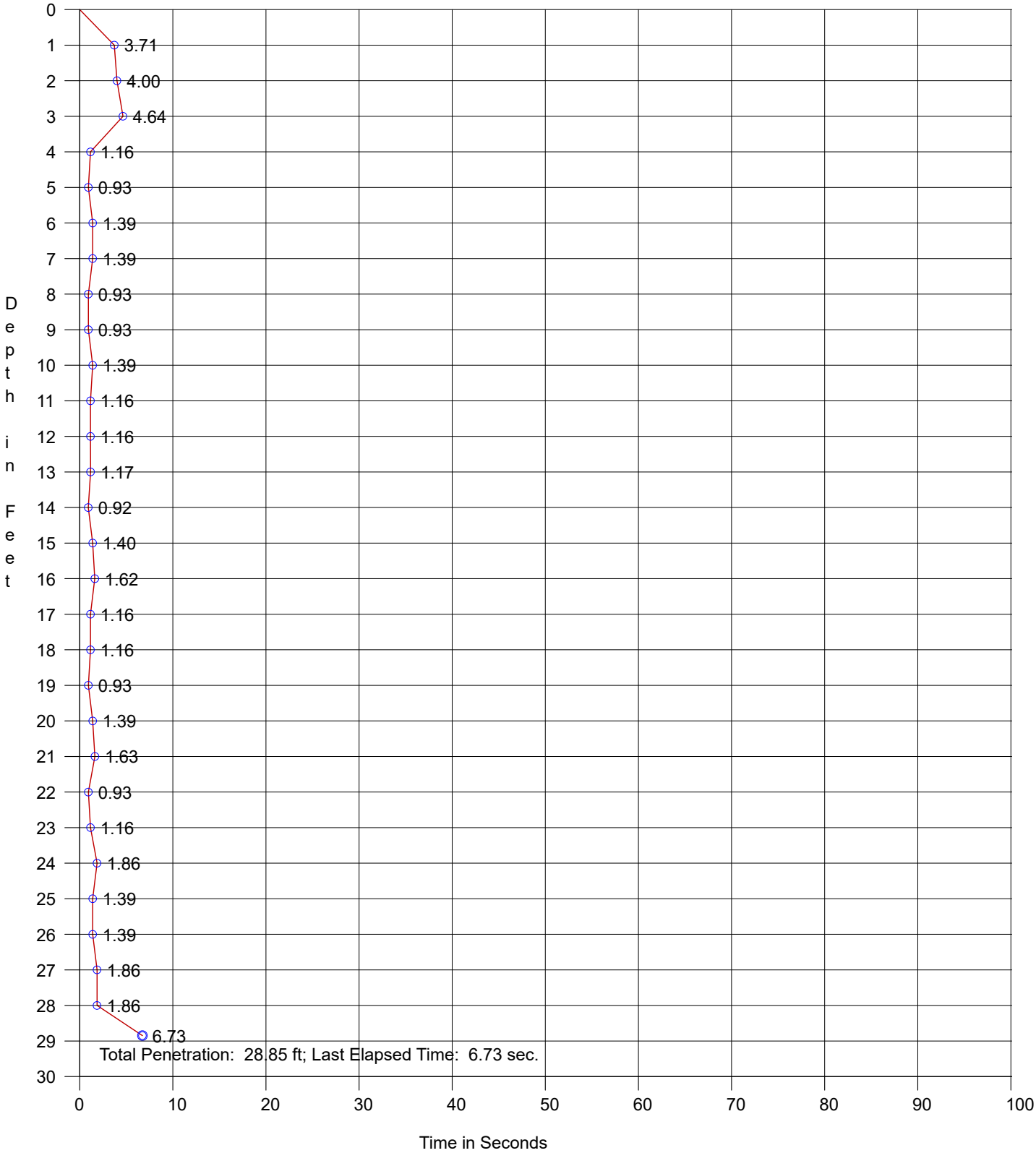
Penetration Graph for Core No. VC238, Run 2

Date: 23/10/2018
Start Time: 13:10:09
End Time: 13:11:19

Penetration: 28.85 ft
Recovery: 24.75 ft
W. D. Corrected: 19.5 ft
W. D. Raw: 24.535

Easting: 936831.39
Northing: 123523.56
Coord. System: NYSP LI

Lat: 40°30'20.1306"N
Long:-074°10'13.8570"W
Datum: Mudline



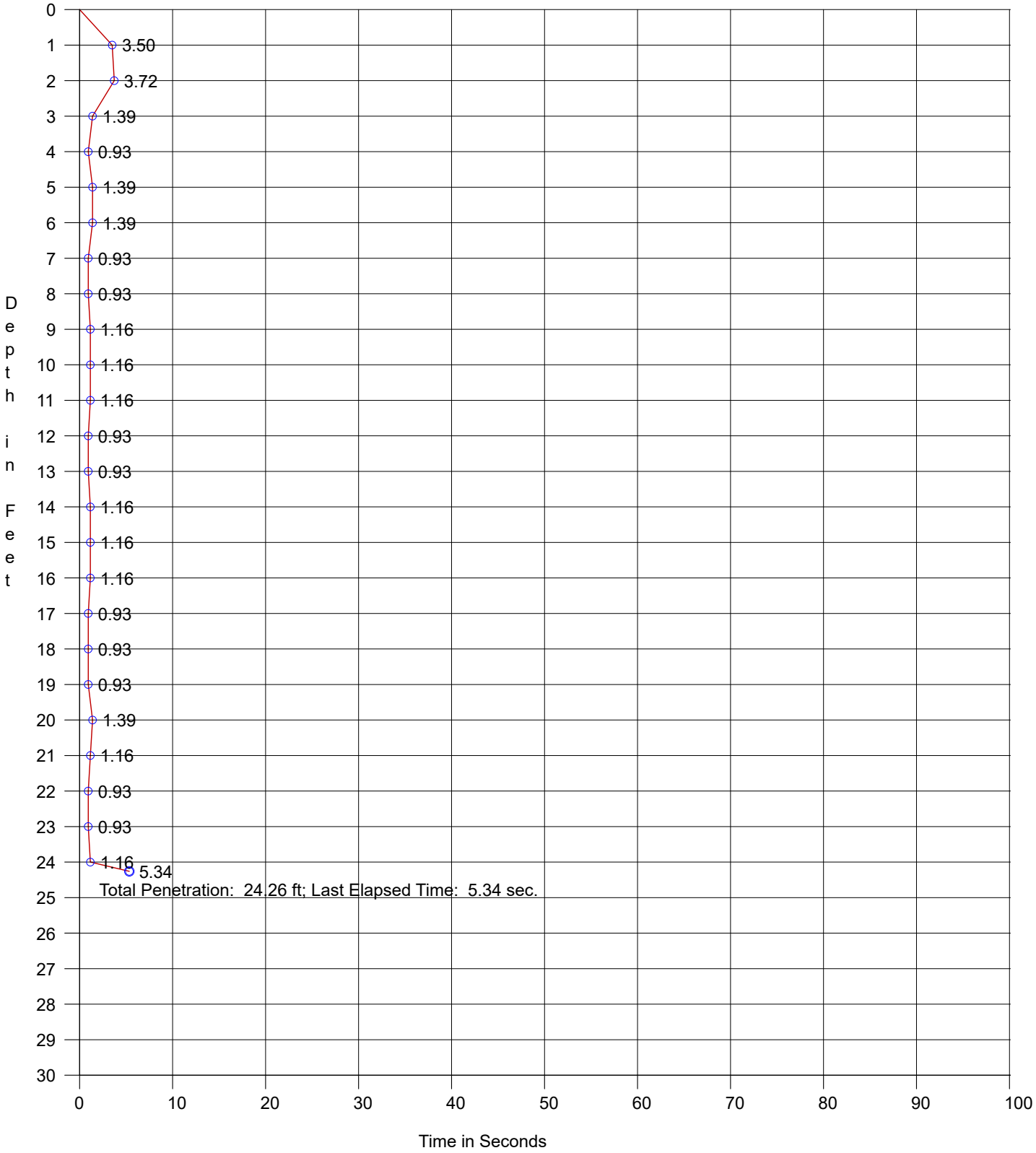
Penetration Graph for Core No. VC239, Run 1

Date: 23/10/2018
Start Time: 12:35:11
End Time: 12:36:08

Penetration: 24.26 ft
Recovery: 20.50 ft
W. D. Corrected: 17.9 ft
W. D. Raw: 23.535

Easting: 937021.99
Northing: 123628.61
Coord. System:
NYSP LI

Lat: 40°30'21.1723"N
Long:-074°10'11.3922"W
Datum: Mudline



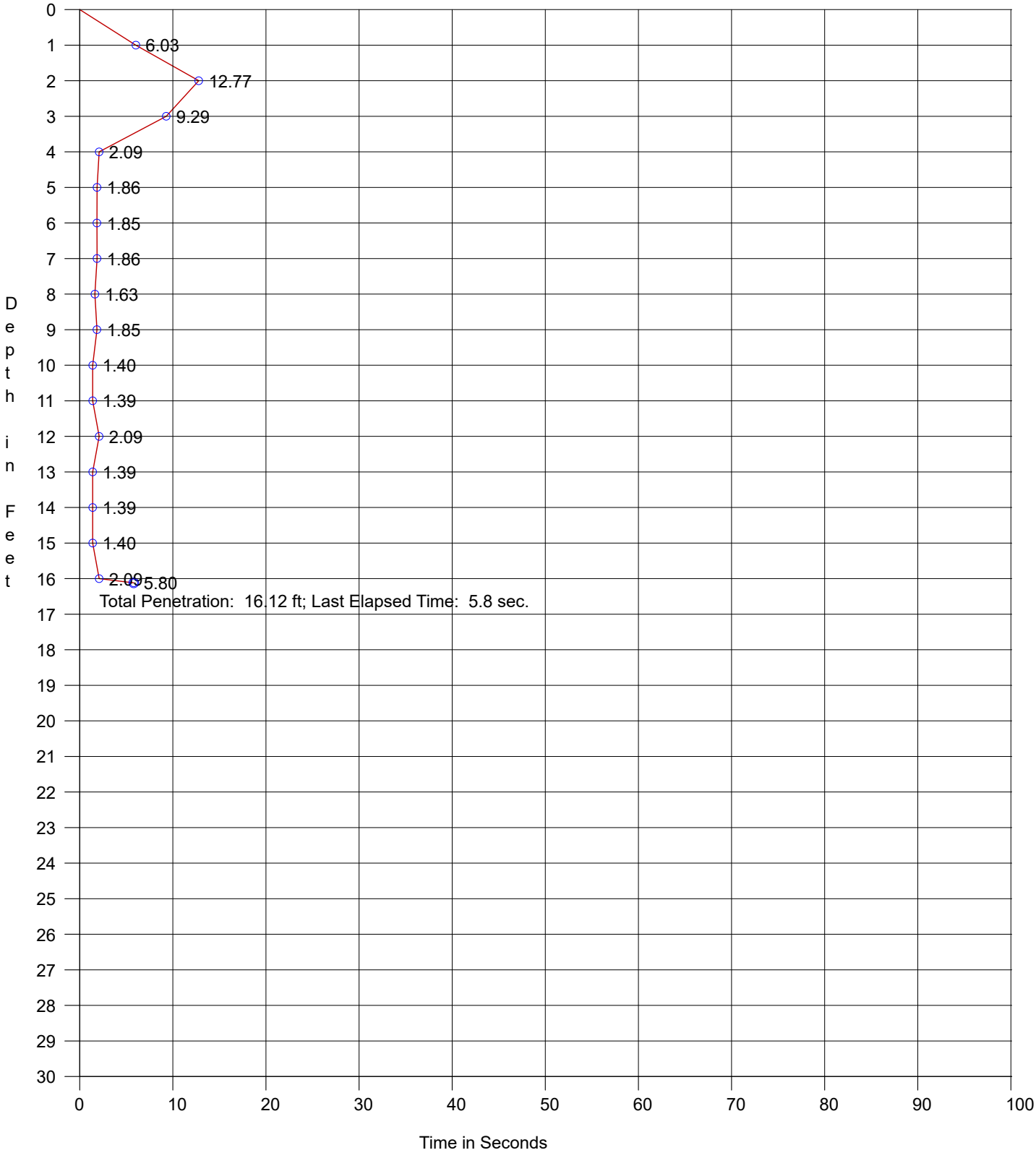
Penetration Graph for Core No. VC240, Run 1

Date: 23/10/2018
Start Time: 12:05:55
End Time: 12:06:51

Penetration: 16.12 ft
Recovery: 15.50 ft
W. D. Corrected: 17.8 ft
W. D. Raw: 23.535ft

Easting: 937214.44
Northing: 123732.20
Coord. System:
NYSP LI

Lat: 40°30'22.1996"N
Long:-074°10'08.9034"W
Datum: Mudline



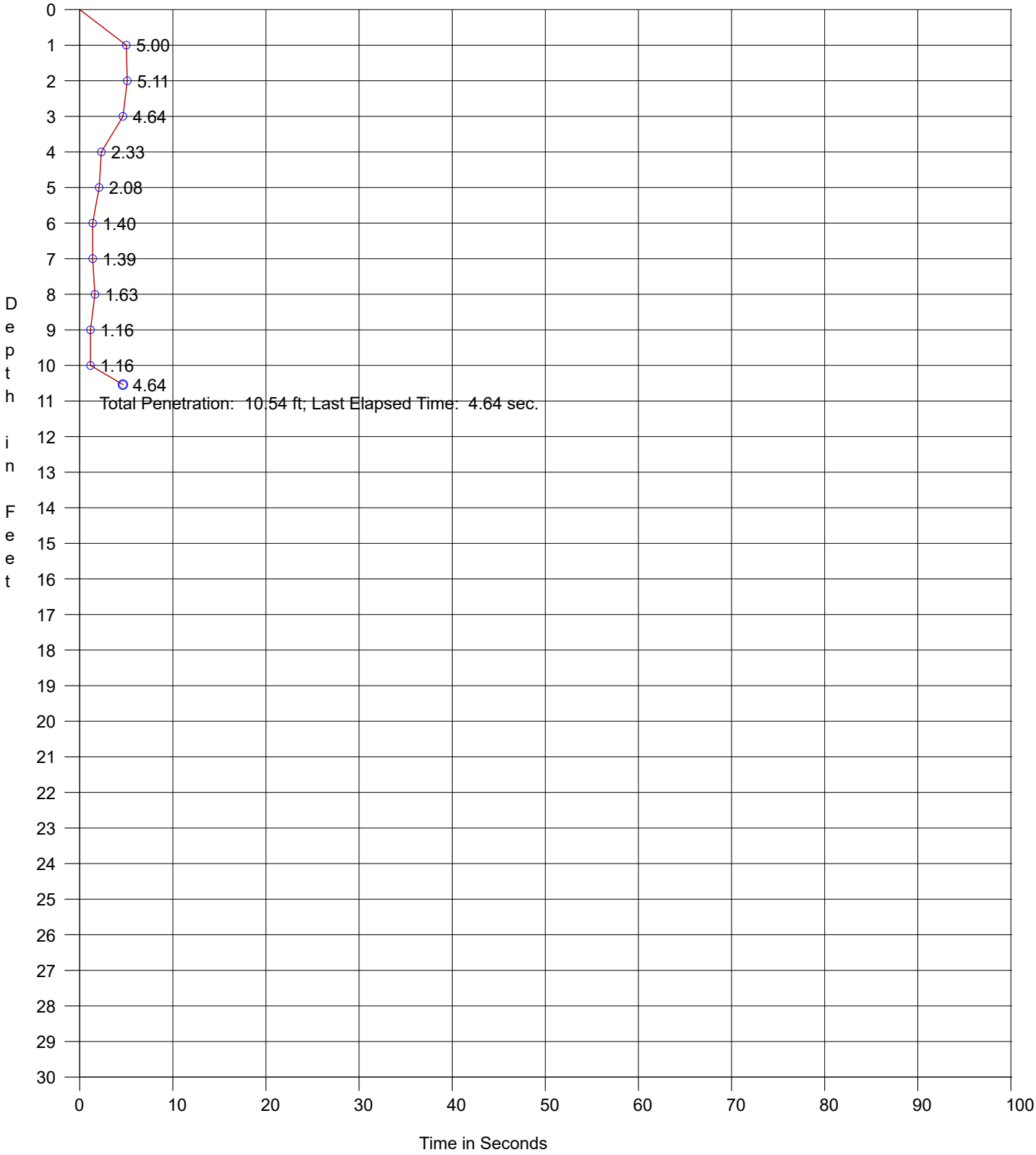
Penetration Graph for Core No. VC242, Run 1

Date: 23/10/2018
Start Time: 11:47:12
End Time: 11:47:56

Penetration: 10.54 ft
Recovery: 10.00 ft
W. D. Corrected: 17.6 ft
W. D. Raw: 23.235ft

Easting: 937406.83
Northing: 123827.25
Coord. System:
NYSP LI

Lat: 40°30'23.1424"N
Long: -074°10'06.4152"W
Datum: Mudline



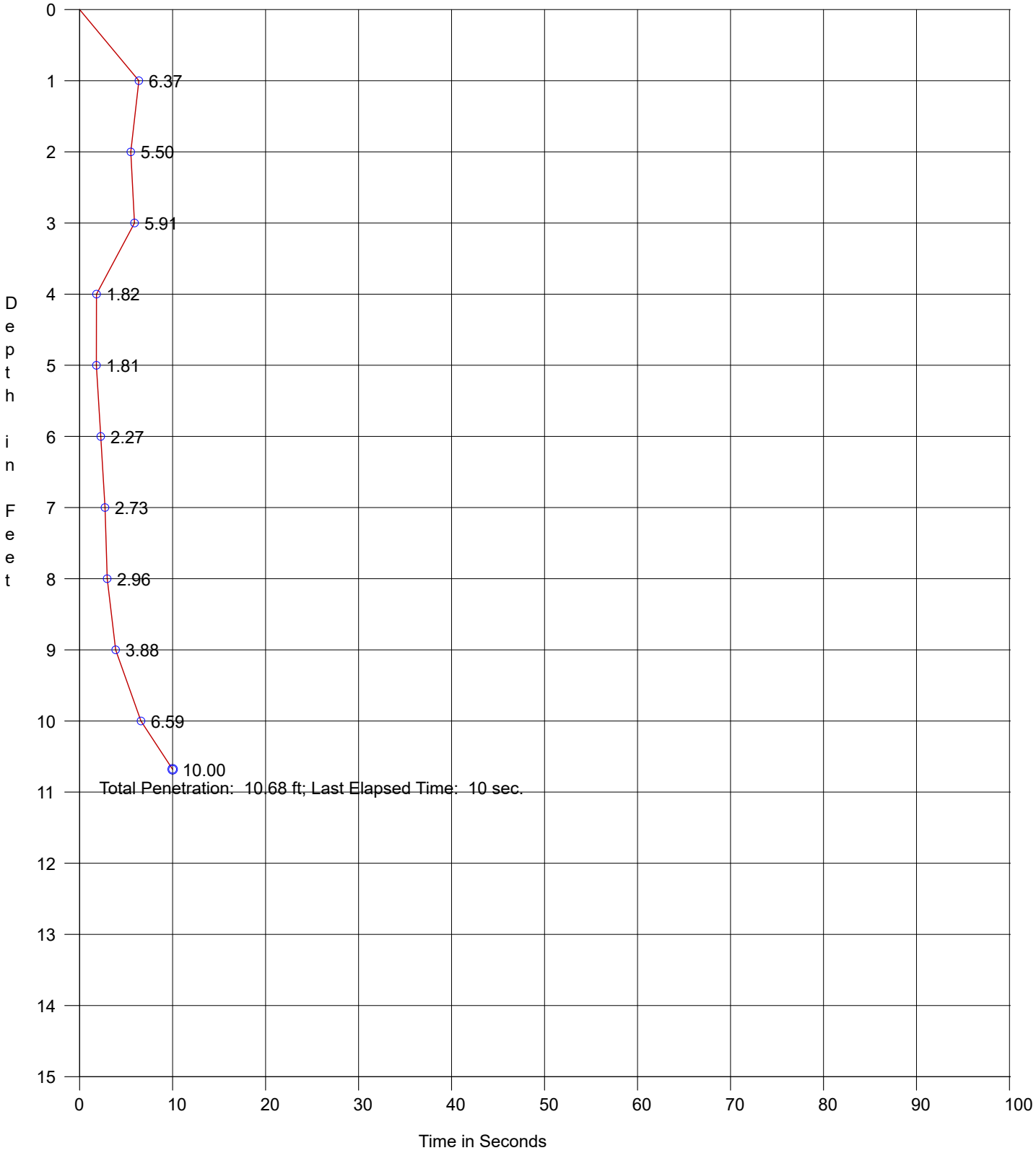
Penetration Graph for Core No. VC244, Run 3

Date: 26/10/2018
Start Time: 19:40:51
End Time: 19:41:51

Penetration: 10.68 ft
Recovery: 8.17 ft
W. D. Corrected: 21.3 ft
W. D. Raw: 21.335 ft

Easting: 970439.58
Northing: 131668.50
Coord. System:
NYSP LI

Lat: 40°31'41.0309"N
Long: -074°02'58.8426"W
Datum: Mudline



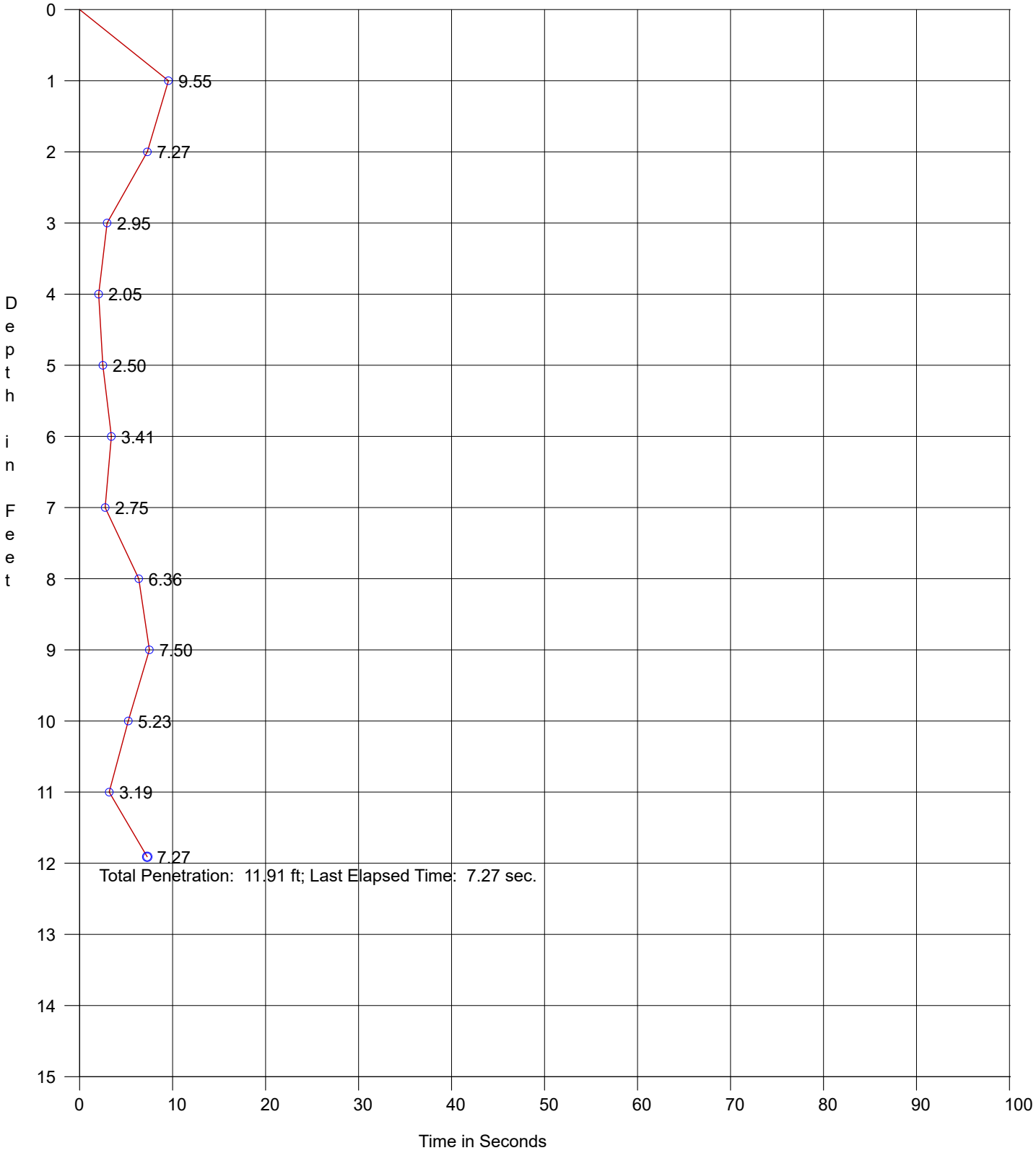
Penetration Graph for Core No. VC245, Run 3

Date: 26/10/2018
Start Time: 18:34:05
End Time: 18:35:05

Penetration: 11.91 ft
Recovery: 9.17 ft
W. D. Corrected: 21.9 ft
W. D. Raw: 22.935 ft

Easting: 971058.82
Northing: 131510.78
Coord. System:
NYSP LI

Lat: 40.527632
Long: -74.047451
Datum: Mudline



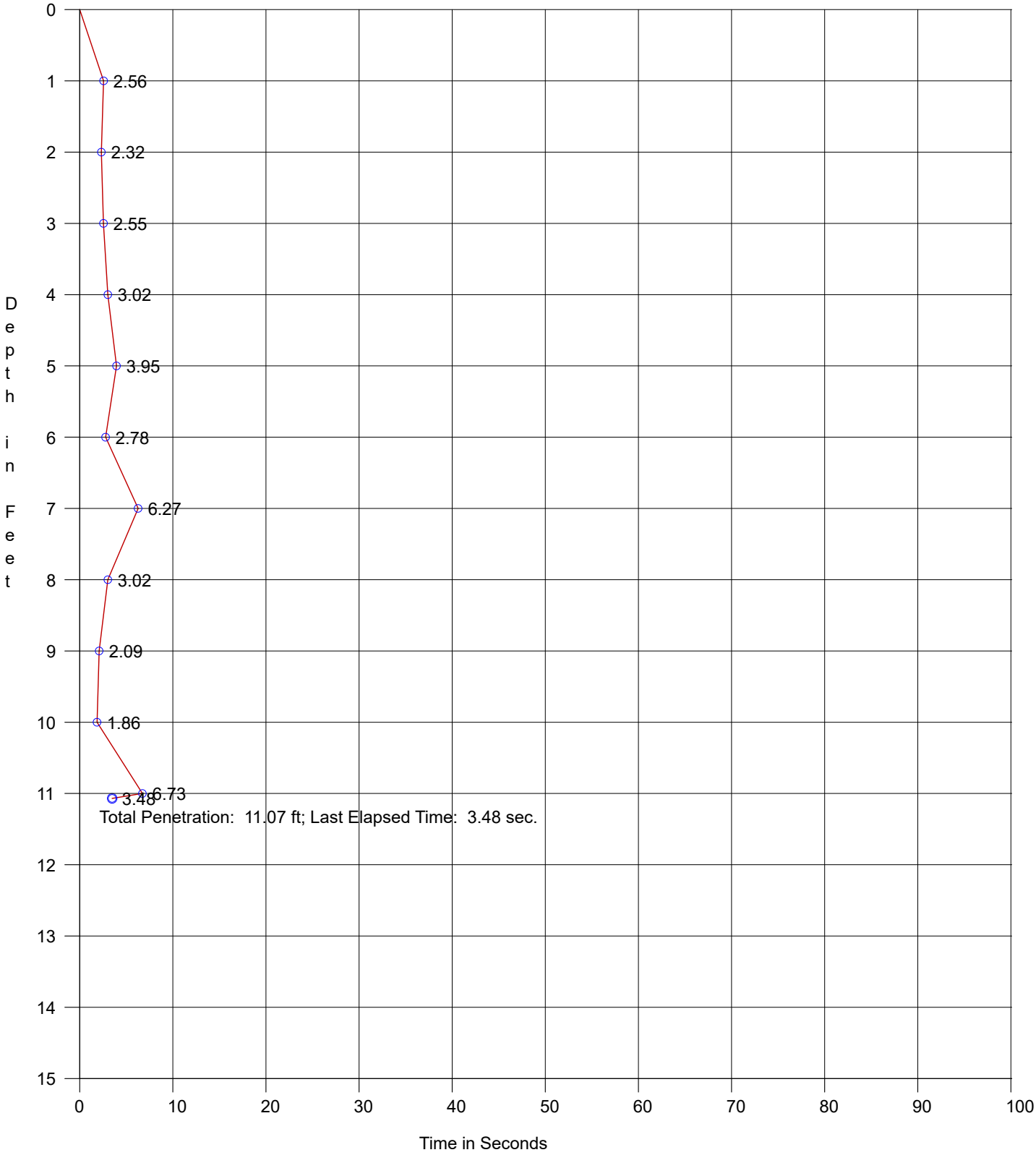
Penetration Graph for Core No. VC246, Run 1

Date: 26/10/2018
Start Time: 17:35:36
End Time: 17:36:16

Penetration: 11.07 ft
Recovery: 8.92 ft
W. D. Corrected: 22.7 ft
W. D. Raw: 24.735

Easting: 971503.46
Northing: 131395.93
Coord. System:
NYSP LI

Lat: 40°31'38.3432"N
Long:-074°02'45.0637"W
Datum: Mudline



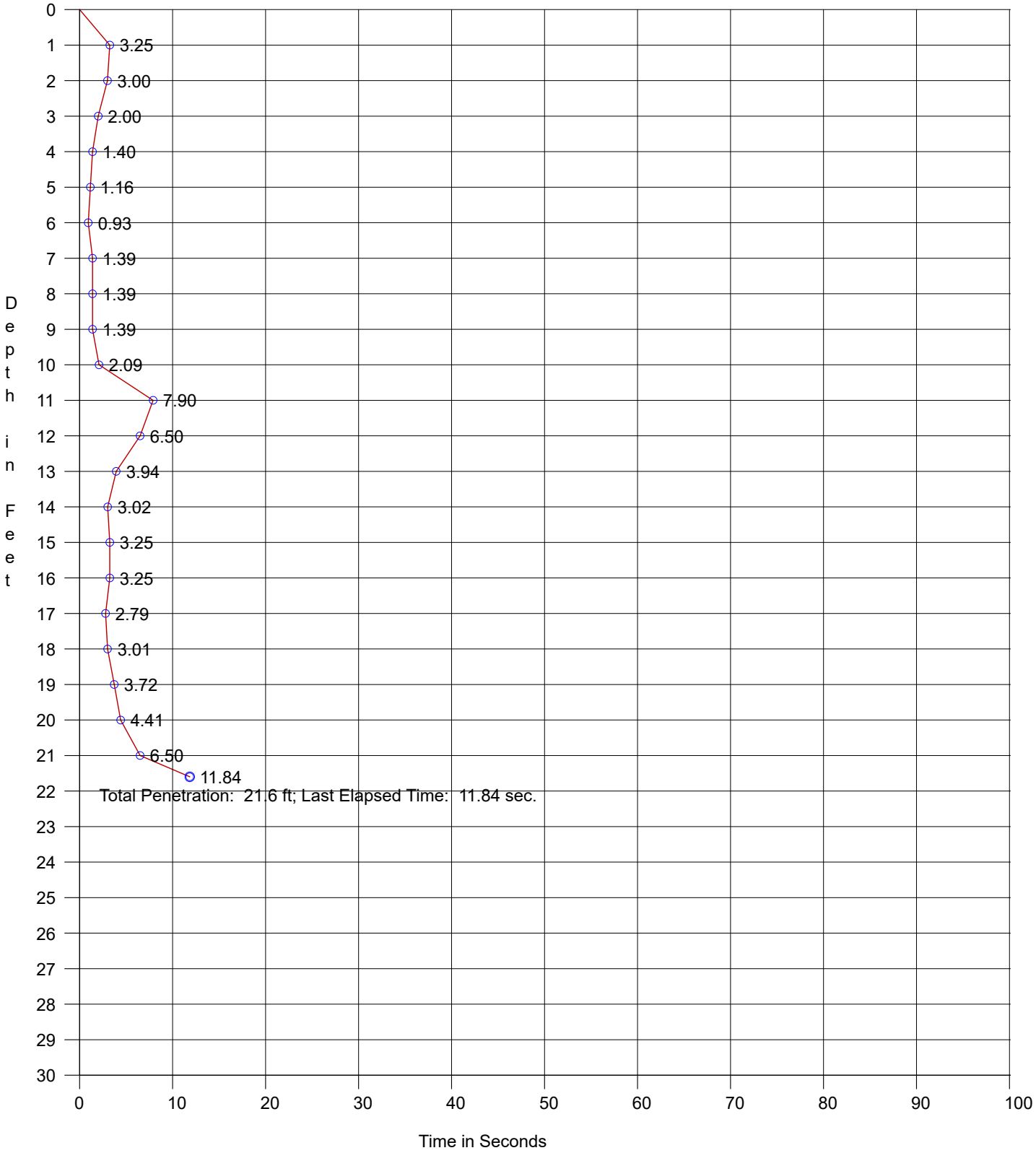
Penetration Graph for Core No. VC247, Run 1

Date: 23/10/2018
Start Time: 15:17:24
End Time: 15:21:30

Penetration: 21.60 ft
Recovery: 18.00 ft
W. D. Corrected: 24.6 ft
W. D. Raw: 27.135

Easting: 972037.82
Northing: 131266.38
Coord. System:
NYSP LI

Lat: 40°31'37.0658"N
Long: -074°02'38.1431"W
Datum: Mudline



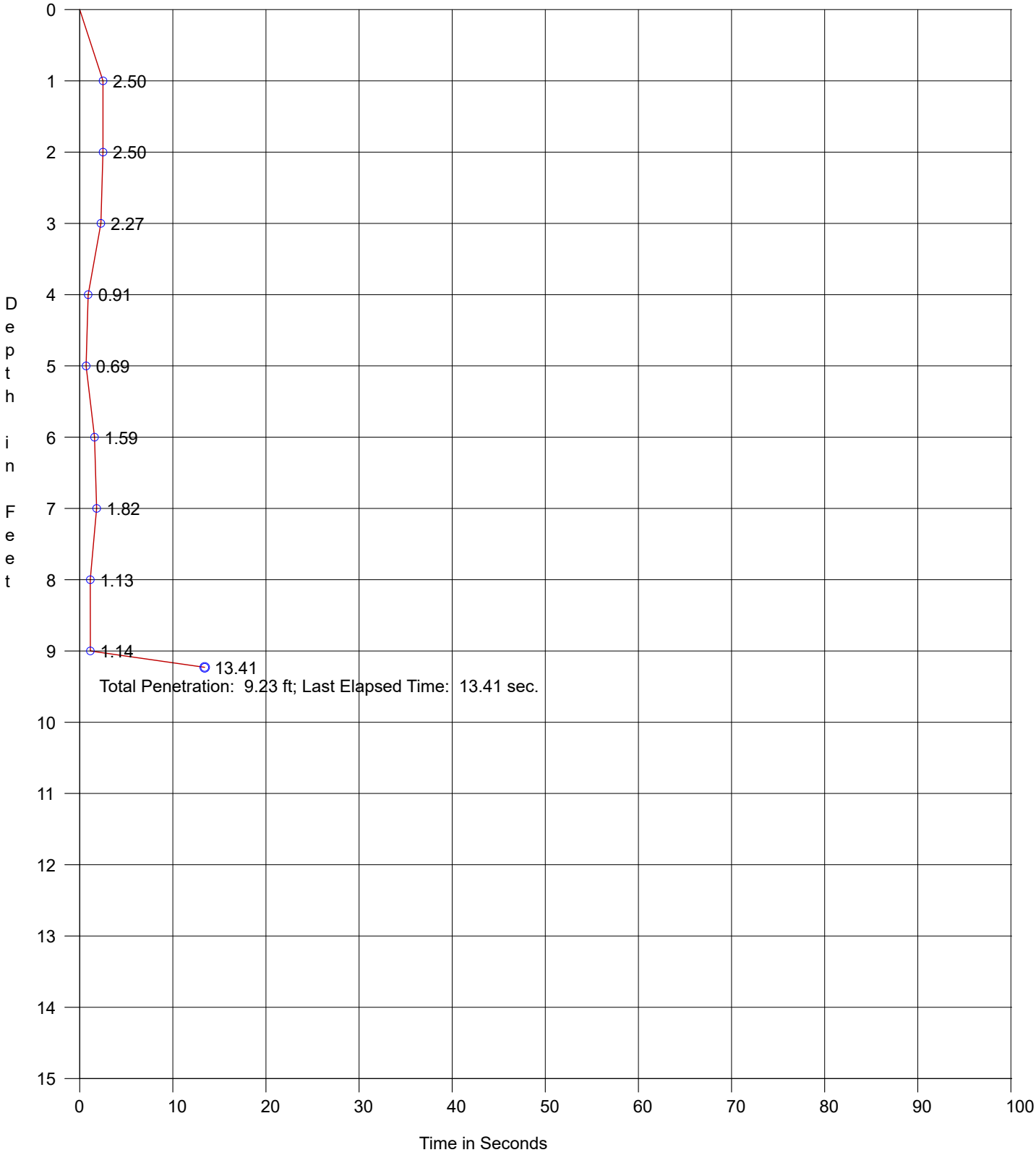
Penetration Graph for Core No. VC251, Run 1

Date: 23/10/2018
Start Time: 18:57:56
End Time: 18:59:40

Penetration: 9.23 ft
Recovery: 7.25 ft
W. D. Corrected: 18.2 ft
W. D. Raw: 19.235 ft

Easting: 974446.59
Northing: 130671.43
Coord. System:
NYSP LI

Lat: 40°31'31.1976"
Long: -072°47'54.5599"
Datum: Mudline



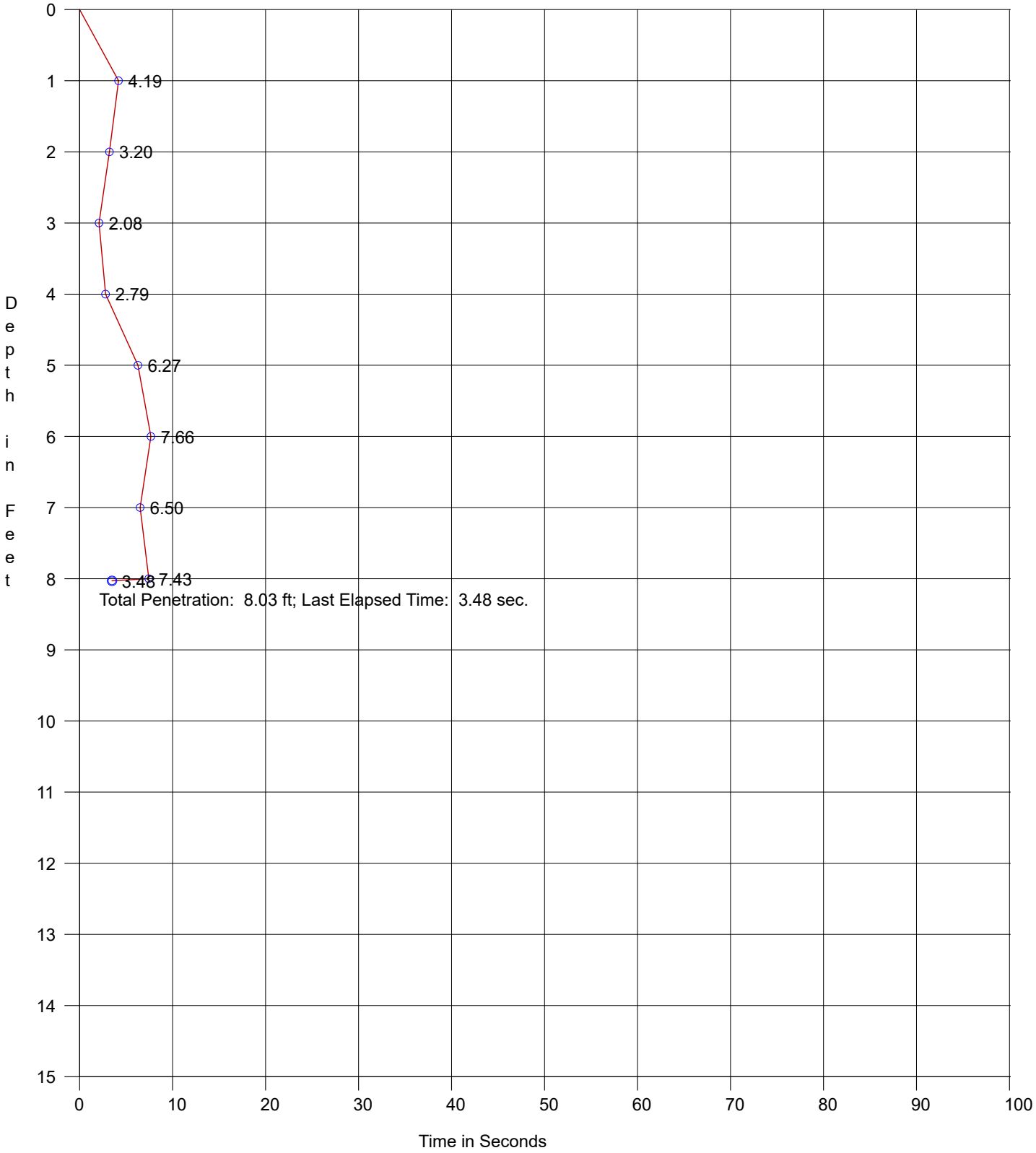
Penetration Graph for Core No. VC252, Run 1

Date: 26/10/2018
Start Time: 17:06:56
End Time: 17:07:54

Penetration: 8.03 ft
Recovery: 7.08 ft
W. D. Corrected: 16.5 ft
W. D. Raw: 19.035 ft

Easting: 975122.45
Northing: 130457.40
Coord. System:
NYSP LI

Lat: 40°31'29.0854"N
Long: -074°01'58.1944"W
Datum: Mudline



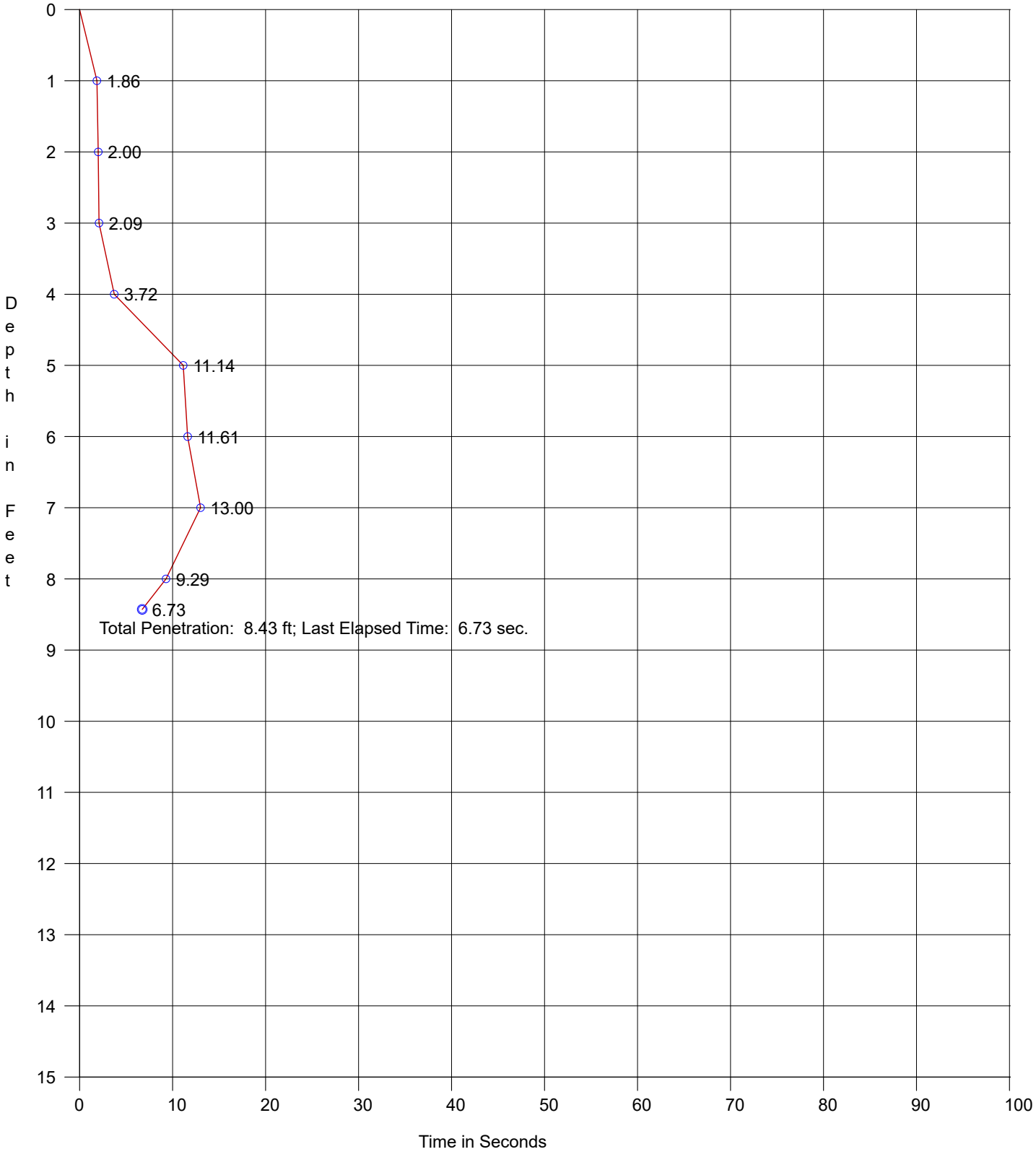
Penetration Graph for Core No. VC253, Run 1

Date: 26/10/2018
Start Time: 16:42:30
End Time: 16:44:01

Penetration: 8.43 ft
Recovery: 8.00 ft
W. D. Corrected: 16.7 ft
W. D. Raw: 19.735 ft

Easting: 975756.87
Northing: 130189.89
Coord. System:
NYSP LI

Lat: 40°31'26.4443"N
Long: -074°01'49.9779"W
Datum: Mudline



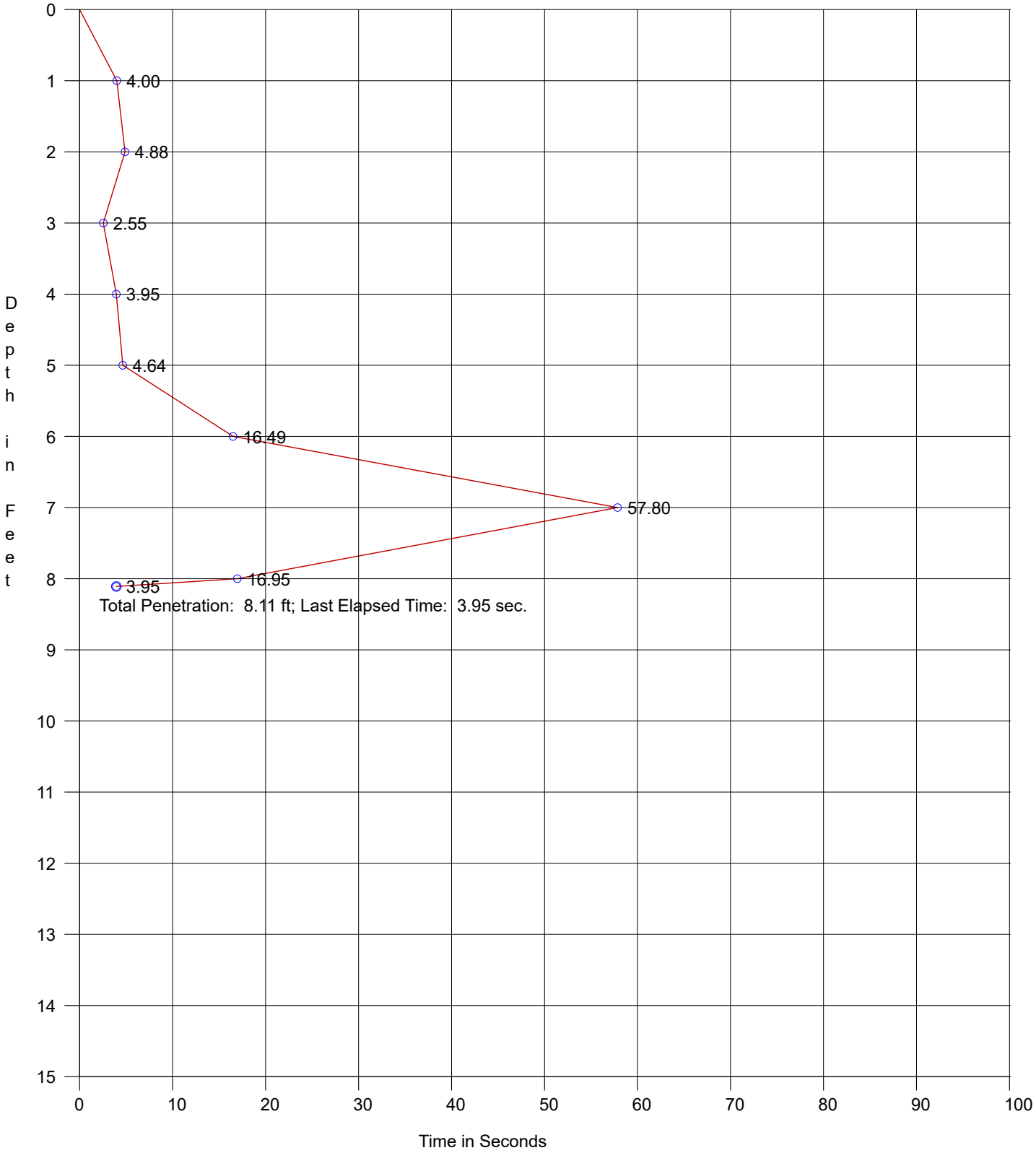
Penetration Graph for Core No. VC255, Run 1

Date: 26/10/2018
Start Time: 12:56:36
End Time: 12:58:46

Penetration: 8.11 ft
Recovery: 6.42 ft
W. D. Corrected: 32.9 ft
W. D. Raw: 38.935 ft

Easting: 1013100.55
Northing: 130432.14
Coord. System: NYSP LI

Lat: 40°31'28.6838"N
Long: -073°53'46.4094"W
Datum: Mudline



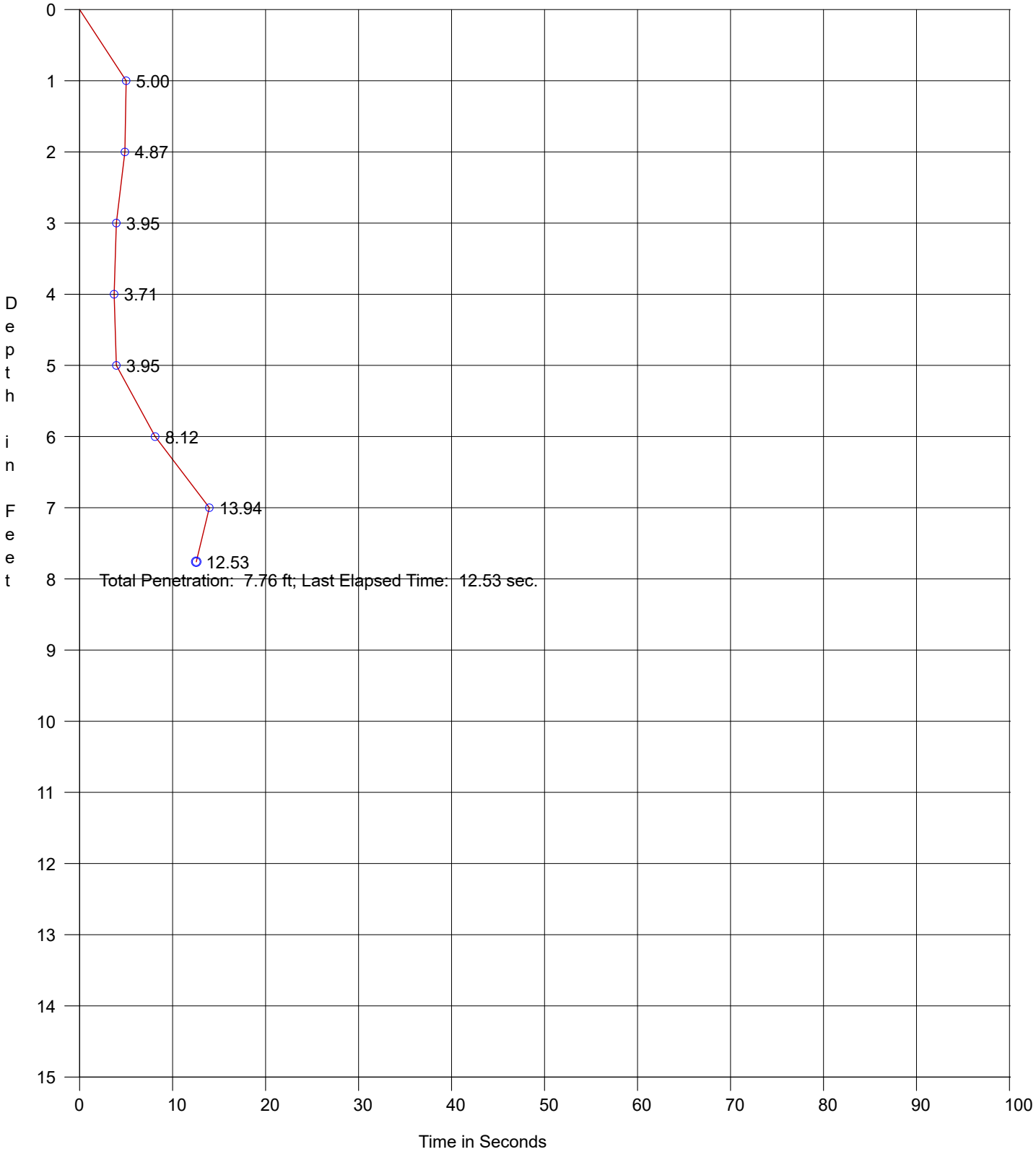
Penetration Graph for Core No. VC256, Run 1

Date: 26/10/2018
Start Time: 12:33:44
End Time: 12:34:55

Penetration: 7.76 ft
Recovery: 6.17 ft
W. D. Corrected: 33.7 ft
W. D. Raw: 39.535 ft

Easting: 1014065.56
Northing: 130795.63
Coord. System: NYSP LI

Lat: 40°31'32.2641"N
Long: -073°53'33.9075"W
Datum: Mudline



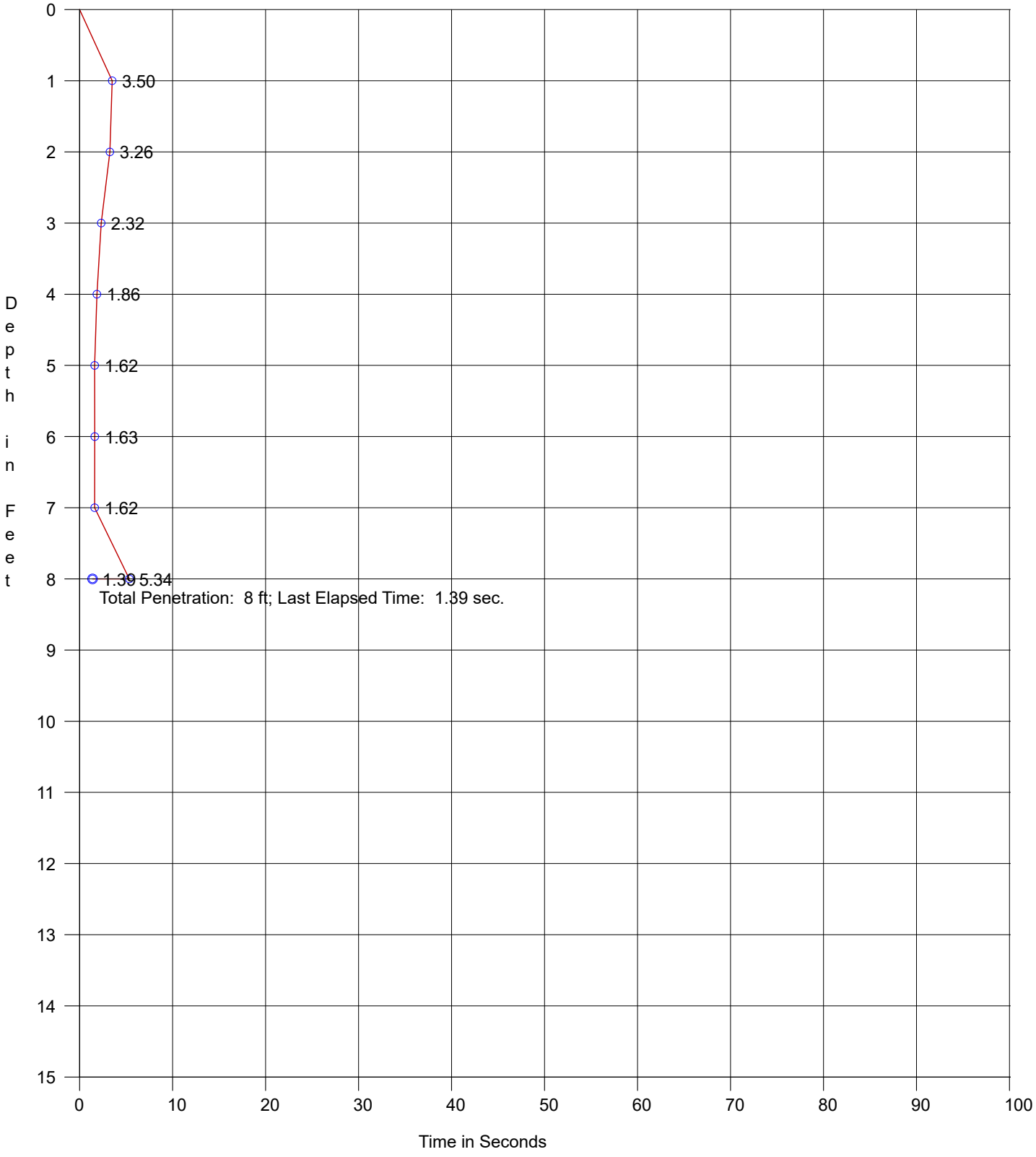
Penetration Graph for Core No. VC301R, Run 2

Date: 30/10/2018
Start Time: 16:55:02
End Time: 16:55:43

Penetration: 8.00 ft
Recovery: 7.50 ft
W. D. Corrected: 9.1 ft
W. D. Raw: 14.835 ft

Easting: 914794.17
Northing: 111025.04
Coord. System: NYSP LI

Lat: 40°28'16.1063"N
Long: -074°14'58.6771"W
Datum: Mudline



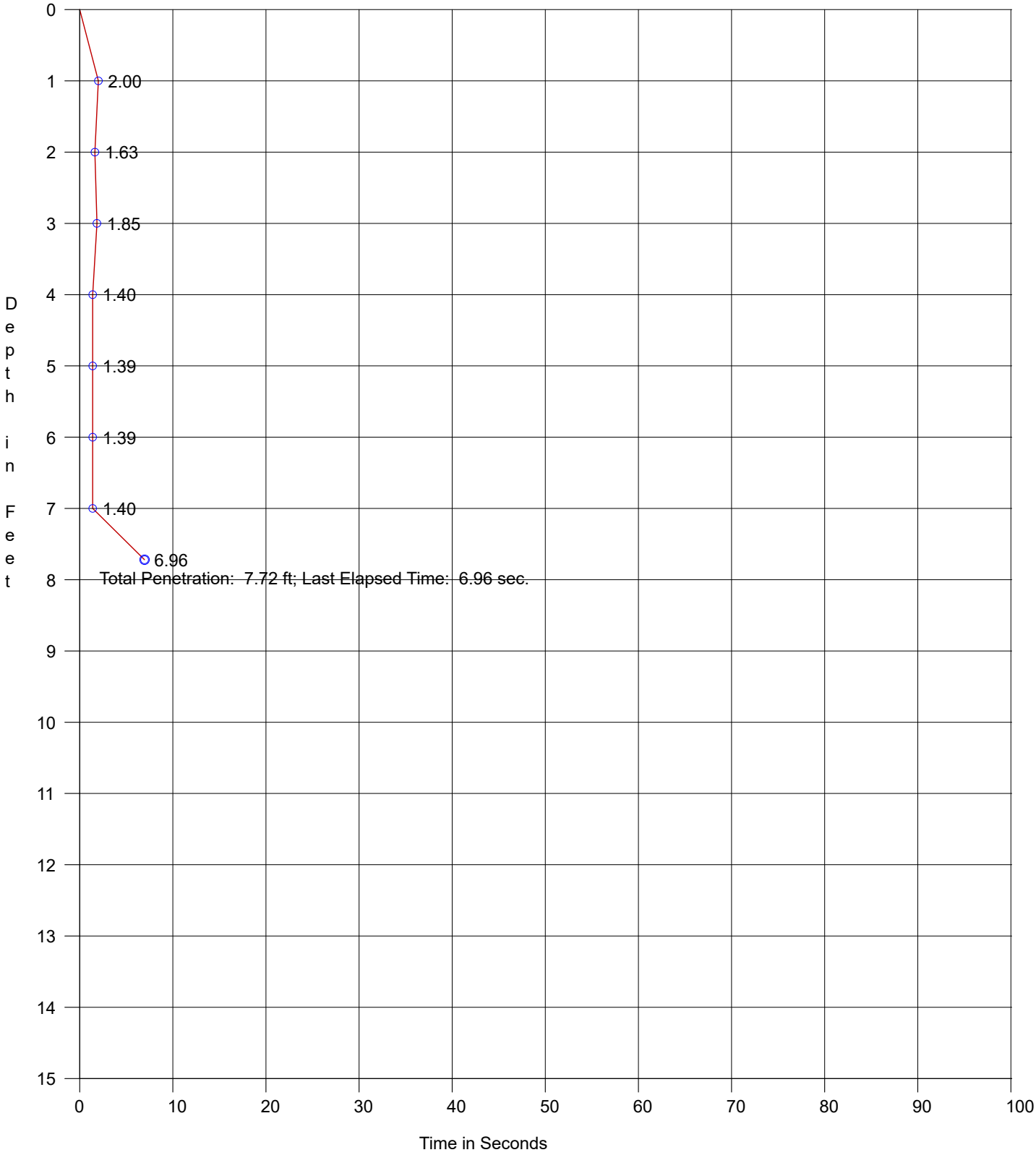
Penetration Graph for Core No. VC303, Run 1

Date: 31/10/2018
Start Time: 16:16:19
End Time: 16:16:54

Penetration: 7.72 ft
Recovery: 7.42 ft
W. D. Corrected: 10.3 ft
W. D. Raw: 15.335 ft

Easting: 915637.70
Northing: 111518.36
Coord. System: NYSP LI

Lat: 40°28'21.0046"N
Long: -074°14'47.7808"W
Datum: Mudline



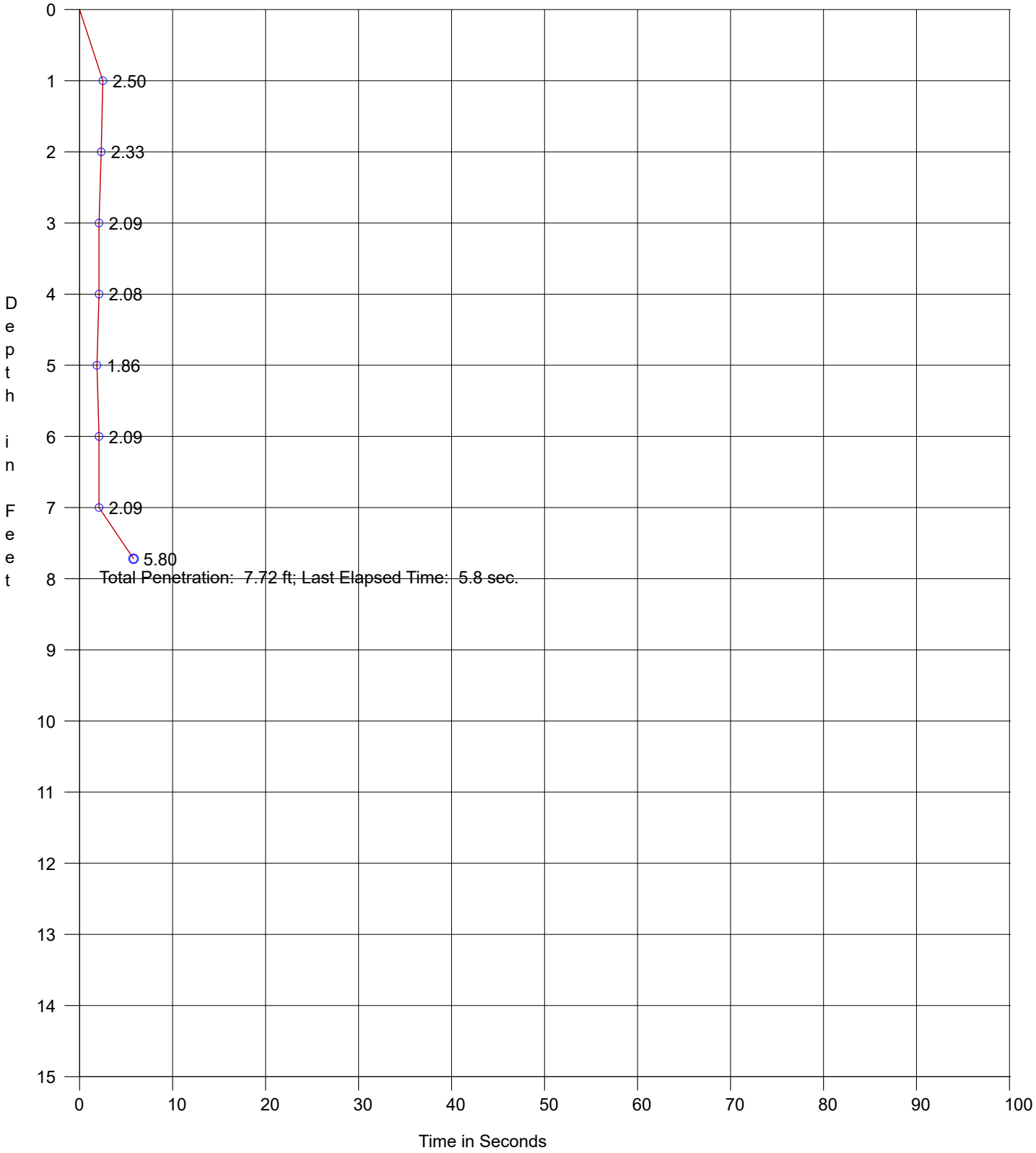
Penetration Graph for Core No. VC304, Run 1

Date: 29/10/2018
Start Time: 14:54:42
End Time: 14:55:25

Penetration: 7.72 ft
Recovery: 7.67 ft
W. D. Corrected: 9.41 ft
W. D. Raw: 15.235 m

Easting: 916484.28
Northing: 112001.78
Coord. System:
NYSP LI

Lat: 40°28'25.8048"N
Long: -074°14'36.8443"W
Datum: Mudline



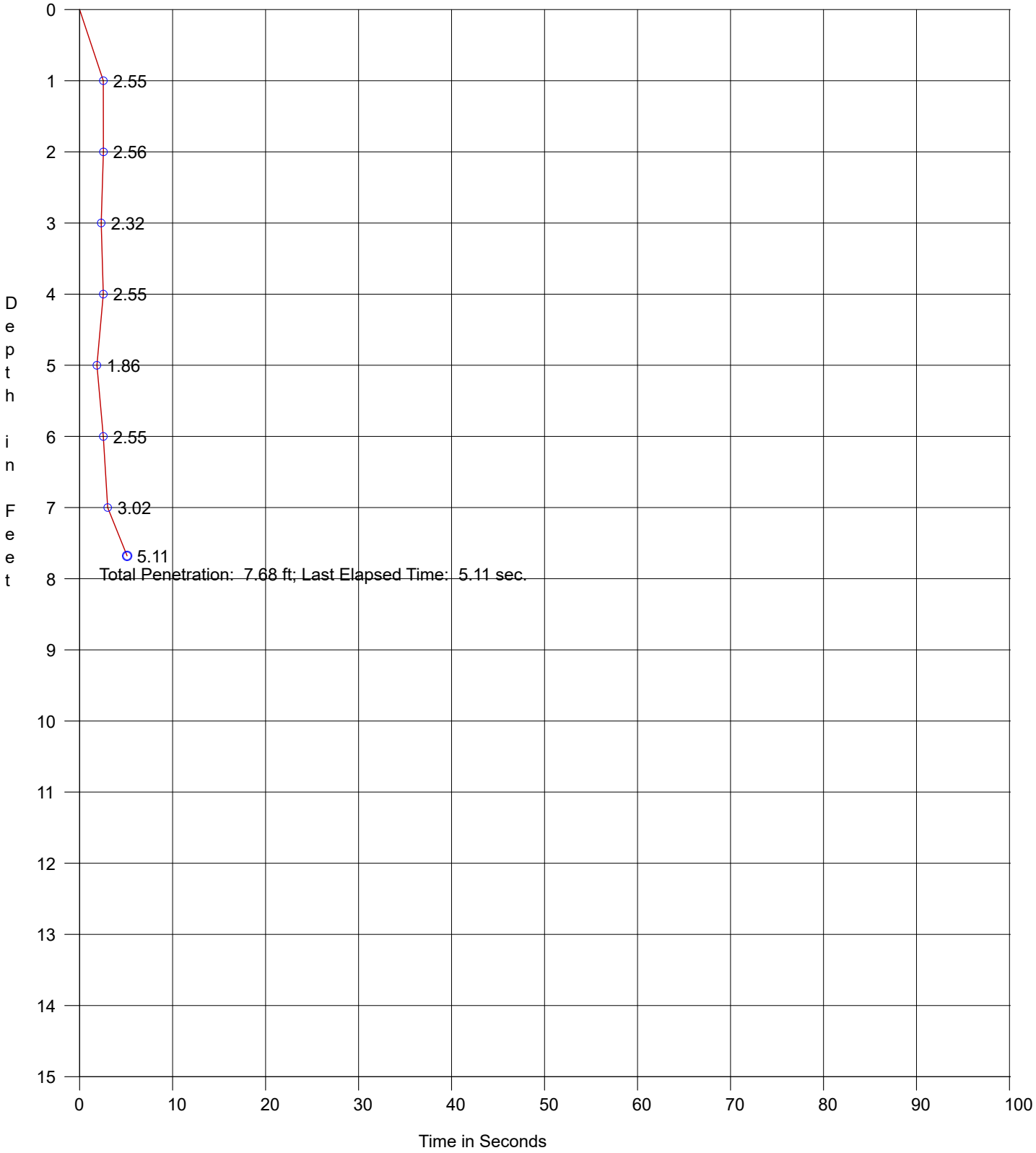
Penetration Graph for Core No. VC307, Run 1

Date: 26/10/2018
Start Time: 17:14:15
End Time: 17:15:00

Penetration: 7.68 ft
Recovery: 7.08 ft
W. D. Corrected: 14.7 ft
W. D. Raw: 19.235 ft

Easting: 924958.82
Northing: 116830.21
Coord. System:
NYSP LI

Lat: 40°29'13.7346"N
Long: -074°12'47.3417"W
Datum: Mudline



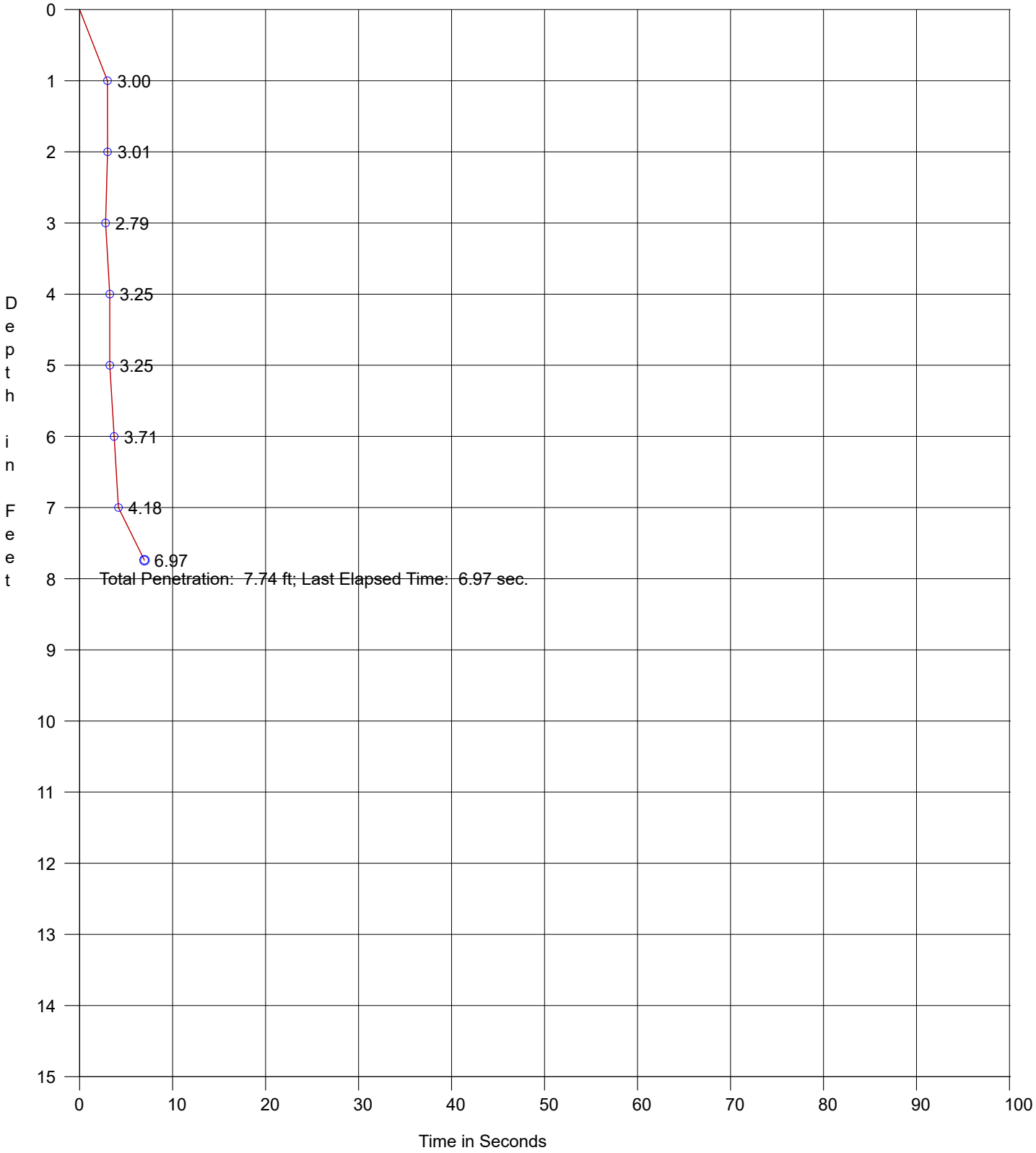
Penetration Graph for Core No. VC308, Run 1

Date: 26/10/2018
Start Time: 16:55:36
End Time: 16:56:30

Penetration: 7.74 ft
Recovery: 7.92 ft
W. D. Corrected: 14.4 ft
W. D. Raw: 19.435 ft

Easting: 925726.37
Northing: 117267.82
Coord. System:
NYSP LI

Lat: 40°29'18.0770"N
Long: -074°12'37.4218"W
Datum: Mudline



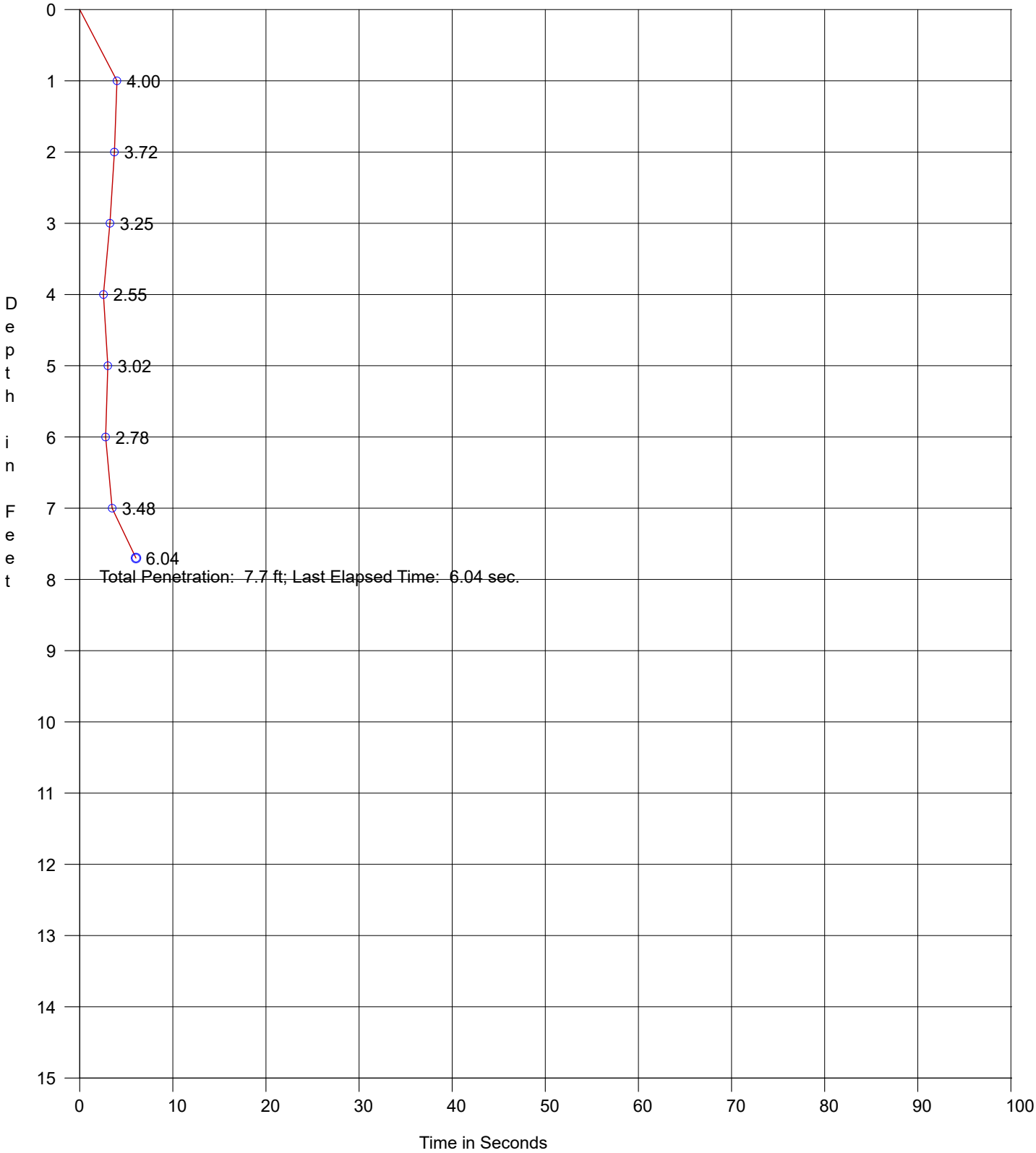
Penetration Graph for Core No. VC309, Run 1

Date: 26/10/2018
Start Time: 16:38:03
End Time: 16:38:53

Penetration: 7.70 ft
Recovery: 7.58 ft
W. D. Corrected: 13.6 ft
W. D. Raw: 19.435 ft

Easting: 926497.83
Northing: 117705.54
Coord. System:
NYSP LI

Lat: 40°29'22.4204"N
Long: -074°12'27.4509"W
Datum: Mudline



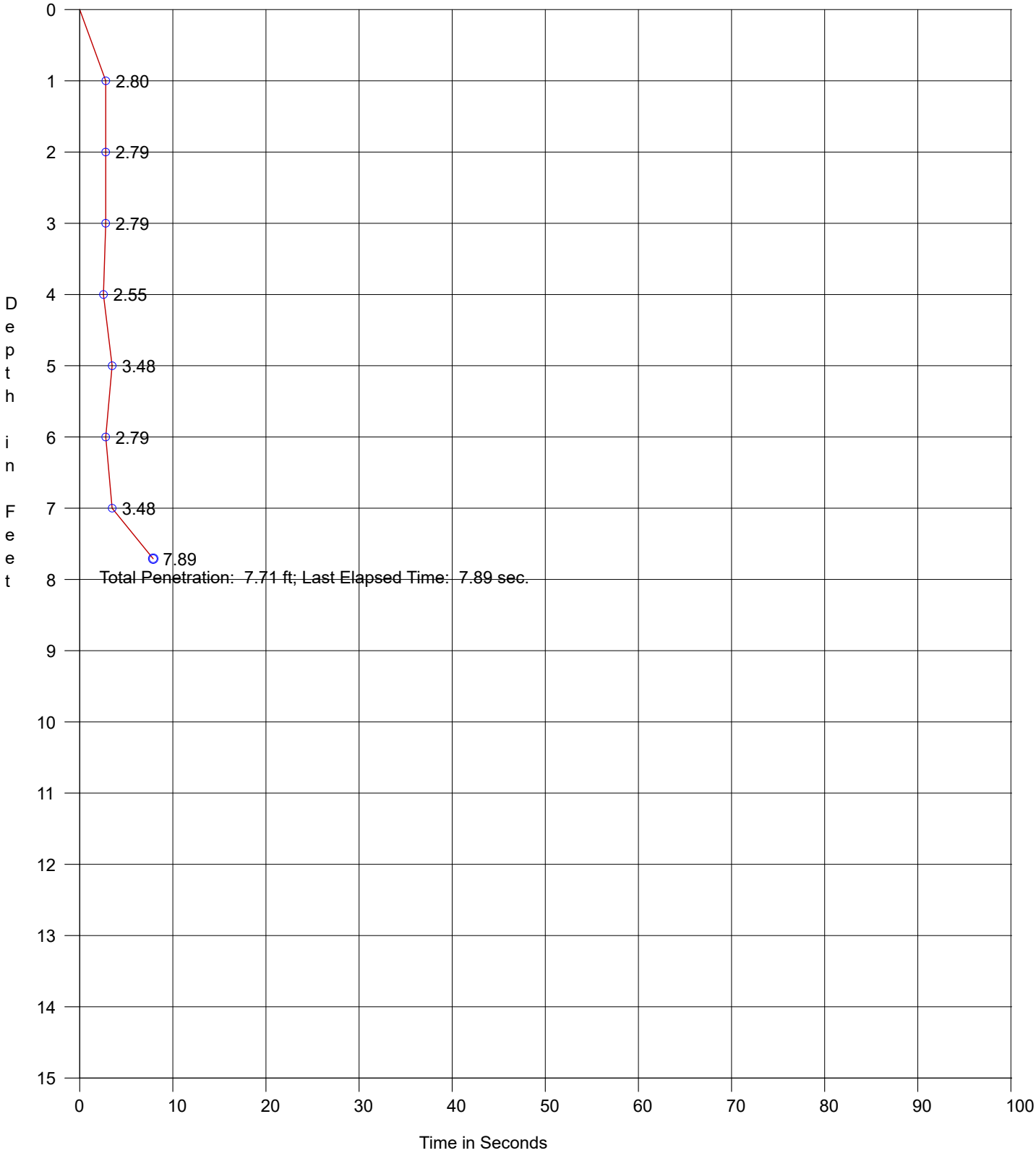
Penetration Graph for Core No. VC310, Run 1

Date: 26/10/2018
Start Time: 15:13:54
End Time: 15:14:44

Penetration: 7.71 ft
Recovery: 7.42 ft
W. D. Corrected: 11.6 ft
W. D. Raw: 17.635 ft

Easting: 927913.18
Northing: 118511.40
Coord. System: NYSP LI

Lat: 40°29'30.4161"N
Long: -074°12'09.1571"W
Datum: Mudline



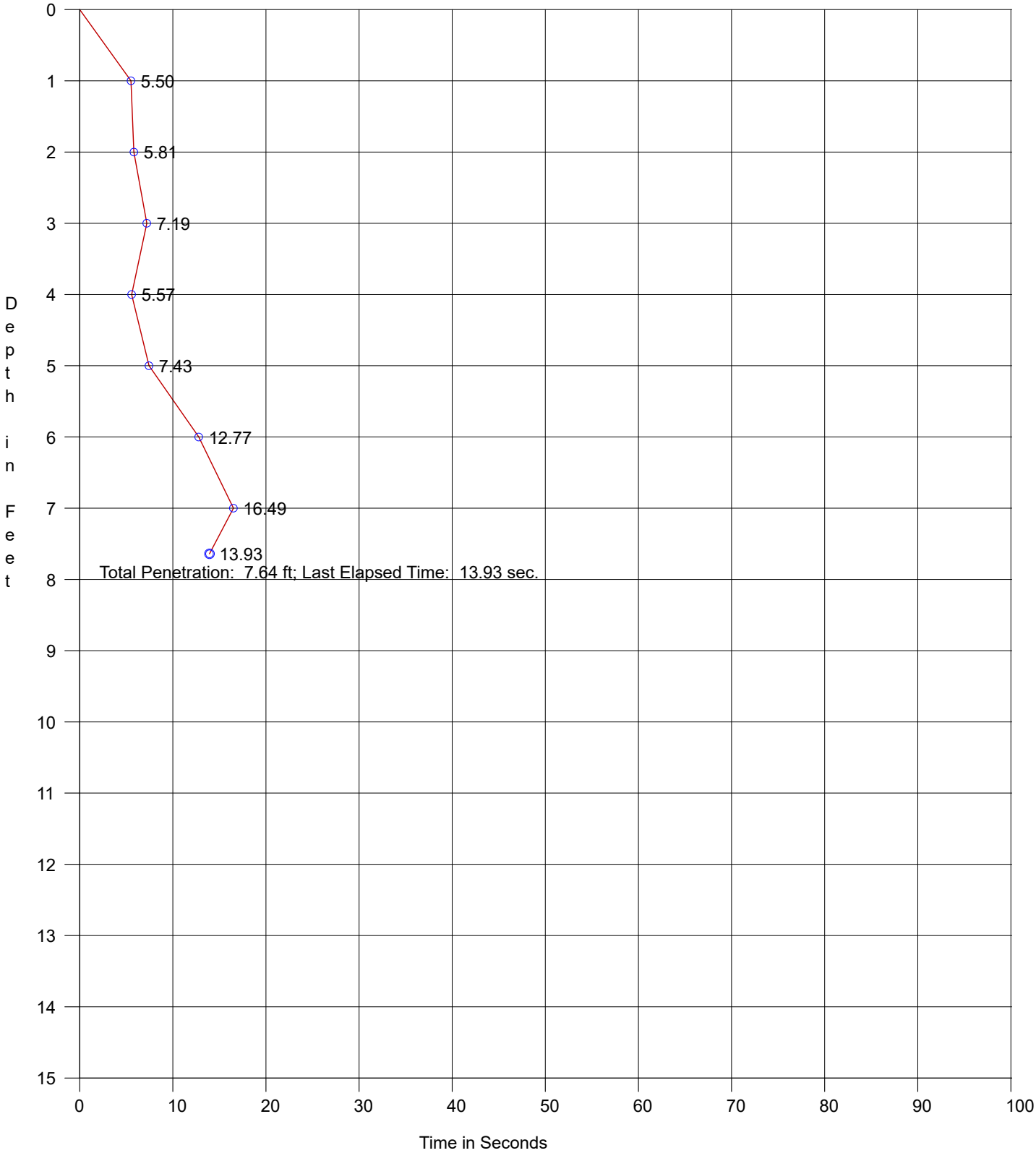
Penetration Graph for Core No. VC311, Run 1

Date: 26/10/2018
Start Time: 14:50:26
End Time: 14:52:02

Penetration: 7.64 ft
Recovery: 7.50 ft
W. D. Corrected: 9.6 ft
W. D. Raw: 15.635 ft

Easting: 928697.75
Northing: 118960.99
Coord. System:
NYSP LI

Lat: 40°29'34.8765"N
Long: -074°
11'59.0159"W
Datum: Mudline



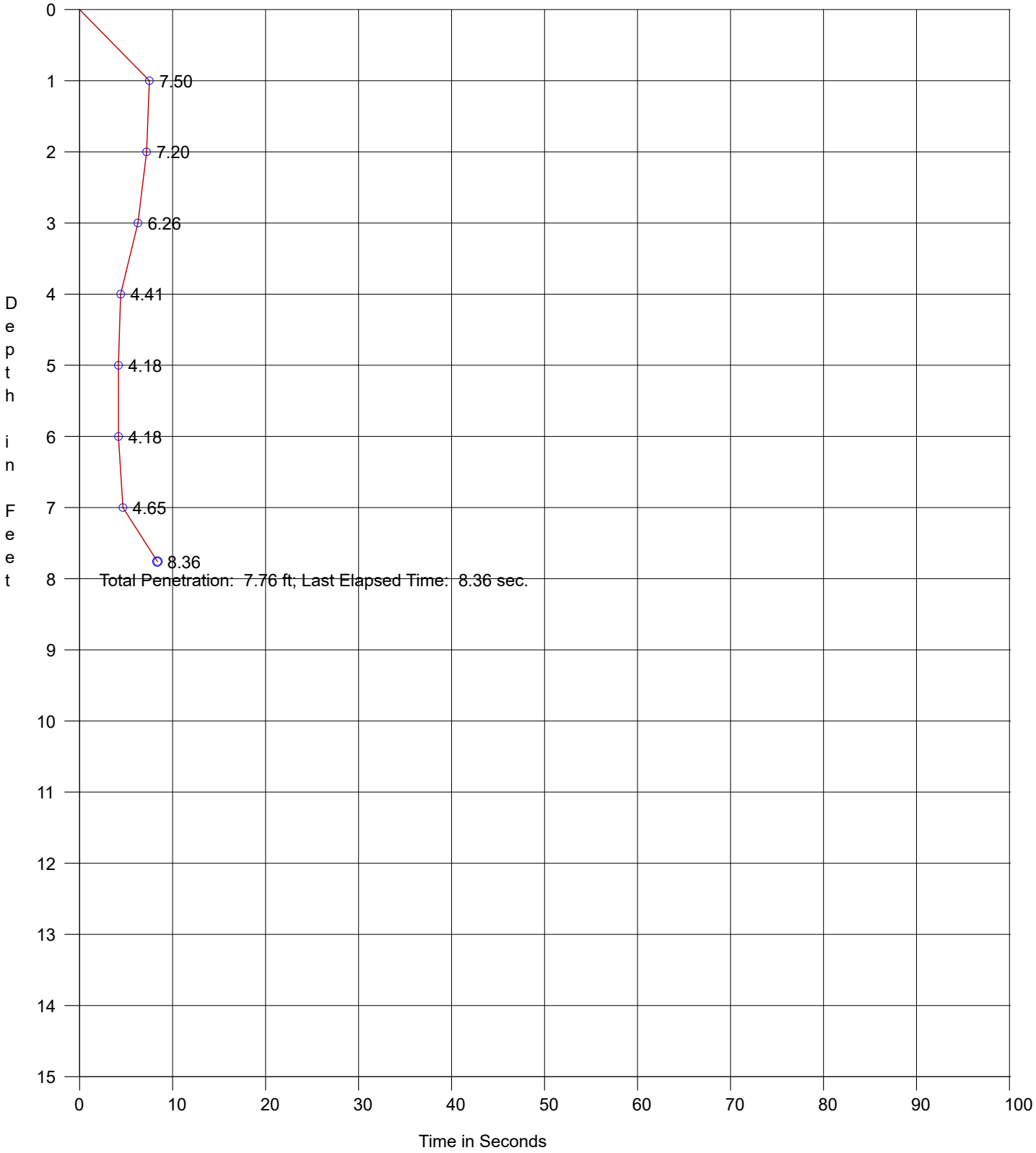
Penetration Graph for Core No. VC312, Run 1

Date: 26/10/2018
Start Time: 14:30:31
End Time: 14:31:39

Penetration: 7.76 ft
Recovery: 6.00 ft
W. D. Corrected: 10.7 ft
W. D. Raw: 16.735 ft

Easting: 929512.76
Northing: 119485.20
Coord. System:
NYSP LI

Lat: 40.494465
Long: -74.196801
Datum: Mudline



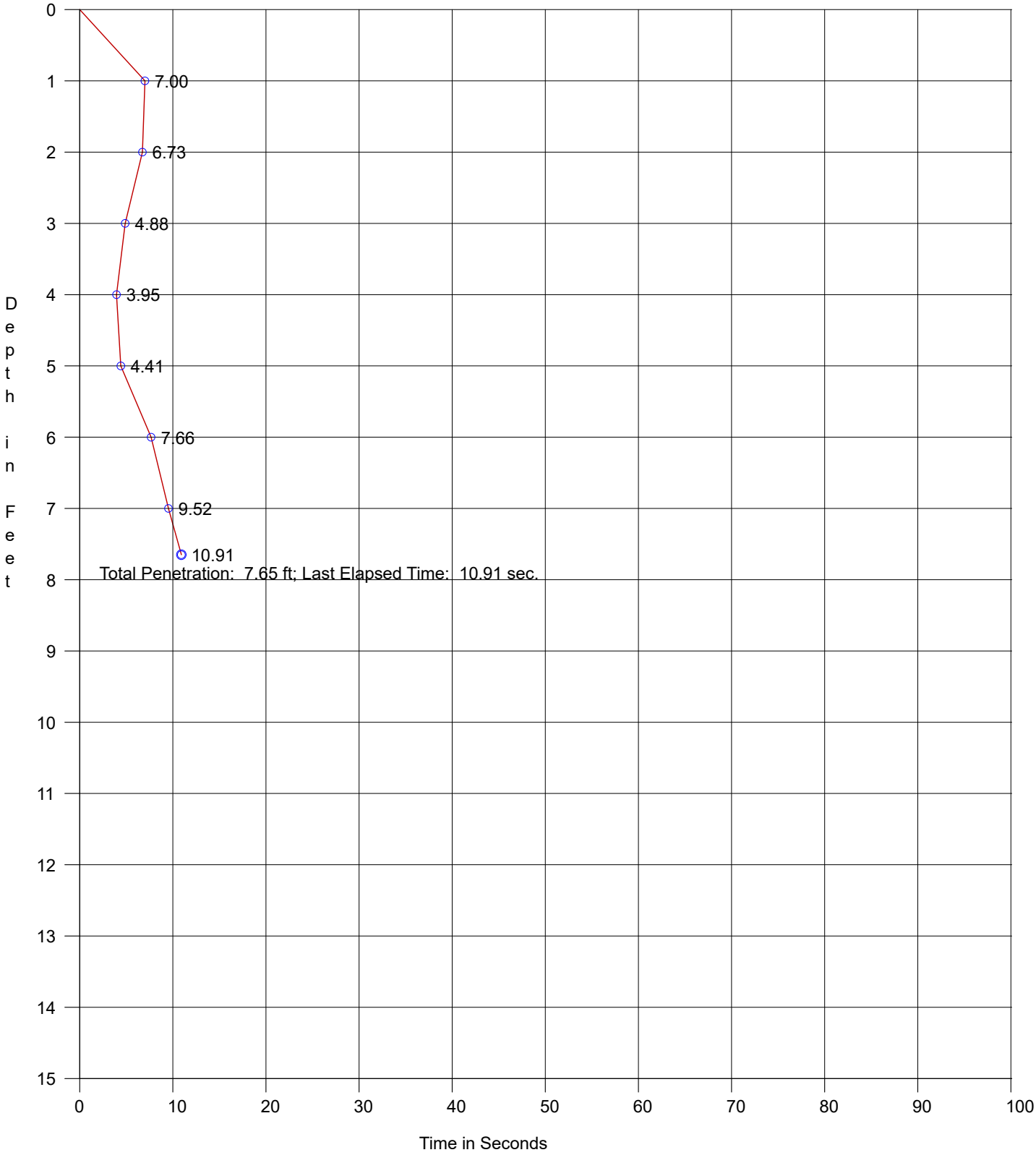
Penetration Graph for Core No. VC313, Run 1

Date: 26/10/2018
Start Time: 14:07:50
End Time: 14:09:02

Penetration: 7.65 ft
Recovery: 6.08 ft
W. D. Corrected: 13.2 ft
W. D. Raw: 19.135 ft

Easting: 930256.23
Northing: 119847.47
Coord. System:
NYSP LI

Lat: 40°29'43.6707"N
Long:-074°11'38.8699"W
Datum: Mudline



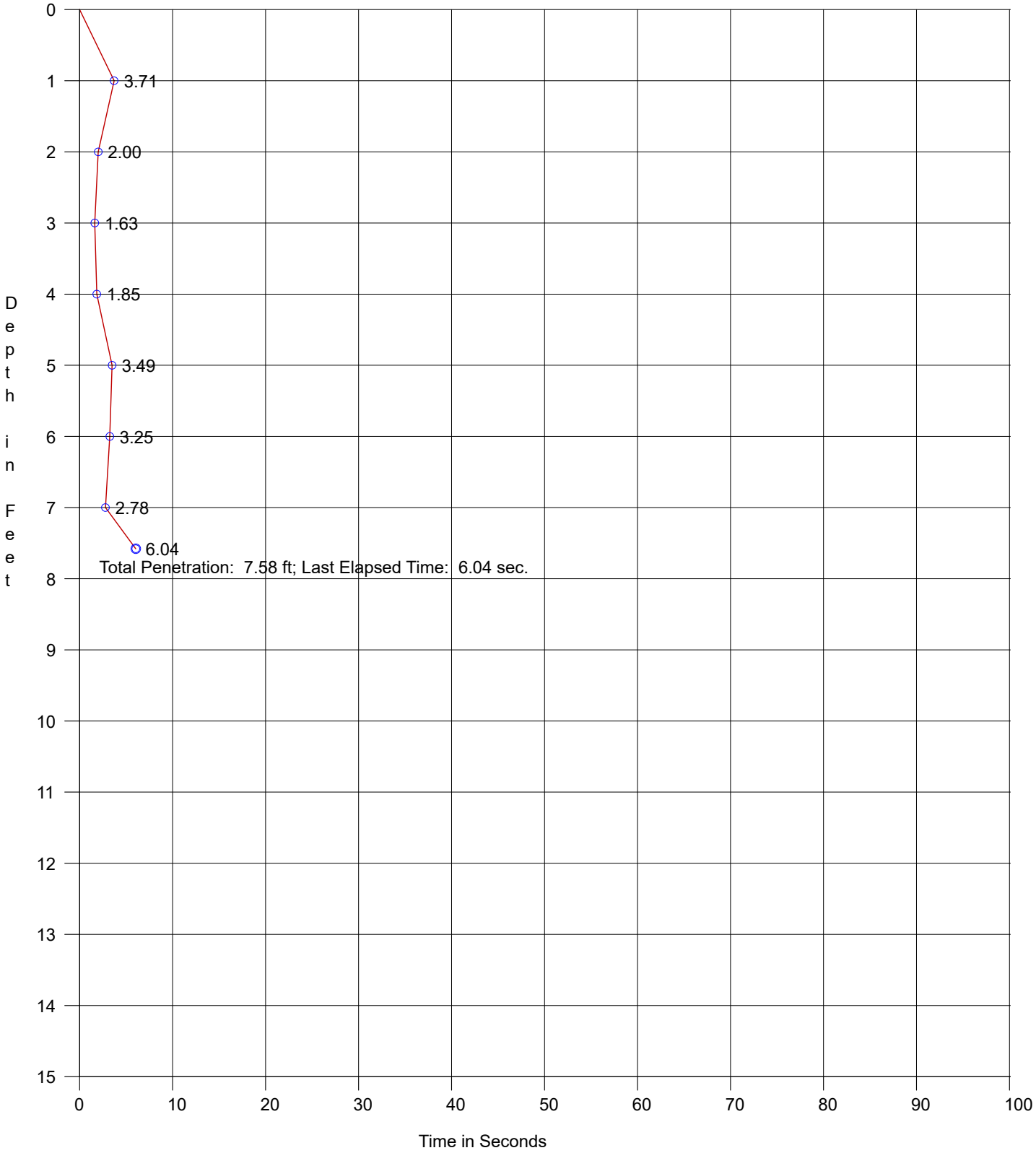
Penetration Graph for Core No. VC314, Run 2

Date: 26/10/2018
Start Time: 13:36:50
End Time: 13:37:36

Penetration: 7.58 ft
Recovery: 5.33 ft
W. D. Corrected: 14.9 ft
W. D. Raw: 20.135 ft

Easting: 931036.21
Northing: 120303.90
Coord. System:
NYSP LI

Lat: 40°29'48.1978"N
Long:-074°11'28.7871"W
Datum: Mudline



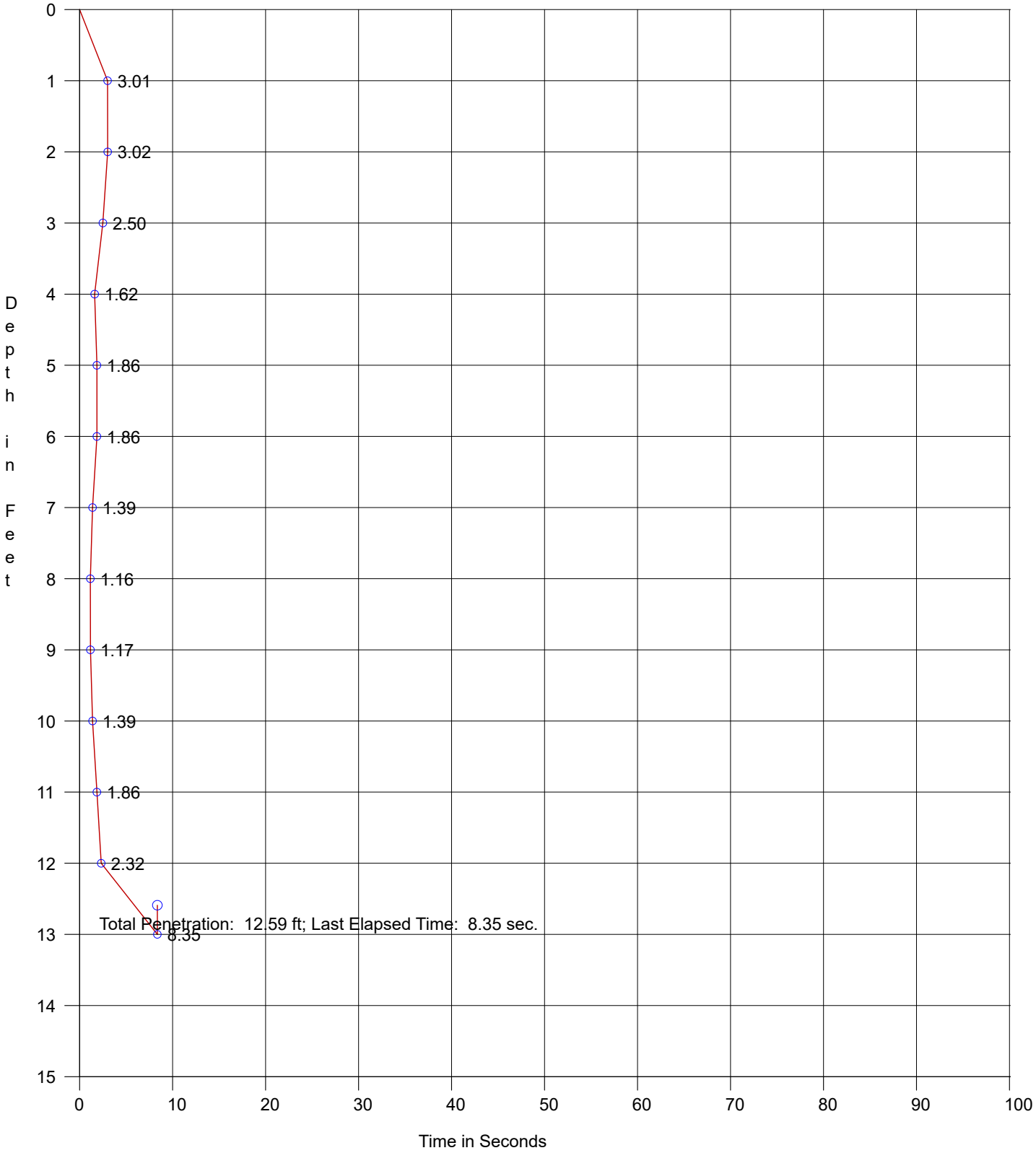
Penetration Graph for Core No. VC315, Run 2

Date: 29/10/2018
Start Time: 17:45:34
End Time: 17:46:35

Penetration: 12.59 ft
Recovery: 9.83 ft
W. D. Corrected: 20.7 ft
W. D. Raw: 25.535 ft

Easting: 968210.72
Northing: 132031.94
Coord. System:
NYSP LI

Lat: 40°31'44.6086"N
Long: -074°03'27.7091"W
Datum: Mudline



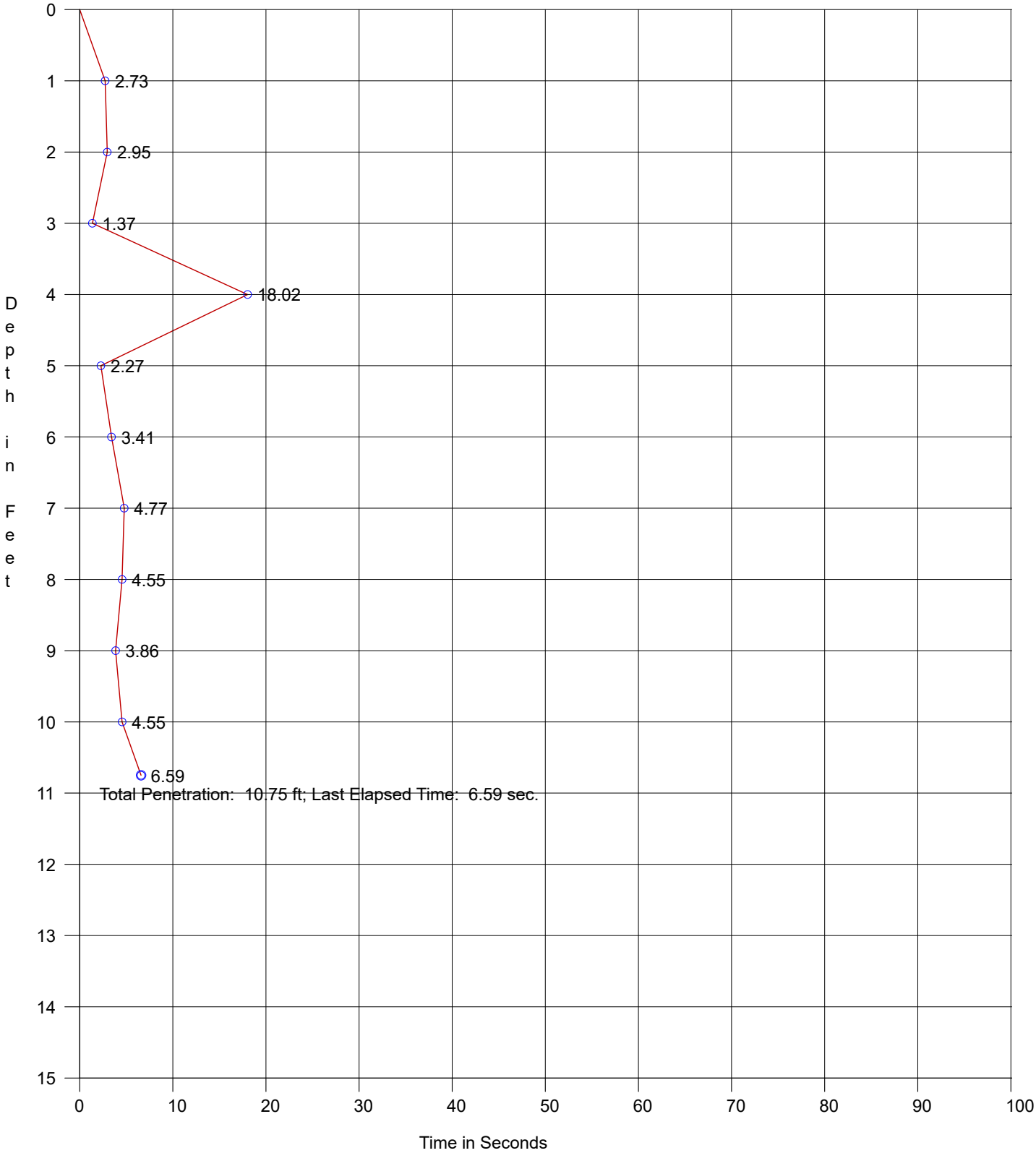
Penetration Graph for Core No. VC316, Run 2

Date: 29/10/2018
Start Time: 18:29:44
End Time: 18:30:39

Penetration: 10.75 ft
Recovery: 7.25 ft
W. D. Corrected: 21.0 ft
W. D. Raw: 25.035 ft

Easting: 969022.72
Northing: 131951.95
Coord. System:
NYSP LI

Lat: 40°31'43.8234"N
Long: -074°03'17.1930"W
Datum: Mudline



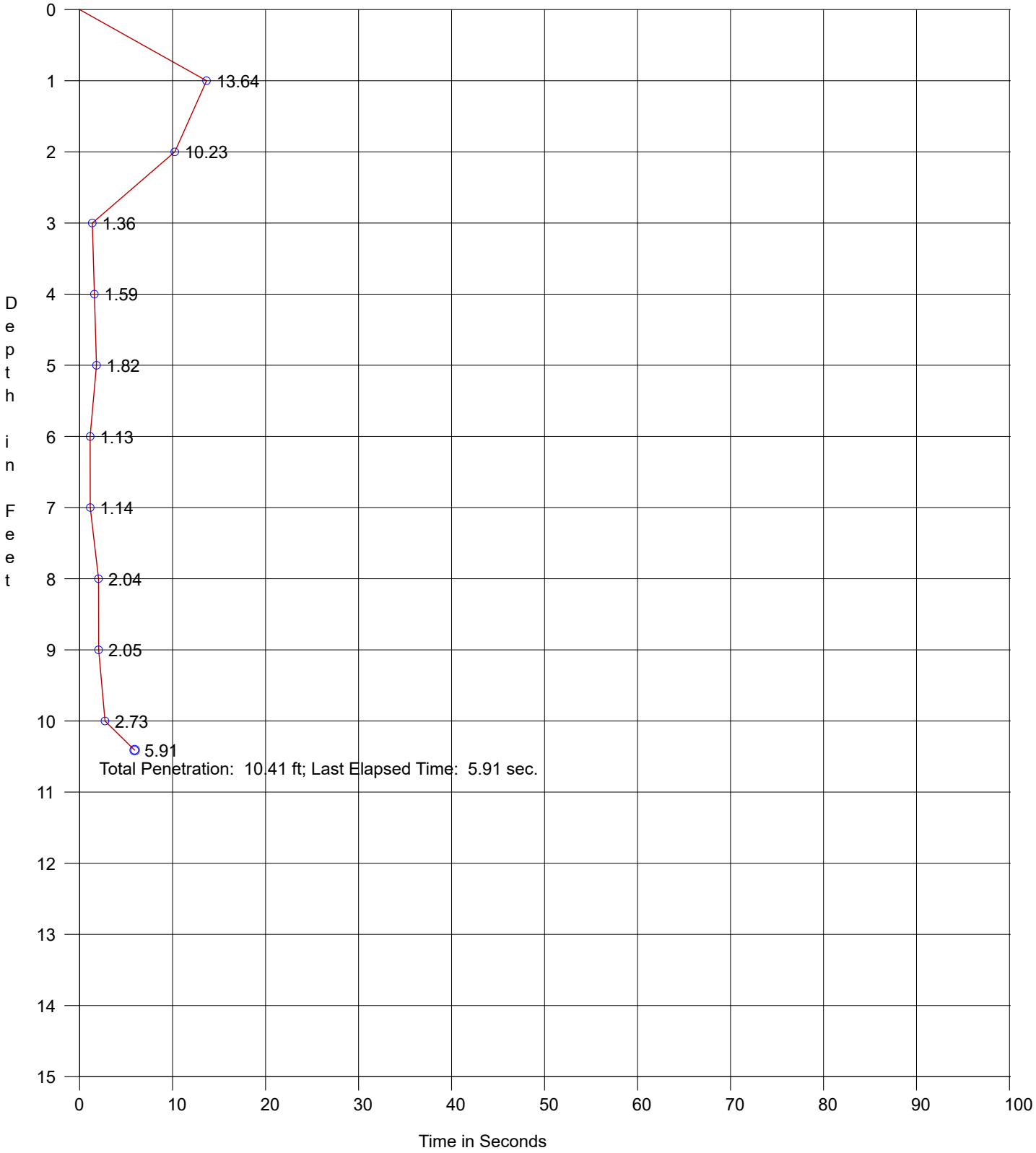
Penetration Graph for Core No. VC317, Run 2

Date: 29/10/2018
Start Time: 19:27:36
End Time: 19:28:20

Penetration: 10.41 ft
Recovery: 8.42 ft
W. D. Corrected: 20.8 ft
W. D. Raw: 23.435 ft

Easting: 970014.31
Northing: 131761.32
Coord. System:
NYSP LI

Lat: 40°31'41.9456"N
Long: -074°03'04.3505"W
Datum: Mudline



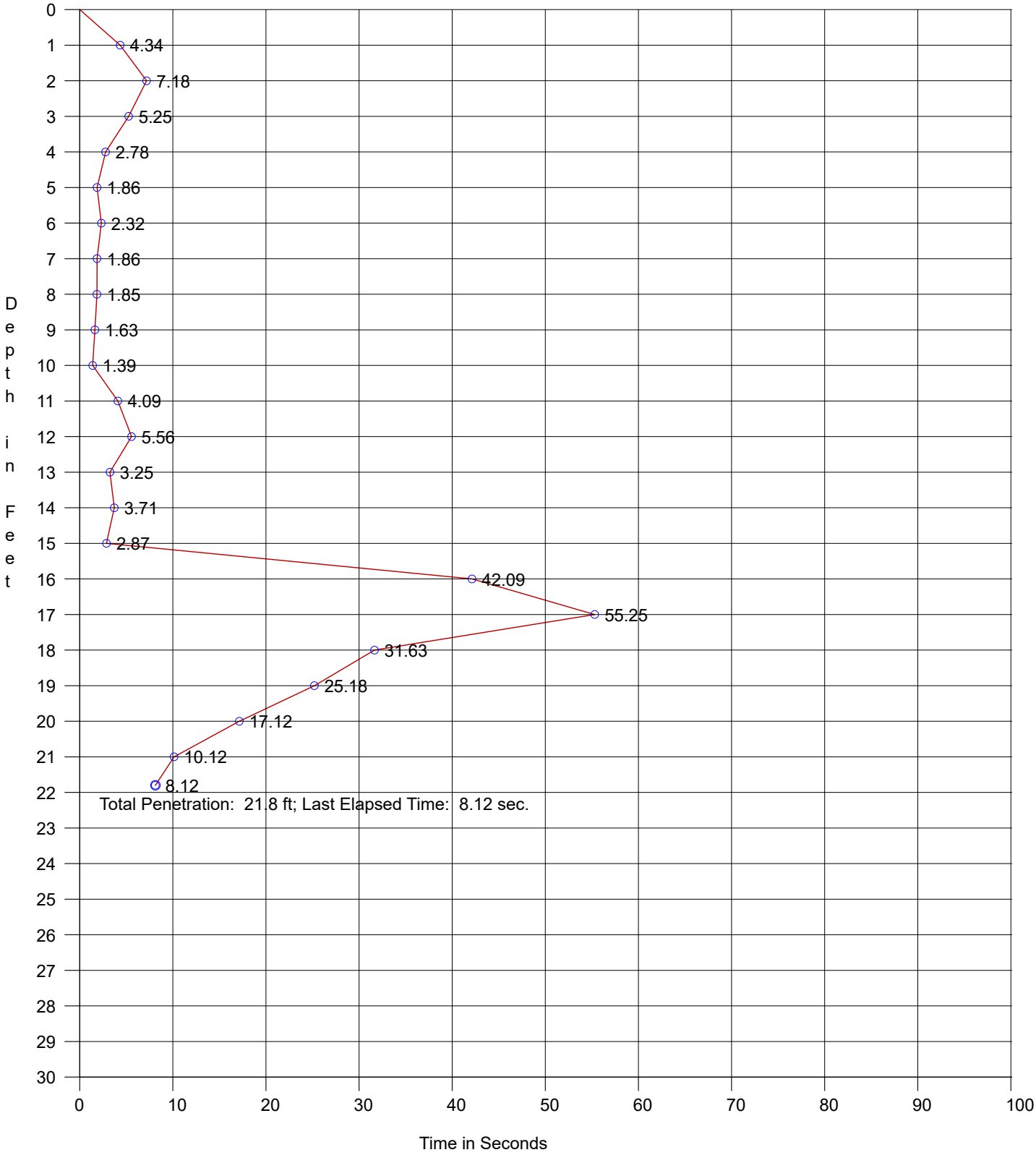
Penetration Graph for Core No. VC318, Run 1

Date: 23/10/2018
Start Time: 12:32:17
End Time: 12:37:45

Penetration: 21.8 ft
Recovery: 20.67 ft
W. D. Corrected: 30.3 ft
W. D. Raw: 34.335 ft

Easting: 972501.24
Northing: 131152.65
Coord. System:
NYSP LI

Lat: 40°31'35.9443"N
Long:-074°02'32.1412"W
Datum: Mudline



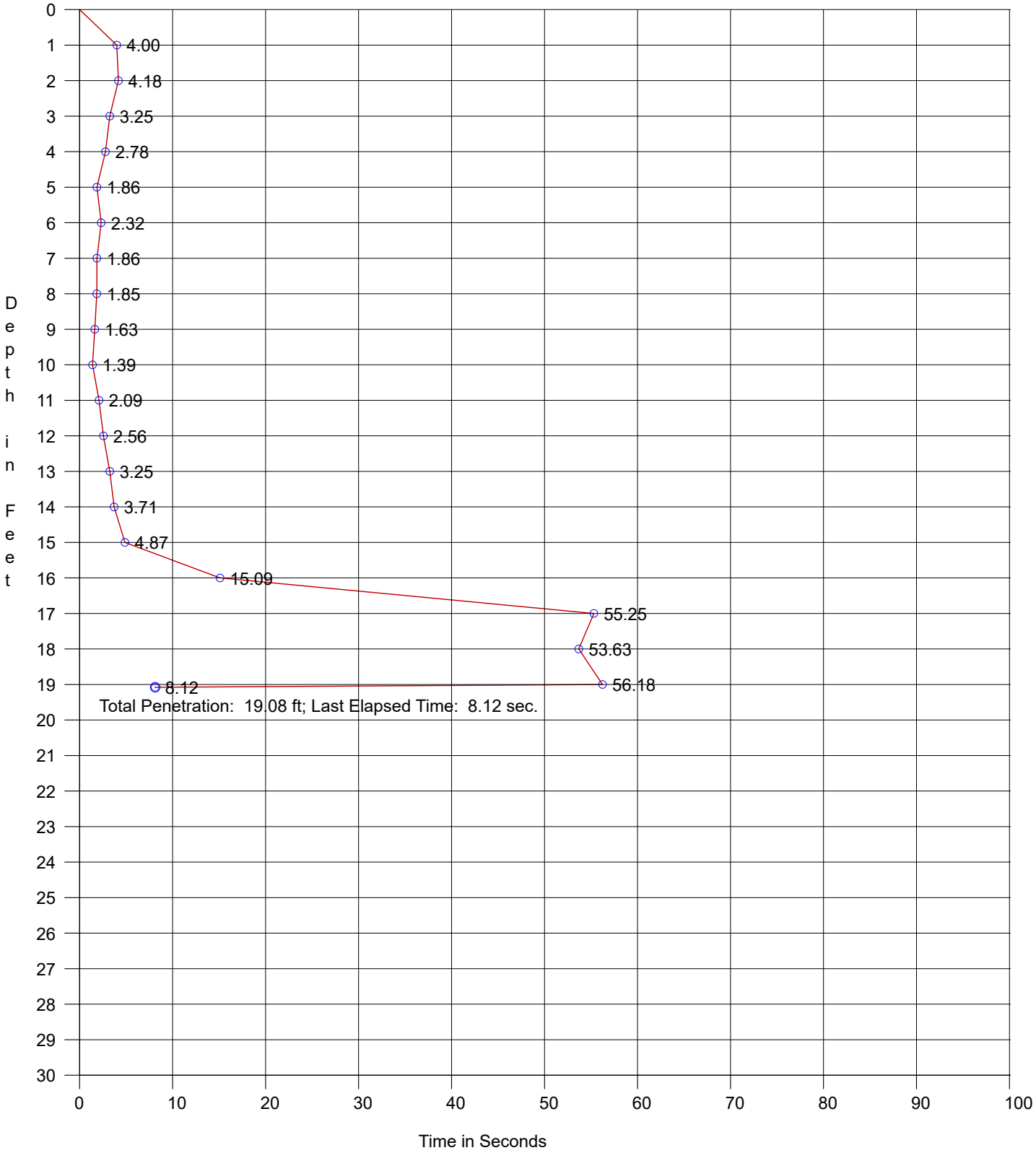
Penetration Graph for Core No. VC320, Run 1

Date: 23/10/2018
Start Time: 17:05:34
End Time: 17:09:51

Penetration: 19.08 ft
Recovery: 19.3 ft
W. D. Corrected: 35.4 ft
W. D. Raw: 35.935 ft

Easting:972862.71
Northing:131065.88
Coord. System:
NYSP LI

Lat: 40°31'35.0886"N
Long:-074°02'27.4598"W
Datum: Mudline



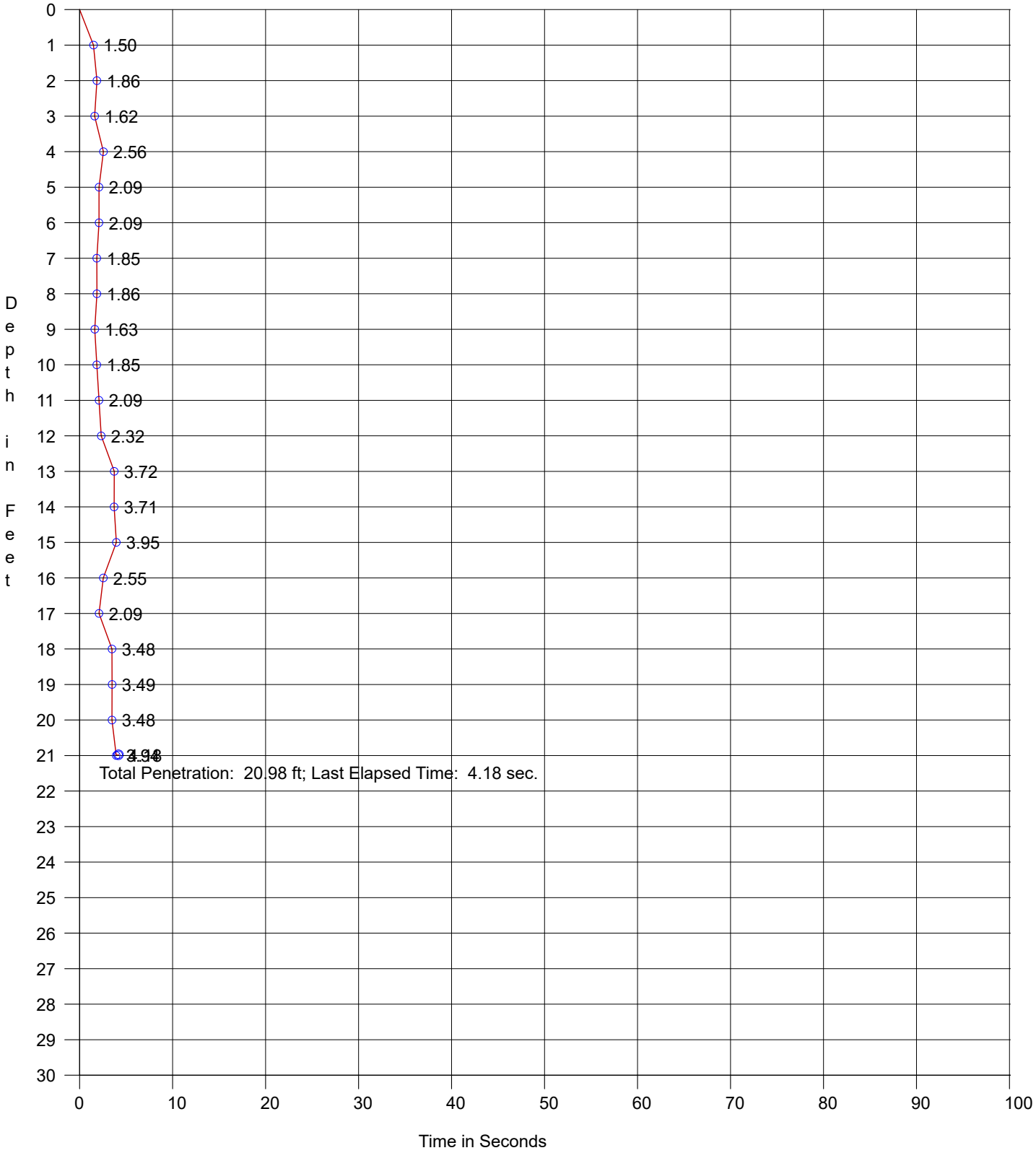
Penetration Graph for Core No. VC321, Run 1

Date: 23/10/2018
Start Time: 17:36:08
End Time: 17:37:26

Penetration: 20.98 ft
Recovery: 18.25 ft
W. D. Corrected: 33.1 ft
W. D. Raw: 33.335 ft

Easting: 973221.28
Northing: 130979.56
Coord. System:
NYSP LI

Lat: 40°31'34.2372"N
Long: -074°02'22.8160"W
Datum: Mudline



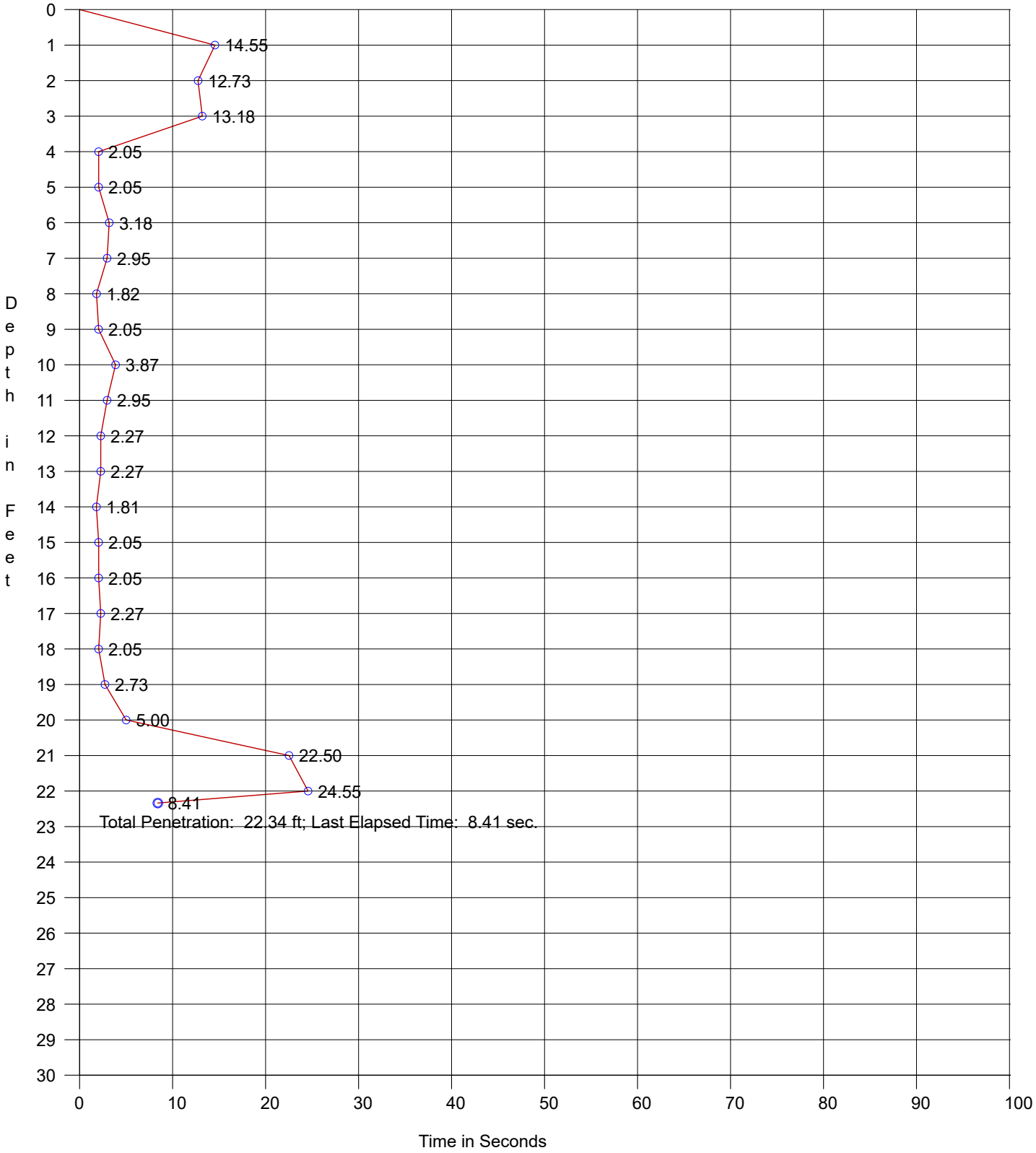
Penetration Graph for Core No. VC323, Run 1

Date: 23/10/2018
Start Time: 18:21:14
End Time: 18:23:33

Penetration: 22.34 ft
Recovery: 17.25 ft
W. D. Corrected: 27.7 ft
W. D. Raw: 28.035 ft

Easting: 973577.61
Northing: 130889.40
Coord. System:
NYSP LI

Lat: 40°31'33.3479"N
Long: -074°02'18.2012"W
Datum: Mudline



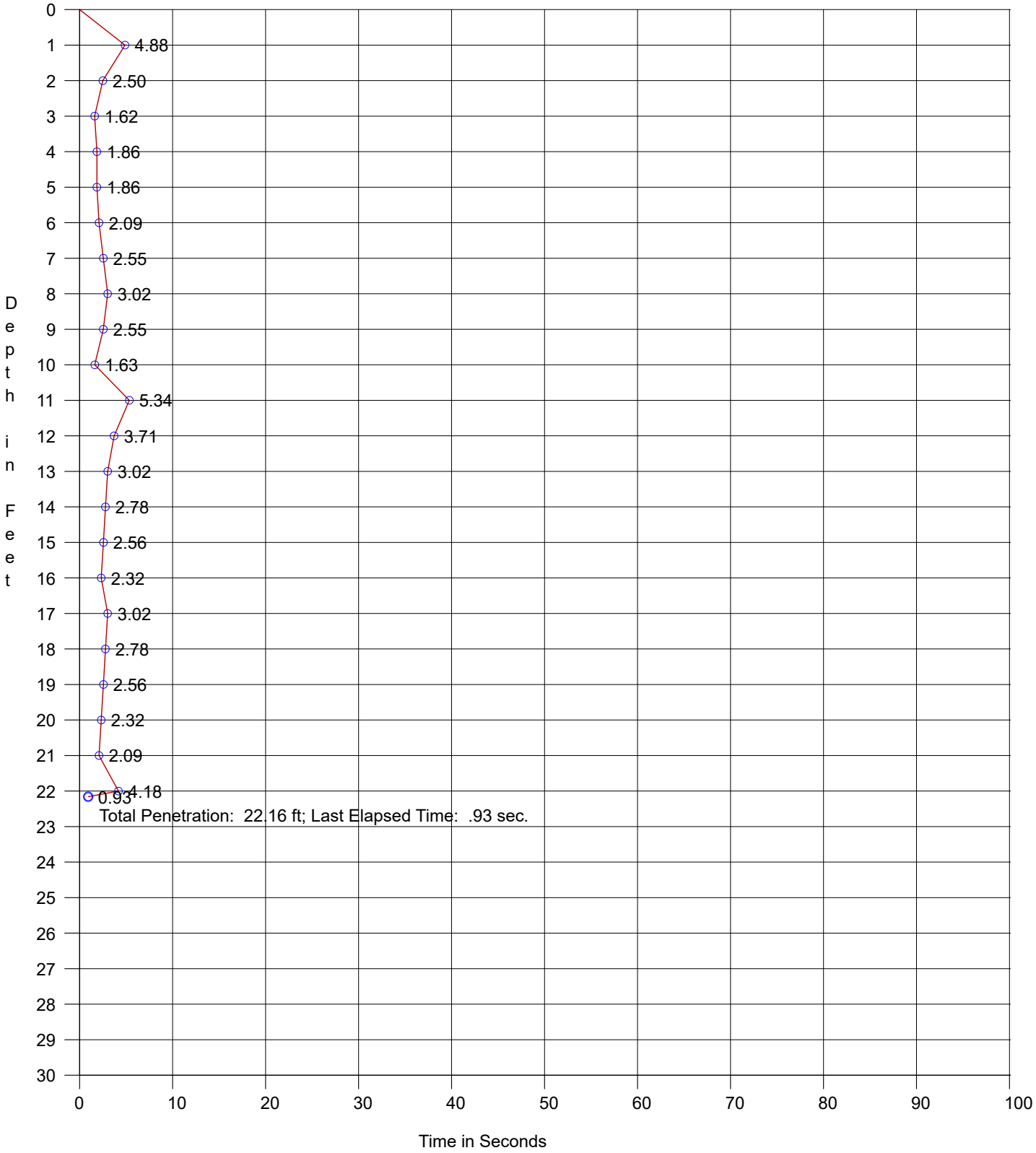
Penetration Graph for Core No. VC326, Run 1

Date: 24/10/2018
Start Time: 12:49:44
End Time: 12:51:04

Penetration: 22.16 ft
Recovery: 19.67 ft
W. D. Corrected: 38.6 ft
W. D. Raw: 45.635 ft

Easting: 993185.94
Northing: 122763.05
Coord. System:
NYSP LI

Lat: 40°30'13.0556"N
Long: -073°58'04.3234"W
Datum: Mudline



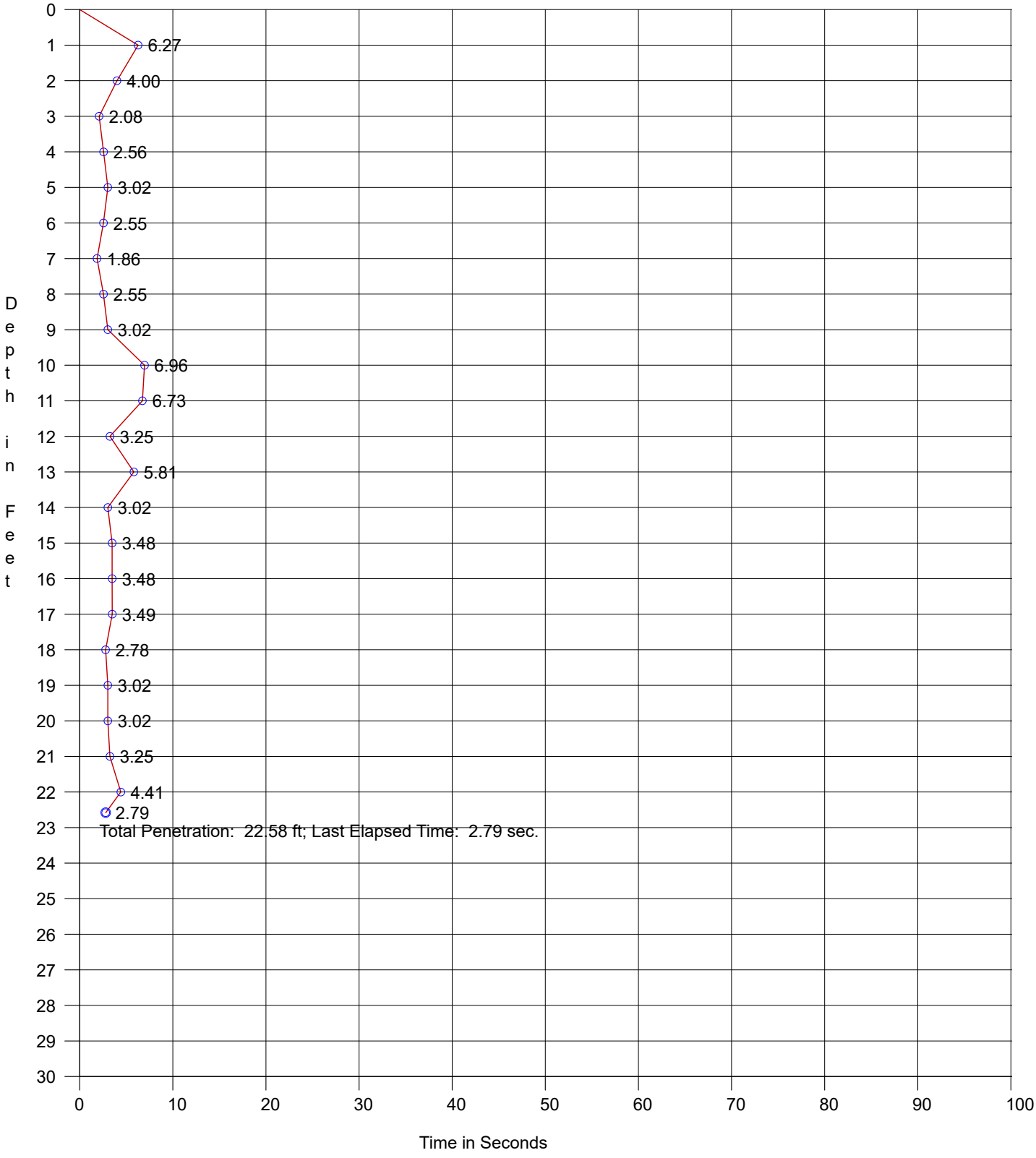
Penetration Graph for Core No. VC327, Run 1

Date: 25/10/2018
Start Time: 12:17:35
End Time: 12:19:20

Penetration: 22.58 ft
Recovery: 19.50 ft
W. D. Corrected: 36.9 ft
W. D. Raw: 42.835 ft

Easting: 993199.35
Northing: 122723.89
Coord. System:
NYSP LI

Lat: 40°30'12.6686"N
Long: -073°58'04.1500"W
Datum: Mudline



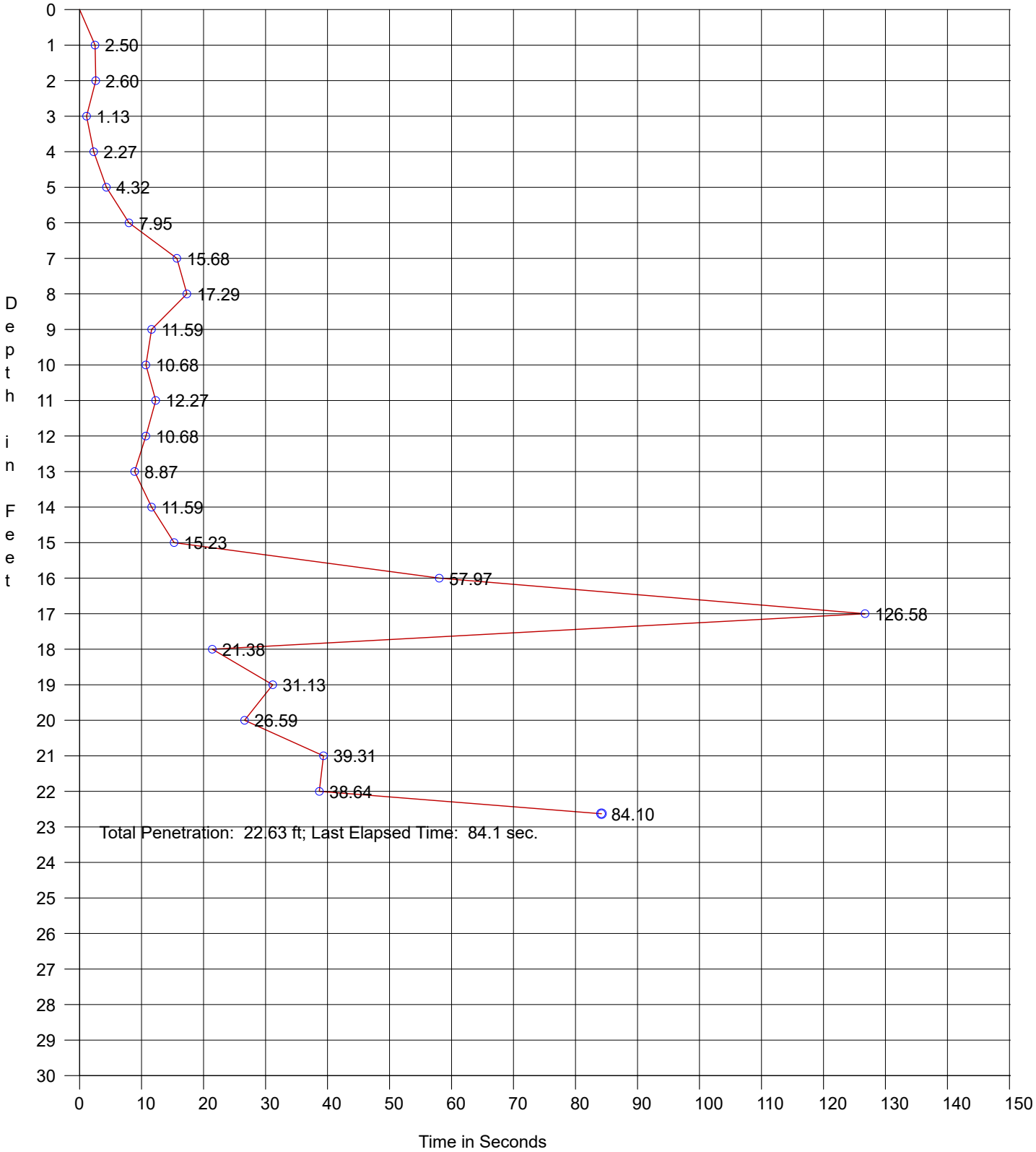
Penetration Graph for Core No. VC328, Run 1

Date: 24/10/2018
Start Time: 19:27:27
End Time: 19:37:15

Penetration: 22.63 ft
Recovery: 18.57 ft
W. D. Corrected: 16.3 ft
W. D. Raw: 16.435ft

Easting: 997098.34
Northing: 124375.97
Coord. System:
NYSP LI

Lat: 40°30'28.9761"N
Long: -073°57'13.6660"W
Datum: Mudline



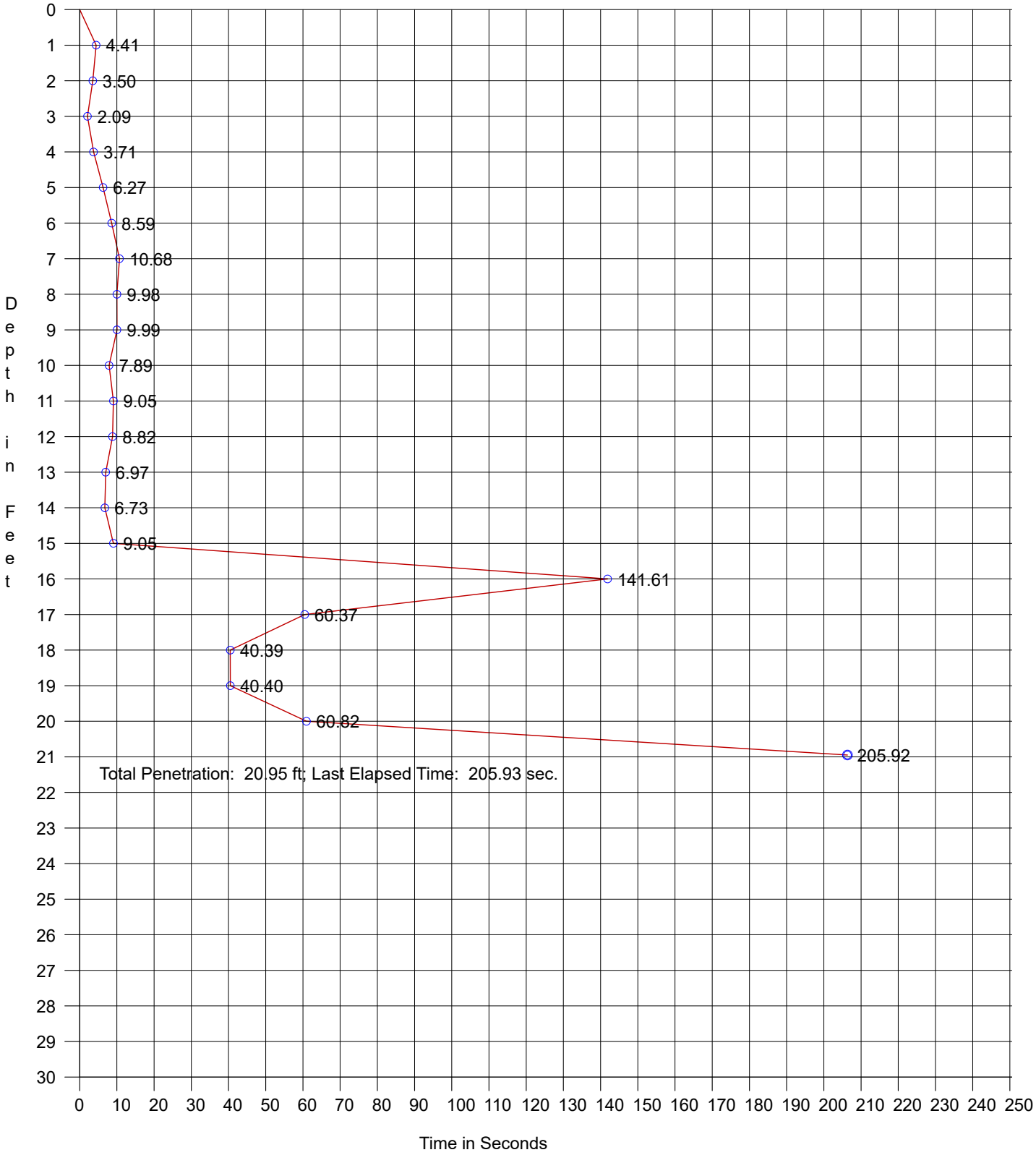
Penetration Graph for Core No. VC329, Run 1

Date: 24/10/2018
Start Time: 13:30:47
End Time: 13:42:01

Penetration: 20.95 ft
Recovery: 25.42 ft
W. D. Corrected: 16.2 ft
W. D. Raw: 22.135 ft

Easting: 997161.98
Northing: 124338.51
Coord. System:
NYSP LI

Lat: 40.507946
Long: -73.953567
Datum: Mudline



APPENDIX C

Photo Log


DEP 1
0'-2'
OCT 31, 2018


DEP 1
2'-4'
OCT 31, 2018


DEP 1
4'-6'2"
OCT 31, 2018


DEP 2
0'-2'
OCT 28, 2018


DEP 2
2'-4'
OCT 28, 2018


DEP 2
4'-6'
OCT 28, 2018


DEP 2
6'-7'9"
OCT 28, 2018


DEP3
0'-2'
OCT 31, 2018


DEP3
2'-4'
OCT 31, 2018


DEP3
4'-6'
OCT 31, 2018


DEP3
6'-7'1"
OCT 31, 2018


DEP-4R
0'-2'
OCT 30, 2018


DEP-4R
2'-4'
OCT 30, 2018


DEP-4R
4'-6'
OCT 30, 2018


DEP-4R
6'-7'7"
OCT 30, 2018


DEP 5R
0'-2'
OCT 30, 2018


DEP 5R
2'-4'
OCT 30, 2018


DEP 5R
4' -6'
OCT 30, 2018


DEP 5R
6' - 6' 11"
OCT 30, 2018


DEP-6
0-2
OCT 22, 2018


DEP-6
2-4
OCT 22, 2018


DEP-6
4'-6'
OCT 22, 2018


DEP-6
6'-8'
OCT 22, 2018


DEP-6
8'-10'
OCT 22, 2018


DEP-6
10'-12'
OCT 22, 2018


DEP-6
12'-14'
OCT 22, 2018


DEP-6
14'-16'2"
OCT 22, 2018


DEP-6
16'2" - 18'
OCT 22, 2018


DEP-6
18' - 20'
OCT 22, 2018


DEP-6
20'-22'
OCT 22, 2018


DEP-6
22'-24'
OCT 22, 2018


DEP-6
24'-26'
OCT 22, 2018


DEP 7
0' - 2'
OCT 22, 2018


DEP 7
2' - 4'
OCT 22, 2018


DEP 7
4' - 6'
OCT 22, 2018


DEP 7
6' - 8'
OCT 22, 2018


DEP 7
8'-8' 10"
OCT 22, 2018


DEP 7
8'10"-10'
OCT 22, 2018


DEP 7
10' - 12'
OCT 22, 2018


DEP 7
12' - 14'
OCT 22, 2018


DEP 7
14' - 16'
OCT 22, 2018


DEP 7
16' - 18'
OCT 22, 2018


DEP 7
18' - 18'10"
OCT 22, 2018

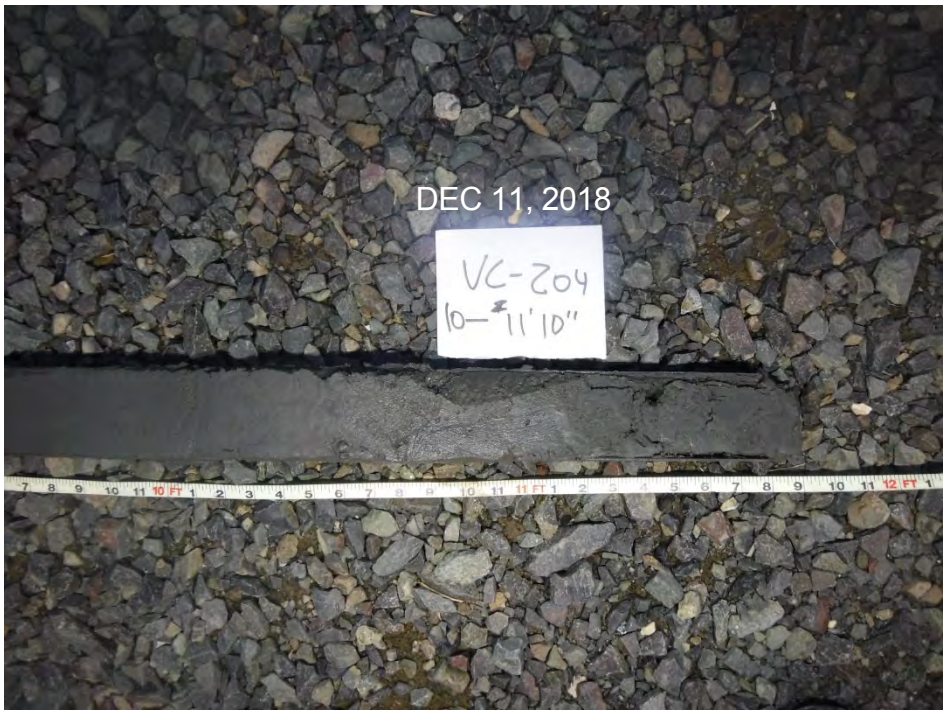

DEC 11, 2018
VC-204
0'-2'


DEC 11, 2018
VC-204
2'-4'


DEC 11, 2018
VC-204
4'-6'


DEC 11, 2018
VC-204
6'-8'


DEC 11, 2018
VC-204
8'-10'


DEC 11, 2018
VC-204
10'-11'10"


DEC 11, 2018
VC-205
0'-2'


DEC 11, 2018
VC-205
2'-4'


DEC 11, 2018
VC-205
4'-6'


DEC 11, 2018
VC-205
6'-8'


DEC 11, 2018
VC-205
8'-10'


DEC 11, 2018
VC-205
10'-10'10"


DEC 11, 2018
VC-208
0'-2'


DEC 11, 2018
VC-208
2'-4'


DEC 11, 2018
VC-208
4'-6'


DEC 11, 2018
VC-208
6'-7'5"


DEC 11, 2018
VC-211
0-2'


DEC 11, 2018
VC-211
2'-4'


DEC 11, 2018
VC-211
4'-6'


DEC 11, 2018
VC-211
6'-7'11"


VC214
0'-2'
OCT 29, 2018


VC214
2'-4'
OCT 29, 2018


VC214
4'-6'
OCT 29, 2018


VC214
6'-7'5"
OCT 29, 2018


VC-216
0'-2'
OCT 29, 2018


VC-216
2'-4'
OCT 29, 2018


VC-216
4'-6'
OCT 29, 2018


VC-216
6'-7'3"
OCT 29, 2018


VC-217
0'-2'
OCT 29, 2018


VC-217
2'-4'
OCT 29, 2018


VC-217
4'-6'
OCT 29, 2018


VC-217
6'-7'8"
OCT 29, 2018


VC218
0-2'
OCT 29, 2018


VC-218
2'-4'
OCT 29, 2018


VC-218
4'-6'
OCT 29, 2018


VC-218
6'-8'2"
OCT 29, 2018


VC 219
0'-2'
OCT 28, 2018


VC 219
2'-4'
OCT 28, 2018


VC 219
4'-6'
OCT 28, 2018


VC 219
6'-7'2"
OCT 28, 2018


VC 220
0'-2'
OCT 28, 2018


VC 220
2'-4'
OCT 28, 2018


VC 220
4'-6'
OCT 28, 2018


VC 220
6' - 7'8"
OCT 28, 2018


VC 221
0'-2'
OCT 28, 2018


VC 221
2'-4'
OCT 28, 2018


VC 221
4'-6'
OCT 28, 2018


VC 221
6'-7'8"
OCT 28, 2018


VC 222
0'-2'
OCT 28, 2018


VC 222
2'-4'
OCT 28, 2018


VC 222
4'-6'
OCT 28, 2018


VC 222
6'-7'11"
OCT 28, 2018


VC 223
0'-2'
OCT 28, 2018

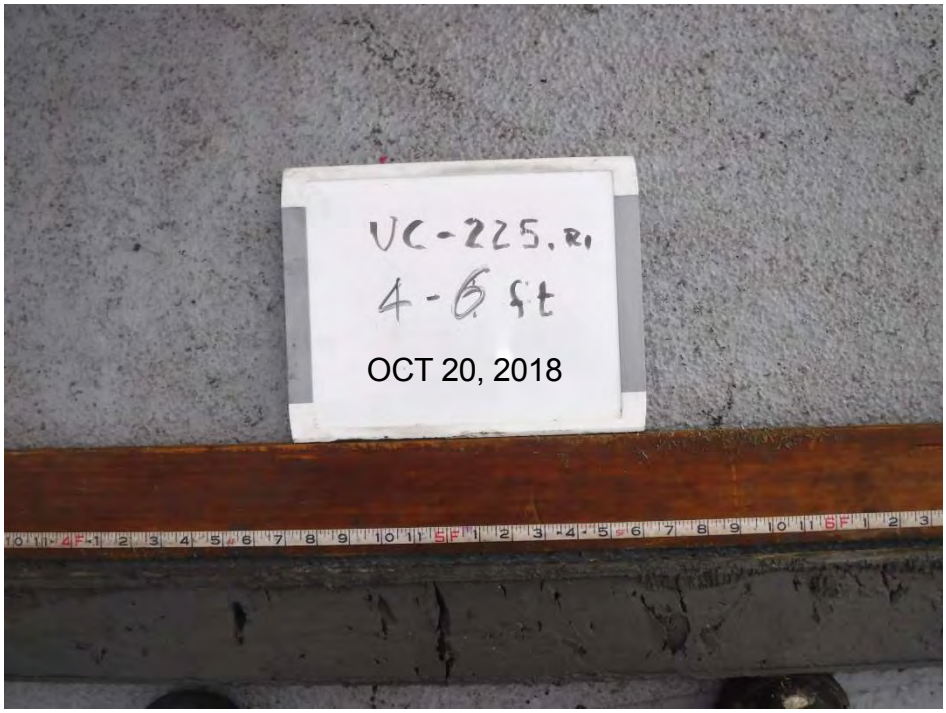

VC 223
2'-4'
OCT 28, 2018


VC 223
4'-6'
OCT 28, 2018


VC 223
6'-7'7"
OCT 28, 2018


VC-225.R1
0-2 ft
OCT 20, 2018


VC-225.R1
2-4 ft
OCT 20, 2018


VC-225.R1
4-6 ft
OCT 20, 2018


VC-225.R1
6-7.5 ft
OCT 20, 2018


VC-227
0-2'
OCT 20, 2018


VC-227
2-4'
OCT 20, 2018


VC-227
4'-6'
OCT 20, 2018


VC-227
6'-8'
OCT 20, 2018


VC-227
8'-10'
OCT 20, 2018


VC-227
10'-12'
OCT 20, 2018


VC-227
12'-14'
OCT 20, 2018


VC-227
14'-15'
OCT 20, 2018


VC-228
0'-2'
OCT 20, 2018


VC-228
2'-4'
OCT 20, 2018


VC-228
4'-6'
OCT 20, 2018


VC-228
6'-8'
OCT 20, 2018


VC-228
8'-10'
OCT 20, 2018


VC-228
10'-12'
OCT 20, 2018


VC-228
12"-14'
OCT 20, 2018


VC-228
14"-16'
OCT 20, 2018


VC-228
16'-18'
OCT 20, 2018


VC-228
18'-19'
OCT 20, 2018


VC 229
0'-2'
OCT 20, 2018


VC 229
2'-4'
OCT 20, 2018


VC 229
4'-6'
OCT 20, 2018


VC 229
6'-8'
OCT 20, 2018


VC 229
8'-10'
OCT 20, 2018


VC 229
10'-12'
OCT 20, 2018


VC 229
12'-14'
OCT 20, 2018


VC 229
14'-16'
OCT 20, 2018


VC 229
16'-18'
OCT 20, 2018


VC 229
18'-20'
OCT 20, 2018


VC 229
20'-22'
OCT 20, 2018


VC 229
22'-23.2"
OCT 20, 2018


VC-230
0'-2'
OCT 20, 2018


VC-230
2'-4'
OCT 20, 2018


VC-230
4'-6'
OCT 20, 2018


VC-230
6'-8'
OCT 20, 2018


VC-230
8'-10'
OCT 20, 2018


VC-230
10'-12'
OCT 20, 2018


VC-230
12-14
OCT 20, 2018


VC-230
14-16
OCT 20, 2018


VC-230
16-17'2"
OCT 20, 2018


VC-230
17'2"-19
OCT 20, 2018


VC-230
19-21'
OCT 20, 2018


VC-230
21'-23'
OCT 20, 2018


VC-230
23'-24'
OCT 20, 2018


VC-230A
0'-2'
OCT 20, 2018


VC-230A
2'-4'
OCT 20, 2018


VC-230A
4'-6'
OCT 20, 2018


VC-230A
6'-8'
OCT 20, 2018


VC-230A
8'-10'
OCT 20, 2018


VC-230A
10'-12'
OCT 20, 2018


VC-230A
12'-14'
OCT 20, 2018


VC-230A
14'-16'
OCT 20, 2018


VC-230A
16'-18'
OCT 20, 2018


VC-230A
18'-20'
OCT 20, 2018


VC-230A
20'-22'
OCT 20, 2018


VC-230A
22'-24'
OCT 20, 2018


VC-230A
24'-26'
OCT 20, 2018


VC-230A
26'-28'
OCT 20, 2018


VC-230A
28'-2 3"
OCT 20, 2018


VC-230B
0'-2'
OCT 20, 2018


VC-230B
2'-4'
OCT 20, 2018


VC-230B
4'-6'
OCT 20, 2018


VC-230B
6'-8'
OCT 20, 2018


VC-230B
8'-10'
OCT 20, 2018


VC-230B
10'-12'
OCT 20, 2018


VC-230B
12'-14'
OCT 20, 2018


VC-230B
14'-16'
OCT 20, 2018


VC-230B
16'-18'
OCT 20, 2018


VC-230B
18'-20'
OCT 20, 2018


VC-230B
20'-22'
OCT 20, 2018


VC-230B
22'-24'
OCT 20, 2018


VC-230B
24'-26'
OCT 20, 2018


VC-230B
26'-28'
OCT 20, 2018


VC232
0'-2'
OCT 22, 2018


VC232
2'-4'
OCT 22, 2018


VC 232
4'-6'
OCT 22, 2018


VC 232
6'-8'
OCT 22, 2018


VC232
8'-10'
OCT 22, 2018


VC232
10'-10'9"
OCT 22, 2018


VC232
10'9" – 12'
OCT 22, 2018


VC232
12' – 14'
OCT 22, 2018


VC 232
14'-16'
OCT 22, 2018


VC 232
16'-18'
OCT 22, 2018


VC 232
18-20'
OCT 22, 2018


VC 232
20'-20'8"
OCT 22, 2018


VC232A
0'-2'
OCT 22, 2018


VC232A
2'-4'
OCT 22, 2018


VC232A
4'-6'
OCT 22, 2018


VC232A
6'-8'
OCT 22, 2018


VC232A
8'-10'
OCT 22, 2018


VC232A
10'-12
OCT 22, 2018


VC232A
12'-12'10"
OCT 22, 2018


VC232A
12'10"-14'
OCT 22, 2018


VC232A
14'-16'
OCT 22, 2018


VC232A
16'-18'
OCT 22, 2018


VC232A
18'-20'
OCT 22, 2018


VC232A
20'-22'
OCT 22, 2018


VC232A
22'-22'6"
OCT 22, 2018


VC232B
0'-2'
OCT 22, 2018


VC232B
2'-4'
OCT 22, 2018


VC232B
4'-6'
OCT 22, 2018


VC232B
6'-8"
OCT 22, 2018


VC232B
8'-10'
OCT 22, 2018


VC232B
10'-12'
OCT 22, 2018


VC232B
12'-14'
OCT 22, 2018


VC232B
14'-16'
OCT 22, 2018


VC232B
16'-18'
OCT 22, 2018


VC232B
18'-20'
OCT 22, 2018


VC232B
20'-22"
OCT 22, 2018


VC235
0'-2'
OCT 22, 2018


VC235
2'-4'
OCT 22, 2018


VC235
4'-6'
OCT 22, 2018


VC235
6'-8'
OCT 22, 2018


VC235
8'-10'
OCT 22, 2018


VC235
10'-11'3"
OCT 22, 2018


VC235
11'3" - 12'
OCT 22, 2018


VC235
12' - 14'
OCT 22, 2018


VC235
14'-16'
OCT 22, 2018


VC235
16'-18'
OCT 22, 2018


VC235
18'-20'
OCT 22, 2018


VC235
20'-21'3"
OCT 22, 2018


VC 237
0'-2'
OCT 22, 2018


VC 237
2'-4'
OCT 22, 2018


VC 237
4'-6
OCT 22, 2018


VC 237
6'-8'
OCT 22, 2018


VC 237
8'-10'
OCT 22, 2018


VC 237
10'-12'
OCT 22, 2018


VC 237
12'-14'
OCT 22, 2018


VC 237
14'-15'6"
OCT 22, 2018


VC 237
15'6" - 18'
OCT 22, 2018


VC 237
18' - 20'
OCT 22, 2018


VC 237
20'-22'
OCT 22, 2018


VC 237
22'-24'
OCT 22, 2018


VC 237
24' - 25'8"
OCT 22, 2018


VC237A
0'-2'
OCT 22, 2018


VC237A
2'-4'
OCT 22, 2018


VC237A
4'-6'
OCT 22, 2018


VC237A
6'-8'
OCT 22, 2018


VC237A
8'-10'
OCT 22, 2018


VC237A
10'-12'
OCT 22, 2018


VC237A
12'-14'
OCT 22, 2018


VC237A
14'-15'11"
OCT 22, 2018


VC237A
15'11" - 18'
OCT 22, 2018


VC237A
18' - 20'
OCT 22, 2018


VC237A
20'-22'
OCT 22, 2018


VC237A
22'-24'
OCT 22, 2018


VC237A
24'-25'9"
OCT 22, 2018


VC 237B
0'-2'
OCT 22, 2018


VC 237B
2'-4'
OCT 22, 2018


VC 237B
4'-6'
OCT 22, 2018


VC 237B
6'-8'
OCT 22, 2018


VC 237B
8'-10'
OCT 22, 2018


VC 237B
10'-12'
OCT 22, 2018


VC 237B
12'-14'
OCT 22, 2018


VC 237B
14'-16'
OCT 22, 2018


OCT 22, 2018
VC 237B
16'-17'5"


OCT 22, 2018
VC 237B
17'5"-18'


VC 237B
18' - 20'
OCT 22, 2018


VC 237B
20' - 22'
OCT 22, 2018


VC 237B
22'-24'
OCT 22, 2018


VC 237B
24'-26'
OCT 22, 2018


VC 237B
26 - 27' 2"
OCT 22, 2018


VC238
0'-2'
OCT 23, 2018


VC238
2'-4'
OCT 23, 2018


VC238
4'-6'
OCT 23, 2018


VC238
6'-8'
OCT 23, 2018


VC238
8'-10'
OCT 23, 2018


VC238
10'-12'
OCT 23, 2018


VC238
12'-14'
OCT 23, 2018


VC238
14'-15'
OCT 23, 2018


VC238
15'-17'
OCT 23, 2018


VC238
17'-19'
OCT 23, 2018


VC238
19'-21'
OCT 23, 2018


VC238
21'-23'
OCT 23, 2018


VC238
23'-24'9"
OCT 23, 2018


VC 239
0' - 2'
OCT 23, 2018


VC 239
2' - 4'
OCT 23, 2018


VC 239
4'-6'
OCT 23, 2018


VC 239
6'-8'
OCT 23, 2018


VC 239
8'-10'
OCT 23, 2018


VC 239
10'-10'7"
OCT 23, 2018


VC 239
10'7"-12'
OCT 23, 2018


VC 239
12'-14'
OCT 23, 2018


VC 239
14'-16'
OCT 23, 2018


VC 239
16'-18'
OCT 23, 2018


VC 239
18'- 20'5"
OCT 23, 2018


VC 240
0' - 2'
OCT 23, 2018


VC 240
2' - 4'
OCT 23, 2018


VC 240
4'-6'
OCT 23, 2018


VC 240
6'-8'
OCT 23, 2018


VC 240
8' - 10'
OCT 23, 2018


VC 240
10' - 12'
OCT 23, 2018


VC 240
12' -14'
OCT 23, 2018


VC 240
14' - 15'6"
OCT 23, 2018


VC 242
0'-2'
OCT 23, 2018


VC 242
2'-4'
OCT 23, 2018


VC 242
4'-6'
OCT 23, 2018


VC 242
6'-8'
OCT 23, 2018


VC 242
8'-10'
OCT 23, 2018


VC 244
0'-2'
OCT 26, 2018


VC 244
2'-4'
OCT 26, 2018


VC 244
4'-6'
OCT 26, 2018


VC 244
6'-8'2"
OCT 26, 2018


VC245
0'-2'
OCT 26, 2018


VC245
2'-4'
OCT 26, 2018


VC245
4'-6'
OCT 26, 2018


VC245
6'-8'
OCT 26, 2018


VC245
8' - 9' 2"
OCT 26, 2018


VC 246
0'-2'
OCT 26, 2018


VC 246
2'-4'
OCT 26, 2018


VC 246
4'-6'
OCT 26, 2018


VC 246
6'-8'
OCT 26, 2018


VC 246
8' - 8'11"
OCT 26, 2018


VC247
0'-2'
OCT 23, 2018


VC247
2'-4'
OCT 23, 2018


VC247
4'-6'
OCT 23, 2018


VC247
6'-7'10"
OCT 23, 2018


VC247
7'10" – 10'
OCT 23, 2018


VC247
10' – 12'
OCT 23, 2018


VC247
12'-14'
OCT 23, 2018


VC247
14'-16'
OCT 23, 2018


VC247
16-18'
OCT 23, 2018


VC 251
0'-2'
OCT 23, 2018


VC 251
2'-4'
OCT 23, 2018


VC 251
4'-6'
OCT 23, 2018


VC 251
6'-7'3"
OCT 23, 2018


VC 252
0'-2'
OCT 26, 2018


VC 252
2'-4'
OCT 26, 2018


VC 252
4'-6'
OCT 26, 2018


VC 252
6'-7'1"
OCT 26, 2018


VC253
0'-2'
OCT 26, 2018


VC253
2'-4'
OCT 26, 2018


VC253
4'-6'
OCT 26, 2018


VC253
6'-8'1"
OCT 26, 2018


VC 255
0' - 2'
OCT 26, 2018


VC 255
2' - 4'
OCT 26, 2018


VC 255
4'-6'5"
OCT 26, 2018


VC256
0'-2'
OCT 26, 2018


VC256
2'-4'
OCT 26, 2018


VC258
4' - 6' 2"
OCT 26, 2018


VC 301
0'-2'
OCT 30, 2018


VC 301
2'-4'
OCT 30, 2018


VC 301
4'-6'
OCT 30, 2018


VC 301
6'-7'6"
OCT 30, 2018


VC303
0'-2'
OCT 31, 2018


VC303
2'-4'
OCT 31, 2018


VC303
4'-6'
OCT 31, 2018


VC303
6'-7'5"
OCT 31, 2018


VC 304
0'-2'
OCT 29, 2018


VC 304
2'-4'
OCT 29, 2018


VC 304
4' - 6'
OCT 29, 2018


VC 304
6' - 7'8"
OCT 29, 2018


VC307
0'-2'
OCT 28, 2018


VC307
2'-4'
OCT 28, 2018


VC307
4'-6'
OCT 28, 2018


VC307
6'-7½"
OCT 28, 2018


VC 308
0'-2'
OCT 28, 2018


VC 308
2'-4'
OCT 28, 2018


VC 308
4'-6'
OCT 28, 2018


VC 308
6'-7'11"
OCT 28, 2018


VC 309
0'-2'
OCT 28, 2018


VC 309
2'-4'
OCT 28, 2018


VC 309
4'-6'
OCT 28, 2018


VC 309
6'-7' 7"
OCT 28, 2018


VC 310
0'-2'
OCT 28, 2018


VC 310
2'-4'
OCT 28, 2018


VC 310
4'-6'
OCT 28, 2018


VC 310
6'-7'5"
OCT 28, 2018


VC 311
0'-2'
OCT 28, 2018


VC 311
2'-4'
OCT 28, 2018


VC 311
4'-6'
OCT 28, 2018


VC 311
6'-7'6"
OCT 28, 2018


VC 312
0'-2'
OCT 28, 2018


VC 312
2'-4'
OCT 28, 2018


VC 312
4'-6'
OCT 28, 2018


VC 313
0'-2'
OCT 28, 2018


VC 313
2'-4'
OCT 28, 2018


VC 313
4' - 6' 1"
OCT 28, 2018


VC 314
0'-2'
OCT 28, 2018


VC 314
2'-4'
OCT 28, 2018


VC 314
4'-5'4"
OCT 28, 2018


VC315
0'-2'
OCT 29, 2018


VC315
2'-4'
OCT 29, 2018


VC 315
4'-6'
OCT 29, 2018


VC 315
6'-8'
OCT 29, 2018


VC 315
8'- 9' 10"
OCT 29, 2018


VC 316 (R2)
0'-2'
OCT 29, 2018


VC 316 (R2)
2'-4'
OCT 29, 2018


VC 316 (R2)
4'-6'
OCT 29, 2018


VC 316 (R2)
6'-7'3"
OCT 29, 2018


VC 317
0'-2'
OCT 29, 2018


VC 317
2'-4'
OCT 29, 2018


VC 317
4'-6'
OCT 29, 2018


VC 317
6'-8'
OCT 29, 2018


VC 317
8'-8'5"
OCT 29, 2018


VC 318
0'-2'
OCT 23, 2018


VC 318
2'-4'
OCT 23, 2018


VC 318
4'-6'
OCT 23, 2018


VC 318
6'-8'
OCT 23, 2018


VC 318
8' - 10'
OCT 23, 2018


VC 318
10' - 12'
OCT 23, 2018


VC 318
12' - 14'
OCT 23, 2018


VC 318
14' - 16'
OCT 23, 2018


VC 318
16'-18'
OCT 23, 2018


VC 318
18'-20'
OCT 23, 2018


VC 318
20'-20'8"
OCT 23, 2018


VC320
0'-2'
OCT 23, 2018


VC320
2'-4'
OCT 23, 2018


VC320
4'-6'
OCT 23, 2018


VC320
6'-8'
OCT 23, 2018


VC320
8'-9'8"
OCT 23, 2018


VC320
9'8"-12'
OCT 23, 2018


VC320
12' - 14'
OCT 23, 2018


VC320
14' - 16'
OCT 23, 2018


VC320
16'-18'
OCT 23, 2018


VC320
18'-19' 3"
OCT 23, 2018


VC321
0'-2'
OCT 23, 2018


VC321
2'-4'
OCT 23, 2018


VC321
4'-6'
OCT 23, 2018


VC321
6'-8'5"
OCT 23, 2018


VC321
8'5" - 10'
OCT 23, 2018


VC321
10' - 12'
OCT 23, 2018


VC321
12' - 14'
OCT 23, 2018


VC321
14' - 16'
OCT 23, 2018


VC321
16'-18'3"
OCT 23, 2018


VC323
0'-2'
OCT 23, 2018


VC323
2'-4'
OCT 23, 2018


VC323
4' - 6'
OCT 23, 2018


VC323
6' - 8'
OCT 23, 2018


VC323
8'-10'
OCT 23, 2018


VC323
10'-12'
OCT 23, 2018


VC323
12'-14'
OCT 23, 2018


VC323
14'-16
OCT 23, 2018


VC323
16'-17'3"
OCT 23, 2018


VC 326
0'-2'
OCT 25, 2018


VC 326
2'-4'
OCT 25, 2018


VC 326
4'-6'
OCT 25, 2018


VC 326
6'-8'
OCT 25, 2018


VC 326
8'-9' 8"
OCT 25, 2018


VC 326
9'8"-12'
OCT 25, 2018


VC 326
12'-14'
OCT 25, 2018


VC 326
14'-16'
OCT 25, 2018


VC 326
16'-18'
OCT 25, 2018


VC 326
18'-19'8"
OCT 25, 2018


VC327
0' - 2'
OCT 25, 2018


VC327
2' - 4'
OCT 25, 2018


VC327
4'-6'
OCT 25, 2018


VC327
6'-8'
OCT 25, 2018


VC327
8'-9'7"
OCT 25, 2018


VC327
9'7"-12'
OCT 25, 2018


VC327
12'-14'
OCT 25, 2018


VC327
14'-16'
OCT 25, 2018

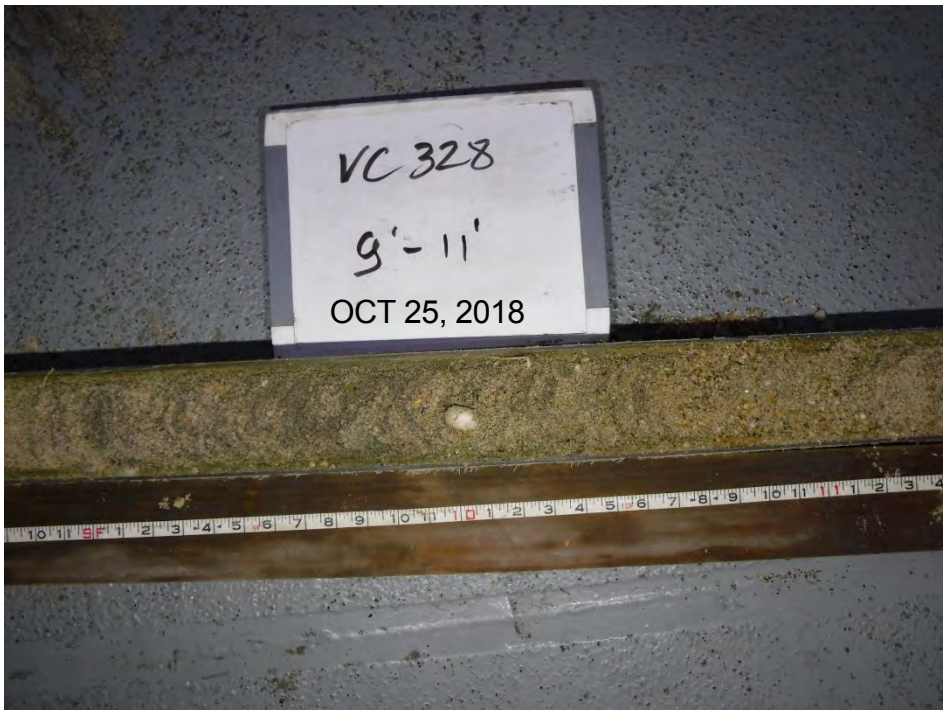

VC327
16'-18"
OCT 25, 2018


VC327
18'-19'6"
OCT 25, 2018


VC 328
2'6" - 5'
OCT 25, 2018


VC 328
5' - 7'
OCT 25, 2018


VC 328
7' - 9'
OCT 25, 2018


VC 328
9' - 11'
OCT 25, 2018


VC 328
11' - 12' 2"
OCT 25, 2018


VC 328
12' 2" - 14'
OCT 25, 2018


VC 328
14' - 16'
OCT 25, 2018


VC 328
16' - 18'
OCT 25, 2018


VC 328
18'-20'
OCT 25, 2018


VC 328
20'-21'2"
OCT 25, 2018


VC 329
0'-2'
OCT 25, 2018


VC 329
2'-4'
OCT 25, 2018


VC 329
4'-6'
OCT 25, 2018


VC 329
6'-8'
OCT 25, 2018


VC 329
8' - 10'
OCT 25, 2018


VC 329
10' - 12'
OCT 25, 2018


VC 329
12'-14'
OCT 25, 2018


VC 329
14'-16'5"
OCT 25, 2018


VC 329
16'5" - 18'
OCT 25, 2018


VC 329
18' - 20'
OCT 25, 2018


VC 329
20' - 22'
OCT 25, 2018


VC 329
22' - 24'
OCT 25, 2018


VC 329
24'-25'3'
OCT 25, 2018

APPENDIX D

Core Logs

BORING NUMBER DEP1

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 31/10/18 **COMPLETED** 31/10/18
WATER DEPTH -9.1 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.76
DRILLING METHOD Vibracore
CORE RECOVERY: 6.17 (79%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:914266.91 Y:110737.33
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-9		(OL) Wet, black loose shells with a loose Organic Silt matrix	DEP-1-D0-7.5E		0	0.05	3
			(ML) Wet to damp, soft, gray, Organic Silt to sandy Silt			0	0.22	2
						0	0.15	3
						0	0.096	2
5	-14		(ML) Wet, dark gray sandy Silt, some intermixes lenses of peat and wood fragments			2.5	>1.0	2
			(CH) Dry, light gray, highly plastic and cohesive Clay			1.7	>1.0	2
								4

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER DEP2

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.2 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.74
DRILLING METHOD Vibracore
CORE RECOVERY: 7.75 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:927277.74 Y:118151.39
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-14		(SP) Wet, loose, gray, fine to medium Sand and shells					
			(OL) Wet, soft, gray-green Organic Silt, few pieces of shell	COMP-J-D0-7.5E	0.8	0	0.06	5
					1.1	0	0.08	4
					2	0	0.06	4
					1.1	0	0.04	4
5	-19				2	0	0.06	3
					0.8	0	0.06	4
						0	0.07	3

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER DEP3

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 31/10/18 **COMPLETED** 31/10/18
WATER DEPTH -11.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.65
DRILLING METHOD Vibracore
CORE RECOVERY: 7.08 (92%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:917350.18 Y:112494.78
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-11		(OL) Wet, black loose shells with Organic Silt matrix					
			(CL-ML) Wet to damp, soft, black at top grading down to dark gray-green Silt/Clay; few small shell fragments	DEP-3-D0-7.5E		0	0.06	2
						0	0.09	2
						0	0.12	2
						0	0.13	2
5	-16					0	0.13	2
						0	0.17	2
						0	0.15	2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 7.7 feet.

BORING NUMBER DEP4R

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 30/10/18 **COMPLETED** 30/10/18
WATER DEPTH -11.5 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.61
DRILLING METHOD Vibracore
CORE RECOVERY: 7.59 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:918189.16 Y:112955.66
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-12		(OL) Wet, loose, black shells with some silt matrix					
			(CL-ML) Wet to damp, soft gray-green Silt/Clay	DEP-4-REV-D0-7.5E		0	0.08	3
						0	0.10	3
						0	0.08	3
						0	0.10	3
5	-17					0	0.16	3
						0	0.14	3
						0	0.14	3

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
□ FINES CONTENT (%) □
20 40 60 80

Bottom of borehole at 7.6 feet.

BORING NUMBER DEP5R

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 30/10/18 **COMPLETED** 30/10/18
WATER DEPTH -12.4 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.76
DRILLING METHOD Vibracore
CORE RECOVERY: 6.92 (89%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:919875.91 Y:113936.31
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-12		(OL) Wet, loose, black Organic Silt and shells					
			(CL-ML) Wet to damp, soft, brown to gray-green Silt/Clay; some small shell fragments throughout	DEP-5-REV-D0-7.5E		0	0.06	2
						0	0.10	2
						0	0.09	2
						0	0.15	2
5	-17					0	0.13	2
						0	0.20	2
								2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER DEP6

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -38.4 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 27.06
DRILLING METHOD Vibracore
CORE RECOVERY: 26 (96%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935879.14 Y:122979.85
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-38		(OH) Wet to damp, dark gray to black, soft to medium stiff Organic Silt	DEP-6-D0-13.5E		n/a	0.03	3
						n/a	0.07	3
5	-43					n/a	0.07	4
						n/a	0.08	4
						n/a	0.01	4
10	-48					n/a	0.13	4
						n/a	0.15	4
			(CH) Damp, green-gray, soft to medium stiff Clay; cohesive	DEP-6-D13.5-27E		n/a	0.27	4
15	-53					n/a	0.30	5
						n/a	0.30	4
20	-58					n/a	0.27	4
						n/a	0.09	4
						n/a	0.25	4
25	-63							5

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 27.1 feet.

BORING NUMBER DEP7

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -38.1 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 20.26
DRILLING METHOD Vibracore
CORE RECOVERY: 18.67 (92%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936249.98 Y:123280.01
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-38		(OH) Damp, black to dark gray Silt, soft to medium stiff, slightly cohesive below 4 feet' some medium to dark tan banding 2"-4" thick with no change in sediment	DEP-7-D0-15E		n/a	n/a	1
						n/a	0.03	2
5	-43					n/a	0.08	2
						n/a	0.12	2
						n/a	0.11	1
10	-48					n/a	0.10	1
						n/a	0.12	1
15	-53		(CH) Damp, gray- green, soft to medium stiff Clay; cohesive	DEP-7-D15-20E		n/a	0.30	1
						n/a	0.25	1
20	-58							2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 20.3 feet.

BORING NUMBER VC204

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 12/11/18 **COMPLETED** 12/11/18
WATER DEPTH -7.1 ft MLLW **HOLE SIZE** 3.25 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 14
DRILLING METHOD Mini-Vibracore
CORE RECOVERY: 11.75 (84%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:912556.06 Y:109742.34
NOTES Total penetration measured manually
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-7		(OL) Wet, soft, dark gray Organic Silt	COMP-A-D0-15E		0	0.15	n/a
						0	0.06	n/a
						0	0.07	n/a
						0.2	0.18	n/a
5	-12		(SP) Wet, medium dense, gray fine Sand			0.5	n/a	n/a
			(OL) Wet, soft, dark gray Organic Silt			0	0.18	n/a
			Refusal at 14.0 '			0	0.17	n/a
						0	0.19	n/a
						0	0.20	n/a
10	-17					0	0.26	n/a
						0	0.30	n/a
								n/a
								n/a
								n/a

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 14.0 feet.

BORING NUMBER VC205

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 12/11/18 **COMPLETED** 12/11/18
WATER DEPTH -6.5 ft MLLW **HOLE SIZE** 3.25 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 15
DRILLING METHOD Mini-Vibracore
CORE RECOVERY: 10.83 (72%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:912597.27 Y:109814.64
NOTES Total penetration measured manually
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-7		(ML) Wet, soft, gray slightly sandy Organic Silt	COMP-A-D0-15E		0.1	0.08	n/a
						0.2	0.08	n/a
						0.4	n/a	n/a
			(SP) Wet, medium dense, light gray-brown fine Sand			0.3	n/a	n/a
5	-12		(ML) Wet, soft, gray sandy Organic Silt			0.0	0.11	n/a
						0.0	0.12	n/a
						0.1	0.12	n/a
						0.3	0.23	n/a
						0.2	0.10	n/a
10	-17					0.5	0.11	n/a
								n/a
								n/a
								n/a
								n/a
15	-22							n/a

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 15.0 feet.

BORING NUMBER VC208

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 12/11/18 **COMPLETED** 12/11/18
WATER DEPTH -7.8 ft MLLW **HOLE SIZE** 3.25 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 8
DRILLING METHOD Mini-Vibracore
CORE RECOVERY: 7.42 (93%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:912975.11 Y:110006.95
NOTES Total penetration measured manually
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-8		(SP) Wet, soft, gray to dark gray fine Sand, rare shells	VC-208-D0-7.5E		0.8	n/a	n/a
			(ML) Wet, soft, dark gray sandy Silt. with lenses of silty Sand- few shells at 2.5-2.67 ft, 3-3.08 ft and 3.5-3.58 feet. Grades to lighter gray at about 6 feet; piece of wood root at 6'11"			0.0	0.07	n/a
						0.0	0.09	n/a
						0.0	0.07	n/a
5	-13					0.1	0.10	n/a
						0.2	0.18	n/a
						0.2	0.15	n/a

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 8.0 feet.

BORING NUMBER VC211

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 12/11/18 **COMPLETED** 12/11/18
WATER DEPTH -8 ft MLLW **HOLE SIZE** 3.25 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 8
DRILLING METHOD Mini-Vibracore
CORE RECOVERY: 7.92 (99%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:913376.8 Y:110230.19
NOTES Total penetration measured manually
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-8		(SW) Wet, gray, loose silty fine Sand; pocket of fine to coarse Gravel at 0.42'-1.92'	VC-211-D0-7.5E		0.6	n/a	n/a
			(SW-SM) Wet, soft, dark gray silty fine Sand with shells			0.7	n/a	n/a
						0.2	0.05	n/a
						0.2	0.06	n/a
5	-13		(ML) Wet, soft, dark gray sandy Organic Silt		0.1	0.1	0.03	n/a
					0.8	0.0	0.24	n/a
			(CL-ML) Wet, soft, dark gray silty Clay to clayey Silt		0.7	0.0	0.45	n/a
					0.8			

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 8.0 feet.

BORING NUMBER VC214

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -8.2 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.86
DRILLING METHOD Vibracore
CORE RECOVERY: 7.42 (94%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:913780.35 Y:110461.12
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-8		(OL) Wet, soft, black Organic Silt	VC-214-D0-7.5E		0	0.03	6
						0	0.05	6
						0	0.05	4
			(OL) Shell layer with loose, wet black Organic Silt matrix			0	0.10	3
5	-13		(OL) Wet, soft, black to brown Organic Silt with color change in lenses 3-4" thick		0.2	0	0.11	3
					0.9	0	0.12	2
			(OL) Wet, soft, black to brown Organic Silt with numerous shells			0	0.09	2

Bottom of borehole at 7.9 feet.

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

BORING NUMBER VC216

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -12.2 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.64
DRILLING METHOD Vibracore
CORE RECOVERY: 7.25 (95%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:920546.8 Y:114312.79
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-12		(OL) Wet, very soft, black Organic Silt, few shells					
			(CL-ML) Damp to wet, soft, brown to green-gray Silt/Clay; numerous small shell fragments	VC-216-D0-7.5E		0	0.02	5
						0	0.11	4
						0	0.12	4
						0	0.14	3
5	-17					0	0.13	3
						0	0.10	3
						0	0.07	3

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
□ FINES CONTENT (%) □
20 40 60 80

Bottom of borehole at 7.6 feet.

BORING NUMBER VC217

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -13.1 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.7
DRILLING METHOD Vibracore
CORE RECOVERY: 7.67 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:921108.14 Y:114633.11
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-13		(OL) Wet, loose very soft, black Organic Silt with shells			0	0.04	5
			(CL-ML) Wet, soft, gray-green Silt/Clay; rare shells			0	0.10	4
						0	0.07	3
				VC-217-D0-7.5E	0.8	0	0.10	3
5	-18					0	0.05	3
						0	0.08	3
						0	0.10	3

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 7.7 feet.

BORING NUMBER VC218

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -13.6 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.69
DRILLING METHOD Vibracore
CORE RECOVERY: 8.17 (100%) *See Note
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:921620.7 Y:114928.68
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-14		(OL) Wet, loose, soft, black Organic Silt	VC-218-D0-7.5E		0	0.04	3
						0	0.06	2
						0	0.05	3
						0	0.03	3
5	-19					0	0.10	3
			(OL) Layer of compact shells with Organic Silt matrix			0	0.14	3
			(CL-ML) Damp, medium stiff, gray-green Silt/Clay; numerous small shell fragments			0	0.16	4

*Note: Recovery value higher than penetration value as a result of core vibration causing de-compaction of materials penetrated.

Bottom of borehole at 7.7 feet.

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
□ FINES CONTENT (%) □
20 40 60 80

BORING NUMBER VC219

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.52
DRILLING METHOD Vibracore
CORE RECOVERY: 7.17 (95%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:922140.04 Y:115220.35
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-14		(OL) Wet, soft, black Organic Silt; 2 inch thick shell layer at 5.42-5.58'	COMP-G-D0-7.5E		0	0.02	5
						0	0.04	4
						0	0.04	4
						0	0.11	3
5	-19					0	0.07	3
			(OL) Wet, soft, brown to gray-green silty Clay / clayey Silt; numerous small shell fragments in upper three inches of section			0	0.06	3
						0	0.09	2

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 7.5 feet.

BORING NUMBER VC220

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.8 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.92
DRILLING METHOD Vibracore
CORE RECOVERY: 7.67 (97%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:922665.63 Y:115522.17
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-15		(OL) Wet, soft, black Organic Silt	COMP-G-D0-7.5E		0	0.05	3
						0	0.15	3
						0	0.15	2
						0	0.06	2
5	-20		(OL) Damp, soft, brown to gray-green silty Clay to clayey Silt; numerous small shell fragments in upper few inches of section			0	0.10	2
						0	0.06	2
						0	0.06	2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.9 feet.

BORING NUMBER VC221

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.4 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.80
DRILLING METHOD Vibracore
CORE RECOVERY: 7.58 (97%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:923189.92 Y:115820.54
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-14		(OL) Wet, soft, black Organic Silt	COMP-G-D0-7.5E		0	0.04	3
						0	0.04	3
						0	0.01	2
						0	0.10	2
5	-19		(OL) Wet, soft to medium stiff, Organic Silt, numerous small shell fragments			0	0.04	2
			(OL) Wet, soft, dark green-gray silty Clay to clayey Silt; rare shells			0	0.09	2
						0	0.10	2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER VC222

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.59
DRILLING METHOD Vibracore
CORE RECOVERY: 7.75 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:923695.87 Y:116108.82
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-14		(OL) Wet, soft, dark gray to black Organic Silt	VC-222-D0-7.5E		0	0.01	6
						0	0.00	6
						0	0.03	5
						0	0.05	4
5	-19					0	0.10	4
			(OL) Wet, soft, dark gray-green Organic Silt			0	0.05	4
						0	0.05	4

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER VC223

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.5 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.77
DRILLING METHOD Vibracore
CORE RECOVERY: 7.5 (96%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:924121.94 Y:116350.96
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-15		(OL) Wet, black, soft Organic Silt	VC-223-D0-7.5E		0	0.03	5
						0	0.05	4
						0	0.10	4
			(OL) Wet, soft, green-gray silty Clay; slightly cohesive			0	0.08	3
5	-20					0	0.08	4
						0	0.06	4
						0	0.10	4

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER VC225

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 20/10/18 **COMPLETED** 20/10/18
WATER DEPTH -17.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.5
DRILLING METHOD Vibracore
CORE RECOVERY: 7.5 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:934946.46 Y:122452.07
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-17		(CH) Wet, soft, dark gray-green Clay	COMP-L-D0-20.5E	1.3	n/a	0.04	7
						n/a	0.09	8
					1.1	n/a	0.06	9
						n/a	0.01	8
5	-22				1	n/a	0.08	9
						n/a	0.06	8
					0.3	n/a	0.05	10

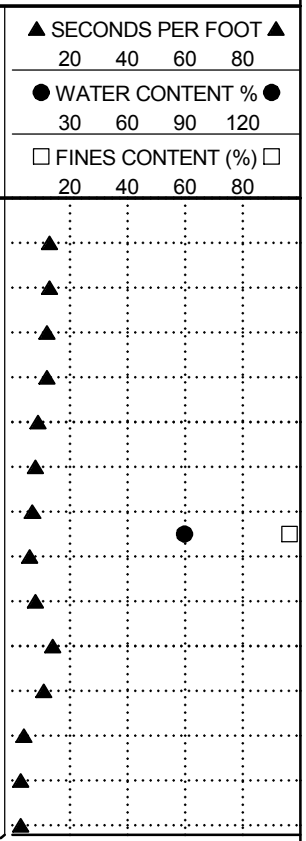
▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 7.5 feet.

BORING NUMBER VC227

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 20/10/18 **COMPLETED** 20/10/18
WATER DEPTH -17.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 14.22
DRILLING METHOD Vibracore
CORE RECOVERY: 15 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935132.88 Y:122555.28
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-17		(OL) Numerous shells and shell fragments in Silt matrix; soft, wet, dark gray-green		1.2	n/a	0.05	13
			(CH) Wet to damp, soft to medium stiff, dark gray-green Clay		3			13
					0.9	n/a	0.03	12
					0.8			12
5	-22			COMP-L-D0-20.5E		n/a	0.10	9
								8
						n/a	0.08	7
								6
						n/a	0.09	8
10	-27							14
						n/a	0.10	11
								4
						n/a	0.13	3
						n/a	0.12	3



*Note: Recovery value higher than penetration value as a result of core vibration causing de-compaction of materials penetrated.

Bottom of borehole at 14.2 feet.

BORING NUMBER VC228

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 20/10/18 **COMPLETED** 20/10/18
WATER DEPTH -17.4 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 21.36
DRILLING METHOD Vibracore
CORE RECOVERY: 18.9 (89%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935318.81 Y:122659.12
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-17		(OL) Dark gray silt with whole shell pieces, soft, loose					
			(CH) Wet to damp soft to medium dense, dark gray-green Clay	COMP-L-D0-20.5E		n/a	0.08	7
						n/a	0.05	6
5	-22					n/a	0.08	5
						n/a	0.12	4
						n/a	0.12	4
10	-27							
						n/a	0.12	4
						n/a	0.16	5
15	-32					n/a	0.15	4
						n/a	0.12	5
								5
20	-37							
								5

Bottom of borehole at 21.4 feet.

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

BORING NUMBER VC229

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 20/10/18 **COMPLETED** 20/10/18
WATER DEPTH -17.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 28.9
DRILLING METHOD Vibracore
CORE RECOVERY: 23.0 (80%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935516.79 Y:122769.84
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-18		(OL) Wet, loose, black Silt					
			(CH) Damp, soft to medium stiff, dark gray-green Clay, cohesive	VC-229-D0-28E		n/a	0.05	7
						n/a	0.10	6
5	-23					n/a	0.10	5
						n/a	0.15	4
						n/a	0.16	4
10	-28					n/a	0.16	4
						n/a	0.20	5
15	-33					n/a	0.17	4
						n/a	0.15	5
						n/a	0.22	5
20	-38					n/a	0.17	5
								6
25	-43							6
								6

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 28.9 feet.

BORING NUMBER VC230

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 20/10/18 **COMPLETED** 20/10/18
WATER DEPTH -29.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 27.64
DRILLING METHOD Vibracore
CORE RECOVERY: 24.0 (87%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935696.74 Y:122880.39
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-29		(OL) Black soft wet Silt					
			(CH) Damp, soft to medium stiff, dark gray-green Clay, cohesive			n/a	0.03	4
						n/a	0.13	5
								6
5	-34					n/a	0.07	6
								5
						n/a	0.11	7
								3
						n/a	0.16	2
10	-39							
				COMP-M-D0-27E		n/a	0.13	2
						n/a	0.19	2
15	-44					n/a	0.15	2
						n/a	0.20	3
						n/a	0.20	2
20	-49							
						n/a	0.20	3
						n/a	0.20	2
25	-54							2
								2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 27.6 feet.

BORING NUMBER VC230A

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 20/10/18 **COMPLETED** 20/10/18
WATER DEPTH -29.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 27.02
DRILLING METHOD Vibracore
CORE RECOVERY: 29.25 (100%) *See Note
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935637.91 Y:122921.32
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-30		(OL) Loose black Silt, trace shell fragments			n/a	0.03	7
						n/a	0.05	6
5	-35		(CH) Dark gray-green soft to medium stiff Clay; cohesive; rare fine shell fragments			n/a	0.11	6
						n/a	0.12	7
10	-40					n/a	0.12	7
						n/a	0.13	6
				COMP-M-D0-27E		n/a	0.13	7
15	-45					n/a	0.17	7
						n/a	0.15	9
20	-50					n/a	0.18	9
						n/a	0.20	7
						n/a	0.22	8
25	-55					n/a	0.20	10
			*Note: Recovery value higher than penetration value as a result of core vibration causing de-compaction of materials penetrated.			n/a	0.30	10

Bottom of borehole at 27.0 feet.

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

BORING NUMBER VC230B

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 20/10/18 **COMPLETED** 20/10/18
WATER DEPTH -28.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 27.13
DRILLING METHOD Vibracore
CORE RECOVERY: 28 (100%) *See Note
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935762.39 Y:122850.32
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-29		(CH) Wet, soft to medium stiff; dark gray-green Clay; cohesive	COMP-M-D0-27E		n/a	0.15	7
						n/a	0.10	6
								6
5	-34					n/a	0.15	3
								3
						n/a	0.10	6
								8
						n/a	0.20	9
10	-39							7
						n/a	0.20	6
						n/a	0.15	6
15	-44					n/a	0.10	5
						n/a	0.15	5
						n/a	0.10	5
20	-49							
						n/a	0.15	4
						n/a	0.15	5
25	-54					n/a	0.10	5
			*Note: Recovery value higher than penetration value as a result of core vibration causing de-compaction of materials penetrated.			n/a	0.10	6

Bottom of borehole at 27.1 feet.

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

BORING NUMBER VC232

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -46.2 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 22.82
DRILLING METHOD Vibracore
CORE RECOVERY: 20.67 (90%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936059.13 Y:123083.06
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-46		(OL) Damp, dark gray to black, soft to medium stiff Organic Silt	COMP-N-D0-4E		n/a	0.10	3
						n/a	0.10	3
								4
5	-51					n/a	0.15	5
			(CH) Damp, soft to medium stiff, gray-green Clay, cohesive	COMP-N-D4-22.5E				17
						n/a	0.28	34
								9
10	-56					n/a	0.20	10
								8
						n/a	0.30	7
						n/a	0.17	6
15	-61					n/a	0.30	5
						n/a	0.25	5
						n/a	0.28	4
20	-66					n/a	0.15	5

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 22.8 feet.

BORING NUMBER VC232A

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -45.1 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 23.07
DRILLING METHOD Vibracore
CORE RECOVERY: 22.5 (97%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936122.86 Y:123056.16
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-45		(OL) Wet, black to dark gray Organic Silt	COMP-N-D0-4E		n/a	n/a	3
						n/a	0.07	3
5	-50		(CH) Damp, green-gray, soft to medium Stiff Clay; cohesive			n/a	0.30	3
						n/a	0.29	3
						n/a	0.30	3
10	-55					n/a	0.26	3
				COMP-N-D4-22.5E		n/a	0.20	2
15	-60					n/a	0.25	2
						n/a	0.25	2
						n/a	0.27	2
20	-65					n/a	0.30	2
								2

▲ SECONDS PER FOOT ▲ (20 40 60 80)
● WATER CONTENT % ● (30 60 90 120)
□ FINES CONTENT (%) □ (20 40 60 80)

Bottom of borehole at 23.1 feet.

BORING NUMBER VC232B

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -46.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 22.5
DRILLING METHOD Vibracore
CORE RECOVERY: 22.0 (98%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:935986.51 Y:123122.29
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-47		(OL) Wet, soft, dark gray to black Organic Silt	COMP-N-D0-4E		n/a	0.05	2
						n/a	0.17	3
5	-52		(CH) Damp, soft to medium stiff Clay; cohesive	COMP-N-D4-22.5E		n/a	0.07	3
								4
						n/a	0.30	5
								8
						n/a	0.25	10
10	-57							
						n/a	0.20	10
						n/a	0.13	10
15	-62					n/a	0.25	10
						n/a	0.20	9
						n/a	0.28	10
20	-67							
						n/a	0.34	9

▲ SECONDS PER FOOT ▲ (20 40 60 80)
● WATER CONTENT % ● (30 60 90 120)
□ FINES CONTENT (%) □ (20 40 60 80)

Bottom of borehole at 22.5 feet.

BORING NUMBER VC235

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -31.8 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 24.23
DRILLING METHOD Vibracore
CORE RECOVERY: 21.3 (88%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936522 Y:123347.61
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-32		(OL) Damp, black to dark gray Organic Silt; cohesive from 4 ft to 13.83; loose 0-4 feet			n/a	n/a	2
					0.2			
					0.2	n/a	0.04	2
					0.8			
5	-37			VC-235-D0-13.7E		n/a	0.06	2
						n/a	0.10	2
						n/a	0.14	2
10	-42					n/a	0.16	2
						n/a	0.12	2
15	-47		(CH) Damp, gray-green soft to medium stiff Clay; cohesive	VC-235-D13.7-24E		n/a	0.16	2
						n/a	0.16	2
						n/a	0.25	2
20	-52					n/a	0.35	2
								2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 24.2 feet.

BORING NUMBER VC237

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -19.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 25.72
DRILLING METHOD Vibracore
CORE RECOVERY: 25.67 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936646.56 Y:123432.37
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-19		(OH) Wet, black to dark gray, soft Organic Silt	COMP-O-D0-2E		n/a	n/a	3
						n/a	0.08	2
			(CH) Damp, soft to medium stiff, gray-green Clay; cohesive					
5	-24					n/a	0.10	2
						n/a	0.18	2
						n/a	0.15	2
10	-29				0.8			
					10	n/a	0.24	2
					2			
				COMP-O-D2-25E		n/a	0.15	1
15	-34					n/a	0.20	2
						n/a	0.22	2
						n/a	0.24	1
20	-39					n/a	0.21	2
						n/a	0.18	2
25	-44					n/a	0.28	1

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 25.7 feet.

BORING NUMBER VC237A

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -21 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 25.97
DRILLING METHOD Vibracore
CORE RECOVERY: 25.67 (99%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936725.19 Y:123388.69
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-21		(OL) Wet, soft, black to dark gray Organic Silt	COMP-O-D0-2E		n/a	n/a	3
						n/a	0.04	2
5	-26		(CH) Damp, soft to medium stiff, green-gray Clay; cohesive; 2"x3" section of oyster shell at 5.75 feet	COMP-O-D2-25E		n/a	0.10	2
						n/a	0.20	2
10	-31					n/a	0.19	2
						n/a	0.23	2
						n/a	0.14	1
15	-36					n/a	0.24	1
						n/a	0.25	1
						n/a	0.25	2
20	-41					n/a	0.25	1
						n/a	0.28	1
25	-46					n/a	0.22	2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 26.0 feet.

BORING NUMBER VC237B

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 22/10/18 **COMPLETED** 22/10/18
WATER DEPTH -30.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 25.74
DRILLING METHOD Vibracore
CORE RECOVERY: 27.17 (100%) *See Note
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936557.57 Y:123446.6
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-30		(OL) Wet, soft, dark gray to black Organic Silt	COMP-O- D0-2E		n/a	0.04	3
			(CL) Damp, soft to medium stiff gray-green Clay; cohesive			n/a	0.04	3
5	-35					n/a	0.10	2
					0.8	n/a	0.12	2
					1			
					0.6	n/a	0.00	2
10	-40				1			
					1.4	n/a	0.20	2
				COMP-O-D2-25E	0.8	n/a	0.21	1
15	-45					n/a	0.20	2
						n/a	0.20	2
						n/a	0.15	1
20	-50					n/a	0.20	1
						n/a	0.19	2
25	-55					n/a	0.22	2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

*Note: Recovery value higher than penetration value as a result of core vibration causing de-compaction of materials penetrated.

Bottom of borehole at 25.7 feet.

BORING NUMBER VC238

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -19.5 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 28.86
DRILLING METHOD Vibracore
CORE RECOVERY: 24.75 (88%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:936831.39 Y:123523.56
NOTES Recovery on Run 1 was too short; Run 2 shown
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-20		(OL) Dark gray, wet, soft Organic Silt; slightly cohesive	VC-238-D0-28E		n/a	0.06	4
			(OL) Black, loose shell hash with soft, loose Silt matrix		2			4
			(CH) Damp, soft to medium stiff, gray-green Clay; cohesive			n/a	0.14	5
								1
5	-25					n/a	0.15	1
						n/a	0.16	1
						n/a	0.19	1
10	-30					n/a	0.14	1
						n/a	0.18	1
15	-35					n/a	0.20	1
						n/a	0.26	1
20	-40					n/a	0.25	1
						n/a	0.23	2
						n/a	0.22	1
25	-45							1
								2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 28.9 feet.

BORING NUMBER VC239

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -17.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 24.26
DRILLING METHOD Vibracore
CORE RECOVERY: 20.5 (84%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:937021.99 Y:123628.61
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-18		(OL) Loose. wet, black Silt					
			(CH) Damp, soft to medium Stiff gray-green Clay; cohesive			n/a	0.15	4
								4
					1	n/a	0.15	1
								1
5	-23					n/a	0.15	1
						n/a	0.15	1
						n/a	0.10	1
10	-28							
						n/a	0.15	1
						n/a	0.22	1
15	-33					n/a	0.21	1
						n/a	0.27	1
						n/a	0.15	1
20	-38							
								1
								1

SECONDS PER FOOT: 20 40 60 80
WATER CONTENT %: 30 60 90 120
FINES CONTENT (%): 20 40 60 80

COMP-P-D0-23E

Bottom of borehole at 24.3 feet.

BORING NUMBER VC240

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -17.8 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 16.12
DRILLING METHOD Vibracore
CORE RECOVERY: 15.5 (95%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:937214.44 Y:123732.2
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-18		(OL) Loose, wet, black Silt with shells					
			(CH) Damp, soft to medium dense green-gray Clay; cohesive	COMP-P-D0-23E		n/a	0.08	6
								13
						n/a	0.04	9
								2
5	-23					n/a	0.05	2
								2
						n/a	0.08	2
								2
						n/a	0.18	2
10	-28							1
						n/a	0.23	1
								2
						n/a	0.23	1
								1
15	-33					n/a	0.24	1
								2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 16.1 feet.

BORING NUMBER VC242

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -17.6 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 10.54
DRILLING METHOD Vibracore
CORE RECOVERY: 10.0 (95%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:937406.83 Y:123827.25
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-18		(OL) Wet, soft, dark gray to black Organic Silt; large shells at bottom of section	COMP-P-D0-23E		n/a	n/a	5
								5
			(CH) Damp, soft to medium stiff, gray-green Clay		1.3	n/a	0.05	5
								2
5	-23					n/a	0.12	2
								1
						n/a	0.09	1
								1
						n/a	0.20	1
10	-28							1

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 10.5 feet.

BORING NUMBER VC244

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 26/10/18 **COMPLETED** 26/10/18
WATER DEPTH -21.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 10.68
DRILLING METHOD Vibracore
CORE RECOVERY: 8.17 (76%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:970439.58 Y:131668.5
NOTES Longest recovery of three attempts; Run 3 shown
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-21		(OL) Wet, loose, black Organic Silt with shells			0.8	0.16	6
			(SM) Wet, soft gray sandy Silt to silty fine Sand	VC-244-D0-4E		n/a	0.12	6
			(SM) Wet, soft, dark gray Organic Silt, some fine sand; some fine shell fragments			0.5	0.14	6
						n/a	0.15	2
5	-26		(SM) Wet, soft, dark gray silty fine Sand, some small shell fragments	COMP-R-D4-10.5E		0.4	0.15	2
						0.2	0.13	2
						1.7	n/a	3
			(SP) Damp, medium dense red-brown fine to medium Sand			1.5	n/a	3
								4
10	-31							7

Bottom of borehole at 10.7 feet.

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

BORING NUMBER VC245

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 26/10/18 **COMPLETED** 26/10/18
WATER DEPTH -21.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 11.91
DRILLING METHOD Vibracore
CORE RECOVERY: 9.17 (77%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:971012.78 Y:131523.4
NOTES Longest recovery of three attempts; Run 3 shown
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-22		(OL) Wet, black to dark gray, soft Organic Silt	VC-245-D0-4E		0.0	0.14	10
						0.0	0.13	7
						0.0	0.07	3
			(SP) Damp, gray, medium dense fine Sand, with 1/2" thick silt lens at 5.5 feet. Sand grades with shells from 7.6 feet to bottom of section			2.5	n/a	2
5	-27			COMP-R-D4-10.5E		1.5	n/a	3
						2.5	n/a	3
						2.4	n/a	3
			(SP) Damp, medium dense red-brown medium Sand, grading down to fine sand, little silt			1.7	n/a	6
						1.6	n/a	8
10	-32							5
								3

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 11.9 feet.

BORING NUMBER VC246

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 26/10/18 **COMPLETED** 26/10/18
WATER DEPTH -22.7 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 11.07
DRILLING METHOD Vibracore
CORE RECOVERY: 8.92 (81%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:971503.46 Y:131395.93
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-23		(OL) Wet, soft, black Organic Silt	VC-246-D0-4E		0.0	0.04	3
						0.0	0.07	2
						0.0	0.16	3
						0	0.15	3
5	-28		(ML) Wet, soft, dark gray Organic Silt with numerous small shell fragments	COMP-R-D4-10.5E		0.7	0.18	4
			(SP) Wet, medium dense, gray fine Sand, few shell fragments			3.5	n/a	3
						0.4	n/a	6
						0.4	n/a	3
			(SP) Damp, medium dense brown fine to medium Sand					2
10	-33							2
								6

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 11.1 feet.

BORING NUMBER VC247

Alpine A GARDLINE COMPANY | HALEY ALDRICH

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -24.6 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 21.6
DRILLING METHOD Vibracore
CORE RECOVERY: 18.0 (83%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:972037.82 Y:131266.38
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-25		(ML) Wet, soft, black Silt, few shells; little medium Sand	VC-247-D0-4E		n/a	n/a	3
			(OL) Wet, black soft, loose, Organic Silt; rare fine shell fragments					
			(OL) Wet, soft, black to dark gray Organic Silt			n/a	0.15	2
5	-30		(SM) Wet, loose, dark gray silty fine to medium Sand	VC-247-D4-21.5E		n/a	0.08	1
						0.25	n/a	1
			(SP) Damp, dense, red-brown fine to medium Sand; one piece of gravel 1.5" x 2" at 16.67 feet			0.7	n/a	1
10	-35							2
						0.7	n/a	8
								7
						1.2	n/a	4
								3
15	-40					1.2	n/a	3
						0.4	n/a	3
								8
								4
20	-45							4
								7

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 21.6 feet.

BORING NUMBER VC251

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -18.2 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 9.23
DRILLING METHOD Vibracore
CORE RECOVERY: 7.25 (78%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:974446.59 Y:130671.43
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-18		(SM) Black to dark gray, wet, medium dense silty fine Sand, numerous shell fragments	VC-251-D0-7.5E	0.8	0.1	n/a	3
					1.1	0.22	n/a	3
			(OL) Wet, soft black shell hash with Organic Silt matrix; slightly cohesive		3.4	n/a	n/a	2
					1.8	n/a	n/a	1
5	-23		(SP) Damp, medium dense, gray fine to medium Sand, few small shell fragments		0.8	0.1	n/a	1
						0.17	n/a	2
						0.1	n/a	2
							n/a	1
							n/a	1

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 9.2 feet.

BORING NUMBER VC252

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 26/10/18 **COMPLETED** 26/10/18
WATER DEPTH -16.5 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 8.03
DRILLING METHOD Vibracore
CORE RECOVERY: 7.08 (88%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:975122.45 Y:130457.4
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-17		(OL) Wet, soft, black Organic Silt					
			(SP) Wet, loose, dark gray fine Sand, some shells and shell fragments	VC-252-D0-7.5E		0.2	n/a	4
						0.2	n/a	3
			(SP) Damp, medium dense, gray fine to medium Sand, rare shell fragments			2.3	n/a	2
						2.2	n/a	3
5	-22					2.2	n/a	6
						1.7	n/a	8
						1.6	n/a	7
								7

Bottom of borehole at 8.0 feet.

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
□ FINES CONTENT (%) □
20 40 60 80

BORING NUMBER VC253

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 26/10/18 **COMPLETED** 26/10/18
WATER DEPTH -16.7 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 8.43
DRILLING METHOD Vibracore
CORE RECOVERY: 8.0 (90%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:975756.87 Y:130189.89
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-17		(SP) Damp, loose, dark gray fine Sand; numerous shells					
			(SP) Damp, medium dense gray fine to medium Sand	VC-253-D0-7.5E		2.0	n/a	2
						2.0	n/a	2
						3.0	n/a	2
						2.2	n/a	4
5	-22					2.5	n/a	11
						2.5	n/a	12
						2.6	n/a	13
						2.0	n/a	9

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 8.4 feet.

BORING NUMBER VC255

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 26/10/18 **COMPLETED** 26/10/18
WATER DEPTH -32.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 8.11
DRILLING METHOD Vibracore
CORE RECOVERY: 6.42 (79%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:1013100.55 Y:130432.14
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-33		(SM) Wet, soft to medium dense, dark gray silty fine Sand, rare shell fragments	VC-255-D0-7.5E		1.0	n/a	4
								5
						3.5	n/a	3
								4
5	-38					3.5	n/a	5
			(SP) Damp, dark gray, loose fine to medium Sand			2.0	n/a	16
								58
								17

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 8.1 feet.

BORING NUMBER VC256

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 26/10/18 **COMPLETED** 26/10/18
WATER DEPTH -33.7 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.76
DRILLING METHOD Vibracore
CORE RECOVERY: 6.17 (80%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:1014065.56 Y:130795.63
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-34		(SM) Damp, dark gray, medium dense silty fine Sand, few shells; 1/2" thick Organic Silt lens at 4.25'	VC-256-D0-7.5E		0.5	n/a	5
								5
						2.1	n/a	4
								4
5	-39		(SP) Damp, loose to medium dense, brown fine to medium Sand, trace coarse Sand; rare shell fragments			2.5	n/a	4
								8
								14

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER VC301R

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 30/10/18 **COMPLETED** 30/10/18
WATER DEPTH -9.1 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 8.0
DRILLING METHOD Vibracore
CORE RECOVERY: 7.5 (94%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:914794.17 Y:111025.04
NOTES No recovery on Run 1, Run 2 shown
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-9		(ML) Wet, soft, loose Organic Silt, little fine sand					
			(CL-ML) Wet, soft to medium dense gray-green slightly organic Silt/Clay; little fine sand	VC-301-REV-D0-7.5E		0	0.09	4
						0	0.18	3
						0	0.00	2
						0	0.14	2
5	-14					0	0.16	2
						0	0.18	2
						0	0.23	5
								1

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

Bottom of borehole at 8.0 feet.

BORING NUMBER VC303

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 31/10/18 **COMPLETED** 31/10/18
WATER DEPTH -10.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.72
DRILLING METHOD Vibracore
CORE RECOVERY: 7.42 (96%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:915637.7 Y:111518.36
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-10		(OL) Wet, loose, black shell hash with Organic Silt matrix			0	0.07	2
			(ML) Wet to damp, soft to medium dense, dark gray grading down to gray-green Silt, some small sandy lenses	VC-303-D0-7.5E		0	0.12	2
						0	0.13	2
						0	0.20	1
5	-15					0.3	0.26	1
						0	0.03	1
						0	0.16	1

Bottom of borehole at 7.7 feet.

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

BORING NUMBER VC304

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -9.4 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.72
DRILLING METHOD Vibracore
CORE RECOVERY: 7.67 (99%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:916484.28 Y:112001.78
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-9		(OL) Wet, soft, red-brown to green-gray Organic Silt; numerous small shell fragments	VC-304-D0-7.5E		0	0.09	3
			(CL-ML) Wet to damp, soft. gray-green Silt/Clay; rare shells			0	0.10	2
						0	0.05	2
						0	0.09	2
5	-14					0	0.11	2
						0	0.11	2
						0	0.14	2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.7 feet.

BORING NUMBER VC307

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.7 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.68
DRILLING METHOD Vibracore
CORE RECOVERY: 7.08 (92%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:924958.82 Y:116830.22
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-15		(SM) Wet, soft, loose, black silty fine Sand; few shell fragments			0	0.02	3
			(OL) Wet, soft, gray-green silty clay - clayey silt			0	0.05	3
						0	0.04	2
				COMP-I-D0-7.5E		0	0.06	3
5	-20					0	0.07	2
						0	0.06	3
						0	0.10	3

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
□ FINES CONTENT (%) □
20 40 60 80

Bottom of borehole at 7.7 feet.

BORING NUMBER VC308

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.4 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.74
DRILLING METHOD Vibracore
CORE RECOVERY: 7.92 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:925726.37 Y:117267.82
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-14		(SM) Numerous shells with a silty Sand matrix; loose, wet, dark gray			0	0.05	3
			(OL) Wet, very soft, loose, black Organic Silt	COMP-I-D0-7.5E	18	0	0.01	3
					17	0	0.06	3
					28	0	0.08	3
5	-19				17	0	0.05	3
					18.1	0	0.01	4
					8	0	0.05	4

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.9 feet.

BORING NUMBER VC309

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -13.6 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.70
DRILLING METHOD Vibracore
CORE RECOVERY: 7.58 (98%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:926497.83 Y:117705.54
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-14		(OL) Wet, soft, gray-green Organic Silt to silty clay; not cohesive	COMP-I-D0-7.5E	0.5	0	0.01	4
					0.8	0	0.08	4
					0.5	0	0.04	3
					0.9	0	0.08	3
5	-19				0.8	0	0.00	3
					3	0	0.08	3
					1	0	0.07	3
					0.5			

Bottom of borehole at 7.7 feet.

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

BORING NUMBER VC310

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -11.6 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.71
DRILLING METHOD Vibracore
CORE RECOVERY: 7.42 (96%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:927913.18 Y:118511.4
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-12		(SM) Wet, loose, dark gray silty Sand with shells	COMP-J-D0-7.5E		0.2	0.10	3
						0	0.05	3
			(OL) Wet, soft, gray-green Organic Silt; few shell pieces			0	0.05	3
						0	0.06	3
5	-17					0	0.14	3
						0	0.14	3
						0	0.02	3

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.7 feet.

BORING NUMBER VC311

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -9.6 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.64
DRILLING METHOD Vibracore
CORE RECOVERY: 7.5 (98%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:928697.75 Y:118960.99
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-10		(SP) Wet, loose, dark gray to gray fine to medium Sand, some shells	VC-311-D0-7.5E		0.7	n/a	6
			(GW-GC) Wet, soft to loose, gray, mixture of well graded Sand, medium to coarse Gravel and cohesive Clay			0.0	n/a	6
			(GW-GC) Wet, gray to red-brown, dense to medium dense, mixture of sandy Clay with fine to medium Gravel; clay in small slightly cohesive sections in the gravel			0.3	n/a	7
						1.0	n/a	6
5	-15					2.0	n/a	7
			(SP) Damp, medium dense, red-brown fine to medium Sand			1.1	n/a	13
						2.7	n/a	16

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 7.6 feet.

BORING NUMBER VC312

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -10.7 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.76
DRILLING METHOD Vibracore
CORE RECOVERY: 6.0 (77%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:929392.54 Y:119352.18
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-11		(SP) Wet, loose, fine to medium Sand, little fine to medium gravel			0.4	n/a	8
			(SP) Damp, gray, medium dense, fine to medium Sand	COMP-K-D0-7.5E		0.3	n/a	7
						1.5	n/a	6
						2.6	n/a	4
5	-16					2.2	n/a	4
						1.3	n/a	4
								5

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.8 feet.

BORING NUMBER VC313

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -13.2 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.65
DRILLING METHOD Vibracore
CORE RECOVERY: 6.08 (79%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:930256.23 Y:119847.47
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-13		(SP) Wet, loose, gray fine to medium Sand, some shells			0.1	n/a	7
			(SW) Wet, loose, gray to brown fine to medium Sand, some fine gravel	COMP-K-D0-7.5E		1.5	n/a	7
			(SP) Damp, medium dense, red-brown fine to medium Sand, little fine gravel; layer of fine to coarse gravel with sand matrix from 5.75 to 6.08 feet			2.5	n/a	5
						3.0	n/a	4
5	-18					2.5	n/a	4
						1.0	n/a	8
								10

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 7.7 feet.

BORING NUMBER VC314

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 28/10/18 **COMPLETED** 28/10/18
WATER DEPTH -14.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 7.58
DRILLING METHOD Vibracore
CORE RECOVERY: 5.33 (68%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:931036.21 Y:120303.9
NOTES Longest recovery of three attempts
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-15		(SP) Wet, loose, gray fine to medium Sand, some shells					
			(SW) Damp, loose to medium dense, gray to red-brown fine to coarse Sand, some fine to coarse Gravel	COMP-K-D0-7.5E		0.5	n/a	4
						1.2	n/a	2
						1.4	n/a	2
						0.9	n/a	2
5	-20					1.0	n/a	3
								3
								3

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 7.6 feet.

BORING NUMBER VC315

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -20.7 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 12.59
DRILLING METHOD Vibracore
CORE RECOVERY: 9.83 (78%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:968210.72 Y:132031.94
NOTES Longest recovery of three attempts
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-21		(SM) Wet, soft to medium dense, silty medium to coarse Sand, some fine to medium Gravel; few shell pieces	COMP-Q-D0-10.5E		0.0	0.11	3
			(SP) Wet, medium dense, red-brown fine to medium Sand, rare fine gravel			0.0	n/a	3
						0.9	n/a	3
						1.6	n/a	2
5	-26					2.2	n/a	2
						2.5	n/a	2
						2.4	n/a	1
						2.2	n/a	1
						2.5	n/a	1
10	-31							1
								2
								2

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 12.6 feet.

BORING NUMBER VC316

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -21 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 10.75
DRILLING METHOD Vibracore
CORE RECOVERY: 7.25 (67%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:969022.72 Y:131951.95
NOTES Longest recovery of three attempts
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-21		(OL) Wet, soft, loose, dark gray Organic Silt, few shells	COMP-Q-D0-10.5E		0.0	0.10	3
			(SM) Wet, medium dense, gray, silty fine to medium Sand; numerous small shell fragments			0.0	0.13	3
			(SP) Wet, medium dense, gray to red-brown fine to medium Sand, rare fine gravel			1.6	n/a	1
						1.5	n/a	18
5	-26					2.1	n/a	2
						2.2	n/a	3
						1.5	n/a	5
								5
								4
10	-31							5

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 10.8 feet.

BORING NUMBER VC317

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 29/10/18 **COMPLETED** 29/10/18
WATER DEPTH -20.8 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 10.41
DRILLING METHOD Vibracore
CORE RECOVERY: 8.42 (79%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:970014.31 Y:131761.32
NOTES Longest recovery of three attempts
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-21		(SP) Wet, medium dense, gray fine Sand	COMP-Q-D0-10.5E		1.2	0.14	14
			(ML) Wet, soft, dark gray sandy Silt; few shells			0.3	0.08	10
						0.0	0.22	1
						0.0	n/a	2
5	-26		(SM) Wet, gray, loose silty fine to medium Sand			0.5	n/a	2
						0.4	n/a	1
			(SP) Wet, medium dense, red-brown fine to coarse Sand, rare fine gravel			1.7	n/a	1
						0.9	n/a	2
								2
10	-31							3

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
☐ FINES CONTENT (%) ☐
20 40 60 80

Bottom of borehole at 10.4 feet.

BORING NUMBER VC318

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -30.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 21.80
DRILLING METHOD Vibracore
CORE RECOVERY: 20.67 (95%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:972501.24 Y:131152.65
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-30	(OL) Wet, loose black Organic Silt	VC-318-D0-3.5E		n/a	0.05	4
							7
					n/a	0.03	5
		(SP) Damp, dense red-brown fine to medium Sand, trace fine gravel					3
5	-35				1.6	n/a	2
							2
					2.2	n/a	2
							2
					1.8	n/a	2
10	-40						1
			VC-318-D3.5-21.5E		1.4	n/a	4
		(CH) Damp, light gray, stiff to semi-stiff sandy Clay					6
		(CH) Damp, light gray and red-brown layering, lenses of fine to medium Sand and lenses of semi-stiff damp clay; lenses 2-3 inches thick			n/a	0.26	3
							4
15	-45	(SW) Damp, dense, red-brown fine to medium Sand with 20%-30% fine gravel			1.7	n/a	3
							42
					1.7	n/a	55
							32
					1.0	n/a	25
20	-50				0.5	n/a	17
							10

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 21.8 feet.

BORING NUMBER VC320

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -35.4 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 19.08
DRILLING METHOD Vibracore
CORE RECOVERY: 19.3 (100%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:972862.71 Y:131065.88
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-35		(SM) Wet, dense, dark gray to gray silty fine Sand, numerous small shell fragments	VC-320-D0-19E		0.0	n/a	4
			(SP) Grades to damp, gray medium dense fine to medium Sand, few fine shell fragments			0.2	n/a	3
5	-40		Damp, dense to hard Peat, with layering less than 2 inches, some thin silt laminae between Peat lenses			0.7	n/a	2
			(SP) Medium dense, damp, gray to light brown medium to fine Sand; rare fine gravel			0.5	n/a	2
10	-45		(CL) Gray, dry, very stiff Clay; cohesive			0.0	n/a	2
			(CL) Gray, stiff sandy Clay, cohesive			2.0	n/a	2
			(CL) Damp to dry, stiff, red-brown to gray sandy Clay to clayey Sand			0.7	0.55	3
15	-50		(SP) Damp, dense, red-brown fine to medium Sand			1.6	n/a	5
								15
						2.0	n/a	55
								54
			(SW) Gray to red-brown, medium dense, damp, fine to coarse Sand, little fine to medium Gravel			2.5	n/a	56

Bottom of borehole at 19.3 feet.

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

BORING NUMBER VC321

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -33.1 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 20.98
DRILLING METHOD Vibracore
CORE RECOVERY: 18.25 (87%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:973221.28 Y:130979.56
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-33		(SW-SM) Black to dark gray, wet, very soft sandy Silt to silty fine Sand interbedded in 6 inch thick layers	VC-321-D0-20.5E		0.0	n/a	2
			(SP-SM) Wet, medium dense,gray fine Sand with some silt; some shell fragments			1.5	n/a	2
5	-38					0.9	n/a	2
						0.5	n/a	2
			(SW) Damp, loose to medium dense, light gray to brown medium to coarse Sand, some fine to medium Gravel			0.7	n/a	2
10	-43					0.5	n/a	2
			(CL) Damp, dark gray stiff Clay			1.2	0.8	4
			(SP) Damp, medium dense, gray to red-brown fine to medium Sand, little fine Gravel			0.1	n/a	4
15	-48					1.5	n/a	2
								3
20	-53							

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
☐ FINES CONTENT (%) ☐ 20 40 60 80

Bottom of borehole at 21.0 feet.

BORING NUMBER VC323

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 23/10/18 **COMPLETED** 23/10/18
WATER DEPTH -27.7 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 22.34
DRILLING METHOD Vibracore
CORE RECOVERY: 17.25 (77%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:973577.61 Y:130889.4
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-28		(SM) Wet, loose to soft, dark gray to black silty fine Sand; few small shell fragments			0.20	n/a	15
			(SP) Damp, medium dense, fine Sand, some shell fragments					13
						0.35	n/a	13
								2
5	-33					0.25	n/a	2
						0.30	n/a	3
			(SM) Wet, soft to medium dense, silty fine Sand, numerous shell fragment; trace fine gravel	VC-323-D0-22E		0.20	n/a	2
10	-38					0.30	n/a	3
						0.20	n/a	2
15	-43		(SP) Damp, loose to medium dense, gray to red-brown medium to coarse Sand			0.15	n/a	2
						n/a	n/a	2
								3
20	-48							5
								23
								25

Bottom of borehole at 22.3 feet.

BORING NUMBER VC326

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 25/10/18 **COMPLETED** 25/10/18
WATER DEPTH -38.6 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 22.16
DRILLING METHOD Vibracore
CORE RECOVERY: 19.67 (89%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:993185.94 Y:122763.05
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-39		(SP) Wet, loose to medium dense gray fine Sand; soft black lens of Organic Silt at 7'-7.25'	COMP-S-D0-0-21E		0.7	n/a	5
					1			3
					6.7	1.25	n/a	2
					14.8			2
5	-44				10	1.0	n/a	2
					10			
					20.1	0.5	n/a	3
					18.2			
					10	n/a	0.07	3
10	-49		(ML) Wet, black, soft sandy Organic Silt					2
						0.3	n/a	5
								4
			(SM) Wet, gray to dark gray, loose to medium dense, silty Sand to Sandy Silt			n/a	0.05	3
15	-54					0.5	n/a	3
						0.5	n/a	3
						1.2	n/a	3
20	-59							
								2
								4

Bottom of borehole at 22.2 feet.

▲ SECONDS PER FOOT ▲
20 40 60 80
● WATER CONTENT % ●
30 60 90 120
□ FINES CONTENT (%) □
20 40 60 80

BORING NUMBER VC327

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 25/10/18 **COMPLETED** 25/10/18
WATER DEPTH -36.9 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 22.58
DRILLING METHOD Vibracore
CORE RECOVERY: 19.5 (86%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:993199.35 Y:122723.89
NOTES
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-37		(SP-SM) Damp to wet, loose to medium dense, gray fine to medium Sand, with lenses of dark gray soft Organic Silt 2"-3" thick at 4.17' and 8.5 ft	COMP-S-D0-0-21E		2.5	n/a	6
								4
						2.2	n/a	2
								3
5	-42					1.8	n/a	3
						2.5	n/a	2
								3
						2.0	n/a	3
10	-47							7
			(SM) Wet, dark gray to gray, loose to medium dense silty fine Sand, occasional lenses of black Organic Silt (slightly cohesive, 3-4" thick at 10.5', 12.5', 14.25' and 16.67'			0.75	n/a	7
								3
						n/a	0.09	6
								3
15	-52					0.2	0.11	3
						0.1	n/a	3
						1.0	n/a	3
20	-57							
								3
								4

SECONDS PER FOOT: 20 40 60 80
WATER CONTENT %: 30 60 90 120
FINES CONTENT (%): 20 40 60 80

Bottom of borehole at 22.6 feet.

BORING NUMBER VC328

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 25/10/18 **COMPLETED** 25/10/18
WATER DEPTH -16.3 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 22.63
DRILLING METHOD Vibracore
CORE RECOVERY: 18.75 (83%)
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:997098.34 Y:124375.97
NOTES Refusal at 22.6 ft
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-16		No sample recovery					3
								3
			(SW) Damp, medium dense, light gray, medium to coarse Sand, 20% fine to medium gravel			0.0	n/a	1
								2
5	-21					1.5	n/a	4
								8
						3.5	n/a	16
								17
						2.7	n/a	12
10	-26			COMP-T-D0-22.5E				11
						2.0	n/a	12
								11
						4.0	n/a	9
								12
15	-31					2.0	n/a	15
								58
						0.1	n/a	127
								21
						0.1	n/a	31
20	-36							27
						0.3	n/a	39
								39

SECONDS PER FOOT: 20 40 60 80
WATER CONTENT %: 30 60 90 120
FINES CONTENT (%): 20 40 60 80

Bottom of borehole at 22.6 feet.

BORING NUMBER VC329

CLIENT Haley and Aldrich
PROJECT NAME Williams NESE project, NJ Upland Disposal
PROJECT NUMBER 1853
PROJECT LOCATION Lower NY Harbor and Raritan Bay
DATE STARTED 25/10/18 **COMPLETED** 25/10/18
WATER DEPTH -16.2 ft MLLW **HOLE SIZE** 3.5 inches
DRILLING CONTRACTOR Alpine Ocean Seismic
CORE PENETRATION: 20.95
DRILLING METHOD Vibracore
CORE RECOVERY: 25.42 (100%) *See Note
LOGGED BY CD **CHECKED BY** TM
CORE LOCATION: X:997108.01 Y:124336.67
NOTES Encountered refusal at 20.95 feet on Run 1 and Run 2; Run 1 shown
DATUM / PROJECTION: NAD 83, NY Long Island Lambert, ft

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE ID	PID READING per foot (ppm)	POCKET PEN. (tsf)	TORVANE (tsf)	PENETRATION SECONDS PER FOOT
0	-16		(SP) Damp, loose to medium dense, gray fine to medium Sand, rare shell fragments		12.4	n/a	n/a	4
					2.6			4
					6.8	1.5	n/a	2
								4
5	-21		(SW) Damp, medium dense, medium to coarse Sand, some fine gravel; NOTE: bottom two feet of core liner empty due to wash out of sand during recovery			3.0	n/a	6
								9
						0.9	n/a	11
								10
						1.5	n/a	10
10	-26			COMP-T-D0-22.5E				8
						2.2	n/a	9
								9
						2.5	n/a	7
								7
15	-31					1.2	n/a	9
								142
						0.5	n/a	60
								40
						2.5	n/a	40
20	-36							70

▲ SECONDS PER FOOT ▲ 20 40 60 80
● WATER CONTENT % ● 30 60 90 120
□ FINES CONTENT (%) □ 20 40 60 80

*Note: Recovery value higher than penetration value as a result of core vibration causing de-compaction of materials penetrated.

Bottom of borehole at 21.0 feet.

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	**GRAVEL AND GRAVELLY SOILS** MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
		GRAVEL WITH ≥ 15% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
		SAND WITH ≥ 15% FINES		SM	Silty SAND
				SC	Clayey SAND
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Abbreviations and Symbology

When the lithology identifies that a material is “fine” it is referring to sediment that will pass a 200-mesh sieve.

APPENDIX E

Agency Correspondence

From: Scott, Ryan <RScott@haleyaldrich.com>
Sent: Tuesday, November 13, 2018 1:19 PM
To: Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Ng, Titania <TNg@haleyaldrich.com>; Clements, Blake <Blake.Clements@williams.com>; Dick, Vince <VDick@haleyaldrich.com>
Subject: Williams SSAP - UPDATE 11/13/2018

Hello Gary/Magda,

The William's field team has completed the fieldwork and will be demobilizing today. The Composite Sample A (VC-204 and VC-205) was completed with penetrations of 14 feet and 15 feet with recoveries of 81% and 72%. Composite A was discussed with Gary this morning. Gary indicated that the sampling effort was acceptable and that the variation on depth should be noted in the data report. Sample analysis and structural fill protocol are in various stages of completion.

Sincerely,

Ryan

Ryan J. Scott, P.E. (NY)
Senior Technical Specialist | Civil Engineering

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From: Scott, Ryan
Sent: Friday, November 09, 2018 10:18 AM
To: Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Ng, Titania <TNg@haleyaldrich.com>; Clements, Blake <Blake.Clements@williams.com>; Dick, Vince <VDick@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications - UPDATE 11/01/2018

Hello Gary/Magda,

Alpine was able to modify their shallow-water pontoon vessel to handle a 15 foot core barrel. This should allow us to get to the full project depth for core locations VC204 and VC205. The custom-length barrel is expected to be delivered to the project site soon and we'll then initiate the collection of the final 4 locations, weather permitting.

The fieldwork will only take a day or two and hopefully be completed this coming Sunday and Monday (weather allowing; Tuesday might be needed for wrap-up). Given that a good part of the work will happen over a weekend and on Monday, which is Veteran's Day, we wanted to request who at NJDEP should be our contact for any questions during the fieldwork? You mentioned previously that someone from your department might be available on weekends. Please provide a contact person and phone number in case questions need to be addressed before we demobilize.

Thanks,

Ryan

Ryan J. Scott, P.E. (NY)
Senior Technical Specialist | Civil Engineering

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From: Dick, Vince <VDick@haleyaldrich.com>
Sent: Friday, November 02, 2018 9:25 AM
To: Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>; Clements, Blake <Blake.Clements@williams.com>
Subject: Re: Williams SSAP requested modifications/clarifications - UPDATE 11/01/2018

Gary,
Thank you for getting back to us so quickly. We need to talk with Alpine to see if there are any alternative approaches that may work to get the full 15-ft depth. I'll circle back to you as soon as we've determined direction today.
Vince

-------- Original message --------
From: "Nickerson, Gary" <Gary.Nickerson@dep.nj.gov>
Date: 11/2/18 8:55 AM (GMT-05:00)
To: "Dick, Vince" <VDick@haleyaldrich.com>, "Usarek-Witek, Magda" <Magda.Usarek-Witek@dep.nj.gov>, "Dietrick, Suzanne" <Suzanne.Dietrick@dep.nj.gov>
Cc: "Martinez, Chris" <Chris.Martinez@williams.com>, "Phillips, Steve" <SPhillips@haleyaldrich.com>, "Horner, Scott" <Scott.Horner@williams.com>, Sarah.Behrends@williams.com, "Scott, Ryan" <RScott@haleyaldrich.com>, "Ng, Titania" <TNg@haleyaldrich.com>, "Clements, Blake" <Blake.Clements@williams.com>
Subject: Re: Williams SSAP requested modifications/clarifications - UPDATE 11/01/2018

Hi Vince,
Cores must be taken to project depth, especially in the area of question where there is already a concern for arsenic.
-gary nickerson

From: Dick, Vince <VDick@haleyaldrich.com>
Sent: Thursday, November 1, 2018 7:54:58 PM
To: Nickerson, Gary; Usarek-Witek, Magda; Dietrick, Suzanne
Cc: Martinez, Chris; Phillips, Steve; Horner, Scott; Sarah.Behrends@williams.com; Scott, Ryan; Ng, Titania; Clements, Blake
Subject: [EXTERNAL] RE: Williams SSAP requested modifications/clarifications - UPDATE 11/01/2018

Gary & Magda,
This email is to update you on overall progress of the sampling program, alert you to a modification for 2 of the remaining cores and request NJDEP concur with the modification by return email. Details of these items are as follows:

- **R/V Shearwater sampling campaign –** within the overall SSAP 3.2B program, there were 65 Vibracores out of 69 proposed locations that were to be collected by the R/V Shearwater. On Tuesday 10/30/2018, our offshore crews were able to complete the last few of those locations and the R/V Shearwater is now being demobilized. That leaves only 4 Vibracores of the 69 locations remaining to be sampled; these locations must be completed by a different vessel due to very shallow water depths in the area of the 4 Vibracores (see below).

- **R/V George sampling campaign –** the last 4 locations are all near-shore in NJ waters, in very shallow areas only accessible at high tide by one of Alpine's pontoon-style vessels, the R/V George. These Vibracore locations include VC204, VC205, VC 208 and VC211.

  Modification request - Note that two of the locations to be sampled from the R/V George, VC204 and VC205, were originally proposed as 15-ft cores in our SAP versions submitted to NJDEP. That depth of core was carried over into the final SSAP 3.2B that was issued and approved by NJDEP for the overall program.

  We have determined with Alpine that the largest Vibracore head/gear that can be handled on the R/V George will only allow sampling to 10-ft depth. We can therefore only complete these two locations (VC204 and VC205) to 10-ft depths, not 15-ft as listed in SSAP 3.2B. The 10-ft limit to Vibracore depth does not affect the planned sampling for VC208 and VC211 as those are planned for sampling to 7.5-ft depth.

  We (Haley & Aldrich and Williams) had originally proposed sampling to 15-ft depth for the VC204 and VC205 locations in our original SAP versions. However we were not aware of vessel size/Vibracore equipment limits in this area of the project at the time and cannot overcome the technical limitation that will keep core depths to 10-ft. We are now nearing the end of the overall sampling campaign and have otherwise successfully sampled from the other planned cores along the pipeline alignment under the SSAP 3.2B. With this successful progress to date, we have determined that missing the bottom 5-ft of depth at only these two locations should not significantly limit being able to characterize sediment chemistry for this area for upland disposition. ***We therefore request NJDEP acknowledge and concur with the change of sampling***

depth at VC204 and VC205 to 10-ft depth; ideally we request NJDEP reply with its concurrence by noon on Monday so we can continue mobilization preparation for the R/V George launch (see below).

Schedule – We and Alpine are currently completing demobilization activities from the R/V Shearwater portion of the sampling campaign. ***We anticipate the R/V George preparation to be completed and sampling to kick-off Tuesday 11/06/2018, pending acceptable weather/sea conditions and USCG coordination***. This should allow the overall sampling campaign to be completed next week and the last of the core samples to be delivered to the lab by the end of the week. Again, we are subject to location access by weather/sea conditions and USCG coordination to allow a Tuesday launch, and have several other preparation items to complete before launch. Therefore we respectfully ask NJDEP to clear the modification described above within the timeframe requested to allow us to keep pace with remaining preparation and launch planning tasks.

Please call us if you have any questions (contact information is below) and *thank you for your continued help*.
Best regards,
Vince

Vincent B. Dick
Principal | Energy Capital Market Leader
Haley & Aldrich
200 Town Centre Drive, Suite 2
Rochester, NY 14623

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C: 585.734.6838

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From: Dick, Vince
Sent: Tuesday, October 30, 2018 2:18 PM
To: 'Nickerson, Gary' <Gary.Nickerson@dep.nj.gov>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications

Gary,
Thanks very much for clearing the TOC request. We'll pass this along to our chemist, Denis Conley to coordinate with the Alpha laboratories.
I anticipate we will go ahead with Method 9060 since this seemed most applicable to offshore samples, but will have Denis discuss the Lloyd Khan method with Alpha as well.
Best regards,
Vince
From: Nickerson, Gary <Gary.Nickerson@dep.nj.gov>
Sent: Tuesday, October 30, 2018 2:06 PM
To: Dick, Vince <VDick@haleyaldrich.com>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan

<RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications

Hi Vince,
Our sediment guy was not familiar with Method 9060, but as NJ offers certification for it, it would be acceptable. He also said that a more popular option for TOC is the Lloyd Khan Method, which NJ also offers for certification.
-gary nickerson

From: Dick, Vince
Sent: Tuesday, October 30, 2018 11:17 AM
To: Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications

Gary,
Thank you very much for helping us with responses so quickly.
If you need any further backup on the TOC method, just let us know.
Otherwise, we will get moving on the three offset locations today and Williams will reach out once they have any acceptance letter(s) in hand.
Vince

From: Nickerson, Gary <Gary.Nickerson@dep.nj.gov>
Sent: Tuesday, October 30, 2018 11:12 AM
To: Dick, Vince <VDick@haleyaldrich.com>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications

Hi Vince,
As per our earlier phone conversation:

1. Shifting the 3 cores as proposed on the attached plan is acceptable.
2. Please provide any letters of acceptance for review and then we can provide comments back to you.
3. I will get back to you with regards to an updated TOC method.

-gary nickerson

From: Dick, Vince
Sent: Monday, October 29, 2018 4:38 PM
To: Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>

Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications
Importance: High

Magda & Gary,
Thank you for the previous response regarding the field sampling guidance. We're happy to report the offshore sampling campaign has been going smoothly and is almost complete. Fifty-nine (59) of the proposed 69 locations in the approved SSAP 3.B2 have been completed to date. Among the remaining core locations, please note four (4) locations are in shallow water and are proposed for an alternate vessel mobilization. Therefore 59 of the 65 locations for the current survey vessel R/V Shearwater have been completed.

There are three items we'd like to discuss with NJDEP and all are somewhat time-critical. They are:

1. Shifting 3 core locations to satisfy previous SHPO clearances.
2. Discussing if an upland acceptance letter can provide relieve for a few remaining boring locations (that would instead be tested at construction).
3. Get NJDEP clarification of the TOC method to be used (we are not finding labs that perform the methodology cited by NJDEP in SSAP 3.2B).

More detail of these items is provided below as background. However, we would like to schedule a call with you to review to provide an update and discuss remaining work. We're available as early as tomorrow morning depending on your schedule. We are however looking for discussion as soon as you can, because we will otherwise be placing the Shearwater on standby and wish to avoid that as possible.

1. There are six (6) remaining locations proposed as part of the R/V Shearwater mobilization in the SSAP. These remaining 6 locations are still subject to a pending NJ State Historic Preservation Office (SHPO) clearance before we can complete the Vibracore sampling at the proposed coordinates in the approved SSAP. Based on previous NJ SHPO reviews of proposed locations, it has taken up to 30 days to secure clearances to proceed, which could create significant delay in completing this work as part of the current mobilization.

   Therefore, we've looked at these remaining 6 locations and there are some previously cleared (by NJ SHPO) locations which, if shifted, we could complete without having to wait further. ***We have attached a plan identifying a proposed relocation of three Vibracore sampling locations (VC301, DEP4 and DEP5). We would proposed to modify the proposed compositing between locations in the SSAP to have each of these three be discrete location sampling. Our core question is whether the shifted locations are acceptable to NJDEP? They are within the same route segment area but fall within previous SHPO clearance areas.***

2. The remaining proposed locations (green highlighted boxes on the attached plan) in the SSAP would remain subject to NJSHPO clearance prior to completing the sampling. This may not be feasible based on the timing of the current mobilization and we'd like to discuss further with you in the context of the overall Project planning and receipt of an approval letter from potential receiving facilities (described further below).

Williams has continued to work through a review of previous baseline chemical sampling data (from previous sampling campaigns) with Clean Earth and anticipates a letter from receiving facility location(s) may be available to supplement this sampling campaign's results. They would like to further discuss satisfying the Project permitting deficiency item related to the offshore dredging items (NJDEP 7/18/18 letter).

3. Lastly we would note in the technical aspects of the laboratory analyses (under NJDEP guidance information) calls for EPA Method 440 for Total Organic Carbon (TOC) analysis; however, based on current industry standards for sediment TOC analysis we understand NJ certifies EPA Method 9060 for TOC sediment analysis and we would plan to use this method as part of our analysis under the approved SSAP 3.B2.

In summary we would like to review:

- confirmation that the relocation of three vibracore locations (VC301, DEP 4 and DEP5) as proposed on the attached plan;
- further review and confirm approach to satisfy the Project's permitting deficiency items (related to offshore dredging and this SSAP); and
- note the update TOC analytical method under this SSAP completion.

Timing is critical for understanding a confirmation on the proposed relocation and approach on the Project's permitting items, as Williams would like to complete the remaining sampling as part of the current R/V Shearwater mobilization. We are prepared to complete relocated vibracore locations as early as tomorrow, Tuesday 10/30/2018.

Please advise at your earliest opportunity and copy this group so we can get buy in for a call time.
Thank you!
Vince

Vincent B. Dick
Principal | Energy Capital Market Leader

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From: Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>
Sent: Monday, October 22, 2018 8:33 AM
To: Dick, Vince <VDick@haleyaldrich.com>; Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications

Hi Vince,

I apologize for the delay we were out of the office. We do not have any follow up questions and just advise to document when out in the field. Use your professional judgement when looking at strata and grain size. As long as you take pictures and make a quick note as to why it was divided or grouped differently, that will be okay with us.

Thank you,

Magda

Magda Usarek-Witek

Environmental Specialist II

Office of Dredging and Sediment Technology

New Jersey Department of Environmental Protection

Magda.Usarek-Witek@dep.nj.gov | (609) 777-1866

Mailing address:

Attn: Magda Usarek-Witek

DEP, Division of Land Use

501 East State Street

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From: Dick, Vince <VDick@haleyaldrich.com>
Sent: Friday, October 19, 2018 2:04 PM
To: Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: [EXTERNAL] RE: Williams SSAP requested modifications/clarifications

Gary & Magda,
Ryan & I tried to reach each of you yesterday and today as a courtesy follow-up to the email below. Unfortunately we couldn't reach either of you but did leave messages on Gary's line. We will be completing cores through the weekend, and anticipate there may be some locations where the procedures in our note below will be put into action. Since we've heard nothing so far from NJDEP,

we're assuming there are no follow-up questions regarding our plans, or acceptance of the core processing under the conditions summarized below.

As has been the case all the way through this project preparation, you and your group's help has been excellent – thanks so much!
Best regards,
Vince

T: 585.321.4207
C: 585.734.6838

From: Dick, Vince
Sent: Tuesday, October 16, 2018 5:34 PM
To: 'Usarek-Witek, Magda' <Magda.Usarek-Witek@dep.nj.gov>; Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Horner, Scott <Scott.Horner@williams.com>; Sarah.Behrends@williams.com; Scott, Ryan <RScott@haleyaldrich.com>; Ng, Titania <TNg@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications

Gary & Magda,
We are getting ready to mobilize (final dock-side kick off and setting sail is planned for tomorrow). We've taken a more detailed look at some of the approved SSAP 3.B2 core locations where we think we *may* run into stratification, and completed further comparison to past sample logs. Based on the SSAP and review of cores previously collected near proposed core locations, we are notifying you prior to sampling of individual sediment cores that have the potential to show grain size stratification and our methods for handling them.

Below are the methods we plan to apply to these cores relative to homogenization. For clarity, note that the planned processing only applies to individual cores where compositing is called for, not compositing between multiple cores.

A. For cores that are 7.5 ft (6.5 ft plus 1 ft over dredge) or less in length, we will homogenize the entire core sample by uniformly collecting a portion of the material over the entire length of the core in order to create a sample of sufficient volume. Based on previous sampling, we generally don't anticipate these proposed locations to show distinct strata changes. While some locations may show a gradation change from Sand with Silt to Sand, only one previously sampled core, VC-12 (see attached), shows a change from Clay to Sand. While this location had a strata that was more than two feet thick, the proposed dredging operations would not segregate this interval; therefore waste characterization of the homogenized core would be most representative and is the basis for us homogenizing over the full length of this category of cores.

B. For longer cores that exhibit stratification >20% by grain size, we plan to use the following procedures, based on the planned dredging methodology that will mix material during dredging and be blended during amendment:
    a. If the core has similar grain-size material over the core length (e.g. transition from silt to clay, or similar change), homogenization over the full core length would be most representative for waste characterization. An example of this is the

previous core VC-17 (see attached). Therefore cores similar to VC-17 would be homogenized over the core length.

b. If the core has only gradational changes in material over the core length (e.g. gradual change in short sequences from clayey sand eventually to all sand), homogenization over the full core length would be most representative for waste characterization. An example of this is the previous core VC-36 (see attached). Therefore cores similar to VC-36 would be homogenized over the entire core length.
c. If the majority of the core is of one sediment type with limited variation (e.g. primarily one grain size such as sand, with short interval modifications such as silty sand, or clayey sand), homogenization over the full core length would be most representative for waste characterization. An example of this is the previous collected core VC-39 (see attached). Therefore cores similar to VC-39 would be homogenized over the entire core length.
d. If a longer core has a distinct change from one grain size to another (e.g. sand to clay, or similar change) and strata thickness of >2-ft, then we would discretely sub-sample such a core.

Based on the approaches described, we assume we do not need to further notify you if we encounter conditions summarized above while processing and sampling cores with stratification. If you have questions regarding the approach, please notify us know as soon as feasible. We will otherwise proceed with initiation of the program – actual coring is anticipated to begin on Thursday.

Also, please note that Ryan Scott will be leaving on vacation and will not be reachable after Friday. While you can continue to copy him on correspondence, Titania Ng and I will handle routine communications with you on the project that comes from Haley & Aldrich.

Thanks very much and best regards,
Vince

Vincent B. Dick
Principal | Energy Capital Market Leader

Haley & Aldrich
200 Town Centre Drive, Suite 2
Rochester, NY 14623

T: 585.321.4207
C: 585.734.6838

www.haleyaldrich.com

From: Horner, Scott <Scott.Horner@williams.com>
Sent: Wednesday, October 10, 2018 11:19 AM
To: Scott, Ryan <RScott@haleyaldrich.com>; Usarek-Witek, Magda <Magda.Usarek-Witek@dep.nj.gov>; Nickerson, Gary <Gary.Nickerson@dep.nj.gov>; Dietrick, Suzanne <Suzanne.Dietrick@dep.nj.gov>
Cc: Martinez, Chris <Chris.Martinez@williams.com>; Phillips, Steve <SPhillips@haleyaldrich.com>; Behrends, Sarah <Sarah.Behrends@williams.com>; Dick, Vince <VDick@haleyaldrich.com>
Subject: RE: Williams SSAP requested modifications/clarifications

Good Morning Magda,

As a follow-up to Ryan's email below, please see the attachment containing the executed SSAP.

Also, please note that our offshore sampling campaign start date has been rescheduled for October 17, 2018 due to weather conditions.

Thank you once again,
Scott

Scott Horner | Williams | Senior Environmental Scientist | Atlantic – Gulf| Engineering and Construction |Environmental Permitting
Office: 713-215-4953 | Cell: 832-954-4916 | Fax: 713-215-2222 | 2800 Post Oak Blvd., Level 11| Houston, TX 77056

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If you have received this message in error, please reply to advise the sender of the error and then immediately delete this message.

APPENDIX F

Alpha Analytical Reports

HALEY ALDRICH

If requested, electronic copies of the Analytical Reports will be provided.

APPENDIX G

TerraSense Reports

HALEY ALDRICH

Sample Amendment and Equipment Cleaning Procedure

A bench scale stabilization study was performed on individual samples in a manner to simulate the sediment stabilization process used in the field.
A standard commercial brand of Type I/II Portland cement (Titan Cement) was utilized to amend each raw sample as follow:
Each raw (unamended) sample was places in a stainless steel bowl and weighted. The total weight in grams of each sample was recorded on the log.
The grams of Portland cement admixture required for the bench scale stabilization study were calculated by multiplying the weight in grams of the raw (unamended) sample by a factor of 0.08 (8%). The required sample dosage was recorded on the log and the appropriate weight of admixture was measured into a separate stainless steel bowl for each sample. Each raw (unamended) sample was blended with the corresponding measured Portland cement admixture dose by slowly introducing the admixture into the sample while actively mixing and continuing mixing until all cement was absorbed. A power drill with mixing paddle was used for mixing. The amended sample was placed into an individually labeled and dedicated stainless steel pan for curing at the minimum ambient temperature of 21 ˚C. The sample was turned twice each day using a stainless steel trowel to break up lumps.. After 48 hours, the cured amended sample was removed from the pan, put into a zip-lock type plastic bag, labeled and stored in a refrigerator until ready to ship to the chemical laboratory.

All the equipment used during the mixing and curing process was cleaned between each use following a four step procedure:

- scrub using commercial grade detergent and tap water;
- generous rinse with tap water;
- scrub using laboratory grade glassware detergent and tap water;
- generous rinse with tap water;
- distilled water and deionized water rinses (the last two rinses were performed just before the equipment reuse unless the equipment blank was to be collected).

One equipment blank was collected after washing the equipment at the end of the curing process. The equipment blank samples were stored in a refrigerator until ready to ship to the chemical laboratory.

Haley & Aldrich #132614-004
Northeast Supply Enhancement Project
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS				REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	HYDROMETER % MINUS 2 μm (%)	specimen dry weight (g)
COMP-L	COMP-L-D0-20.5E	0-20.5	89.6	CH	96.3	32	95.91
COMP-M	COMP-M-D0-27E	0-27	85.5	CH	96.5	39	99.11
COMP-N	COMP-N-D0-4E	0-4	118.9	OH	94.7	24	85.43
COMP-N	COMP-N-D4-22.5E	4-22.5	79.8	CH	94.5	39	99.59
COMP-O	COMP-O-D0-2E	0-2	128.4	OH	86.5	13	97.52
COMP-O	COMP-O-D2-25E	2-25	88.3	CH	97.0	40	101.60
COMP-P	COMP-P-D0-23E	0-23	79.3	CH	91.3	31	103.28
DEP-6	DEP-6-D0-13.5E	0-13.5	131.0	OH	95.4	17	81.33
DEP-6	DEP-6-D13.5-27E	13.5-27	83.5	CH	94.6	40	90.59
DEP-7	DEP-7-D0-15E	0-15	112.7	OH	92.7	26	86.66
DEP-7	DEP-7-D15-20E	15-20	81.5	CH	95.6	39	94.24
VC-229	VC-229-D0-28E	0-28	86.5	CH	97.1	37	87.52
VC-235	VC-235-D0-13.7E	0-13.7	115.1	OH	93.0	20	93.19
VC-235	VC-235-D13.7-24E	13.7-24	82.5	CH	94.2	41	97.84
VC-238	VC-238-D0-28E	0-28	87.6	CH	97.5	40	89.10

Note: (1) USCS symbol based on visual observation and Sieve reported.

Project # 7788-18005.1
Northeast Supply Enhancement Project

Exploration Number	Sample Number	Sample Depth (ft)	Sample Delivery	Mix Date	Mix Time	Sample Wet Weight (gm)	Cement Weight (gm)	Storage Vessel #	Bagged
	~~Equipment Blank 1~~								~~10/24/18 10:32 AM~~
COMP-L	COMP-L-D0-20.5E	0 - 20.5	10/23/2018	10/24/2018	amend observed / time not recorded	4506.8	361.4	23&35	10/26/18 8:30 AM
COMP-M	COMP-M-D0-27E	0 - 27	10/23/2018	10/24/2018	11:45	4775.0	382.8	05&04	10/26/18 9:10 AM
COMP-N	COMP-N-D0-4E	0 - 4	10/23/2018	10/24/2018	12:26	4720.9	390.6	17&01	10/26/18 10:15 AM
COMP-N	COMP-N-D4-22.5E	4 - 22.5	10/23/2018	10/25/2018	8:17	4590.7	367.3	22&26	10/27/18 9:51 AM
COMP-O	COMP-O-D0-2E	0 - 2	10/23/2018	10/25/2018	8:45	3798.9	303.9	18&28	10/27/18 10:11 AM
COMP-O	COMP-O-D2-25E	2-25	10/23/2018	10/25/2018	9:20	4409.7	352.8	11&27	10/27/18 10:29 AM
COMP-P	COMP-P-D0-23E	0-23	10/23/2018	10/25/2018	9:46	5215.7	417.3	02&24	10/27/18 10:45 AM
DEP-6	DEP-6-D0-13.5E	0 - 13.5	10/23/2018	10/25/2018	10:02	2844.0	227.6	06&19	10/27/18 10:53 AM
DEP-6	DEP-6-D13.5-27E	13.5 - 27	10/23/2018	10/25/2018	10:34	4272.4	341.8	25&14	10/27/18 11:10 AM
DEP-7	DEP-7-D0-15E	0 - 15	10/23/2018	10/25/2018	11:03	4120.2	329.6	13&38	10/27/18 11:24 AM
DEP-7	DEP-7-D15-20E	15 - 20	10/23/2018	10/26/2018	8:28	3457.6	276.6	03&35	10/28/18 9.35 AM
VC-229	VC-229-D0-28E	0 - 28	10/23/2018	10/26/2018	9:05	4968.2	397.5	37&05	10/28/18 9:55 AM
VC-235	VC-235-D0-13.7E	0 - 13.7	10/23/2018	10/26/2018	9:31	3864.0	309.1	16&04	10/28/18 10:15 AM
VC-235	VC-235-D13.7-24E	13.7 - 24	10/23/2018	10/26/2018	9:56	3393.8	271.5	02&01	10/28/18 10:35 AM
VC-238	VC-238-D0-28E	0-28	10/23/2018	10/26/2018	10:30	3969.9	317.6	31&23	10/28/18 10:53 AM
	Equipment Blank ~~2~~ **1**								10/28/18 11:13 AM

Haley & Aldrich #132614-006, SID2
Northeast Supply Enhancement Project
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS				REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	HYDROMETER % MINUS 2 μm (%)	specimen dry weight (g)
	2287-102618-0002		23.2	SP-SM	5.0	1	143.32
COMP-S	COMP-S-D0-21E	0-21	28.4	SM	14.5	4	127.68
COMP-T	COMP-T-D0-22.5E	0-22.5	14.7	SP	1.7	0	143.67
VC-247	VC-247-D0-4E	0-4	60.1	OH	58.2	12	99.81
VC-247	VC-247-D4-21.5E	4-21.5	22.4	SP-SM	6.1	1	136.51
VC-251	VC-251-D0-7.5E	0-7.5	26.1	SP-SM	5.7	3	511.05
VC-255	VC-255-D0-7.5E	0-7.5	24.2	SP-SM	5.6	1	135.48
VC-256	VC-256-D0-7.5E	0-7.5	23.1	SP-SM	5.2	1	138.42
VC-318	VC-318-D0-3.5E	0-3.5	82.2	OH	53.5	8	91.70
VC-318	VC-318-D3.5-21.5E	3.5-21.5	16.0	SP-SM	7.8	2	640.94
VC-320	VC-320-D0-19E	0-19	26.2	SC	21.6	6	542.32
VC-321	VC-321-D0-20.5E	0-20.5	20.4	SW-SM	10.8	3	697.09
VC-323	VC-323-D0-22E	0-22	24.4	SP-SM	7.3	2	138.49

Note: (1) USCS symbol based on visual observation and Sieve reported.

Project # 7788-18005.2

Northeast Supply Enhancement Project

Exploration Number	Sample Number	Sample Depth (ft)	Sample Delivery	Mix Date	Mix Time	Sample Wet Weight (gm)	Cement Weight (gm)	Storage Vessel #'s	Bagged
	Equipment Blank 3								10/29/18 9:42 am
COMP-S	COMP-S-D0-0-21E	0-21	10/26/2018	10/29/2018	9:29	4806.1	326.9	21&28	10/31/18 8:10 am
COMP-T	COMP-T-DO-22.5E	0-22.5	10/26/2018	10/29/2018	9:55	5180.9	414.5	37&01	10/31/18 8:31 am
VC-247	VC-247-D0-4E	0-4	10/26/2018	10/29/2018	10:14	4544.8	363.6	35&05	10/31/18 8:55 am
VC-247	VC-247-D4-21.5E	4-21.5	10/26/2018	10/29/2018	10:35	6043.5	483.5	04&16	10/31/18 9:18 am
VC-251	VC-251-D0-7.5E	0-7.5	10/26/2018	10/30/2018	9:10	5285.8	422.9	14&19	11/01/18 9:20 am
VC-256	VC-256-D0-7.5E	0-7.5	10/26/2018	10/31/2018	8:30	4273.4	341.9	27&37	11/02/18 8:15 am
VC-255	VC-255-D0-7.5E	0-7.5	10/26/2018	10/31/2018	8:50	5022.8	401.8	25&04	11/02/18 8:30 am
VC-318	VC-318-D0-3.5E	0-3.5	10/26/2018	10/29/2018	10:50	2587.1	207.0	1/3/1900	10/31/18 9:30 am
VC-318	VC-318-D3.5-21.5E	3.5-21.5	10/26/2018	10/30/2018	7:55	4420.3	353.6	23&02	11/01/18 8:18 am
VC-320	VC-320-D0-19E	0-19	10/26/2018	10/30/2018	8:12	4994.5	399.6	17&06	11/01/18 8:32 am
VC-321	VC-321-D0-20.5E	0-20.5	10/26/2018	10/30/2018	8:34	5350.3	428.0	31&38	11/01/18 8:48 am
VC-323	VC-323-D0-22E	0-22	10/26/2018	10/30/2018	8:51	4302.9	344.2	11&13	11/01/18 9:02 am
	2287-102618-0002	-	10/26/2018	10/31/2018	8:10	4698.9	375.9	18&21	11/02/18 7:57 am
	Equipment Blank 4								11/02/18 8:43 am

Haley & Aldrich #132614-006, SID2
Northeast Supply Enhancement Project
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS				REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	HYDROMETER % MINUS 2 μm (%)	specimen dry weight (g)
	2287-102618-0007	0-7.5	22.6	SP	2.2	0	112.74
	2287-102918-0011	0-7.5	102.9	OH	69.5	11	247.23
COMP-G	COMP-G-D0-7.5E	0-7.5	114.3	OH	95.1	22	74.25
COMP-I	COMP-I-D0-7.5E	0-7.5	111.8	OH	96.2	44	75.68
COMP-J	COMP-J-D0-7.5E	0-7.5	54.2	SM	43.4	19	122.78
COMP-K	COMP-K-D0-7.5E	0-7.5	17.6	SP-SM	6.8	2	119.25
COMP-Q	COMP-Q-D0-10.5E	0-10.5	23.8	SM	13.3	5	150.25
COMP-R	COMP-R-D4-10.5E	4-10.5	22.8	SP-SM	7.9	2	127.91
VC-214	VC-214-D0-7.5E	0-7.5	104.7	OH	70.9	10	82.90
VC-216	VC-216-D0-7.5E	0-7.5	97.7	OH	96.0	37	86.95
VC-217	VC-217-D0-7.5E	0-7.5	104.5	OH	94.9	40	69.53
VC-218	VC-218-D0-7.5E	0-7.5	118.7	OH	96.0	26	63.92
VC-222	VC-222-D0-7.5E	0-7.5	110.2	OH	91.2	22	75.63
VC-223	VC-223-D0-7.5E	0-7.5	104.3	OH	93.2	28	86.52
VC-244	VC-244-D0-4E	0-4	40.8	SM	43.3	11	118.29
VC-245	VC-245-D0-4E	0-4	41.1	SM	38.3	11	120.40
VC-246	VC-246-D0-4E	0-4	57.7	ML	61.9	15	69.41
VC-252	VC-252-D0-7.5E	0-7.5	23.3	SP	3.1	1	115.20
VC-253	VC-253-D0-7.5E	0-7.5	21.6	SP	1.9	0	113.65
VC-304	VC-304-D0-7.5E	0-7.5	100.3	OH	90.3	35	80.61
VC-311	VC-311-D0-7.5E	0-7.5	15.6	SW-SM	11.0	4	158.37

Note: (1) USCS symbol based on visual observation and Sieve reported.

Project # 7788-18005.3

Northeast Supply Enhancement Project

Sample Number	Sample Depth (ft)	Sample Delivery	Mix Date	Mix Time	Sample Wet Weight (gm)	Cement Weight (gm)	Storage Vessel #'s	Bagged
VC-253-D0-7.5E	0-7.5	10/30/2018	11/5/2018	8:33	4748.9	379.9	21 & 04	11/07/18 8:05
VC-246-D0-4E	0-4	10/30/2018	11/5/2018	8:50	4408.0	352.6	37 & 14	11/07/18 8:22
VC-245-D0-4E	0-4	10/30/2018	11/5/2018	9:09	5266.2	421.3	11 & 02	11/07/18 8:40
VC-244-D0-4E	0-4	10/30/2018	11/5/2018	9:34	4922.0	393.8	18 & 23	11/07/18 9:02
COMP-R-D4-10.5E	4-10.5	10/30/2018	11/5/2018	9:54	6014.5	481.2	31 & 27	11/07/18 9:13
2287-102618.0007	0-7.5	10/30/2018	11/6/2018	8:28	3637.4	291.0	26 & 28	11/08/18 8:03
VC-252-D0-7.5E	0-7.5	10/30/2018	11/6/2018	8:39	5078.5	406.3	38 & 25	11/08/18 8:17
COMP-G-D0-7.5E	0-7.5	10/30/2018	11/6/2018	8:56	4064.6	325.2	19 & 05	11/08/18 8:31
VC-223-D0-7.5E	0-7.5	10/30/2018	11/6/2018	9:35	4035.9	322.9	06 & 22	11/08/18 8:45
VC-222-D0-7.5E	0-7.5	10/30/2018	11/6/2018	9:52	4536.2	362.9	13 & 01	11/08/18 9:00

Project # 7788-18005.3

Northeast Supply Enhancement Project

Sample Number	Sample Depth (ft)	Sample Delivery	Mix Date	Mix Time	Sample Wet Weight (gm)	Cement Weight (gm)	Storage Vessel #'s	Bagged
COMP-I-D0-7.5E	0-7.5	10/30/2018	11/7/2018	7:57	4910.8	392.9	03 & 02	11/09/18 8:10
COMP-K-D0-7.5E	0-7.5	10/30/2018	11/7/2018	8:31	5777.1	462.2	16 & 21	11/09/18 8:20
VC-311-D0-7.5E	0-7.5	10/30/2018	11/7/2018	8:45	2109.8	168.8	24	11/09/18 8:26
COMP-J-D0-7.5E	0-7.5	10/30/2018	11/7/2018	9:11	3987.6	319.0	35 & 14	11/09/18 8:34
VC-218-D0-7.5E	0-7.5	10/30/2018	11/7/2018	9:33	4100.0	328.0	23 & 04	11/09/18 8:43
VC-217-D0-7.5E	0-7.5	10/30/2018	11/12/2018	8:22	4614.3	369.1	04 & 38	11/14/18 7:55
VC-216-D0-7.5E	0-7.5	10/30/2018	11/12/2018	8:50	4862.6	389.0	21 & 16	11/14/18 8:05
VC-214-D0-7.5E	0-7.5	10/30/2018	11/12/2018	9:08	4149.7	332.0	03 & 05	11/14/18 8:07
2287-102918-0011	0-7.5	10/30/2018	11/12/2018	9:25	3945.6	315.6	02 & 14	11/14/18 8:19
VC-304-D0-7.5E	0-7.5	10/30/2018	11/12/2018	9:40	4671.4	373.7	24 & 26	11/14/18 8:27
COMP-Q-D0-10.5E	0-10.5	10/30/2018	11/12/2018	10:03	6478.9	518.3	23 & 35	11/14/18 8:31
Equipment Blank ~~6~~ **3**								11/14/18 9:21

Haley & Aldrich #132614-006, SID2
Northeast Supply Enhancement Project
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS				REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	HYDROMETER % MINUS 2 μm (%)	specimen dry weight (g)
DEP-1	DEP-1-D0-7.5E	0-7.5	42.7	OH	52.7	21	122.69
DEP-3	DEP-3-D0-7.5E	0-7.5	93.3	OH	95.6	30	83.29
DEP-4-REV	DEP-4-REV-D0-7.5E	0-7.5	95.4	OH	96.8	31	91.20
DEP-5-REV	DEP-5-REV-D0-7.5E	0-7.5	102.5	OH	94.6	35	88.98
VC-301-REV	VC-301-REV-D0-7.5E	0-7.5	70.7	OH	57.7	25	105.04
VC-303	VC-303-D0-7.5E	0-7.5	90.6	OH	77.0	35	88.32

Note: (1) USCS symbol based on visual observation and Sieve reported.

Project # 7788-18005.4

Northeast Supply Enhancement Project

Sample Number	Sample Depth (ft)	Sample Delivery	Mix Date	Mix Time	Sample Wet Weight (gm)	Cement Weight (gm)	Storage Vessel #'s	Bagged
VC-301-REV-D0-7.5E	0-7.5	11/1/2018	11/13/2018	8:08	4358.9	348.7	28 & 13	11/15/18 8:23
DEP-4-REV-D0-7.5E	0-7.5	11/1/2018	11/13/2018	8:26	4666.0	373.3	25 & 31	11/15/18 8:29
DEP-5-REV-D0-7.5E	0-7.5	11/1/2018	11/13/2018	8:46	3850.9	308.1	19 & 11	11/15/18 8:39
DEP-1-D0-7.5E	0-7.5	11/1/2018	11/13/2018	9:15	6632.4	530.6	37 & 06	11/15/18 8:59
DEP-3-D0-7.5E	0-7.5	11/1/2018	11/13/2018	9:39	5135.0	410.8	22 & 18	11/15/18 9:16
VC-303-D0-7.5E	0-7.5	11/1/2018	11/13/2018	10:00	4460.5	356.8	01 & 10	11/15/18 9:18
Equipment Blank ~~6~~ **4**								11/15/18 10:41

Haley & Aldrich #132614-006, SID2
Northeast Supply Enhancement Project
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS				REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	HYDROMETER % MINUS 2 μm (%)	specimen dry weight (g)
COMP-A	COMP-A-D0-15E	0-15	46.4	SC	43.1	19	112.69
VC-208	VC-208-D0-7.5E	0-7.5	56.5	SC	35.7	11	112.30
VC-211	VC-211-D0-7.5E	0-7.5	25.1	SC	18.3	7	140.33

Note: (1) USCS symbol based on visual observation and Sieve reported.

Project # 7788-18005.5

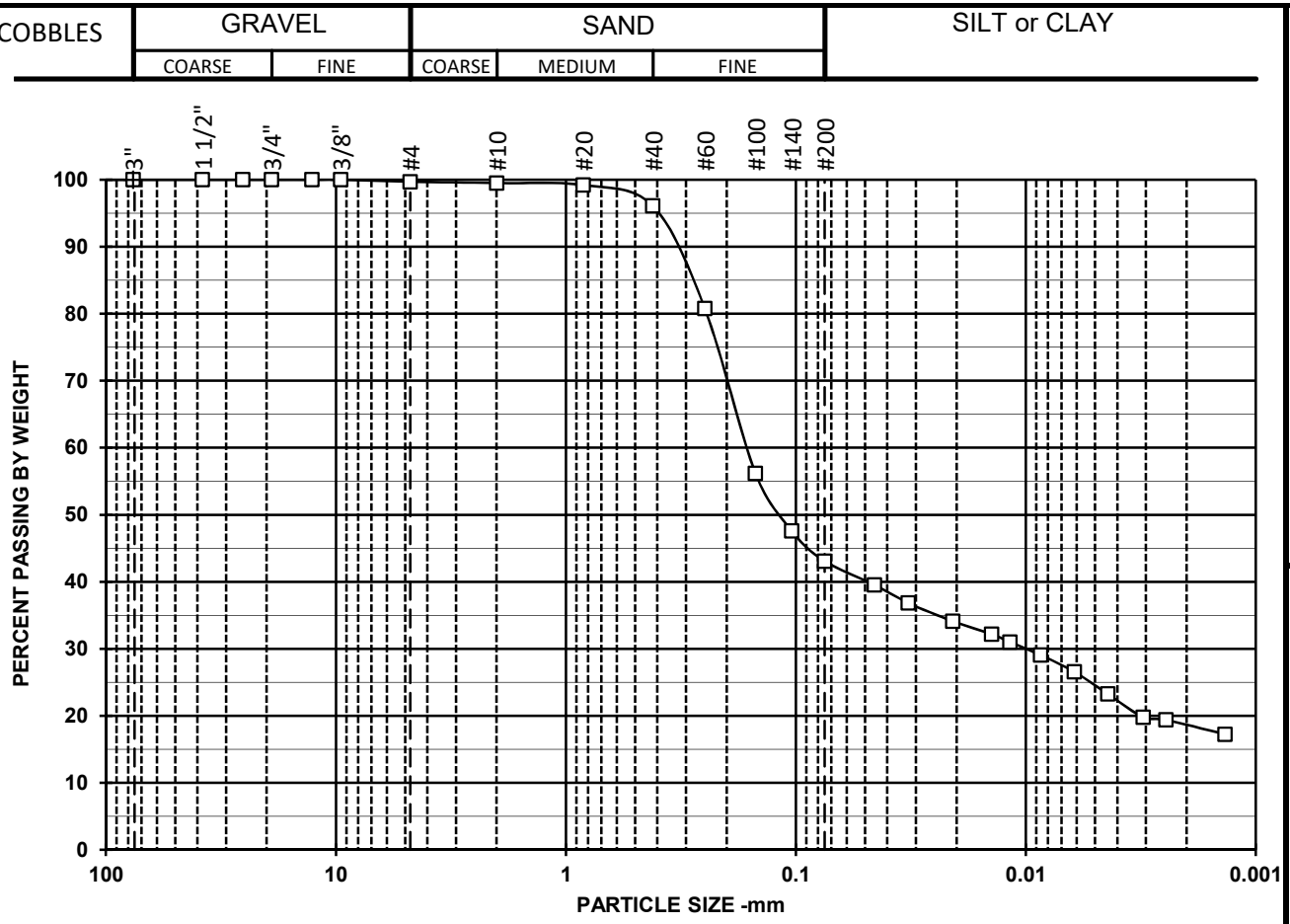
Northeast Supply Enhancement Project

Sample Number	Sample Depth (ft)	Sample Delivery	Mix Date	Mix Time	Sample Wet Weight (gm)	Cement Weight (gm)	Storage Vessel #'s	Bagged
VC-211-D0-7.5E	0-7.5	11/13/2018	11/19/2018	8:30	4549.2	363.9	10 + 11	11/21/18 8:09
VC-208-D0-7.5E	0-7.5	11/13/2018	11/19/2018	8:42	5098.1	407.8	27 + 37	11/21/18 8:10
COMP-A-D0-15E	0-15	11/13/2018	11/19/2018	9:05	5855.1	468.4	19 + 25	11/21/18 8:20
Equipment Blank 5								11/21/18 8:55

Haley & Aldrich #132614-004
Northeast Supply Enhancement Project
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS				REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	HYDROMETER % MINUS 2 μm (%)	
COMP-L	COMP-L-D0-20.5E	0-20.5	89.6	CH	96.3	32	
COMP-M	COMP-M-D0-27E	0-27	85.5	CH	96.5	39	
COMP-N	COMP-N-D0-4E	0-4	118.9	OH	94.7	24	
COMP-N	COMP-N-D4-22.5E	4-22.5	79.8	CH	94.5	39	
COMP-O	COMP-O-D0-2E	0-2	128.4	OH	86.5	13	
COMP-O	COMP-O-D2-25E	2-25	88.3	CH	97.0	40	
COMP-P	COMP-P-D0-23E	0-23	79.3	CH	91.3	31	
DEP-6	DEP-6-D0-13.5E	0-13.5	131.0	OH	95.4	17	
DEP-6	DEP-6-D13.5-27E	13.5-27	83.5	CH	94.6	40	
DEP-7	DEP-7-D0-15E	0-15	112.7	OH	92.7	26	
DEP-7	DEP-7-D15-20E	15-20	81.5	CH	95.6	39	
VC-229	VC-229-D0-28E	0-28	86.5	CH	97.1	37	
VC-235	VC-235-D0-13.7E	0-13.7	115.1	OH	93.0	20	
VC-235	VC-235-D13.7-24E	13.7-24	82.5	CH	94.2	41	
VC-238	VC-238-D0-28E	0-28	87.6	CH	97.5	40	

Note: (1) USCS symbol based on visual observation and Sieve reported.



Symbol	□	■	○
Boring	COMP-A		
Sample	COMP-A-D0-15E		
Depth	0-15		
% +3"	0.0		
% Gravel	0.3		
% SAND	56.6		
%C SAND	0.2		
%M SAND	3.4		
%F SAND	53.0		
% FINES	43.1		
D_{100} (mm)	9.530		
D_{60} (mm)	0.162		
D_{30} (mm)	0.010		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	99.7		
#10	99.5		
#20	99.2		
#40	96.1		
#60	80.8		
#100	56.2		
#140	47.6		
#200	43.1		
5μ m	25		
2μ m	19		
1μ m	16		

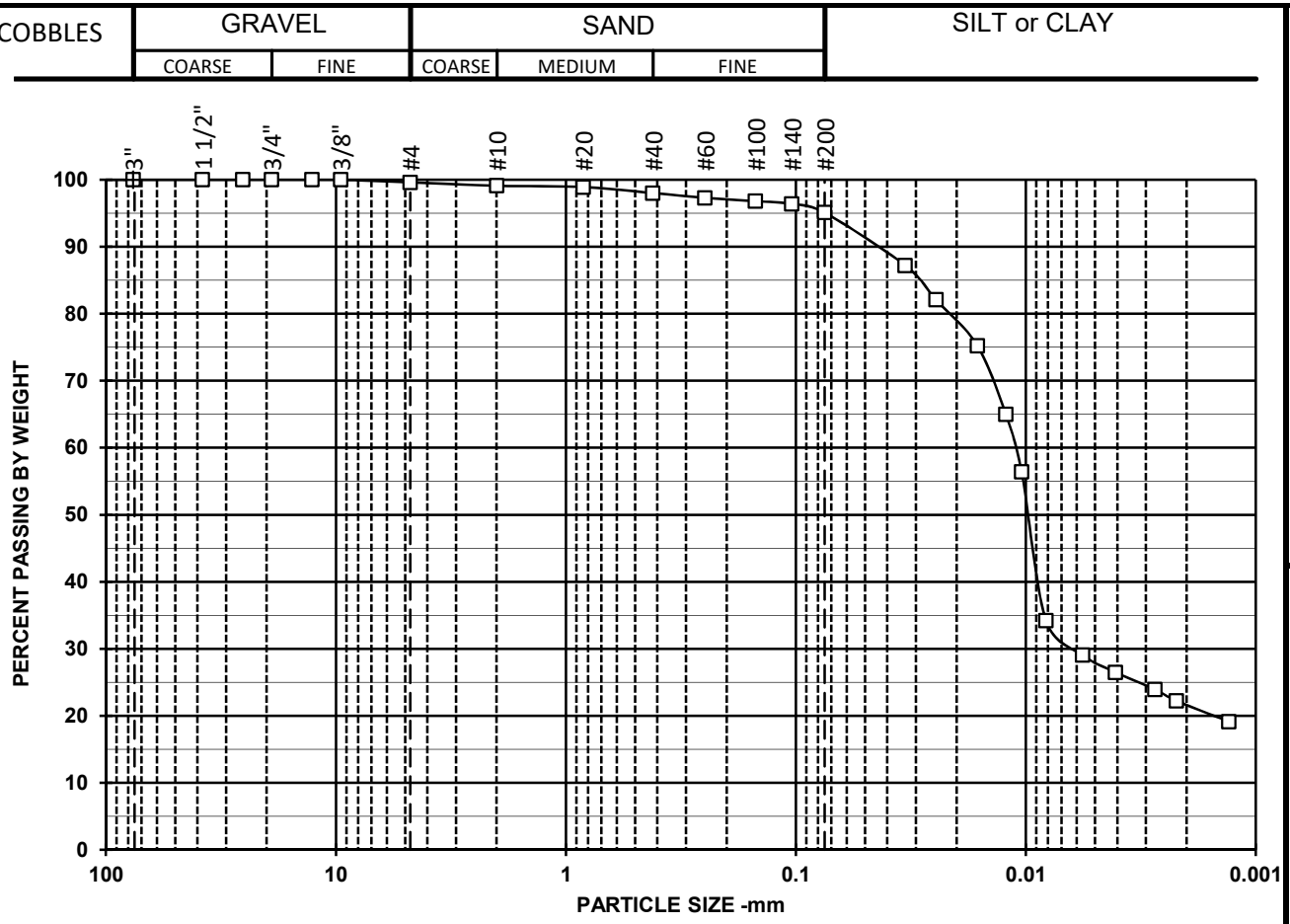
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	46.4				SC		Gray, Clayey sand shell fragments noted	11/14/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-G		
Sample	COMP-G-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.4		
% SAND	4.5		
%C SAND	0.5		
%M SAND	1.1		
%F SAND	2.9		
% FINES	95.1		
D_{100} (mm)	9.530		
D_{60} (mm)	0.011		
D_{30} (mm)	0.006		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	99.6
#10	99.1
#20	98.9
#40	98.0
#60	97.3
#100	96.8
#140	96.4
#200	95.1
5μ m	28
2μ m	22
1μ m	18

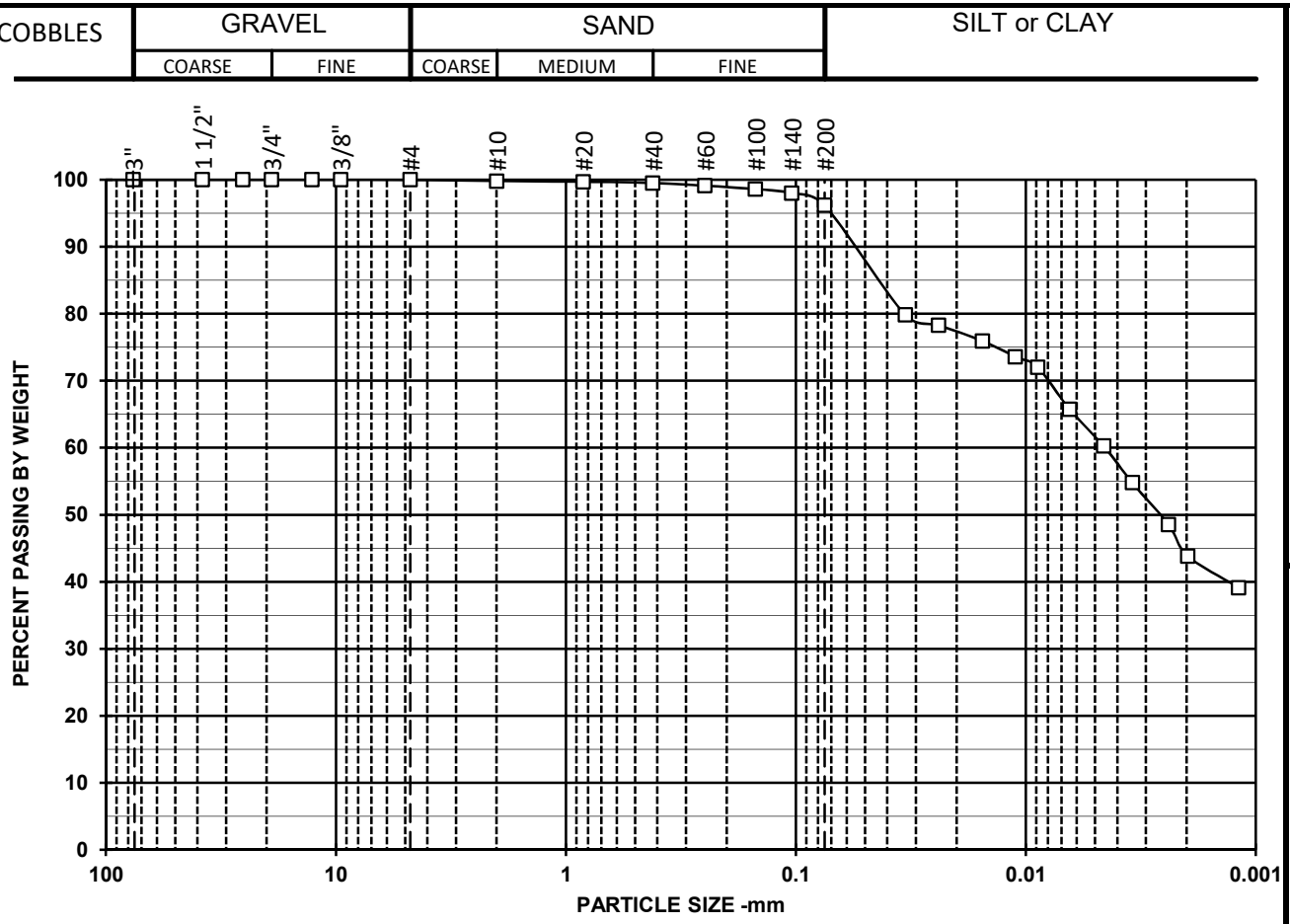
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	114.3				OH		Black, Organic clay shell fragments noted	11/02/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-I		
Sample	COMP-I-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	3.8		
%C SAND	0.2		
%M SAND	0.3		
%F SAND	3.3		
% FINES	96.2		
D_{100} (mm)	4.750		
D_{60} (mm)	0.005		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	111.8				OH		Gray, Organic clay shell fragments noted	11/01/18
■								
○								

Sieve

Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	99.8		
#20	99.7		
#40	99.5		
#60	99.1		
#100	98.6		
#140	98.0		
#200	96.2		
5μ m	62		
2μ m	44		
1μ m	38		

Haley & Aldrich #132614-004

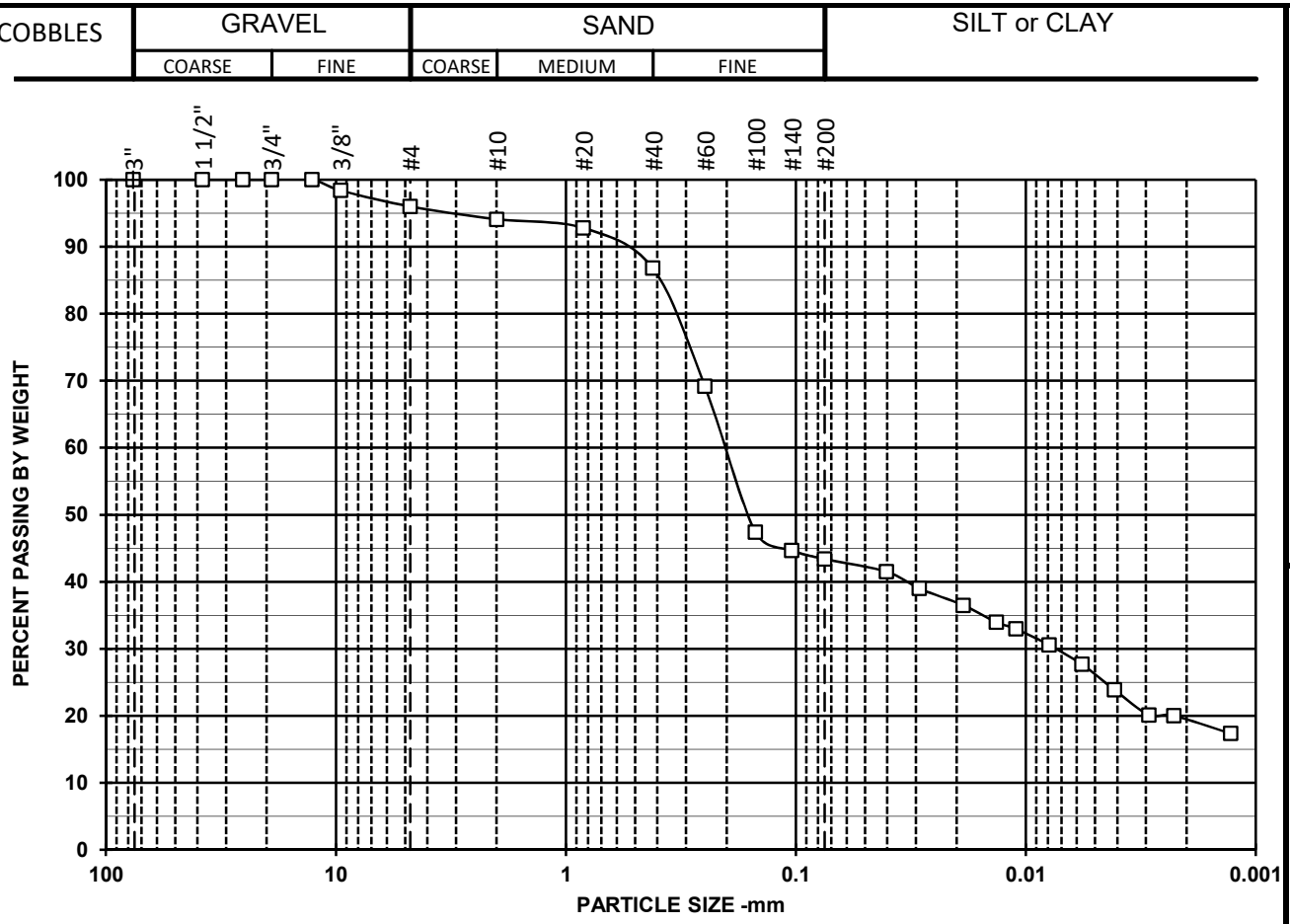
TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

TerraSense Analysis File: GrainSizeV4R4(11/17)

Siev3d.xlsx 11/14/2018



Symbol	□	■	○
Boring	COMP-J		
Sample	COMP-J-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	4.0		
% SAND	52.6		
%C SAND	1.9		
%M SAND	7.3		
%F SAND	43.4		
% FINES	43.4		
D_{100} (mm)	12.700		
D_{60} (mm)	0.201		
D_{30} (mm)	0.007		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	98.4		
#4	96.0		
#10	94.1		
#20	92.8		
#40	86.8		
#60	69.2		
#100	47.4		
#140	44.7		
#200	43.4		
5μ m	26		
2μ m	19		
1μ m	16		

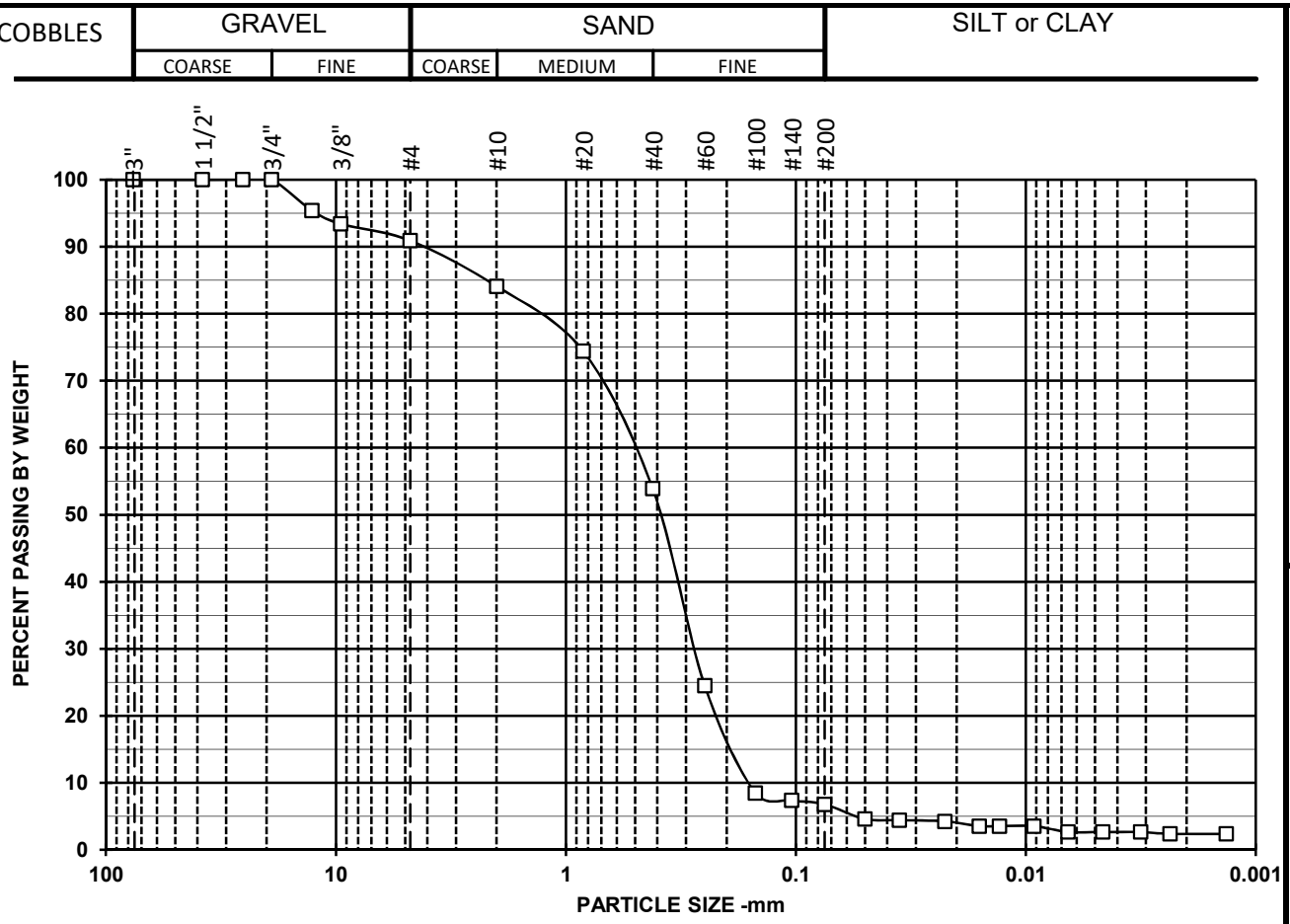
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	54.2				SM		Gray, Silty sand shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-K		
Sample	COMP-K-D0-7.5		
Depth	0-7.5		
% +3"	0.0		
% Gravel	9.1		
% SAND	84.1		
%C SAND	6.8		
%M SAND	30.2		
%F SAND	47.1		
% FINES	6.8		
D_{100} (mm)	19.050		
D_{60} (mm)	0.516		
D_{30} (mm)	0.274		
D_{10} (mm)	0.157		
Cc	0.900		
Cu	3.3		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	95.4		
3/8"	93.4		
#4	90.9		
#10	84.1		
#20	74.4		
#40	53.9		
#60	24.5		
#100	8.5		
#140	7.4		
#200	6.8		
5μ m	3		
2μ m	2		
1μ m	2		

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	17.6				SP-SM		Brown, Poorly graded sand with silt shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

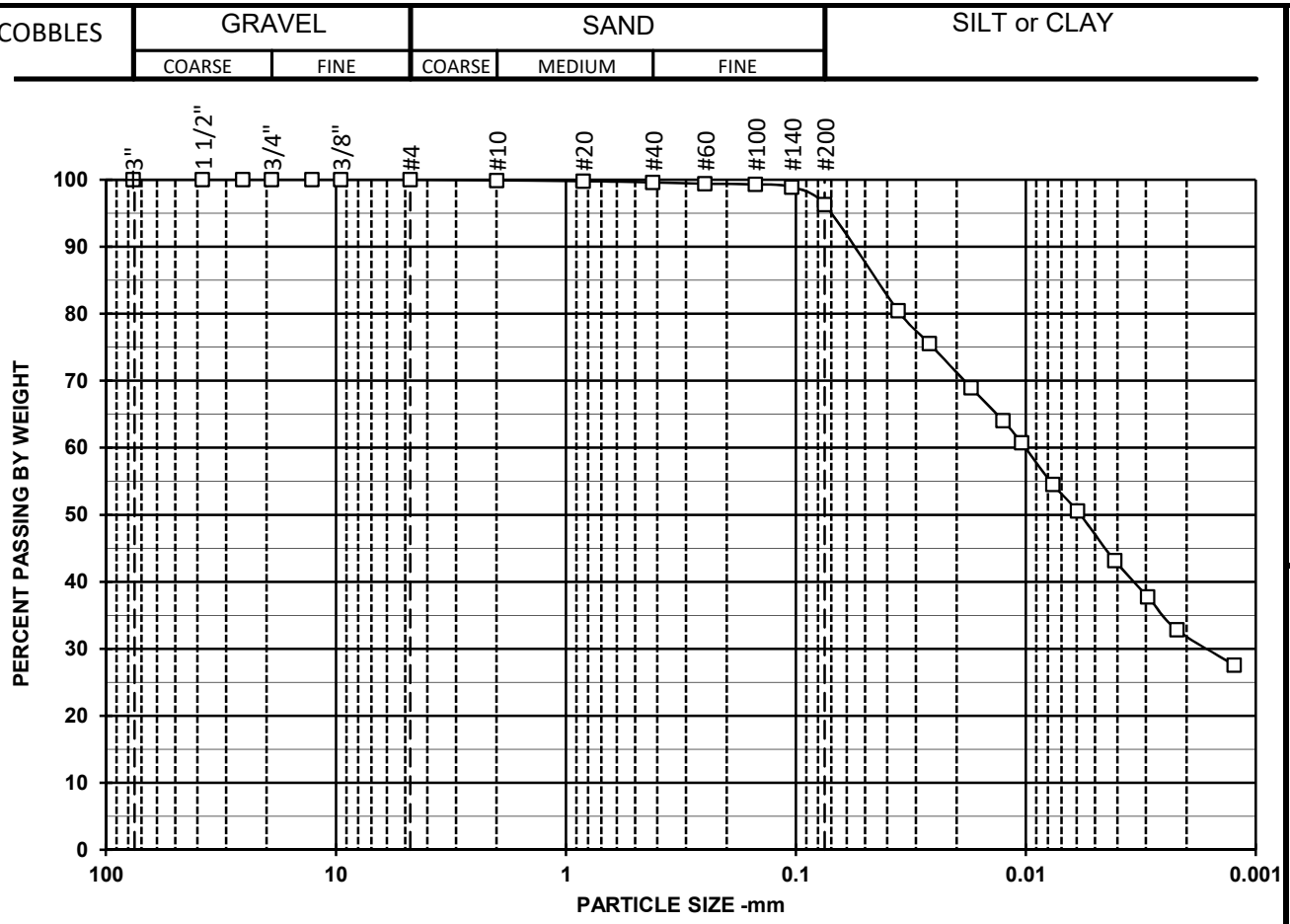
TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

TerraSense Analysis File: GrainSizeV4R4(11/17)

Siev3f.xlsx 11/14/2018



Symbol	□	■	○
Boring	COMP-L		
Sample	COMP-L-D0-20.5E		
Depth	0-20.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	3.7		
%C SAND	0.1		
%M SAND	0.3		
%F SAND	3.3		
% FINES	96.3		
D_{100} (mm)	4.750		
D_{60} (mm)	0.010		
D_{30} (mm)	0.002		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	99.9		
#20	99.8		
#40	99.6		
#60	99.4		
#100	99.3		
#140	98.9		
#200	96.3		
5μ m	47		
2μ m	32		
1μ m	26		

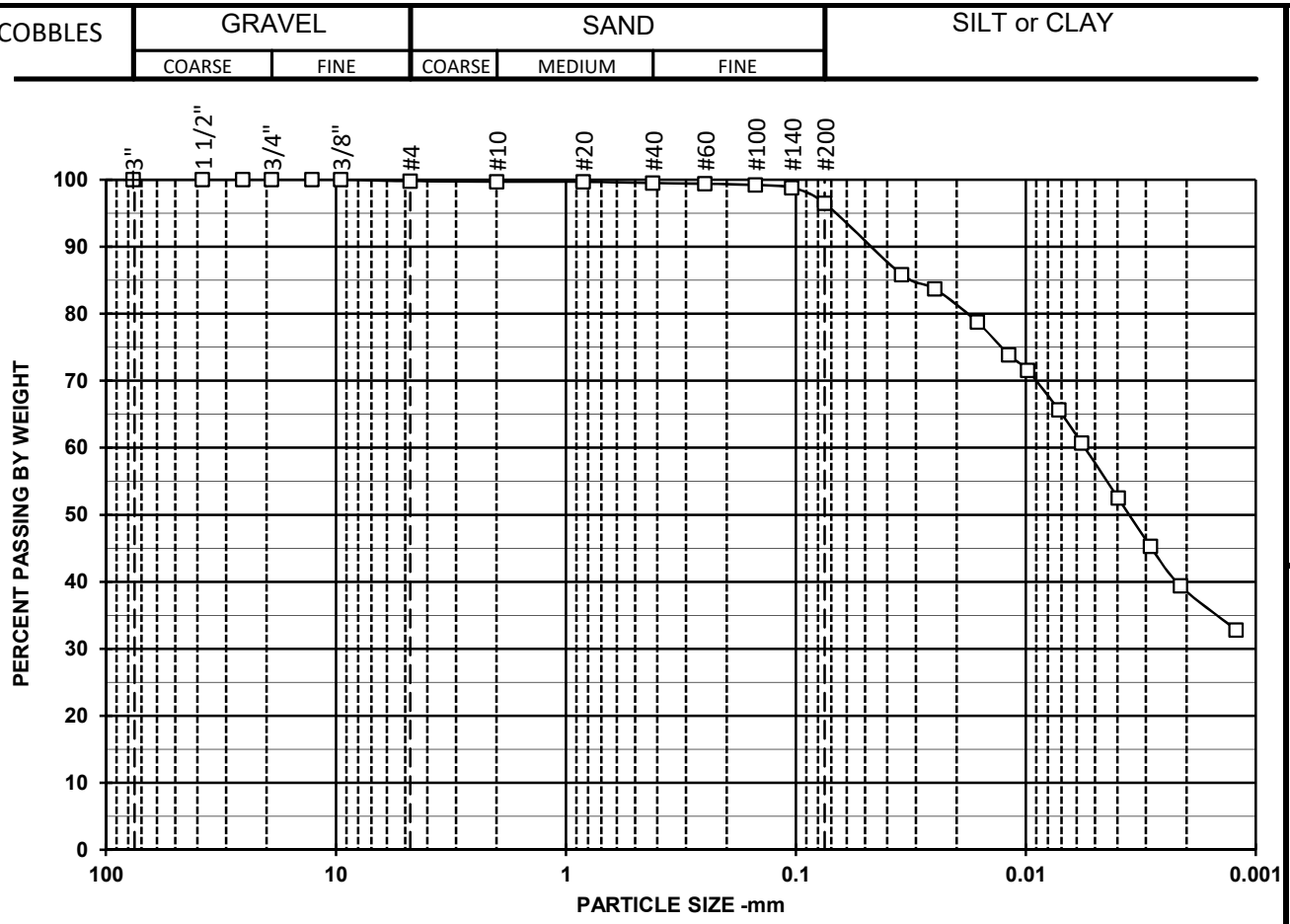
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	89.6				CH		Gray, Fat clay	10/24/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-M		
Sample	COMP-M-D0-27E		
Depth	0-27		
% +3"	0.0		
% Gravel	0.2		
% SAND	3.3		
%C SAND	0.1		
%M SAND	0.2		
%F SAND	3.0		
% FINES	96.5		
D_{100} (mm)	9.530		
D_{60} (mm)	0.006		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

Sieve

Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	99.8		
#10	99.7		
#20	99.7		
#40	99.5		
#60	99.4		
#100	99.2		
#140	98.8		
#200	96.5		
5μ m	58		
2μ m	39		
1μ m	31		

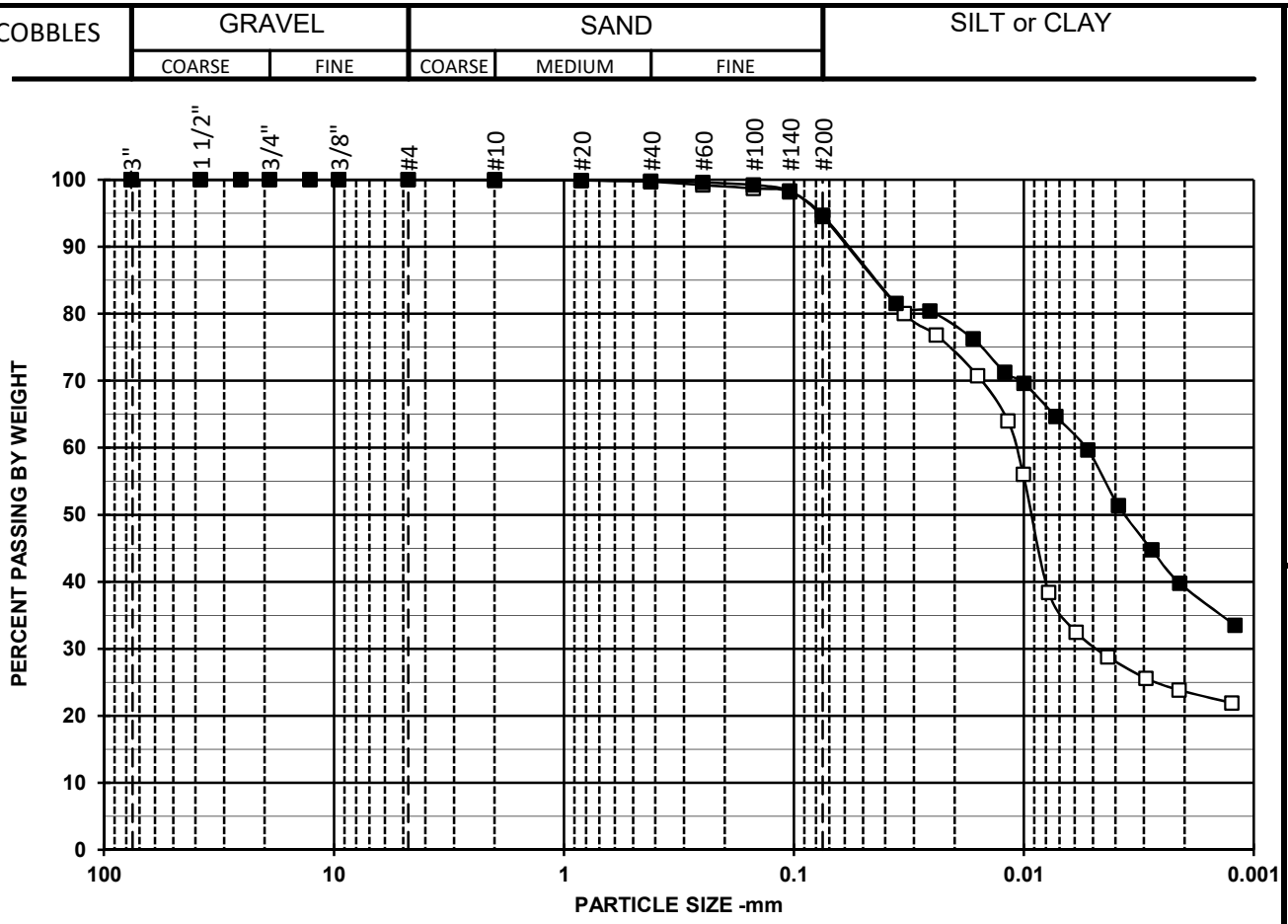
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	85.5				CH		Gray, Fat clay	10/24/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-N	COMP-N	
Sample	COMP-N-D0-4E	COMP-N-D4-22.5E	
Depth	0-4	4-22.5	
% +3"	0.0	0.0	
% Gravel	0.0	0.0	
% SAND	5.3	5.5	
%C SAND	0.0	0.1	
%M SAND	0.3	0.1	
%F SAND	5.0	5.3	
% FINES	94.7	94.5	
D_{100} (mm)	4.750	4.750	
D_{60} (mm)	0.011	0.005	
D_{30} (mm)	0.005		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0	100.0	
4"	100.0	100.0	
3"	100.0	100.0	
1 1/2"	100.0	100.0	
1"	100.0	100.0	
3/4"	100.0	100.0	
1/2"	100.0	100.0	
3/8"	100.0	100.0	
#4	100.0	100.0	
#10	100.0	99.9	
#20	99.9	99.9	
#40	99.7	99.8	
#60	99.2	99.6	
#100	98.7	99.2	
#140	98.2	98.3	
#200	94.7	94.5	
5μ m	31	58	
2μ m	24	39	
1μ m	21	31	

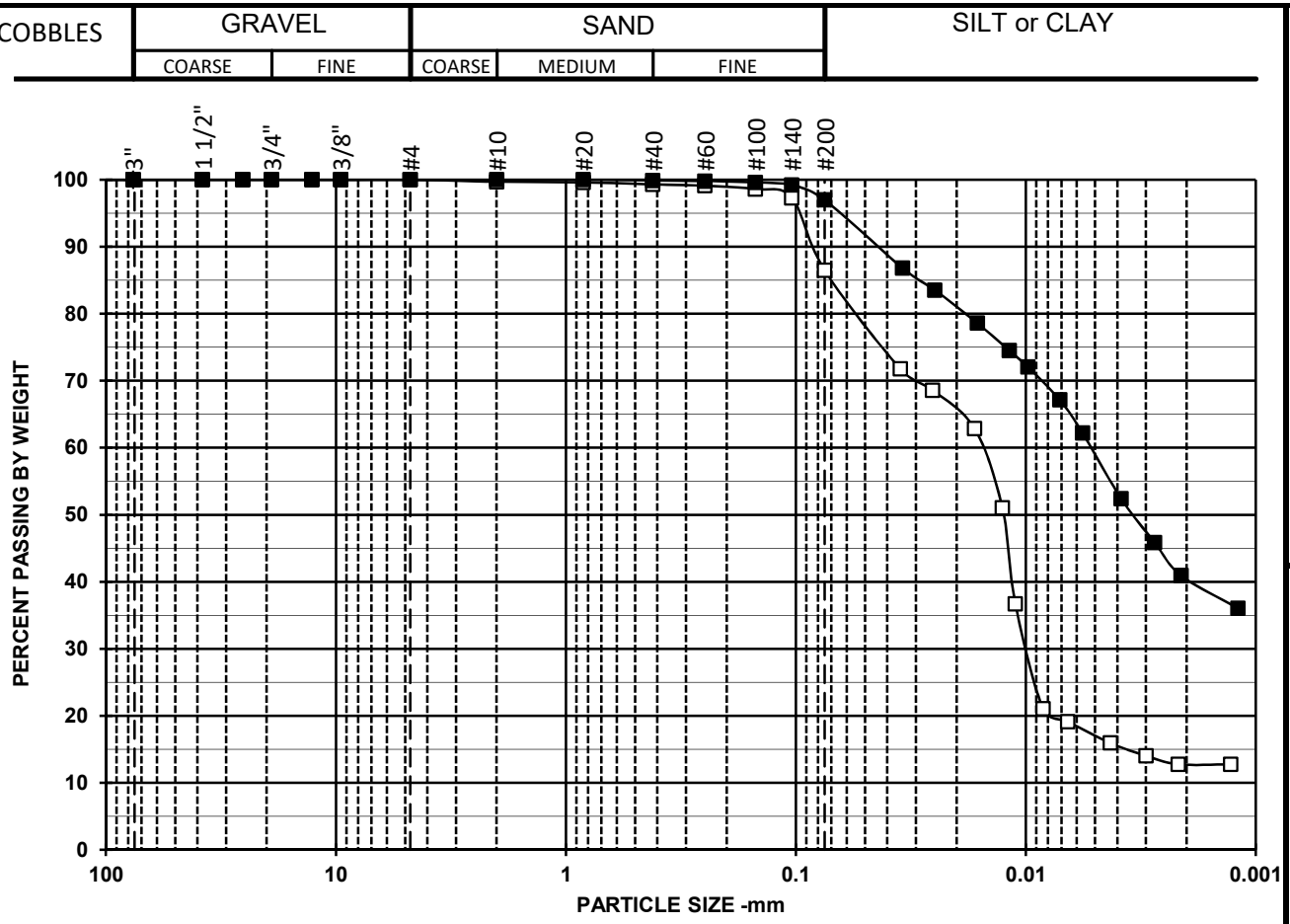
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	118.9				OH		Very dark gray, Organic clay	10/24/18
■	79.8				CH		Gray, Fat clay shell fragments noted	10/24/18
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-O	COMP-O	
Sample	COMP-O-D0-2E	COMP-O-D2-25E	
Depth	0-2	2-25	
% +3"	0.0	0.0	
% Gravel	0.0	0.0	
% SAND	13.5	3.0	
%C SAND	0.3	0.0	
%M SAND	0.4	0.1	
%F SAND	12.8	2.9	
% FINES	86.5	97.0	
D_{100} (mm)	4.750	4.750	
D_{60} (mm)	0.016	0.005	
D_{30} (mm)	0.010		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0	100.0	
4"	100.0	100.0	
3"	100.0	100.0	
1 1/2"	100.0	100.0	
1"	100.0	100.0	
3/4"	100.0	100.0	
1/2"	100.0	100.0	
3/8"	100.0	100.0	
#4	100.0	100.0	
#10	99.7	100.0	
#20	99.6	100.0	
#40	99.3	99.9	
#60	99.1	99.8	
#100	98.6	99.6	
#140	97.3	99.2	
#200	86.5	97.0	
5μ m	17	59	
2μ m	13	40	
1μ m	13	34	

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	128.4				OH		Very dark gray, Organic silt	10/24/18
■	88.3				CH		Gray, Fat clay	10/24/18
○								

Haley & Aldrich #132614-004

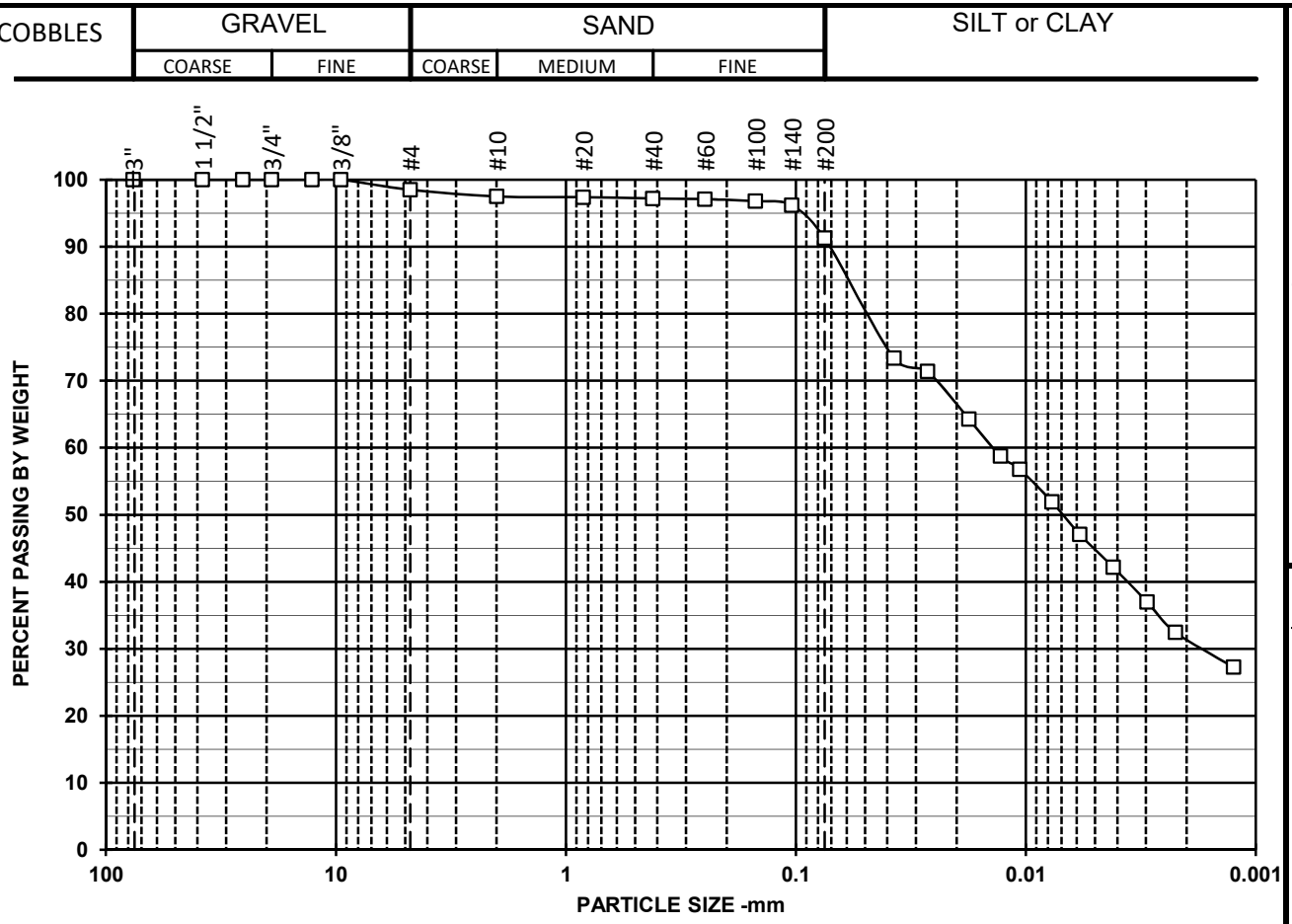
TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

TerraSense Analysis File: GrainSizeV4R4(11/17)

Siev1d.xlsx 11/2/2018



Symbol	□	■	○
Boring	COMP-P		
Sample	COMP-P-D0-23E		
Depth	0-23		
% +3"	0.0		
% Gravel	1.5		
% SAND	7.2		
%C SAND	1.0		
%M SAND	0.3		
%F SAND	5.9		
% FINES	91.3		
D_{100} (mm)	9.530		
D_{60} (mm)	0.014		
D_{30} (mm)	0.002		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	98.5
#10	97.5
#20	97.4
#40	97.2
#60	97.1
#100	96.8
#140	96.2
#200	91.3
5μ m	45
2μ m	31
1μ m	25

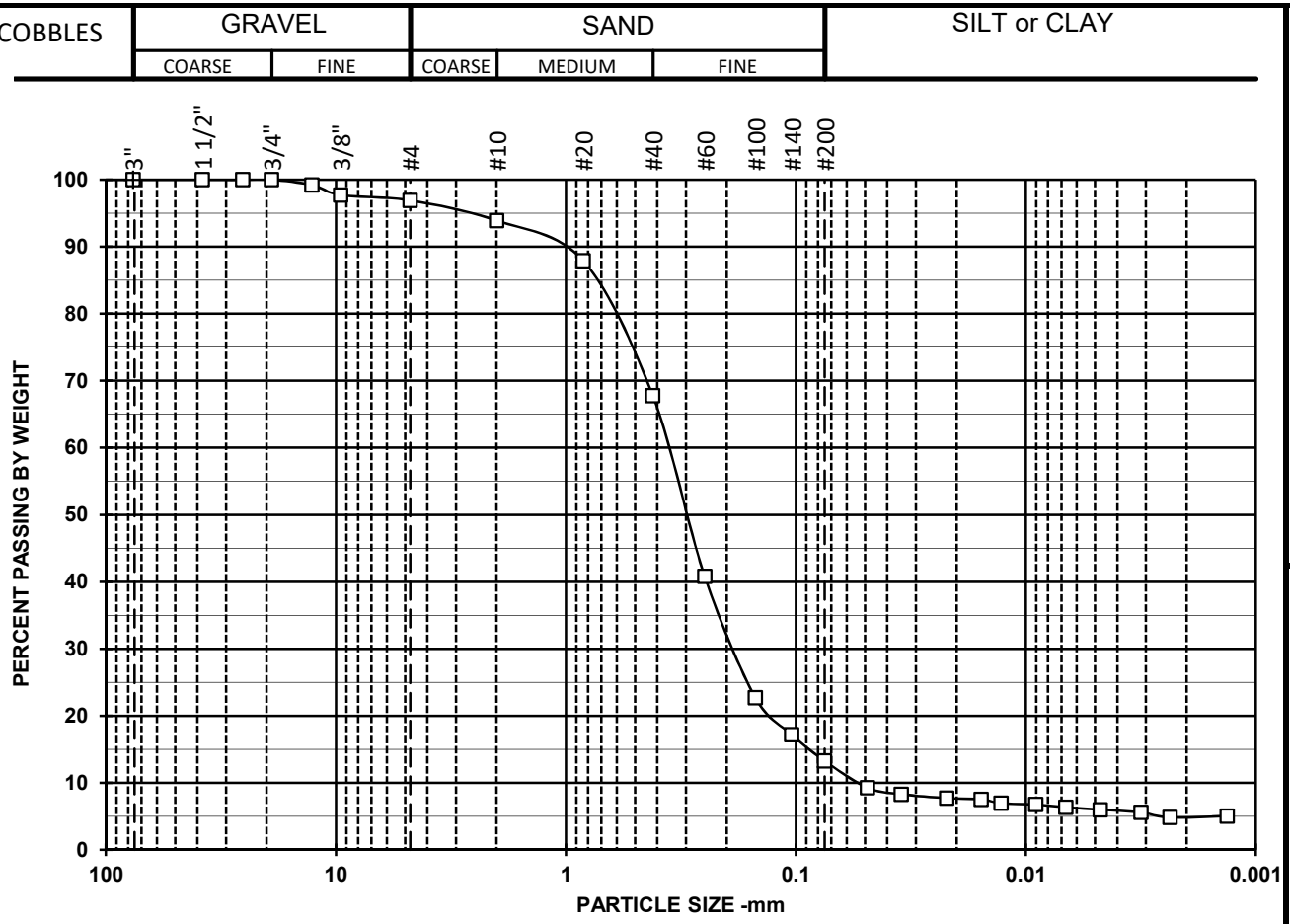
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	79.3				CH		Gray, Fat clay	10/24/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-Q		
Sample	COMP-Q-D0-10.5E		
Depth	0-10.5		
% +3"	0.0		
% Gravel	3.1		
% SAND	83.6		
%C SAND	3.0		
%M SAND	26.1		
%F SAND	54.5		
% FINES	13.3		
D_{100} (mm)	19.050		
D_{60} (mm)	0.361		
D_{30} (mm)	0.184		
D_{10} (mm)	0.053		
Cc	1.800		
Cu	6.8		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	99.2		
3/8"	97.7		
#4	96.9		
#10	93.9		
#20	87.9		
#40	67.8		
#60	40.8		
#100	22.7		
#140	17.2		
#200	13.3		
5μ m	6		
2μ m	5		
1μ m	5		

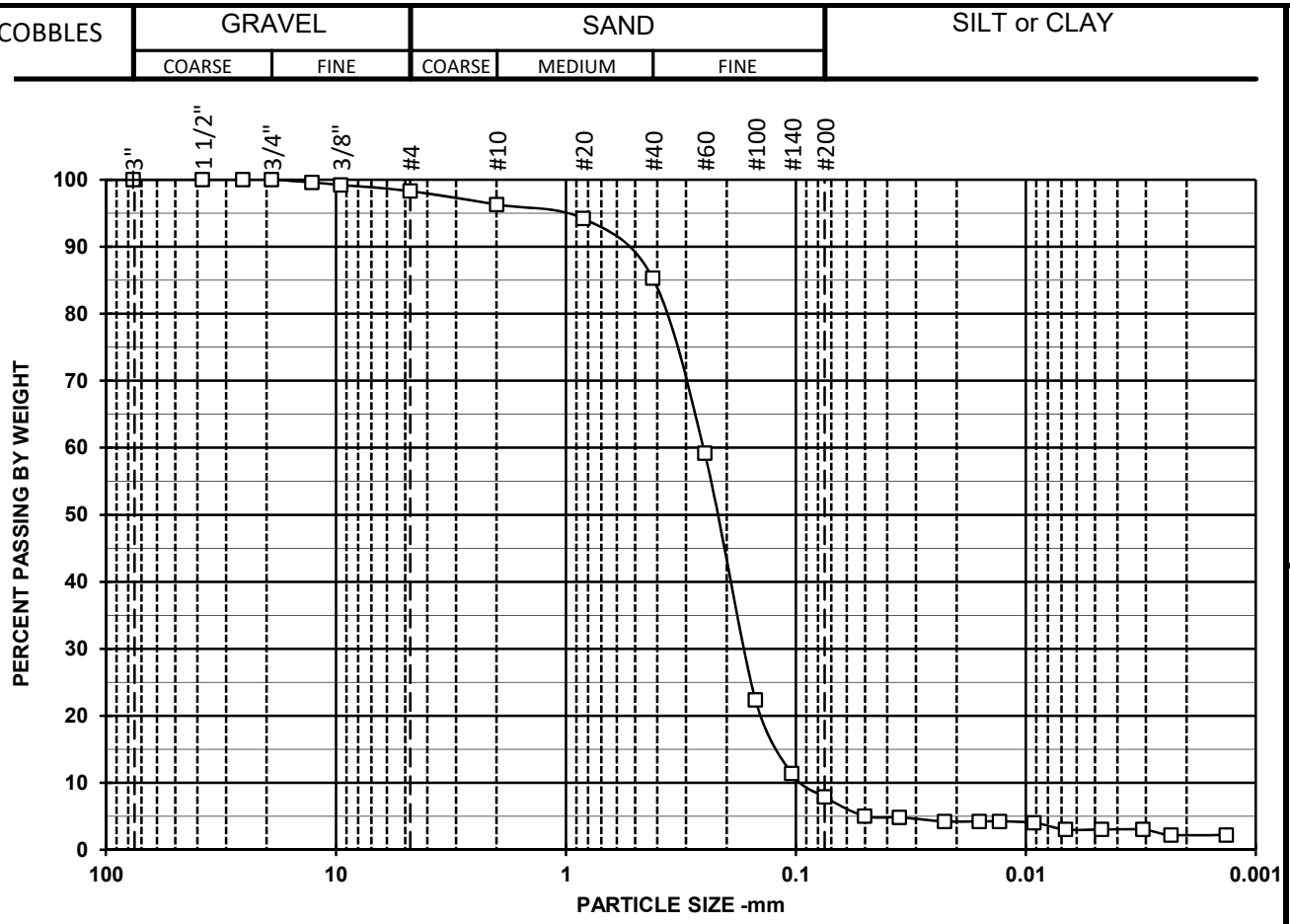
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	23.8				SM		Brown, Silty sand	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-R		
Sample	COMP-R-D4-10.5E		
Depth	4-10.5		
% +3"	0.0		
% Gravel	1.7		
% SAND	90.4		
%C SAND	2.0		
%M SAND	11.0		
%F SAND	77.4		
% FINES	7.9		
D_{100} (mm)	19.050		
D_{60} (mm)	0.253		
D_{30} (mm)	0.166		
D_{10} (mm)	0.091		
Cc	1.200		
Cu	2.8		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	99.6		
3/8"	99.2		
#4	98.3		
#10	96.3		
#20	94.2		
#40	85.3		
#60	59.2		
#100	22.4		
#140	11.4		
#200	7.9		
5μ m	3		
2μ m	2		
1μ m	2		

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	22.8				SP-SM		Gray, Poorly graded sand with silt shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

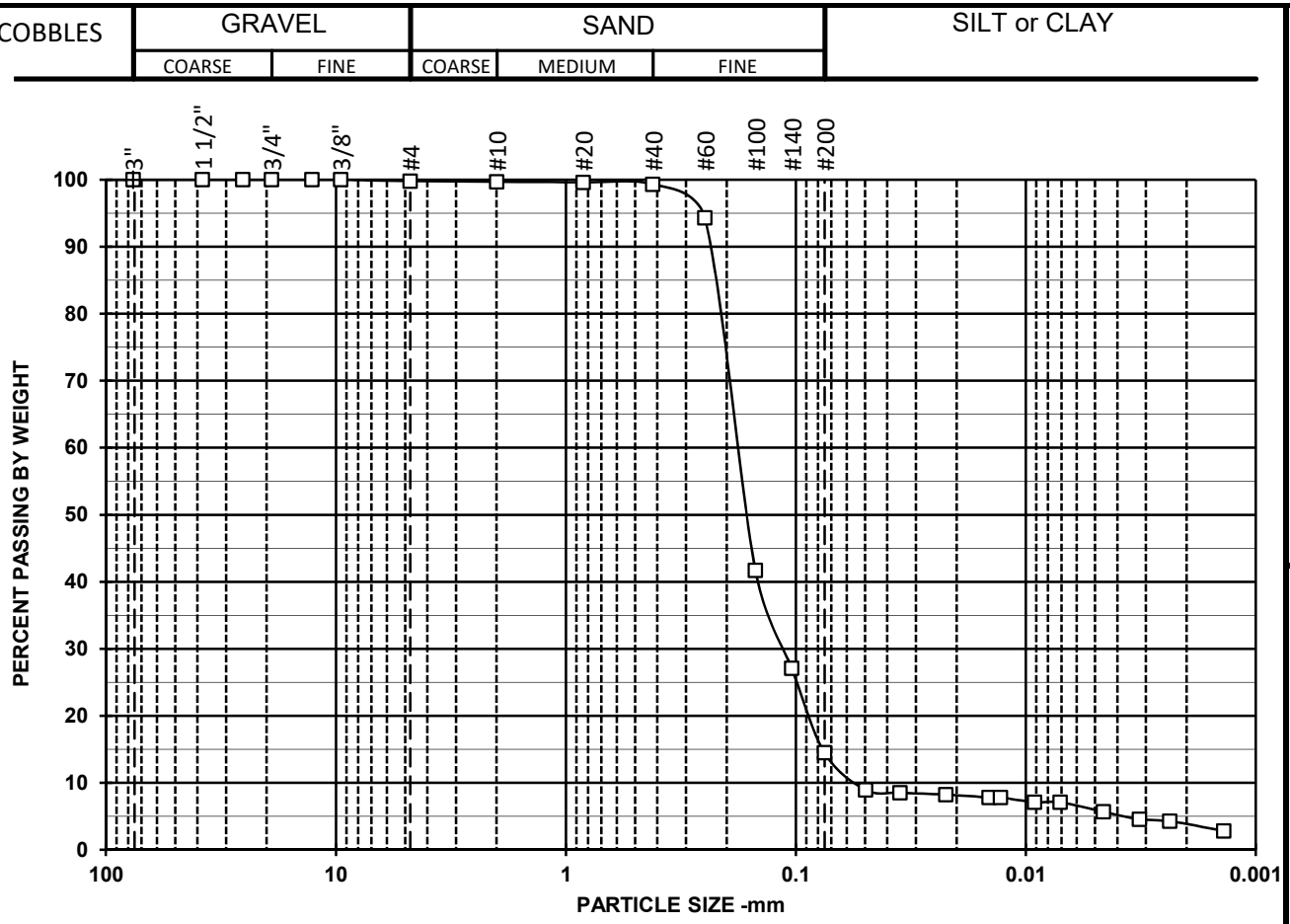
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Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

TerraSense Analysis File: GrainSizeV4R4(11/17)

Siev3h.xlsx 11/14/2018



Symbol	□	■	○
Boring	COMP-S		
Sample	COMP-S-D0-21E		
Depth	0-21		
% +3"	0.0		
% Gravel	0.2		
% SAND	85.3		
%C SAND	0.1		
%M SAND	0.4		
%F SAND	84.8		
% FINES	14.5		
D_{100} (mm)	9.530		
D_{60} (mm)	0.179		
D_{30} (mm)	0.112		
D_{10} (mm)	0.054		
Cc	1.300		
Cu	3.3		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	99.8		
#10	99.7		
#20	99.6		
#40	99.3		
#60	94.3		
#100	41.7		
#140	27.1		
#200	14.5		
5μ m	6		
2μ m	4		
1μ m	2		

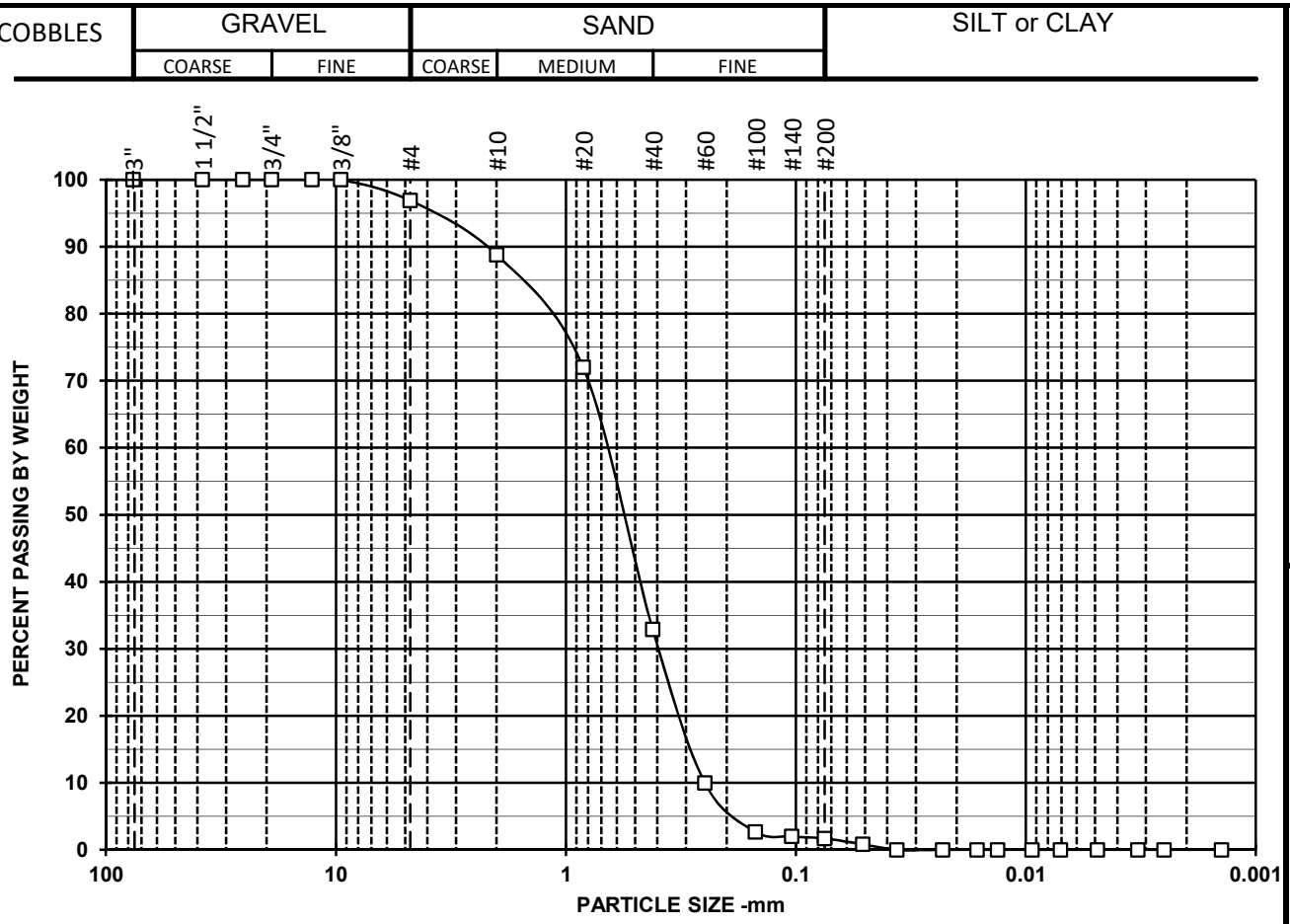
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	28.4				SM		Gray, Silty sand organic mat'l noted	10/29/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	COMP-T		
Sample	COMP-T-D0-22.5E		
Depth	0-22.5		
% +3"	0.0		
% Gravel	3.1		
% SAND	95.2		
%C SAND	8.1		
%M SAND	55.9		
%F SAND	31.2		
% FINES	1.7		
D_{100} (mm)	9.530		
D_{60} (mm)	0.679		
D_{30} (mm)	0.392		
D_{10} (mm)	0.249		
Cc	0.900		
Cu	2.7		

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	96.9
#10	88.8
#20	72.0
#40	32.9
#60	10.0
#100	2.7
#140	2.0
#200	1.7
5μ m	0
2μ m	0
1μ m	0

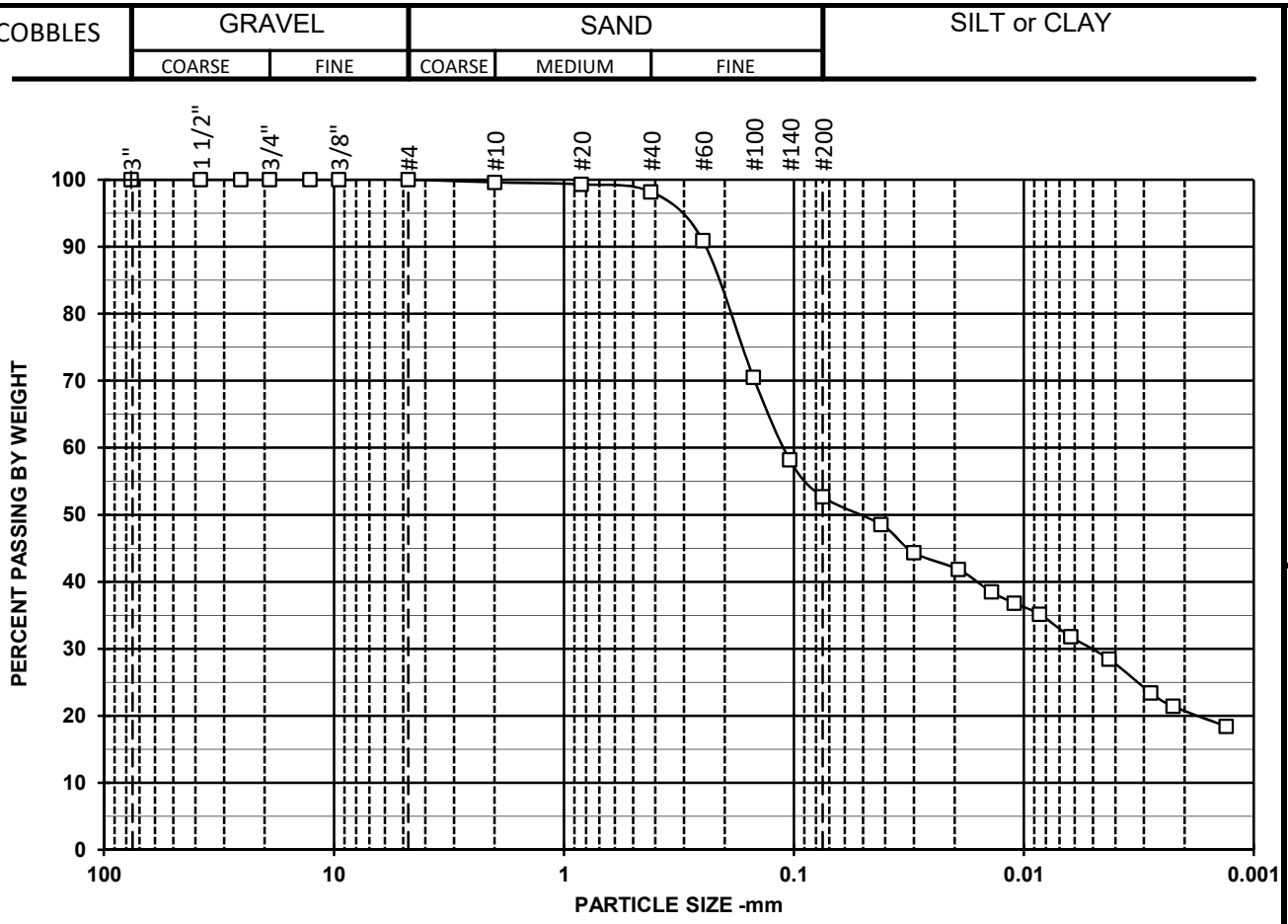
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	14.7				SP		Gray, Poorly graded sand	10/29/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	DEP-1		
Sample	DEP-1-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	47.3		
%C SAND	0.4		
%M SAND	1.4		
%F SAND	45.5		
% FINES	52.7		
D_{100} (mm)	4.750		
D_{60} (mm)	0.110		
D_{30} (mm)	0.005		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	99.6		
#20	99.3		
#40	98.2		
#60	90.9		
#100	70.5		
#140	58.2		
#200	52.7		
5μ m	30		
2μ m	21		
1μ m	17		

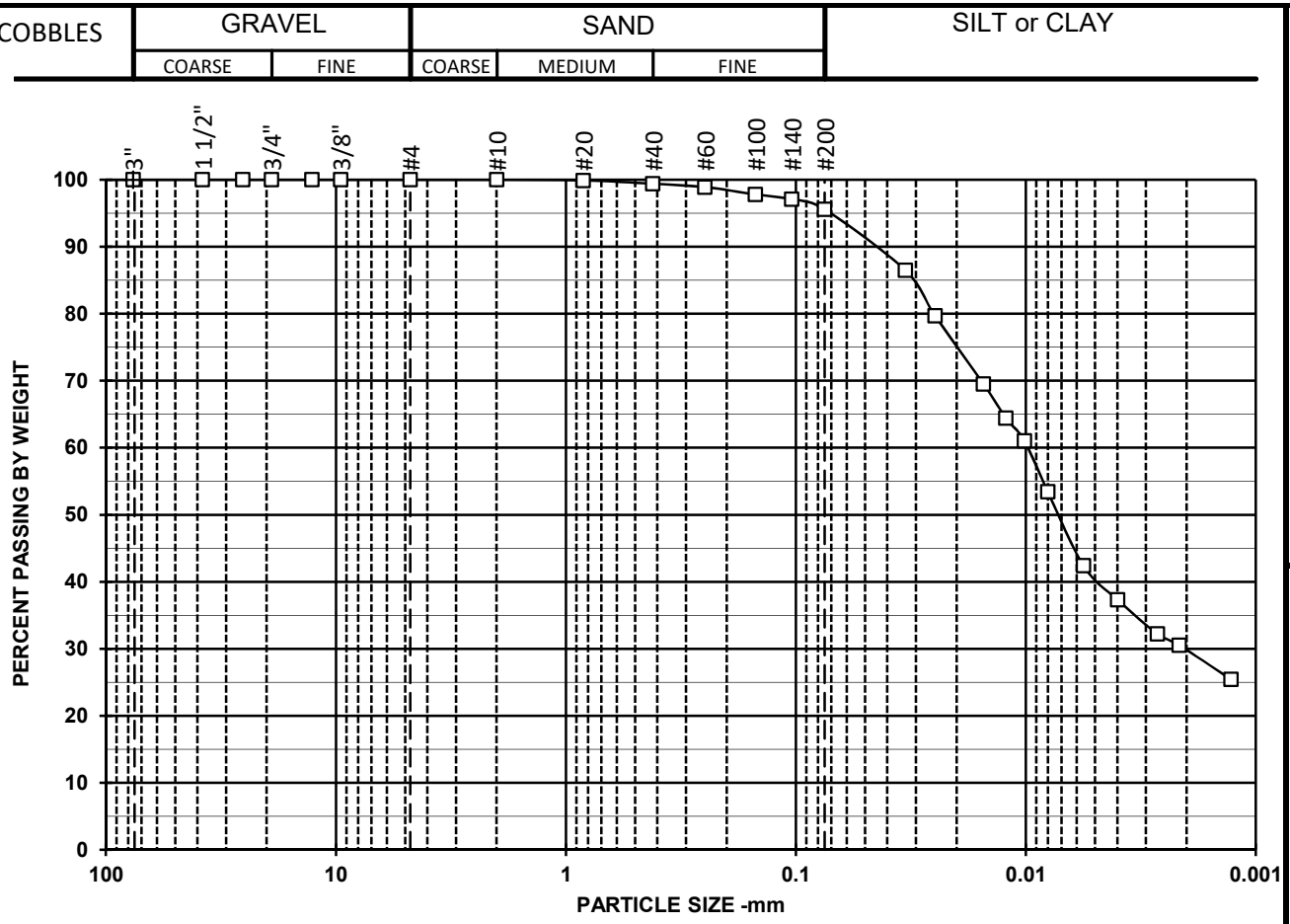
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	42.7				OH		Gray, Sandy Organic clay	11/02/18
■								
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Haley & Aldrich #132614-004

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Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	DEP-3		
Sample	DEP-3-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	4.4		
%C SAND	0.0		
%M SAND	0.6		
%F SAND	3.8		
% FINES	95.6		
D_{100} (mm)	4.750		
D_{60} (mm)	0.010		
D_{30} (mm)	0.002		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	100.0
#10	100.0
#20	99.9
#40	99.4
#60	98.9
#100	97.8
#140	97.1
#200	95.6
5μ m	41
2μ m	30
1μ m	23

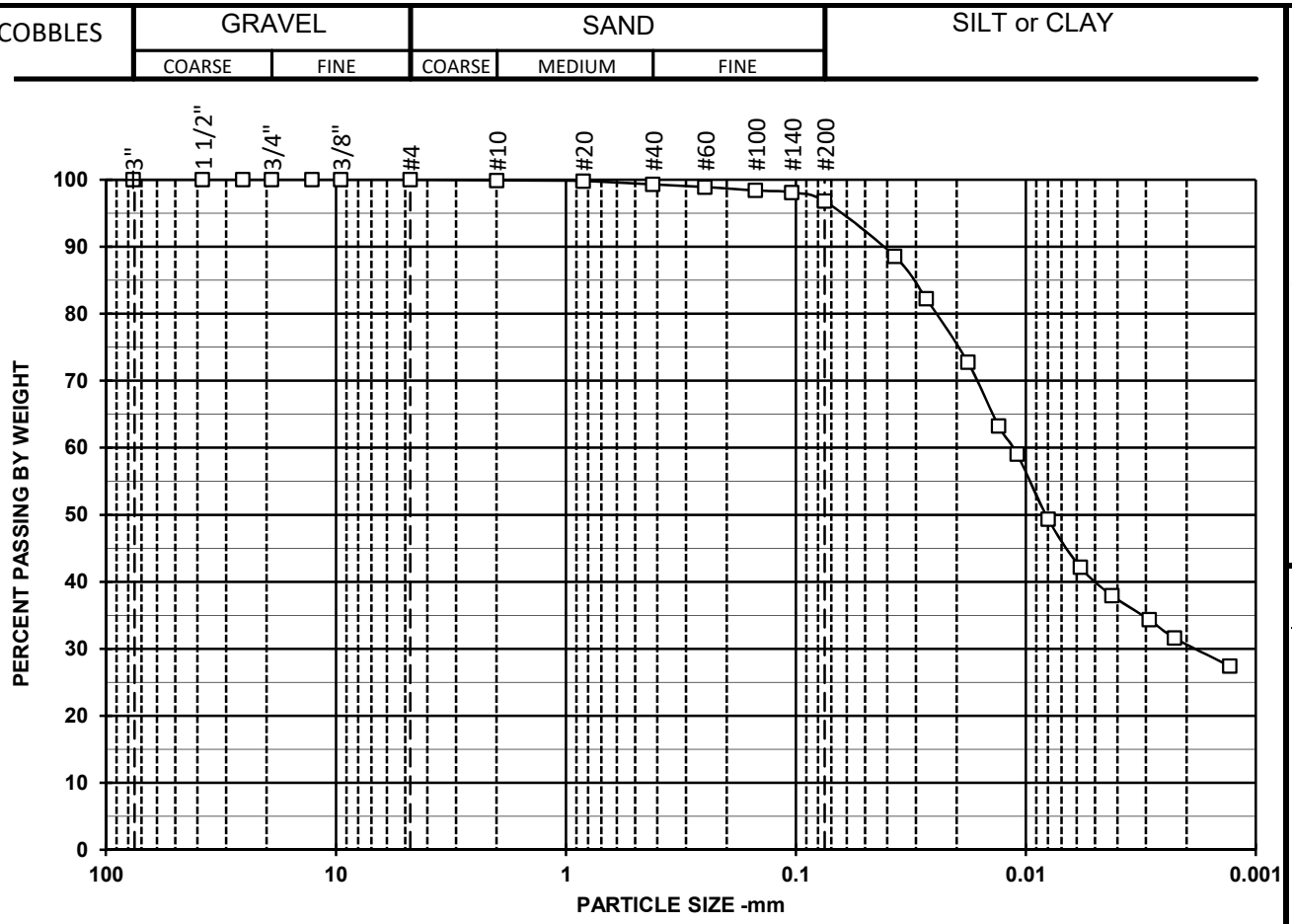
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	93.3				OH		Brown, Organic clay	11/02/18
■								
○								

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Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	DEP-4-REV		
Sample	DEP-4-REV-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	3.2		
%C SAND	0.1		
%M SAND	0.6		
%F SAND	2.5		
% FINES	96.8		
D_{100} (mm)	4.750		
D_{60} (mm)	0.011		
D_{30} (mm)	0.002		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	100.0
#10	99.9
#20	99.8
#40	99.3
#60	98.9
#100	98.4
#140	98.1
#200	96.8
5μ m	40
2μ m	31
1μ m	25

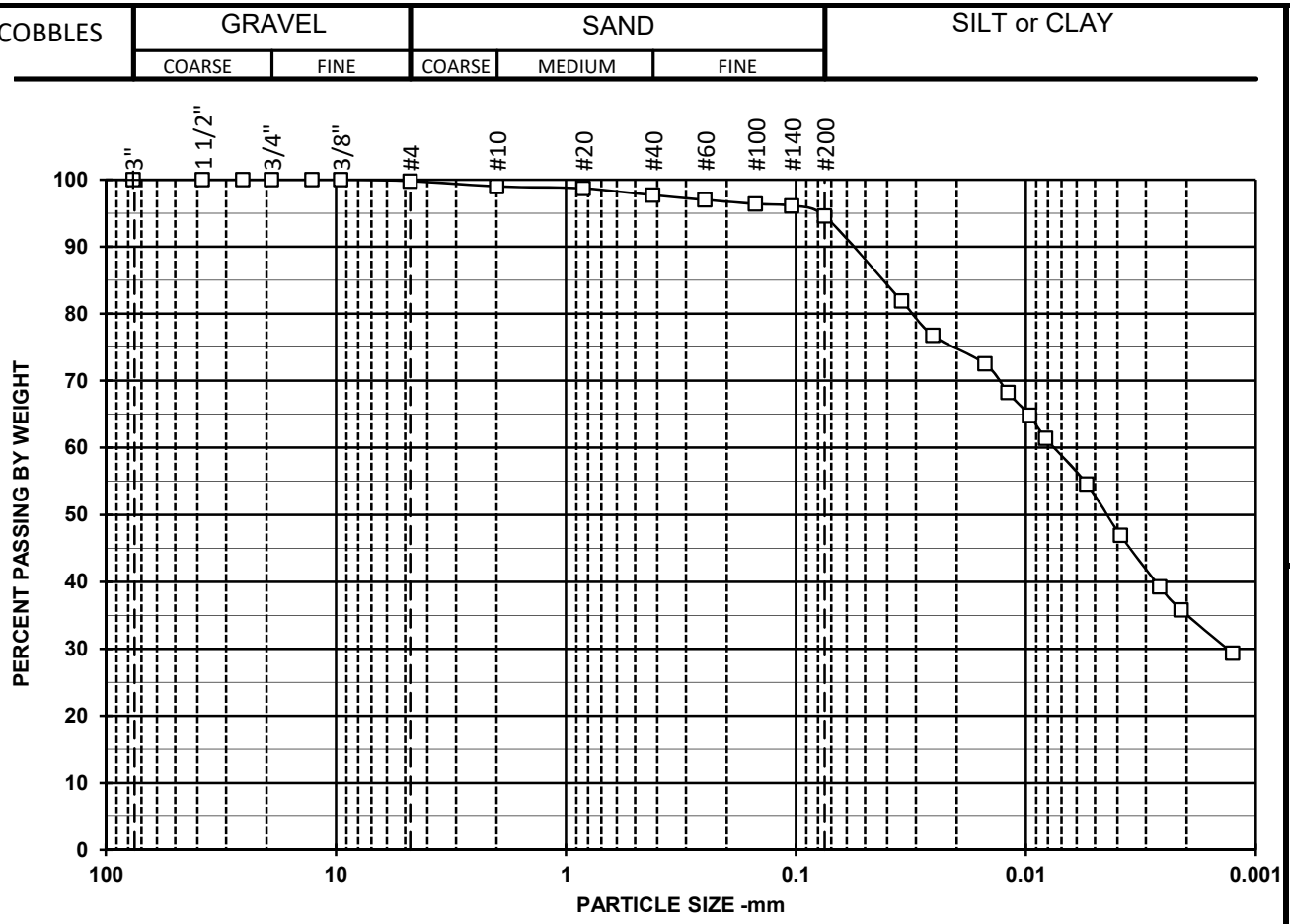
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	95.4				OH		Dark brown, Organic clay	11/02/18
■								
○								

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Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	DEP-5-REV		
Sample	DEP-5-REV-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.2		
% SAND	5.2		
%C SAND	0.8		
%M SAND	1.3		
%F SAND	3.1		
% FINES	94.6		
D_{100} (mm)	9.530		
D_{60} (mm)	0.008		
D_{30} (mm)	0.001		
D_{10} (mm)			
Cc			
Cu			

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	102.5				OH		Gray, Organic clay	11/02/18
■								
○								

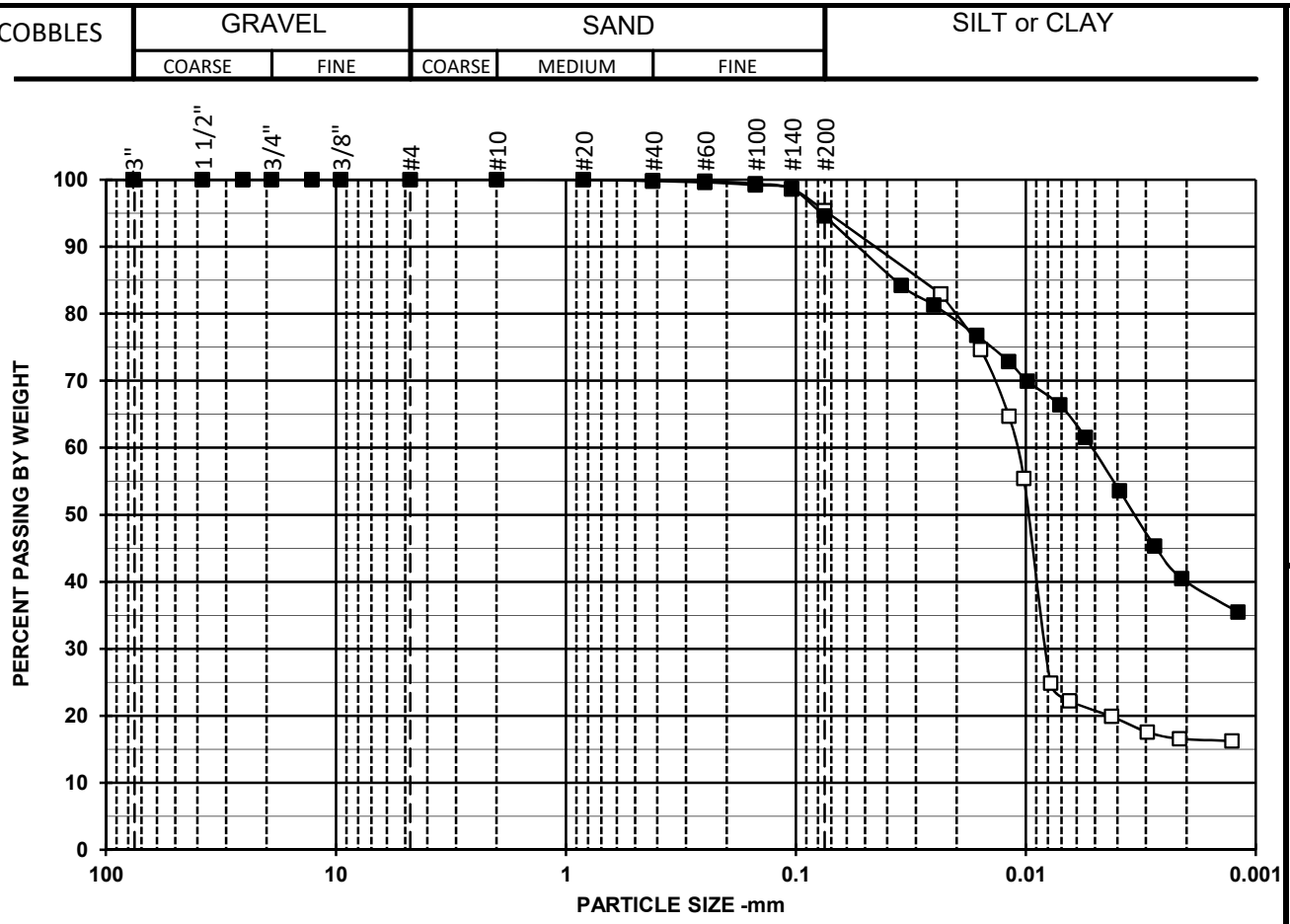
Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	99.8
#10	99.0
#20	98.7
#40	97.7
#60	97.0
#100	96.4
#140	96.1
#200	94.6
5μ m	53
2μ m	35
1μ m	26

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Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	DEP-6	DEP-6	
Sample	DEP-6-D0-13.5E	DEP-6-D13.5-27E	
Depth	0-13.5	13.5-27	
% +3"	0.0	0.0	
% Gravel	0.0	0.0	
% SAND	4.6	5.4	
%C SAND	0.0	0.0	
%M SAND	0.2	0.1	
%F SAND	4.4	5.3	
% FINES	95.4	94.6	
D_{100} (mm)	4.750	4.750	
D_{60} (mm)	0.011	0.005	
D_{30} (mm)	0.008		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0	100.0	
4"	100.0	100.0	
3"	100.0	100.0	
1 1/2"	100.0	100.0	
1"	100.0	100.0	
3/4"	100.0	100.0	
1/2"	100.0	100.0	
3/8"	100.0	100.0	
#4	100.0	100.0	
#10	100.0	100.0	
#20	100.0	100.0	
#40	99.8	99.9	
#60	99.6	99.8	
#100	99.2	99.4	
#140	98.7	98.6	
#200	95.4	94.6	
5μ m	21	59	
2μ m	17	40	
1μ m	16	34	

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	131.0				OH		Very dark gray, Organic clay	10/24/18
■	83.5				CH		Gray, Fat clay shell fragments noted	10/24/18
○								

Haley & Aldrich #132614-004

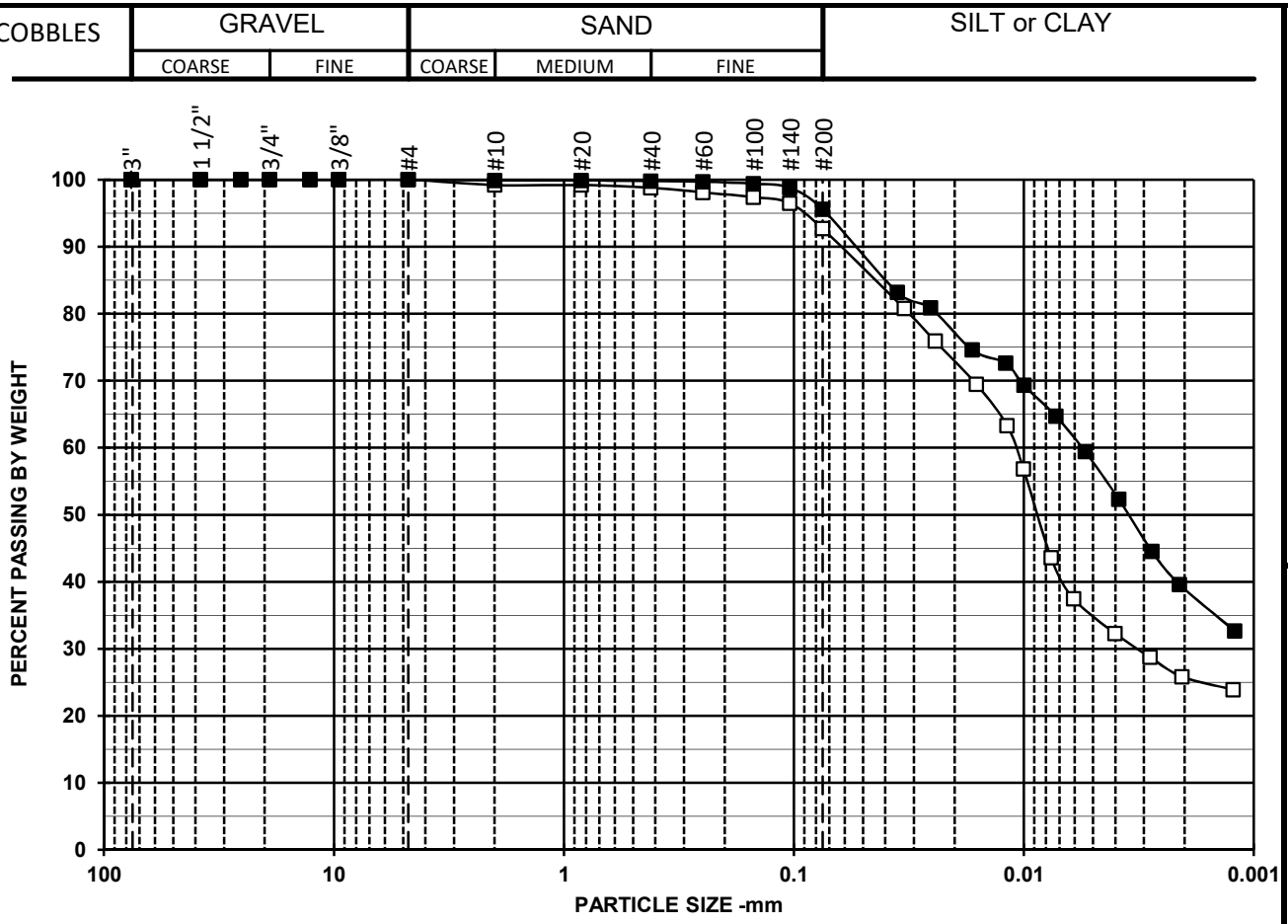
TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

TerraSense Analysis File: GrainSizeV4R4(11/17)

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Symbol	□	■	○
Boring	DEP-7	DEP-7	
Sample	DEP-7-D0-15E	DEP-7-D15-20E	
Depth	0-15	15-20	
% +3"	0.0	0.0	
% Gravel	0.0	0.0	
% SAND	7.3	4.4	
%C SAND	0.8	0.1	
%M SAND	0.4	0.1	
%F SAND	6.1	4.2	
% FINES	92.7	95.6	
D_{100} (mm)	4.750	4.750	
D_{60} (mm)	0.011	0.006	
D_{30} (mm)	0.003		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0	100.0	
4"	100.0	100.0	
3"	100.0	100.0	
1 1/2"	100.0	100.0	
1"	100.0	100.0	
3/4"	100.0	100.0	
1/2"	100.0	100.0	
3/8"	100.0	100.0	
#4	100.0	100.0	
#10	99.2	99.9	
#20	99.2	99.9	
#40	98.8	99.8	
#60	98.1	99.7	
#100	97.4	99.4	
#140	96.5	98.8	
#200	92.7	95.6	
5μ m	35	58	
2μ m	26	39	
1μ m	23	30	

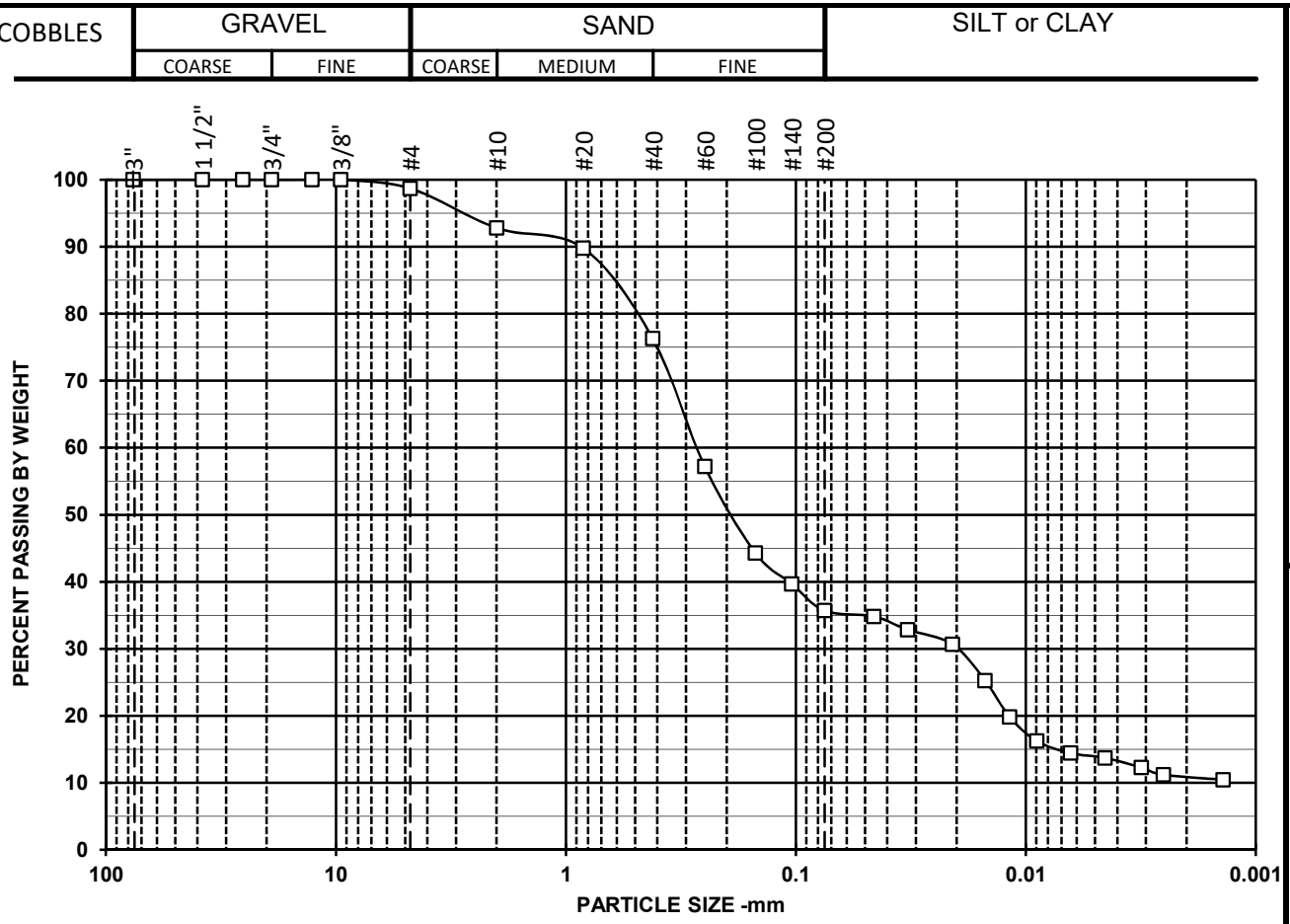
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	112.7				OH		Very dark gray, Organic clay	10/24/18
■	81.5				CH		Gray, Fat clay	10/24/18
○								

Haley & Aldrich #132614-004

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Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-208		
Sample	VC-208-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	1.3		
% SAND	63.0		
%C SAND	5.9		
%M SAND	16.5		
%F SAND	40.6		
% FINES	35.7		
D_{100} (mm)	9.530		
D_{60} (mm)	0.269		
D_{30} (mm)	0.020		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	98.7
#10	92.8
#20	89.8
#40	76.3
#60	57.2
#100	44.3
#140	39.7
#200	35.7
5μ m	14
2μ m	11
1μ m	10

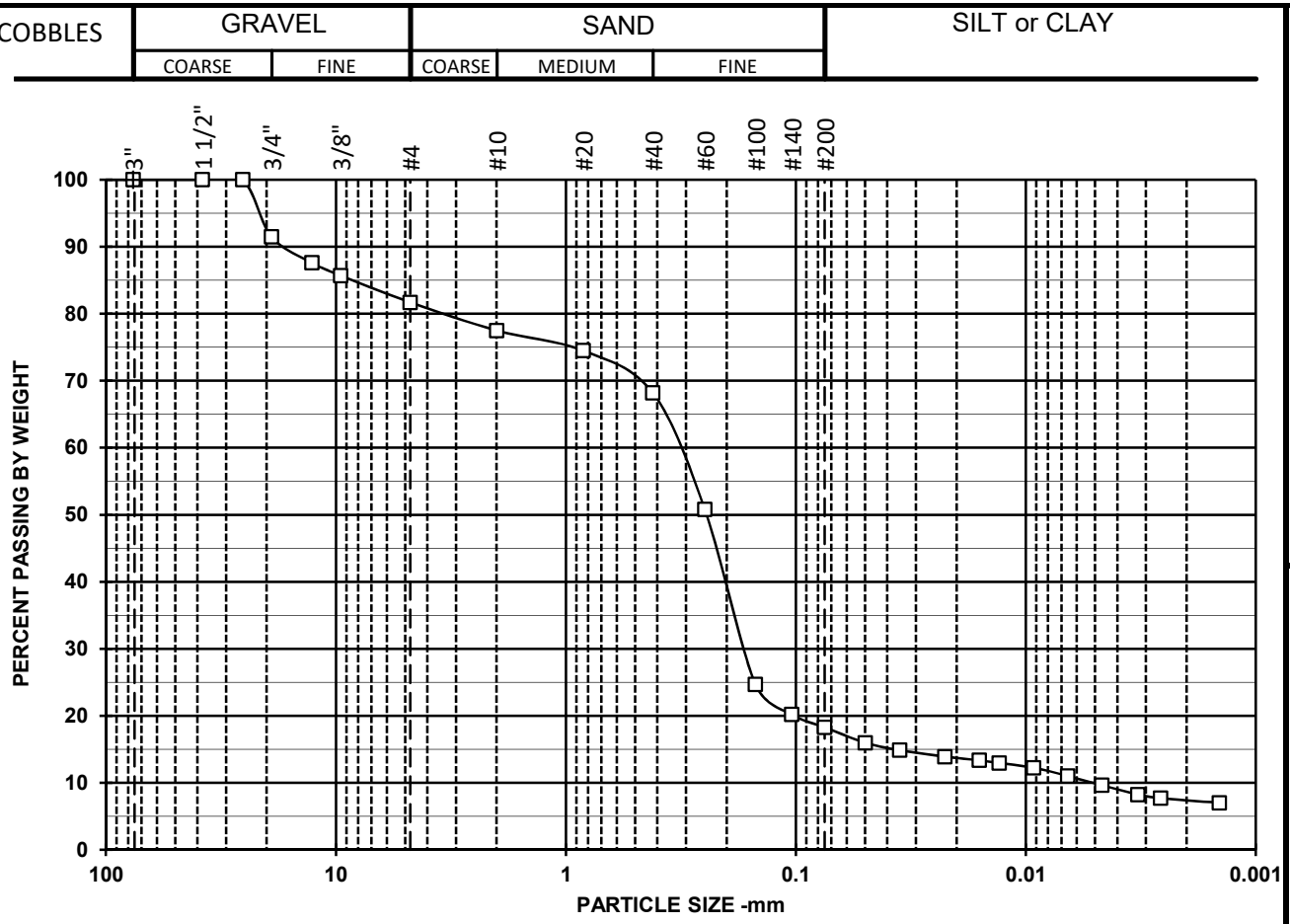
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	56.5				SC		Black, Clayey sand shell fragments and organic mat'l noted	11/14/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-211		
Sample	VC-211-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	18.3		
% SAND	63.4		
%C SAND	4.2		
%M SAND	9.3		
%F SAND	49.9		
% FINES	18.3		
D_{100} (mm)	25.400		
D_{60} (mm)	0.328		
D_{30} (mm)	0.166		
D_{10} (mm)	0.005		
Cc	16.500		
Cu	64.2		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	91.5		
1/2"	87.6		
3/8"	85.7		
#4	81.7		
#10	77.5		
#20	74.5		
#40	68.2		
#60	50.8		
#100	24.7		
#140	20.2		
#200	18.3		
5μ m	10		
2μ m	7		
1μ m	7		

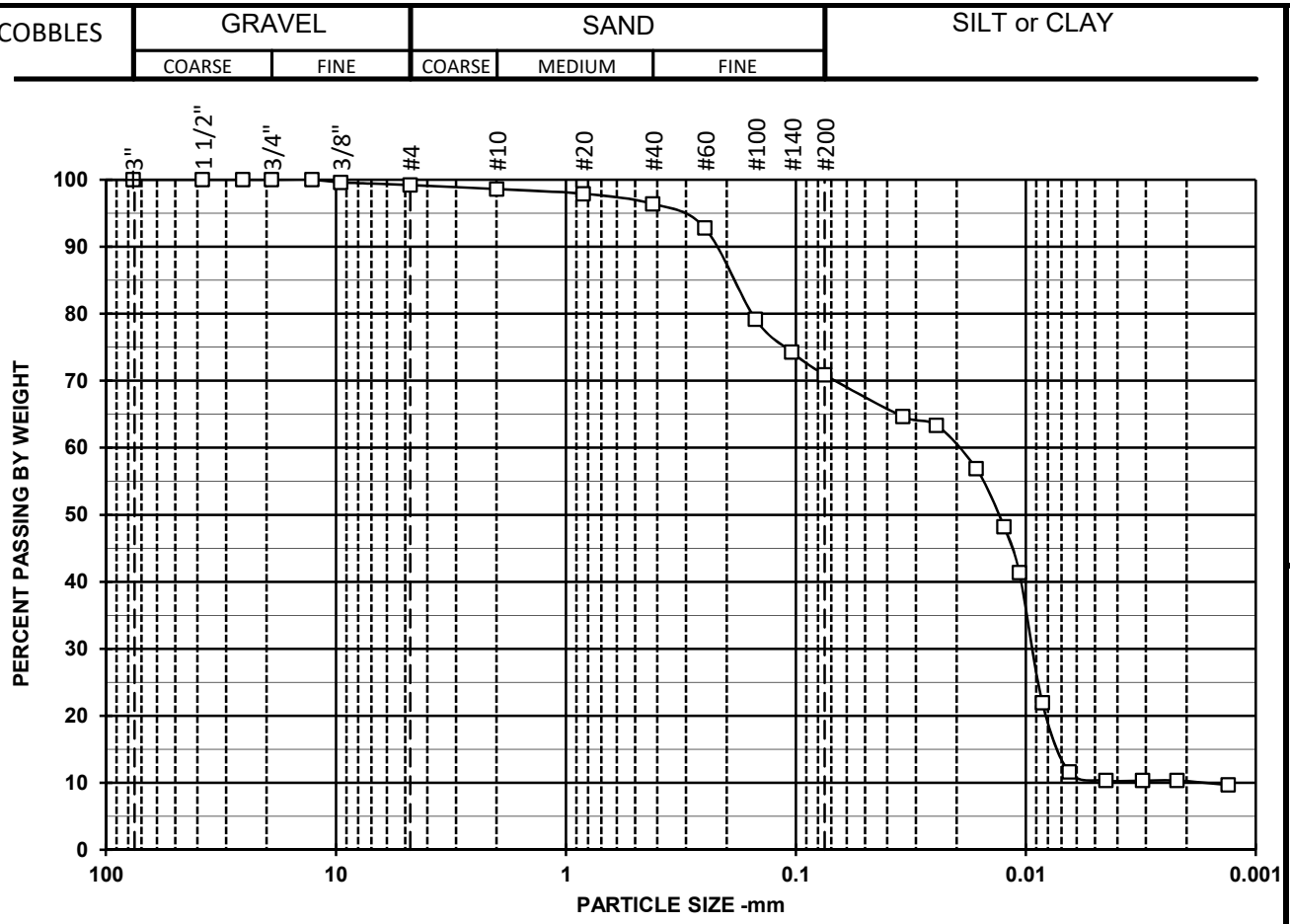
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	25.1				SC		Gray, Clayey sand with gravel	11/14/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-214		
Sample	VC-214-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.8		
% SAND	28.3		
%C SAND	0.6		
%M SAND	2.2		
%F SAND	25.5		
% FINES	70.9		
D_{100} (mm)	12.700		
D_{60} (mm)	0.020		
D_{30} (mm)	0.009		
D_{10} (mm)	0.002		
Cc	2.600		
Cu	11.9		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	99.6		
#4	99.2		
#10	98.6		
#20	97.9		
#40	96.4		
#60	92.8		
#100	79.2		
#140	74.3		
#200	70.9		
5μ m	11		
2μ m	10		
1μ m	9		

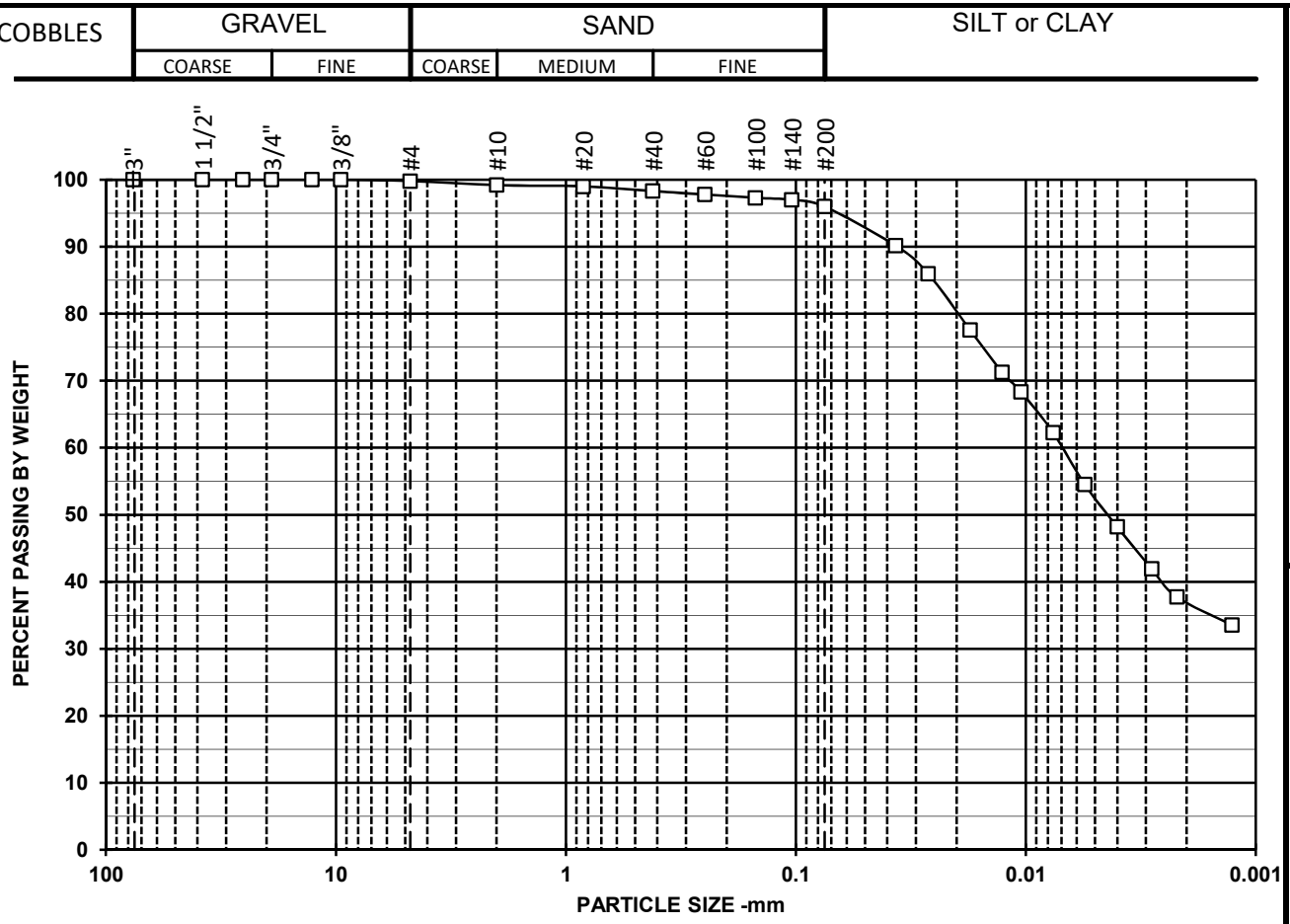
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	104.7				OH		Black, Organic silt with sand	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-216		
Sample	VC-216-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.2		
% SAND	3.8		
%C SAND	0.6		
%M SAND	0.9		
%F SAND	2.3		
% FINES	96.0		
D_{100} (mm)	9.530		
D_{60} (mm)	0.007		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	99.8		
#10	99.2		
#20	99.0		
#40	98.3		
#60	97.8		
#100	97.3		
#140	97.0		
#200	96.0		
5μ m	53		
2μ m	37		
1μ m	32		

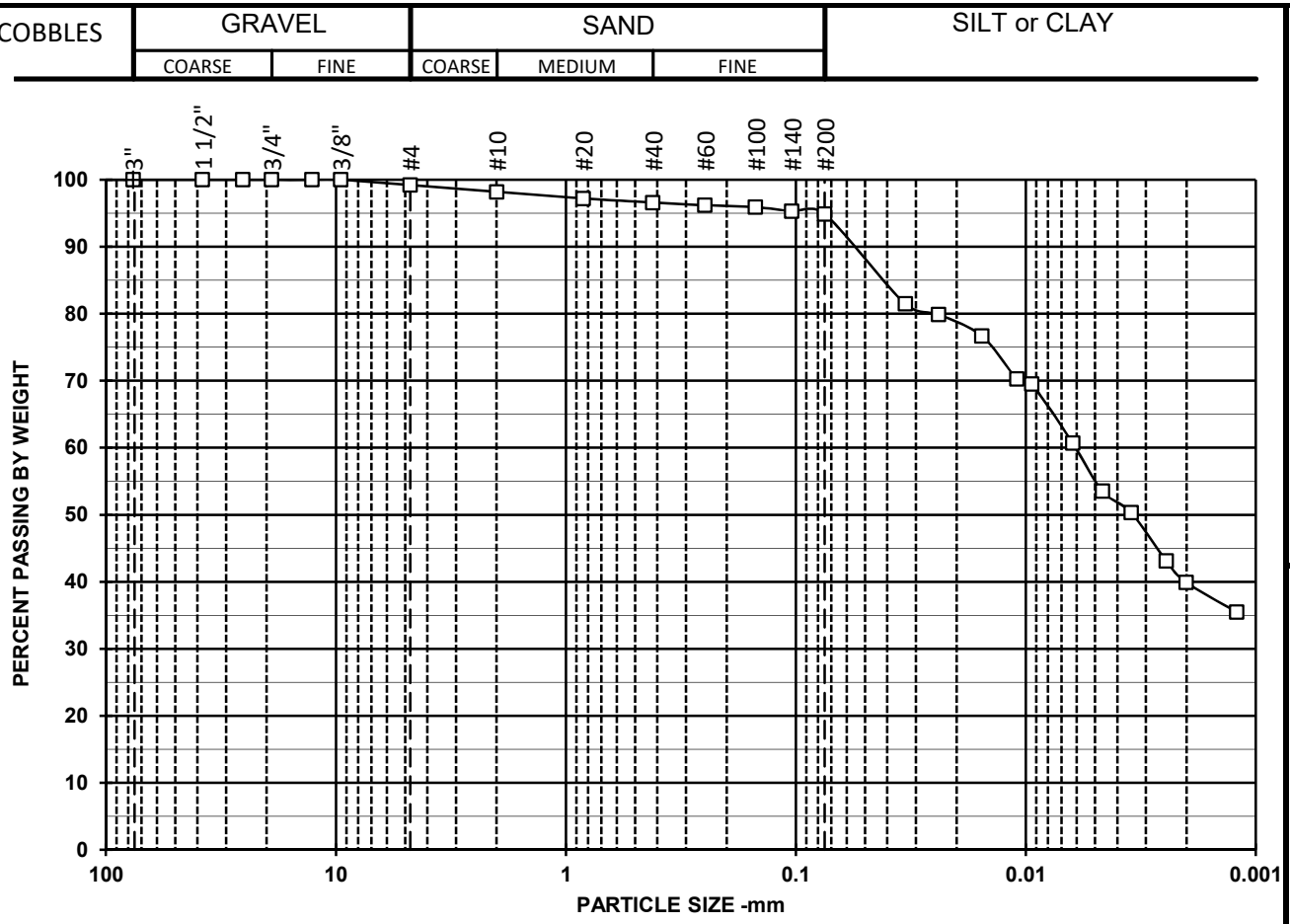
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	97.7				OH		Gray, Organic clay shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-217		
Sample	VC-217-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.8		
% SAND	4.3		
%C SAND	1.0		
%M SAND	1.6		
%F SAND	1.7		
% FINES	94.9		
D_{100} (mm)	9.530		
D_{60} (mm)	0.006		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	99.2
#10	98.2
#20	97.2
#40	96.6
#60	96.2
#100	95.9
#140	95.3
#200	94.9
5μ m	55
2μ m	40
1μ m	34

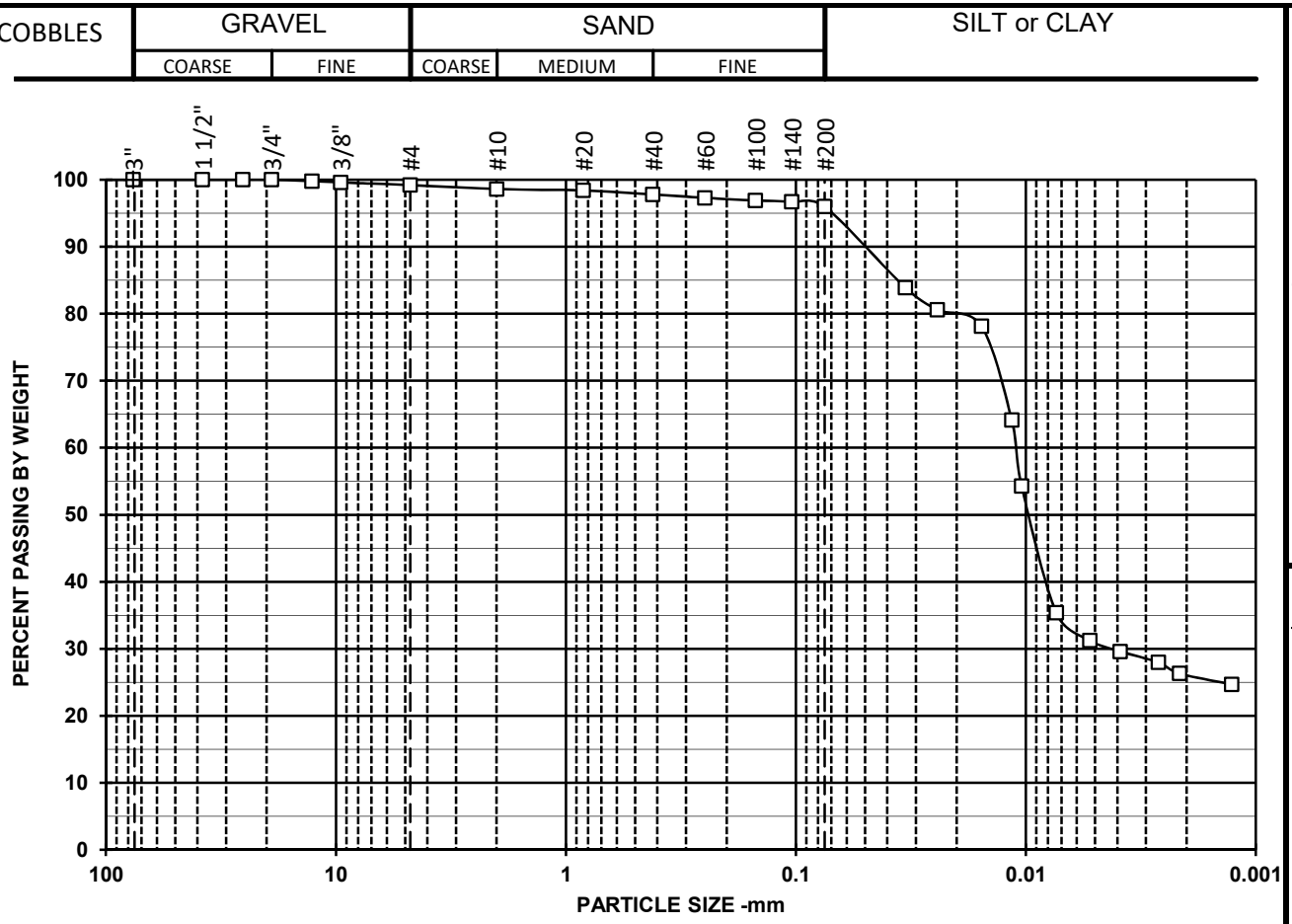
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	104.5				OH		Gray, Organic clay shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-218		
Sample	VC-218-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.8		
% SAND	3.2		
%C SAND	0.6		
%M SAND	0.8		
%F SAND	1.8		
% FINES	96.0		
D_{100} (mm)	19.050		
D_{60} (mm)	0.011		
D_{30} (mm)	0.004		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	99.8		
3/8"	99.6		
#4	99.2		
#10	98.6		
#20	98.4		
#40	97.8		
#60	97.3		
#100	96.9		
#140	96.7		
#200	96.0		
5μ m	31		
2μ m	26		
1μ m	24		

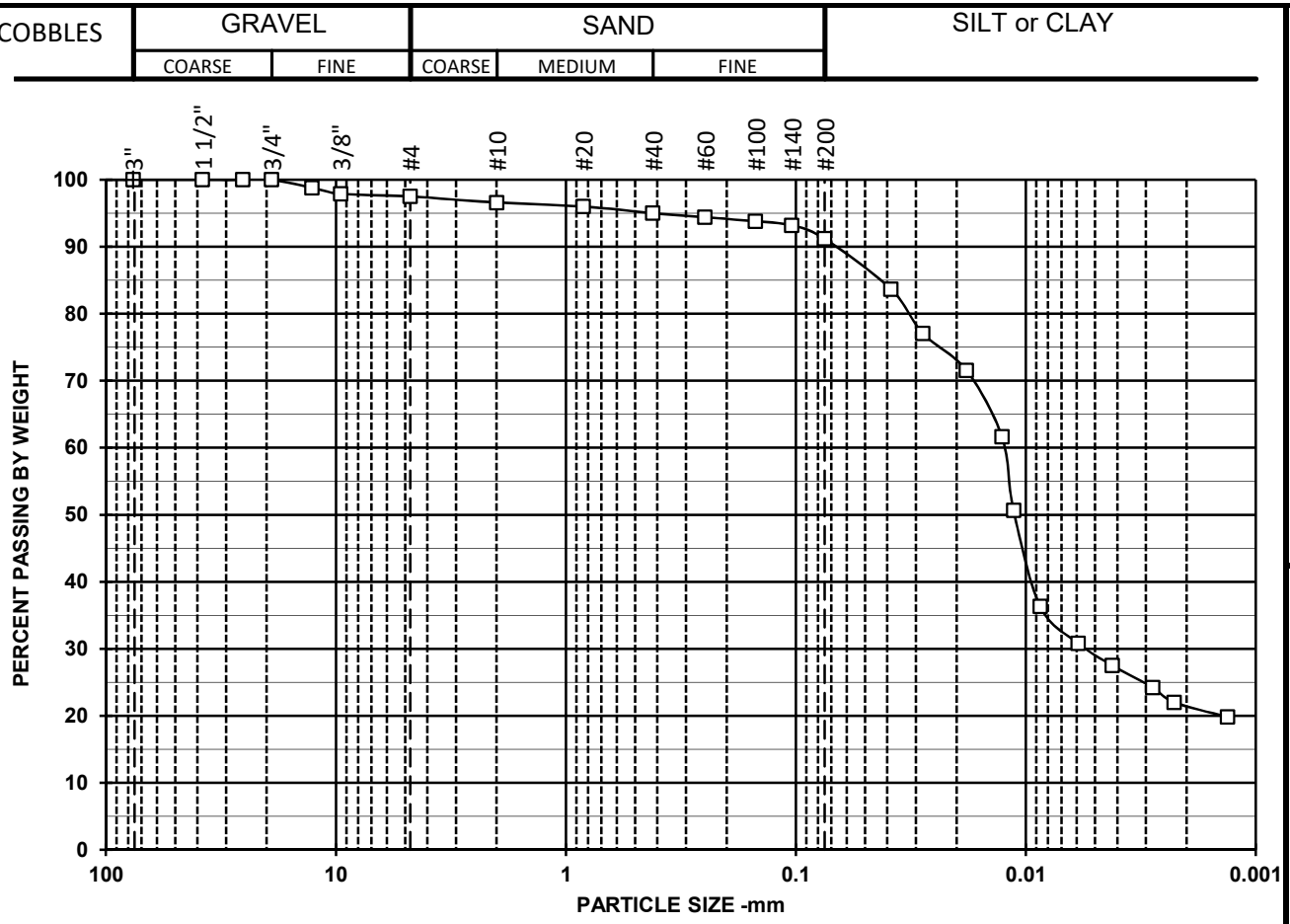
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	118.7				OH		Black, Organic clay shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-222		
Sample	VC-222-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	2.5		
% SAND	6.3		
%C SAND	0.9		
%M SAND	1.6		
%F SAND	3.8		
% FINES	91.2		
D_{100} (mm)	19.050		
D_{60} (mm)	0.012		
D_{30} (mm)	0.005		
D_{10} (mm)			
Cc			
Cu			

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	110.2				OH		Black, Organic clay shell fragments noted	11/01/18
■								
○								

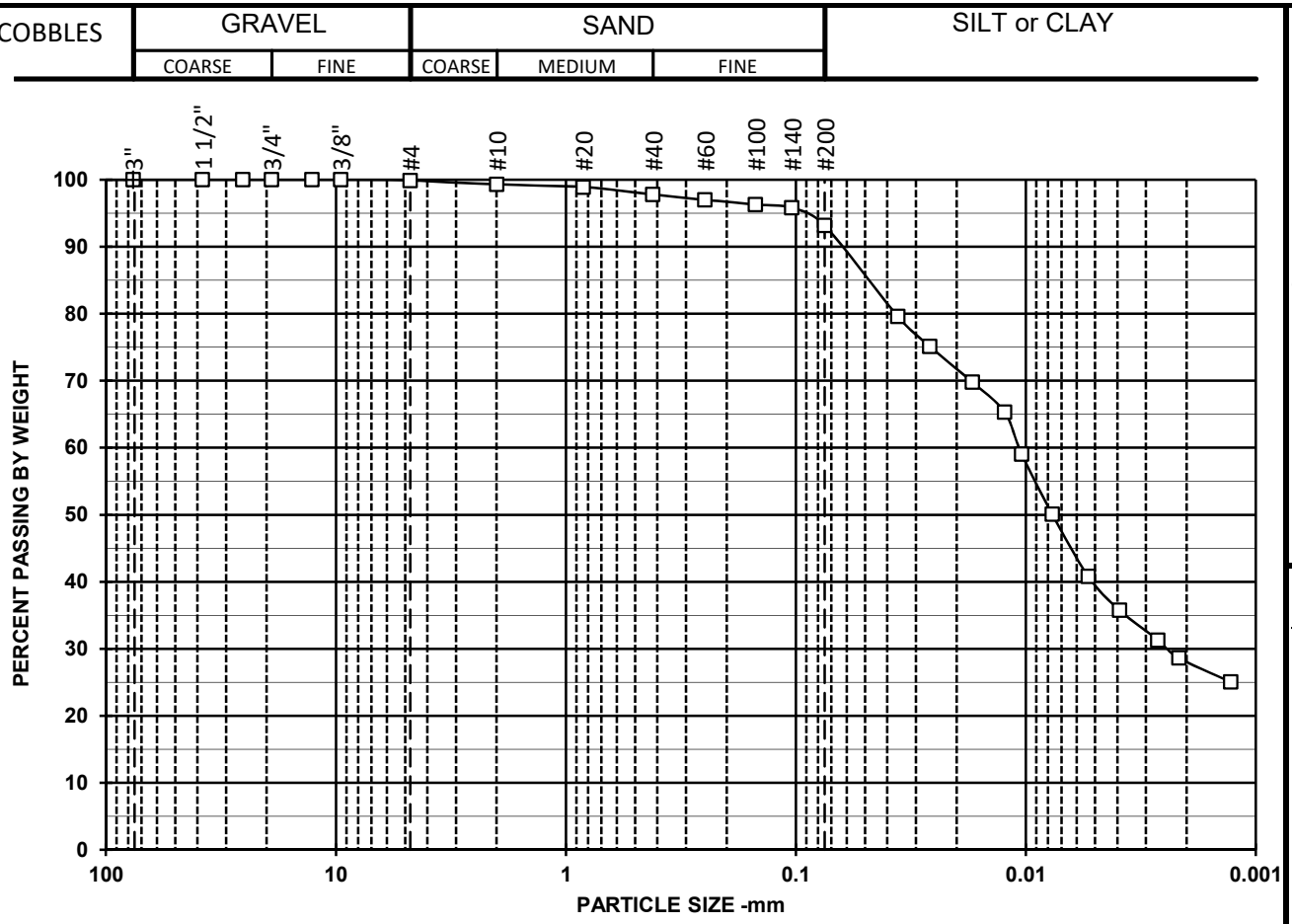
Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	98.8		
3/8"	97.9		
#4	97.5		
#10	96.6		
#20	96.0		
#40	95.0		
#60	94.4		
#100	93.8		
#140	93.2		
#200	91.2		
5μ m	29		
2μ m	22		
1μ m	19		

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-223		
Sample	VC-223-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.1		
% SAND	6.7		
%C SAND	0.6		
%M SAND	1.5		
%F SAND	4.6		
% FINES	93.2		
D_{100} (mm)	9.530		
D_{60} (mm)	0.011		
D_{30} (mm)	0.002		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	99.9
#10	99.3
#20	98.9
#40	97.8
#60	97.0
#100	96.3
#140	95.8
#200	93.2
5μ m	40
2μ m	28
1μ m	23

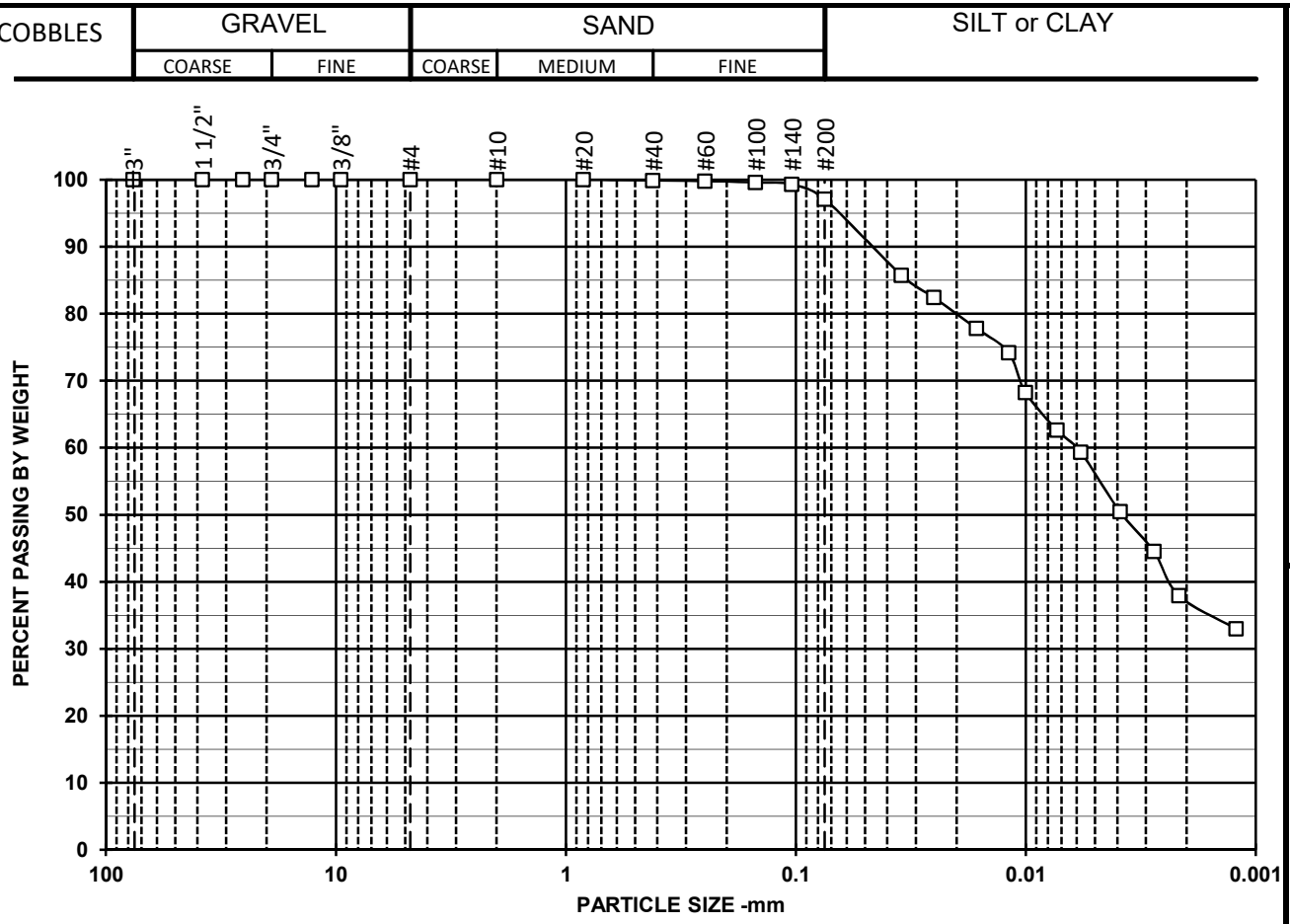
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	104.3				OH		Black, Organic clay shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-229		
Sample	VC-229-D0-28E		
Depth	0-28		
% +3"	0.0		
% Gravel	0.0		
% SAND	2.9		
%C SAND	0.0		
%M SAND	0.1		
%F SAND	2.8		
% FINES	97.1		
D_{100} (mm)	4.750		
D_{60} (mm)	0.006		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.9		
#60	99.8		
#100	99.6		
#140	99.3		
#200	97.1		
5μ m	56		
2μ m	37		
1μ m	31		

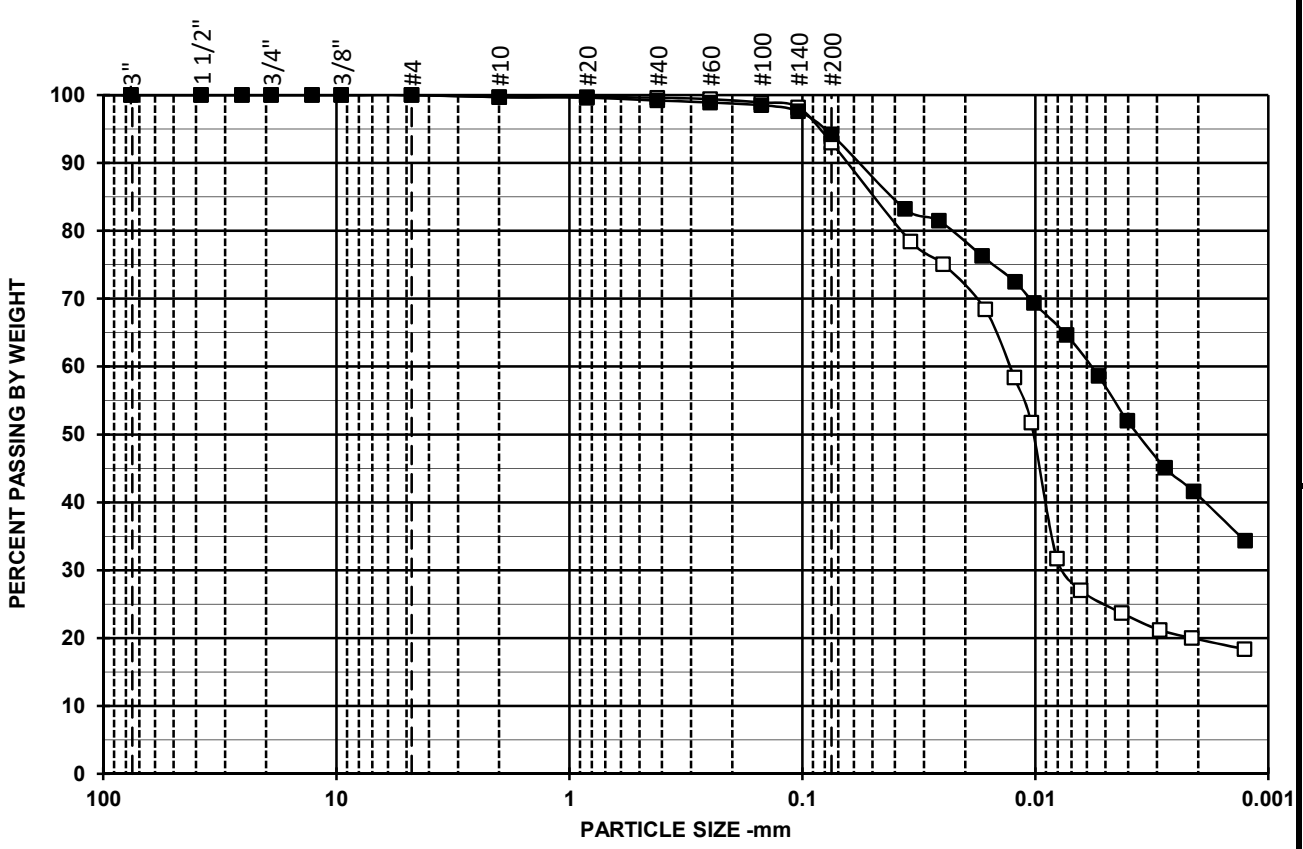
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	86.5				CH		Gray, Fat clay	10/24/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-235	VC-235	
Sample	VC-235-D0-13.7E	VC-235-D13.7-24E	
Depth	0-13.7	13.7-24	
% +3"	0.0	0.0	
% Gravel	0.0	0.0	
% SAND	7.0	5.8	
%C SAND	0.3	0.3	
%M SAND	0.1	0.5	
%F SAND	6.6	5.0	
% FINES	93.0	94.2	
D_{100} (mm)	4.750	4.750	
D_{60} (mm)	0.013	0.006	
D_{30} (mm)	0.007		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0	100.0	
4"	100.0	100.0	
3"	100.0	100.0	
1 1/2"	100.0	100.0	
1"	100.0	100.0	
3/4"	100.0	100.0	
1/2"	100.0	100.0	
3/8"	100.0	100.0	
#4	100.0	100.0	
#10	99.7	99.7	
#20	99.7	99.6	
#40	99.6	99.2	
#60	99.4	98.9	
#100	98.9	98.5	
#140	98.2	97.6	
#200	93.0	94.2	
5μ m	25	57	
2μ m	20	41	
1μ m	18	31	

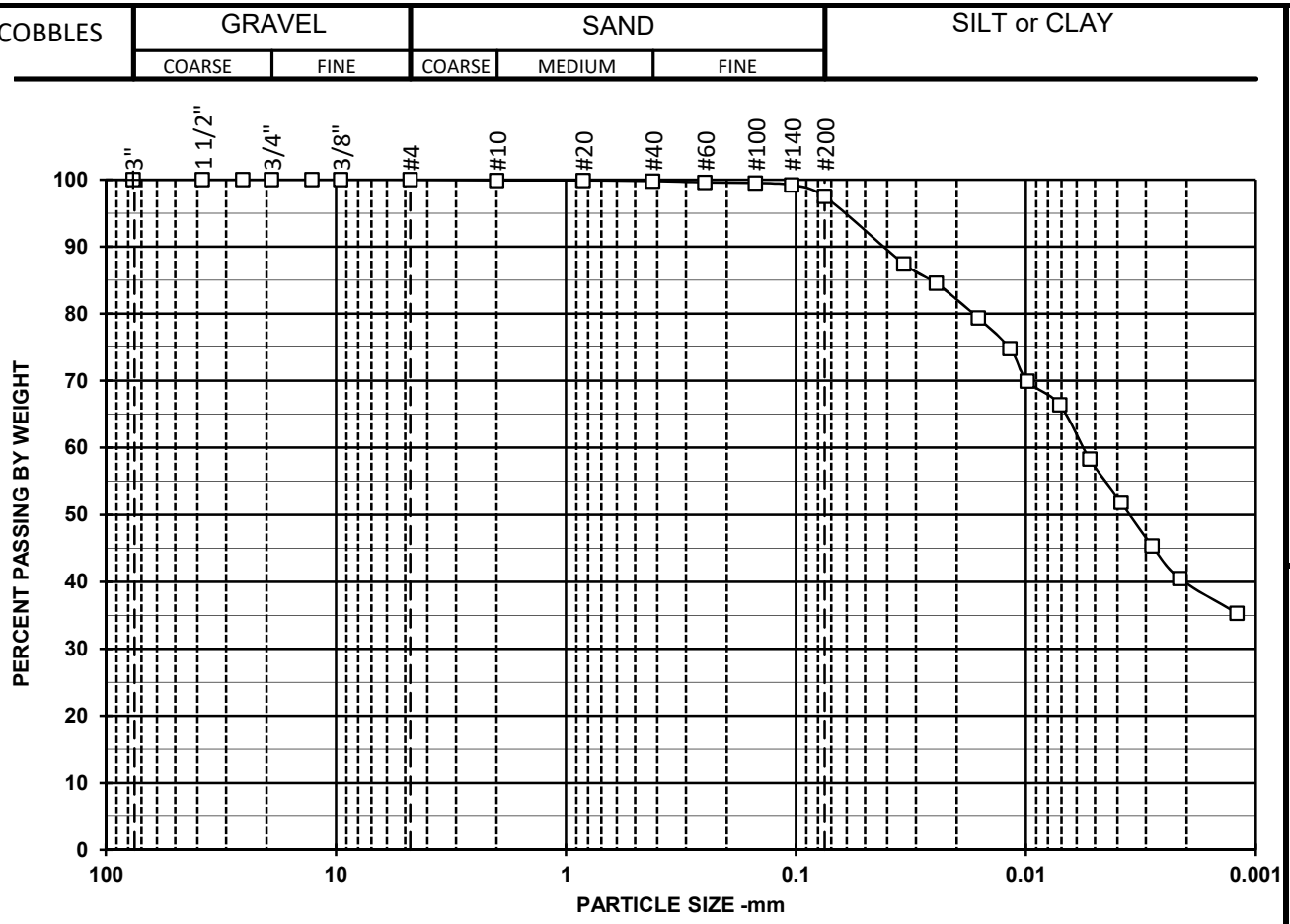
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	115.1				OH		Very dark gray, Organic clay	10/24/18
■	82.5				CH		Gray, Fat clay	10/24/18
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-238		
Sample	VC-238-D0-28E		
Depth	0-28		
% +3"	0.0		
% Gravel	0.0		
% SAND	2.5		
%C SAND	0.1		
%M SAND	0.1		
%F SAND	2.3		
% FINES	97.5		
D_{100} (mm)	4.750		
D_{60} (mm)	0.006		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	99.9		
#20	99.9		
#40	99.8		
#60	99.6		
#100	99.5		
#140	99.2		
#200	97.5		
5μ m	57		
2μ m	40		
1μ m	34		

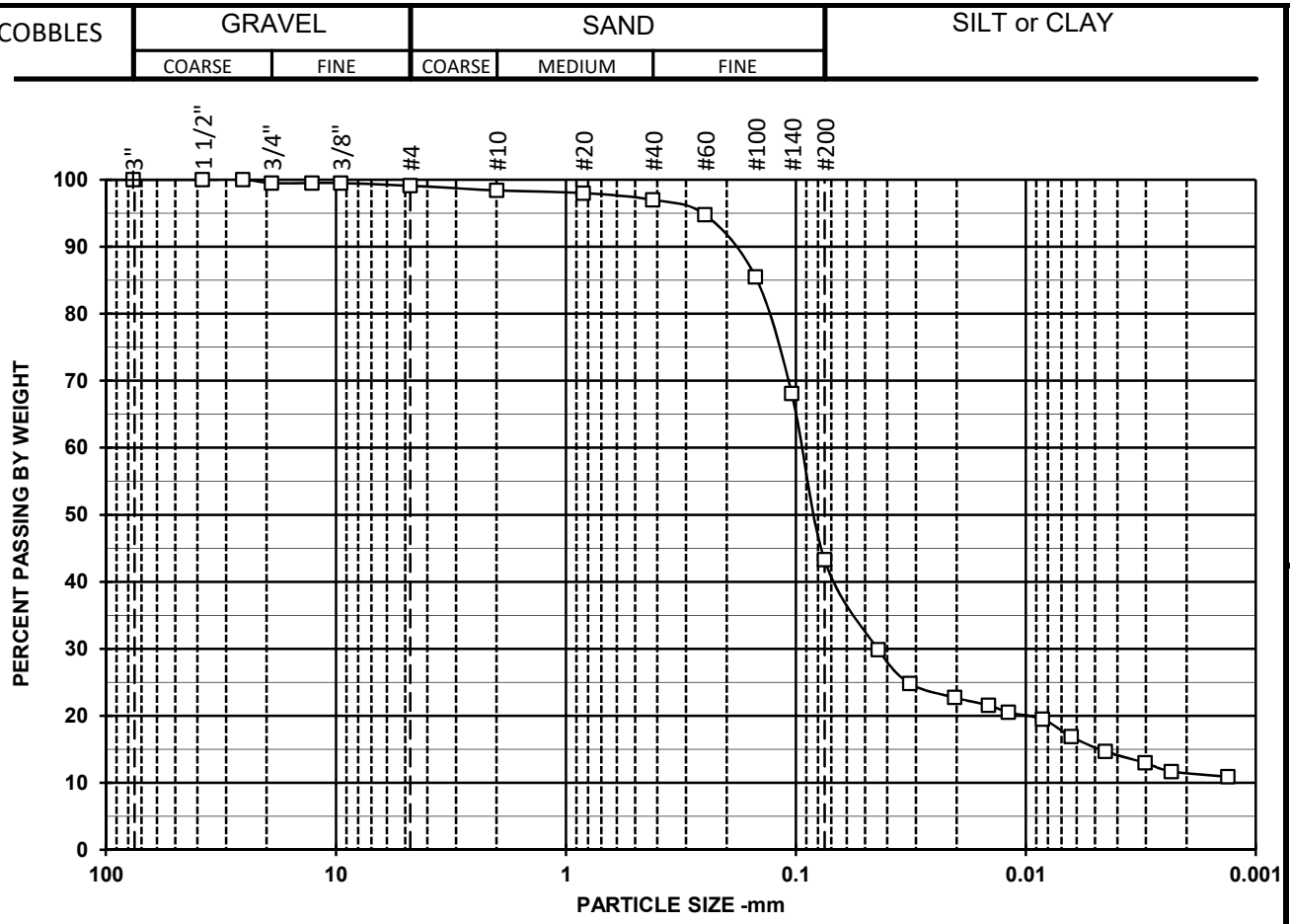
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	87.6				CH		Gray, Fat clay	10/24/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-244		
Sample	VC-244-D0-4E		
Depth	0-4		
% +3"	0.0		
% Gravel	0.9		
% SAND	55.8		
%C SAND	0.7		
%M SAND	1.4		
%F SAND	53.7		
% FINES	43.3		
D_{100} (mm)	25.400		
D_{60} (mm)	0.094		
D_{30} (mm)	0.044		
D_{10} (mm)			
Cc			
Cu			

Sieve

Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	99.5		
1/2"	99.5		
3/8"	99.5		
#4	99.1		
#10	98.4		
#20	98.0		
#40	97.0		
#60	94.8		
#100	85.5		
#140	68.1		
#200	43.3		
5μ m	15		
2μ m	11		
1μ m	11		

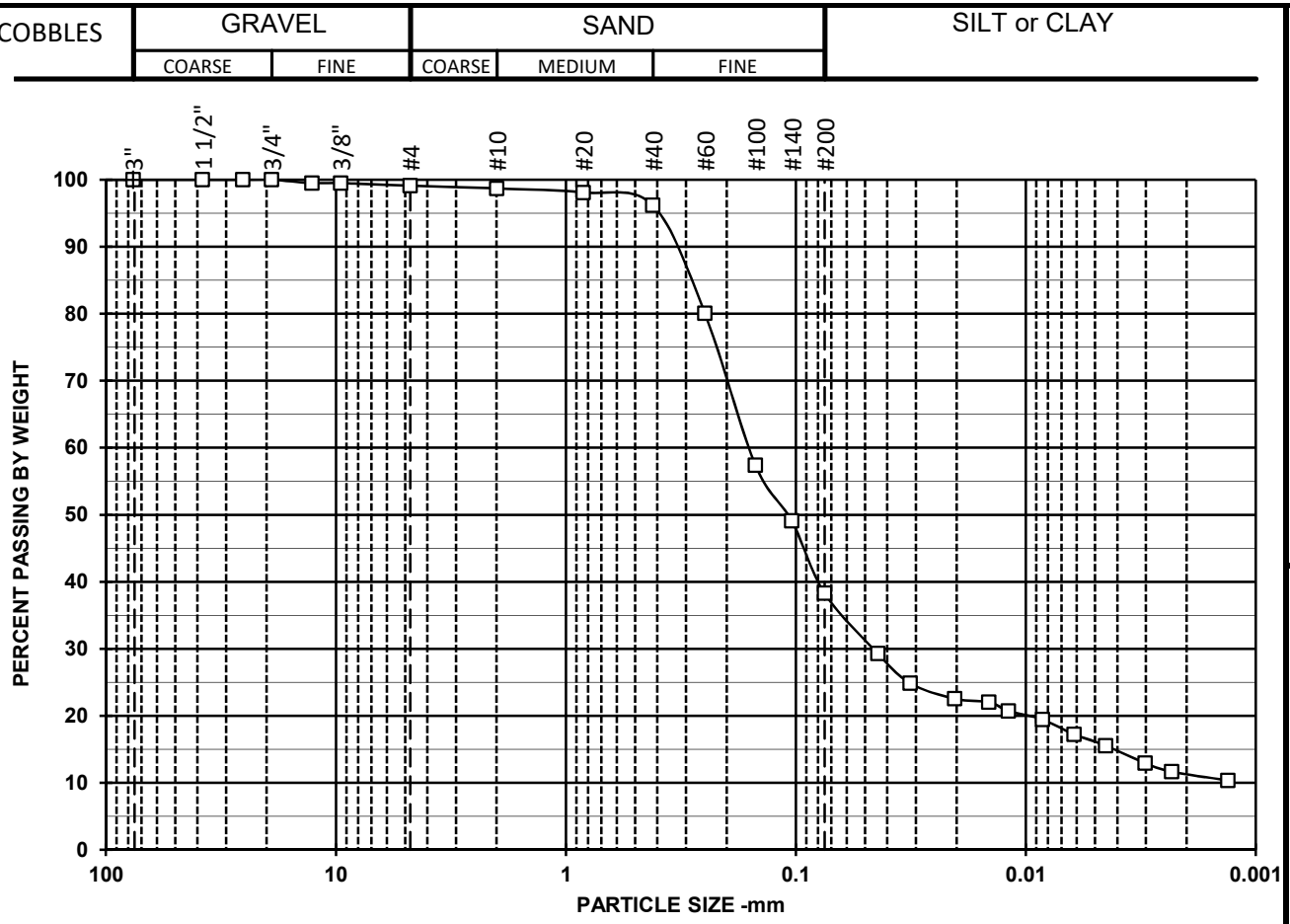
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	40.8				SM		Dark gray, Silty sand shell fragments noted	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-245		
Sample	VC-245-D0-4E		
Depth	0-4		
% +3"	0.0		
% Gravel	0.9		
% SAND	60.8		
%C SAND	0.4		
%M SAND	2.5		
%F SAND	57.9		
% FINES	38.3		
D_{100} (mm)	19.050		
D_{60} (mm)	0.159		
D_{30} (mm)	0.046		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	99.5		
3/8"	99.5		
#4	99.1		
#10	98.7		
#20	98.1		
#40	96.2		
#60	80.1		
#100	57.4		
#140	49.1		
#200	38.3		
5μ m	16		
2μ m	11		
1μ m	10		

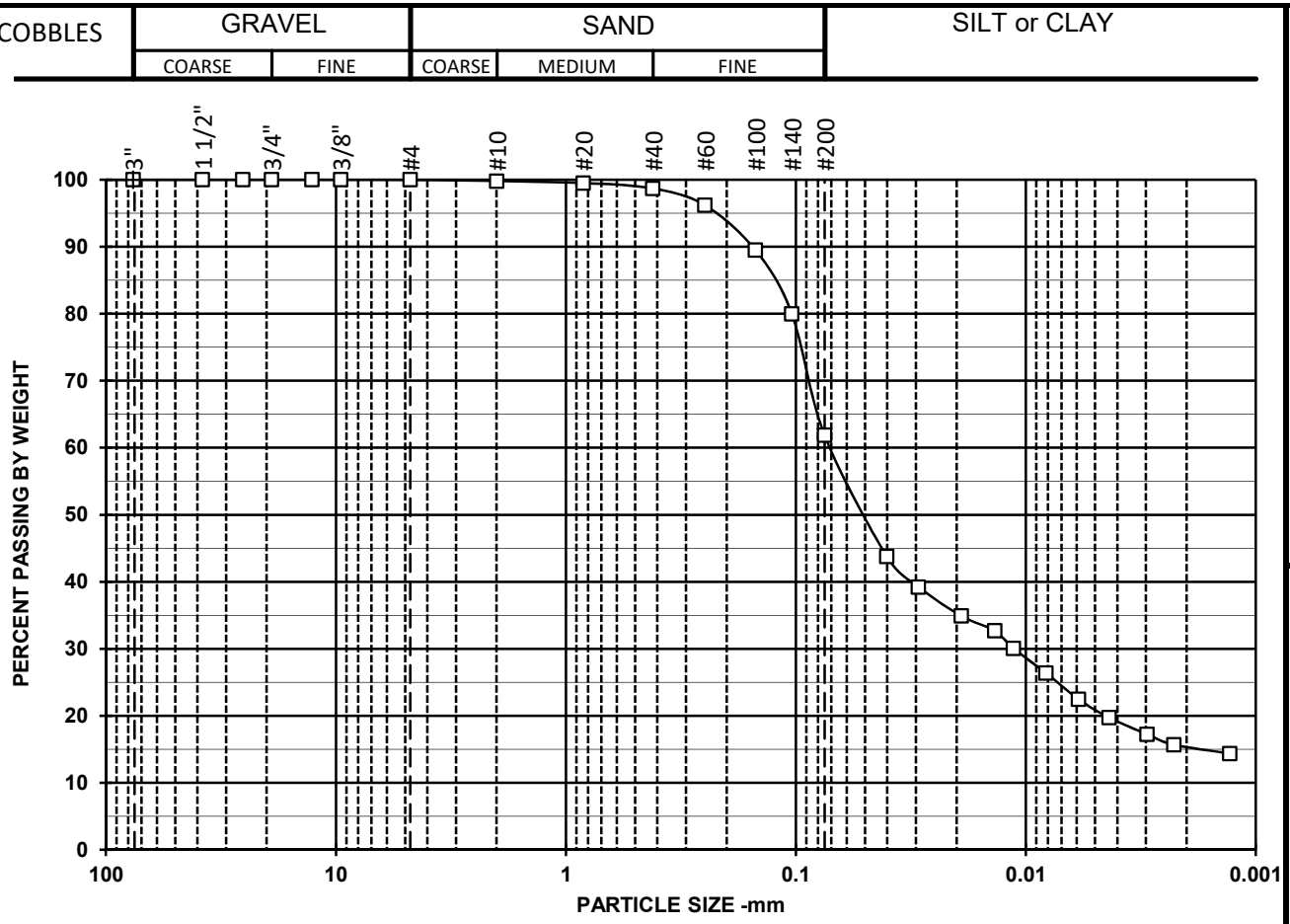
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	41.1				SM		Dark gray, Silty sand	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-246		
Sample	VC-246-D0-4E		
Depth	0-4		
% +3"	0.0		
% Gravel	0.0		
% SAND	38.1		
%C SAND	0.2		
%M SAND	1.1		
%F SAND	36.8		
% FINES	61.9		
D_{100} (mm)	4.750		
D_{60} (mm)	0.070		
D_{30} (mm)	0.011		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	99.8		
#20	99.5		
#40	98.7		
#60	96.2		
#100	89.5		
#140	80.0		
#200	61.9		
5μ m	21		
2μ m	15		
1μ m	14		

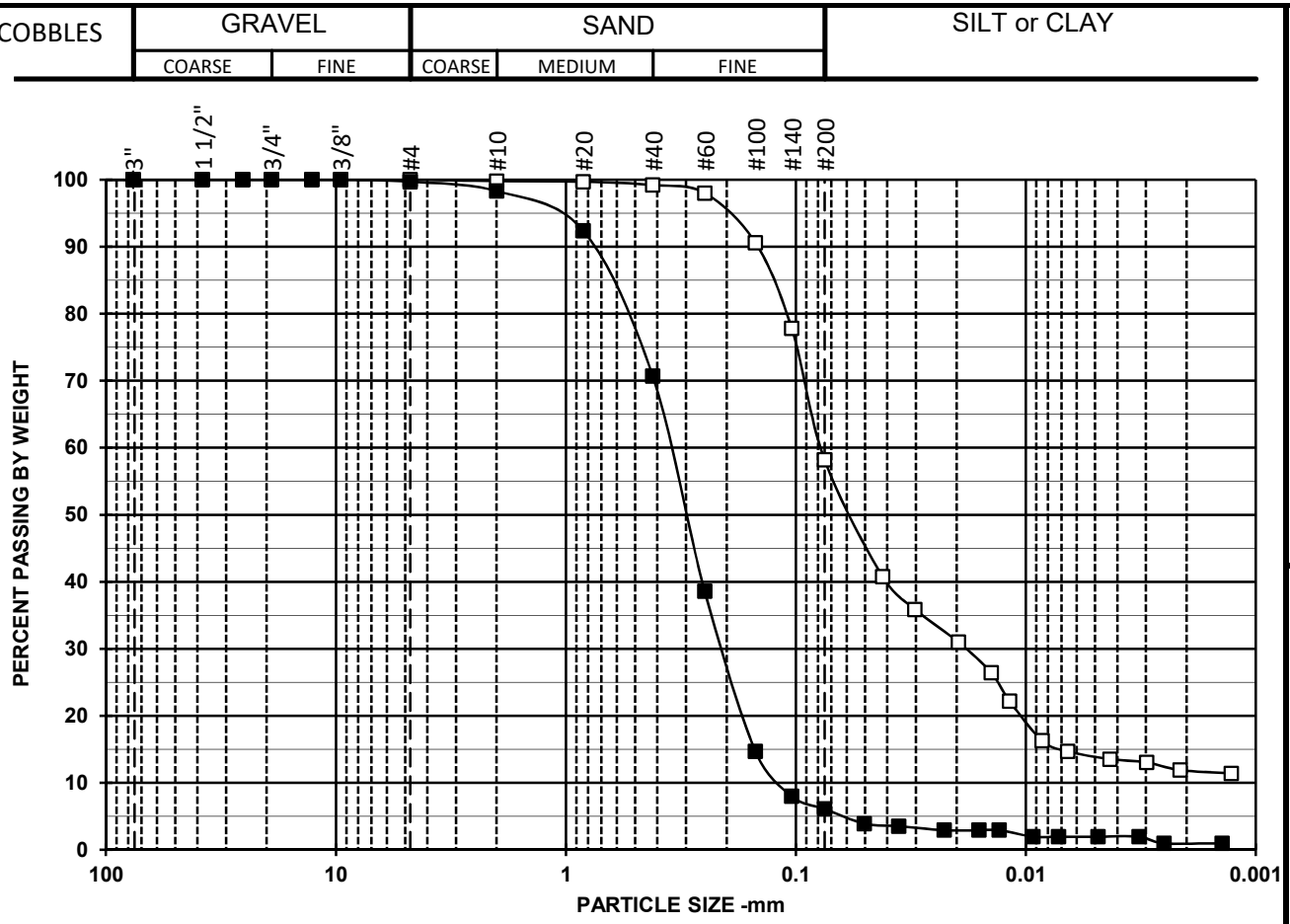
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	57.7				ML		Dark gray, Sandy silt	11/01/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-247	VC-247	
Sample	VC-247-D0-4E	VC-247-D4-21.5E	
Depth	0-4	4-21.5	
% +3"	0.0	0.0	
% Gravel	0.0	0.3	
% SAND	41.8	93.6	
%C SAND	0.2	1.4	
%M SAND	0.6	27.6	
%F SAND	41.0	64.6	
% FINES	58.2	6.1	
D_{100} (mm)	4.750	9.530	
D_{60} (mm)	0.077	0.352	
D_{30} (mm)	0.018	0.207	
D_{10} (mm)		0.116	
Cc		1.100	
Cu		3.0	

Sieve Size/ID #	Percent Finer Data		
6"	100.0	100.0	
4"	100.0	100.0	
3"	100.0	100.0	
1 1/2"	100.0	100.0	
1"	100.0	100.0	
3/4"	100.0	100.0	
1/2"	100.0	100.0	
3/8"	100.0	100.0	
#4	100.0	99.7	
#10	99.8	98.3	
#20	99.7	92.4	
#40	99.2	70.7	
#60	98.0	38.6	
#100	90.6	14.7	
#140	77.8	8.0	
#200	58.2	6.1	
5μ m	14	2	
2μ m	12	1	
1μ m	11	1	

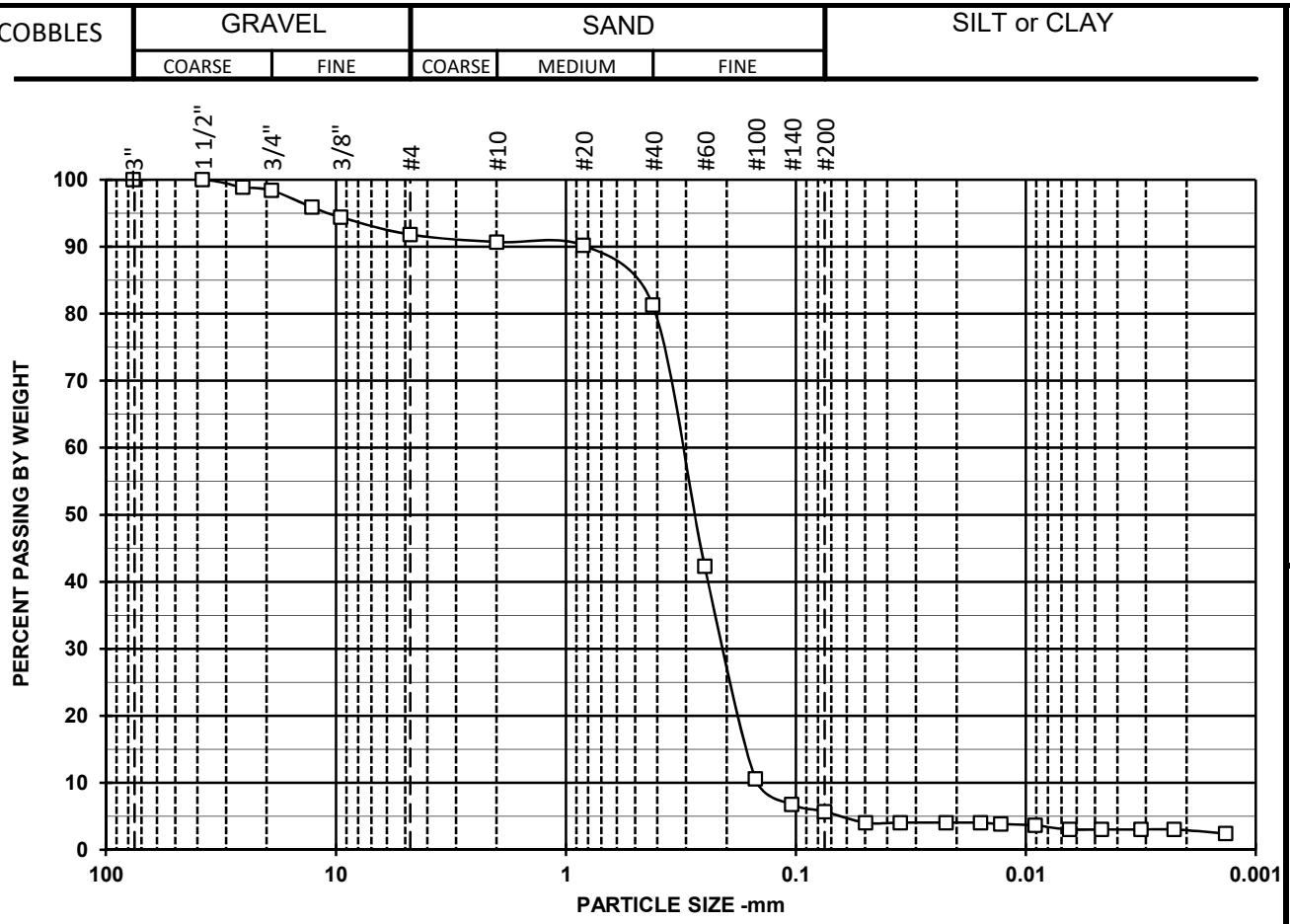
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	60.1				OH		Dark gray, Sandy Organic clay shell fragments noted	10/29/18
■	22.4				SP-SM		Gray, Poorly graded sand with silt shell fragments noted	10/29/18
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-251		
Sample	VC-251-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	8.2		
% SAND	86.1		
%C SAND	1.1		
%M SAND	9.4		
%F SAND	75.6		
% FINES	5.7		
D_{100} (mm)	38.100		
D_{60} (mm)	0.315		
D_{30} (mm)	0.204		
D_{10} (mm)	0.141		
Cc	0.900		
Cu	2.2		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	98.9		
3/4"	98.4		
1/2"	95.9		
3/8"	94.4		
#4	91.8		
#10	90.7		
#20	90.2		
#40	81.3		
#60	42.3		
#100	10.6		
#140	6.8		
#200	5.7		
5μ m	3		
2μ m	3		
1μ m	2		

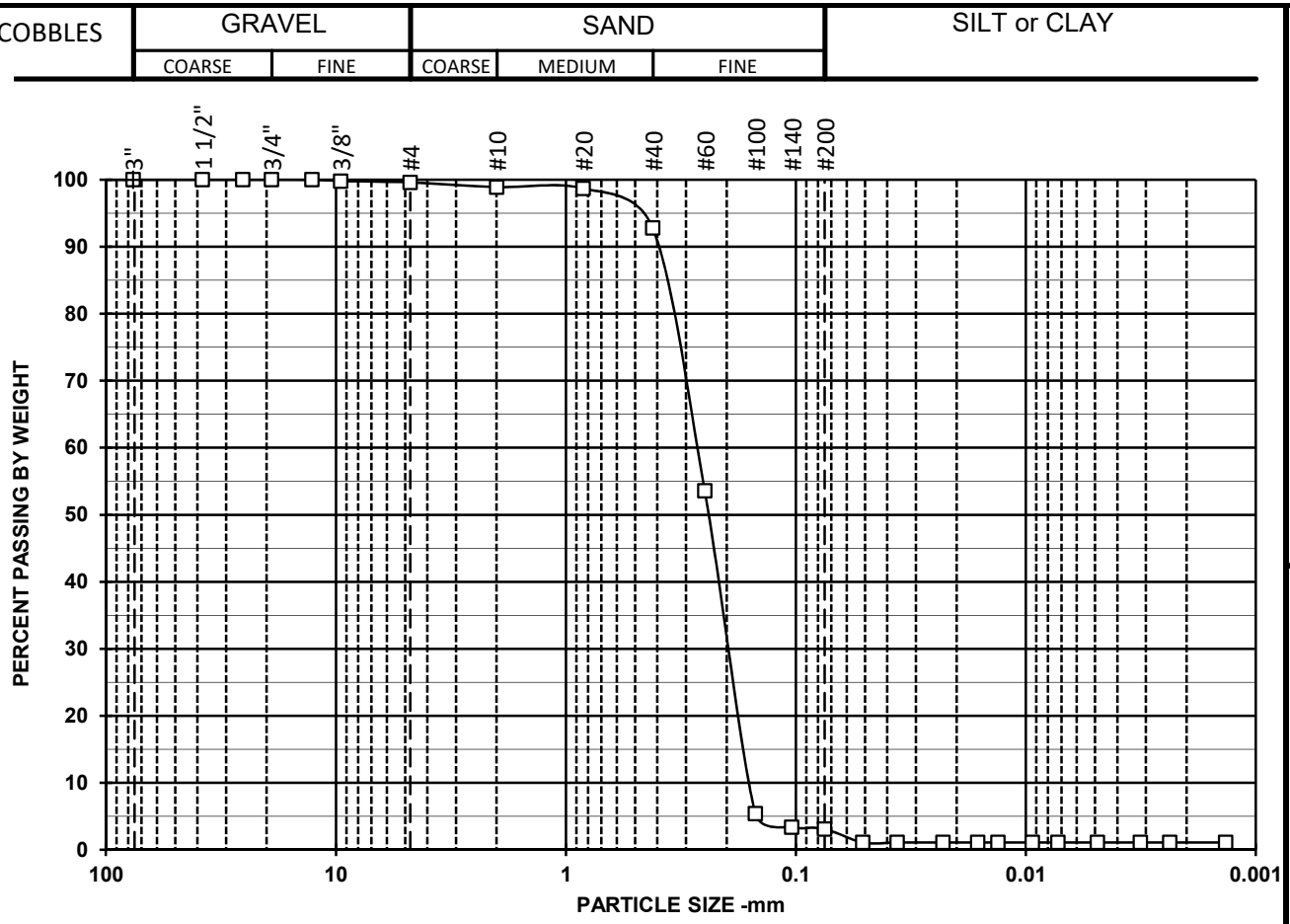
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	26.1				SP-SM		Very dark gray, Poorly graded sand with silt shell fragments noted	10/29/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-252		
Sample	VC-252-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.4		
% SAND	96.5		
%C SAND	0.7		
%M SAND	6.1		
%F SAND	89.7		
% FINES	3.1		
D_{100} (mm)	12.700		
D_{60} (mm)	0.271		
D_{30} (mm)	0.194		
D_{10} (mm)	0.157		
Cc	0.900		
Cu	1.7		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	99.8		
#4	99.6		
#10	98.9		
#20	98.7		
#40	92.8		
#60	53.6		
#100	5.4		
#140	3.4		
#200	3.1		
5μ m	1		
2μ m	1		
1μ m	1		

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	23.3				SP		Grayish brown, Poorly graded sand shell fragments noted	11/01/18
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Haley & Aldrich #132614-004

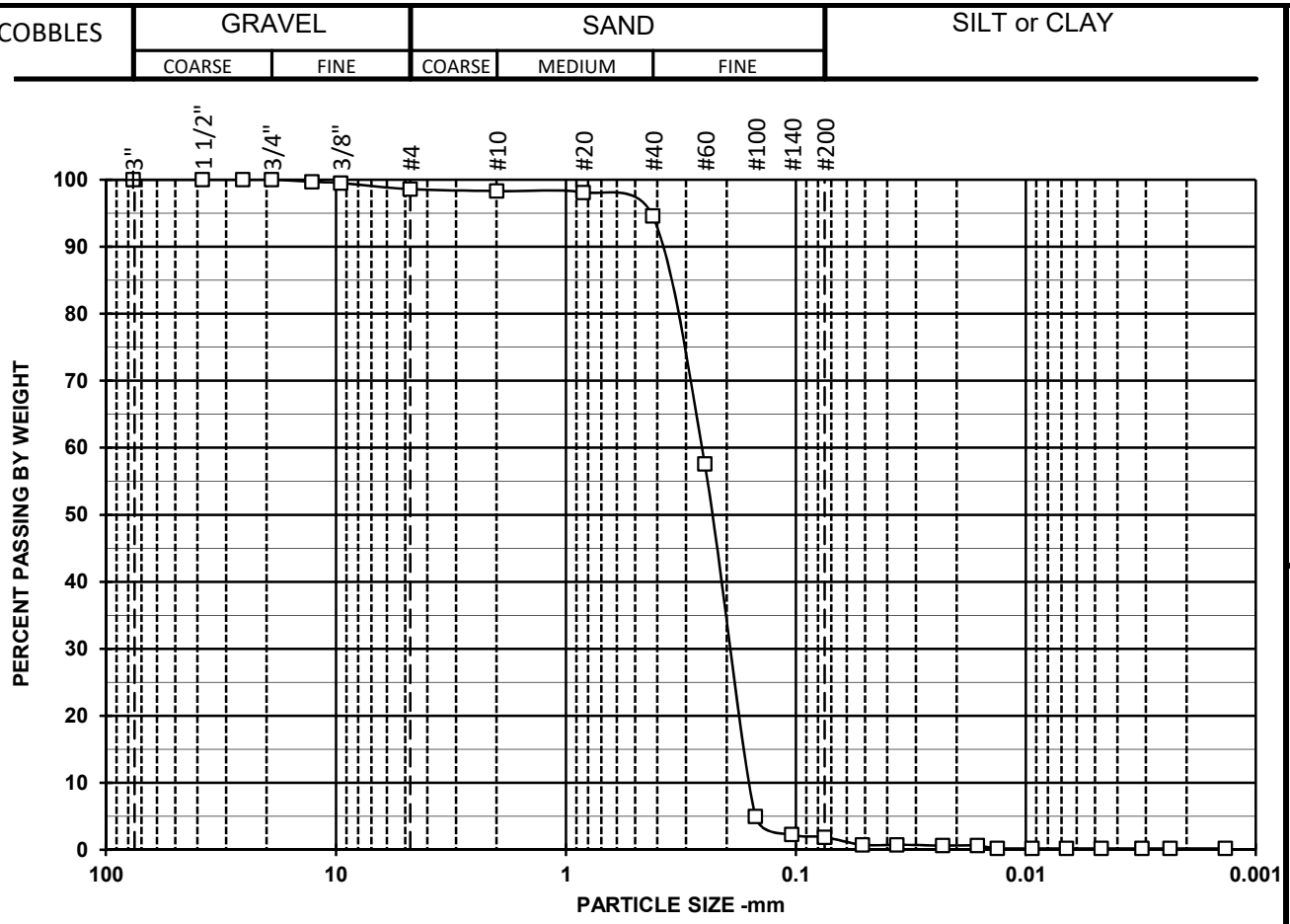
TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

TerraSense Analysis File: GrainSizeV4R4(11/17)

Siev3r.xlsx 11/14/2018



Symbol	□	■	○
Boring	VC-253		
Sample	VC-253-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	1.4		
% SAND	96.7		
%C SAND	0.3		
%M SAND	3.7		
%F SAND	92.7		
% FINES	1.9		
D_{100} (mm)	19.050		
D_{60} (mm)	0.257		
D_{30} (mm)	0.191		
D_{10} (mm)	0.157		
Cc	0.900		
Cu	1.6		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	99.7		
3/8"	99.5		
#4	98.6		
#10	98.3		
#20	98.1		
#40	94.6		
#60	57.6		
#100	5.0		
#140	2.3		
#200	1.9		
5μ m	0		
2μ m	0		
1μ m	0		

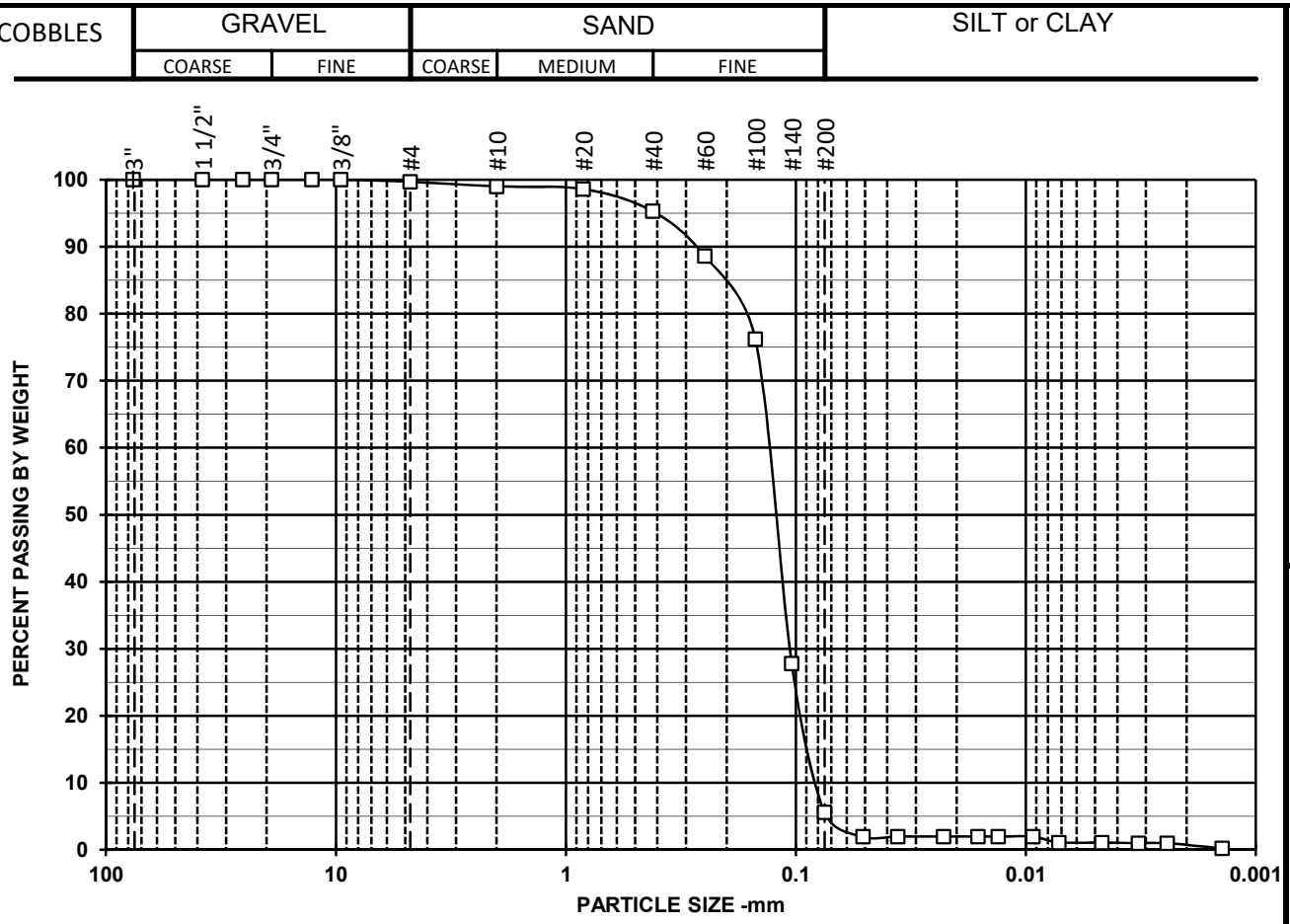
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	21.6				SP		Gray, Poorly graded sand shell fragments noted	11/01/18
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Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-255		
Sample	VC-255-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.3		
% SAND	94.1		
%C SAND	0.7		
%M SAND	3.7		
%F SAND	89.7		
% FINES	5.6		
D_{100} (mm)	9.530		
D_{60} (mm)	0.133		
D_{30} (mm)	0.106		
D_{10} (mm)	0.080		
Cc	1.100		
Cu	1.7		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	99.7		
#10	99.0		
#20	98.6		
#40	95.3		
#60	88.6		
#100	76.2		
#140	27.8		
#200	5.6		
5μ m	1		
2μ m	1		
1μ m			

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	24.2				SP-SM		Gray, Poorly graded sand with silt shell fragments noted	10/29/18
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Haley & Aldrich #132614-006, SID2

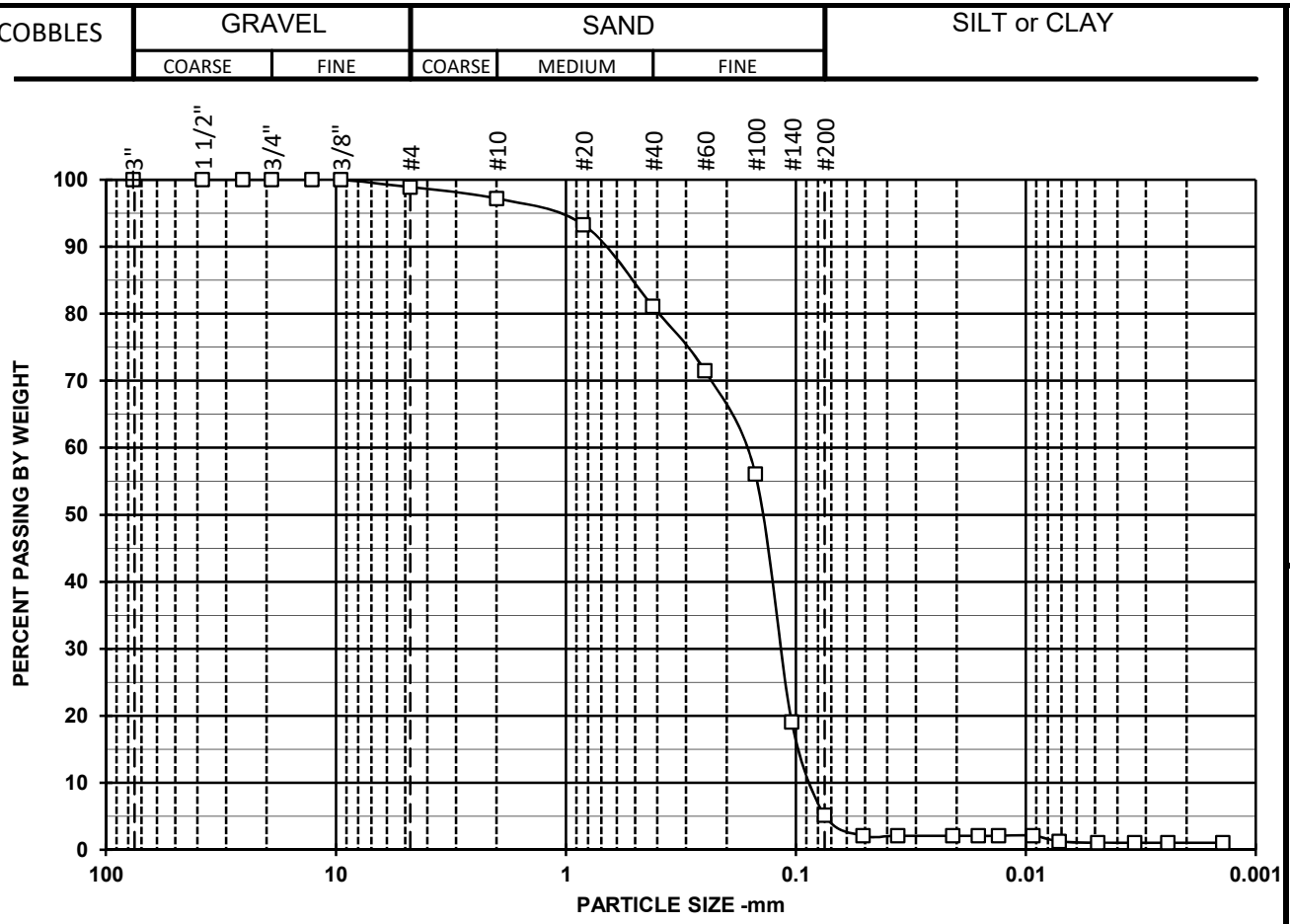
TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

TerraSense Analysis File: GrainSizeV4R4(11/17)

Siev2f.xlsx 11/9/2018



Symbol	□	■	○
Boring	VC-256		
Sample	/C-256-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	1.1		
% SAND	93.7		
%C SAND	1.7		
%M SAND	16.1		
%F SAND	75.9		
% FINES	5.2		
D_{100} (mm)	9.530		
D_{60} (mm)	0.170		
D_{30} (mm)	0.116		
D_{10} (mm)	0.084		
Cc	0.900		
Cu	2.0		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	98.9		
#10	97.2		
#20	93.3		
#40	81.1		
#60	71.5		
#100	56.1		
#140	19.1		
#200	5.2		
5μ m	1		
2μ m	1		
1μ m	1		

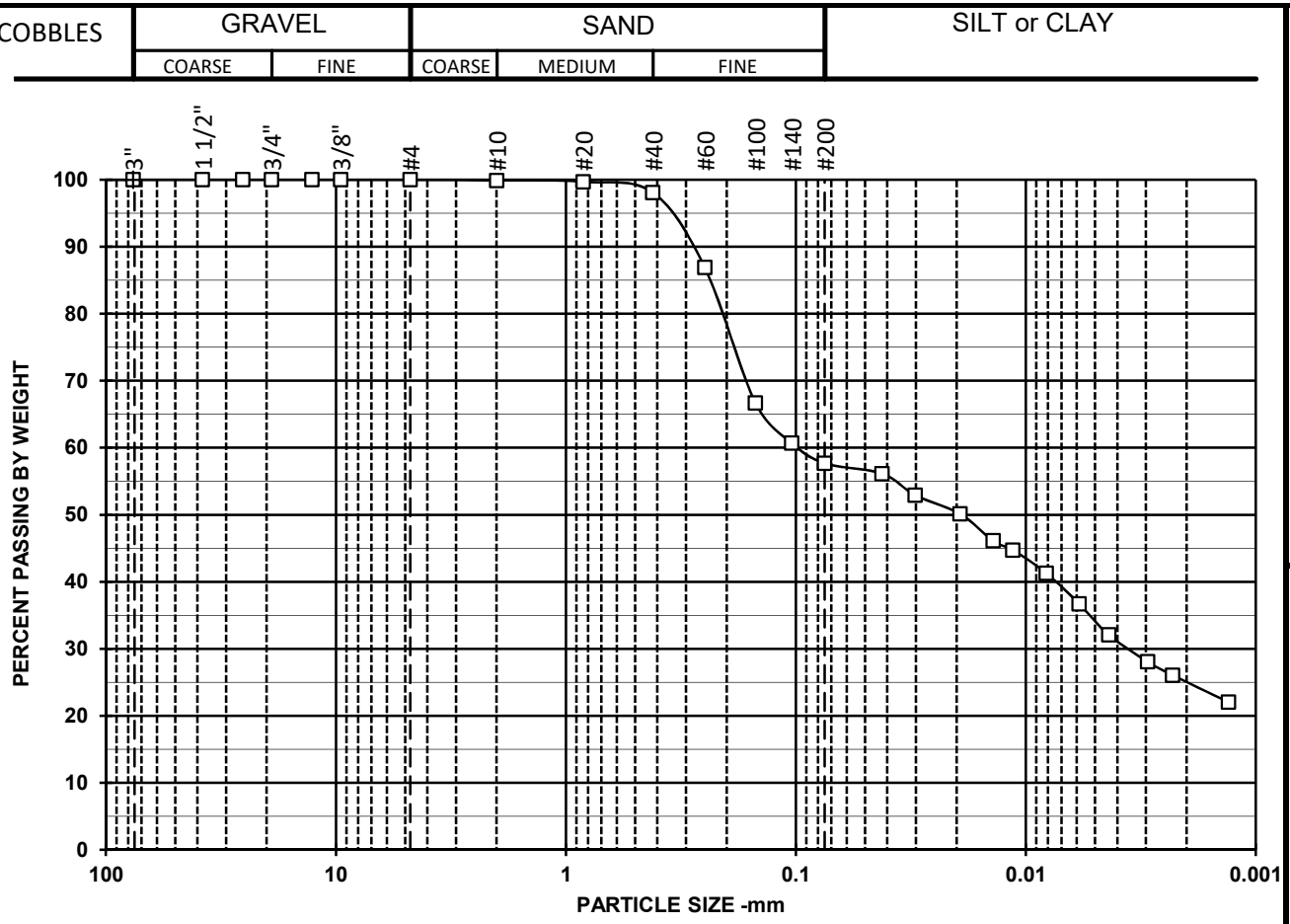
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	23.1				SP-SM		Gray, Poorly graded sand with silt shell fragments noted	10/29/18
■								
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Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-301-REV		
Sample	VC-301-REV-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	42.3		
%C SAND	0.1		
%M SAND	1.8		
%F SAND	40.4		
% FINES	57.7		
D_{100} (mm)	4.750		
D_{60} (mm)	0.096		
D_{30} (mm)	0.004		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	100.0
#10	99.9
#20	99.7
#40	98.1
#60	86.9
#100	66.7
#140	60.7
#200	57.7
5μ m	34
2μ m	25
1μ m	20

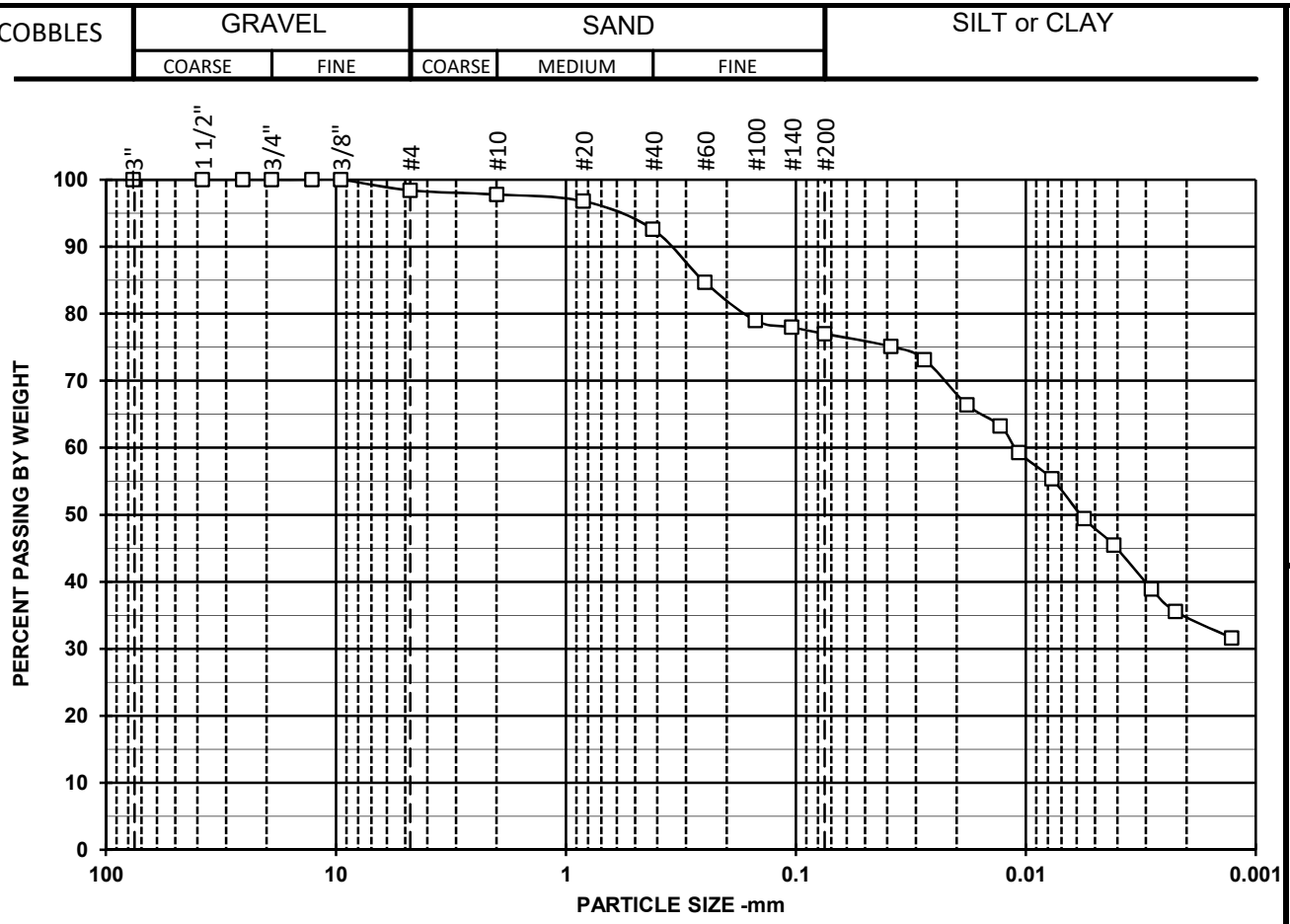
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	70.7				OH		Dark gray, Sandy Organic clay	11/02/18
■								
○								

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-303		
Sample	VC-303-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	1.6		
% SAND	21.4		
%C SAND	0.6		
%M SAND	5.2		
%F SAND	15.6		
% FINES	77.0		
D_{100} (mm)	9.530		
D_{60} (mm)	0.011		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	98.4		
#10	97.8		
#20	96.8		
#40	92.6		
#60	84.7		
#100	79.0		
#140	78.0		
#200	77.0		
5μ m	48		
2μ m	35		
1μ m	30		

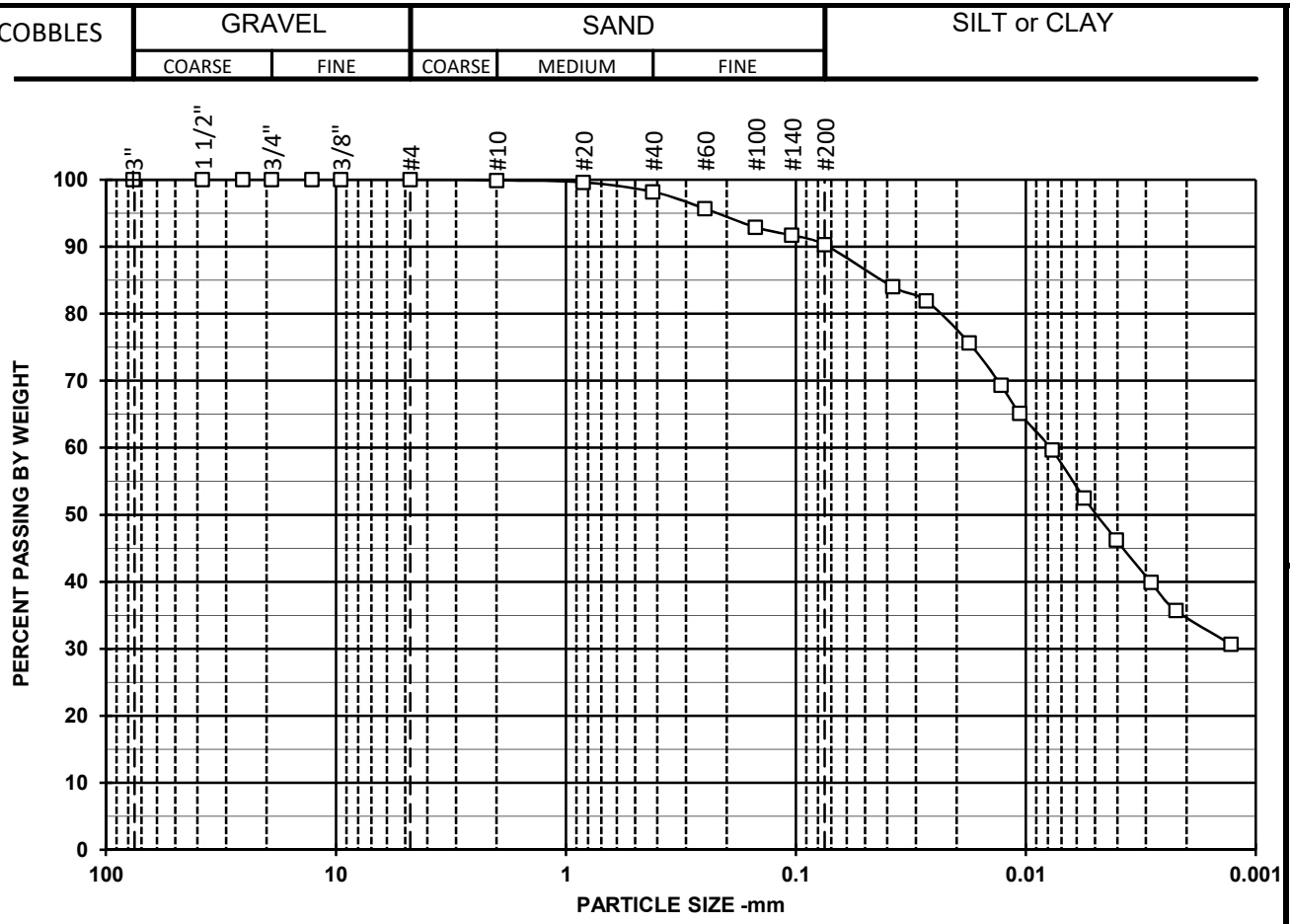
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	90.6				OH		Dark gray, Organic clay with sand	11/02/18
■								
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Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-304		
Sample	VC-304-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	9.7		
%C SAND	0.1		
%M SAND	1.7		
%F SAND	7.9		
% FINES	90.3		
D_{100} (mm)	4.750		
D_{60} (mm)	0.008		
D_{30} (mm)			
D_{10} (mm)			
Cc			
Cu			

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	100.3				OH		Gray, Organic clay shell fragments noted	11/01/18
■								
○								

Sieve

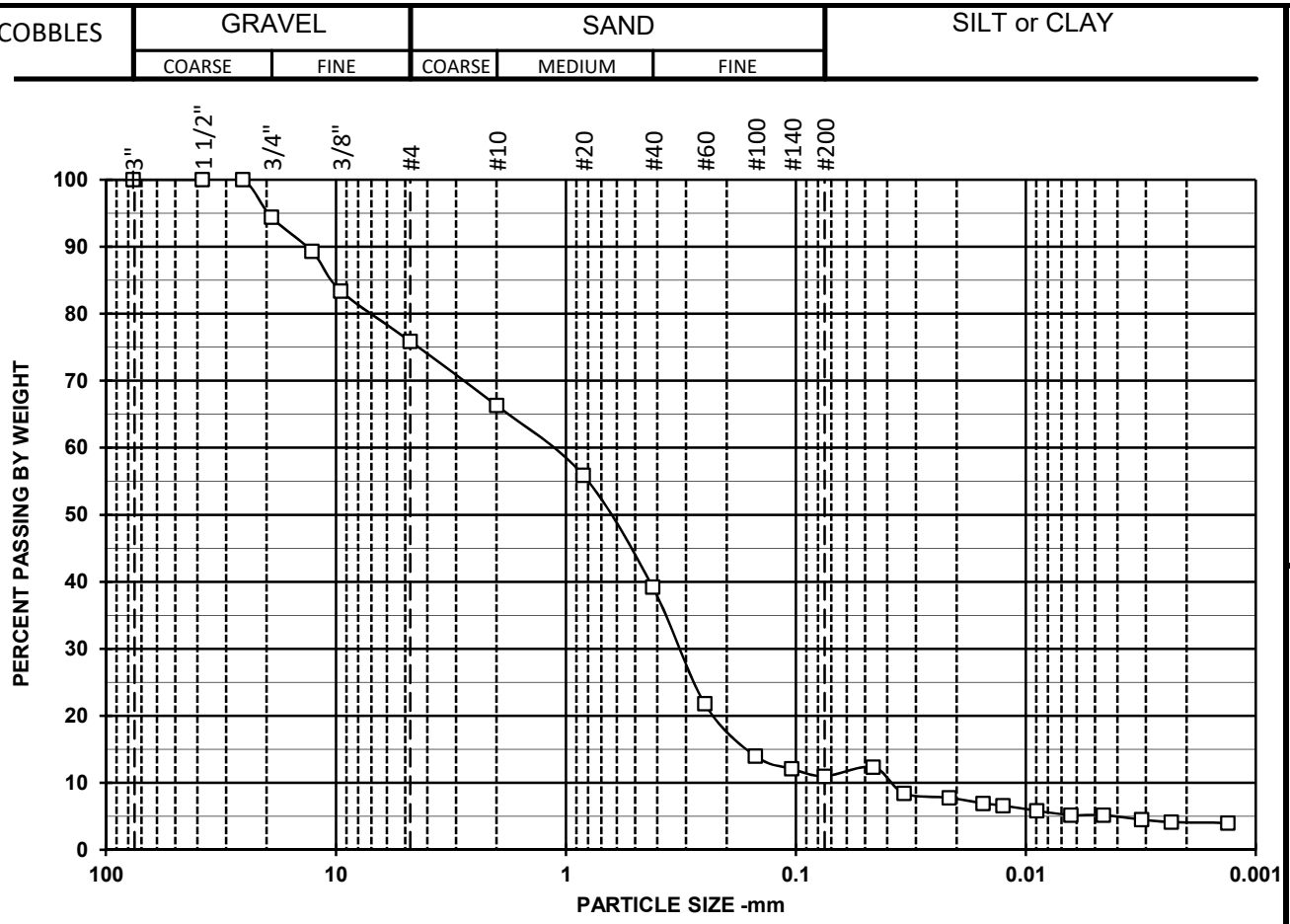
Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	99.9		
#20	99.6		
#40	98.2		
#60	95.7		
#100	92.9		
#140	91.7		
#200	90.3		
5μ m	50		
2μ m	35		
1μ m	28		

Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-311		
Sample	VC-311-D0-7.5E		
Depth	0-7.5		
% +3"	0.0		
% Gravel	24.1		
% SAND	64.9		
%C SAND	9.6		
%M SAND	27.1		
%F SAND	28.2		
% FINES	11.0		
D_{100} (mm)	25.400		
D_{60} (mm)	1.183		
D_{30} (mm)	0.318		
D_{10} (mm)	0.038		
Cc	2.200		
Cu	30.9		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	94.4		
1/2"	89.3		
3/8"	83.4		
#4	75.9		
#10	66.3		
#20	55.9		
#40	39.2		
#60	21.8		
#100	14.0		
#140	12.1		
#200	11.0		
5μ m	5		
2μ m	4		
1μ m	4		

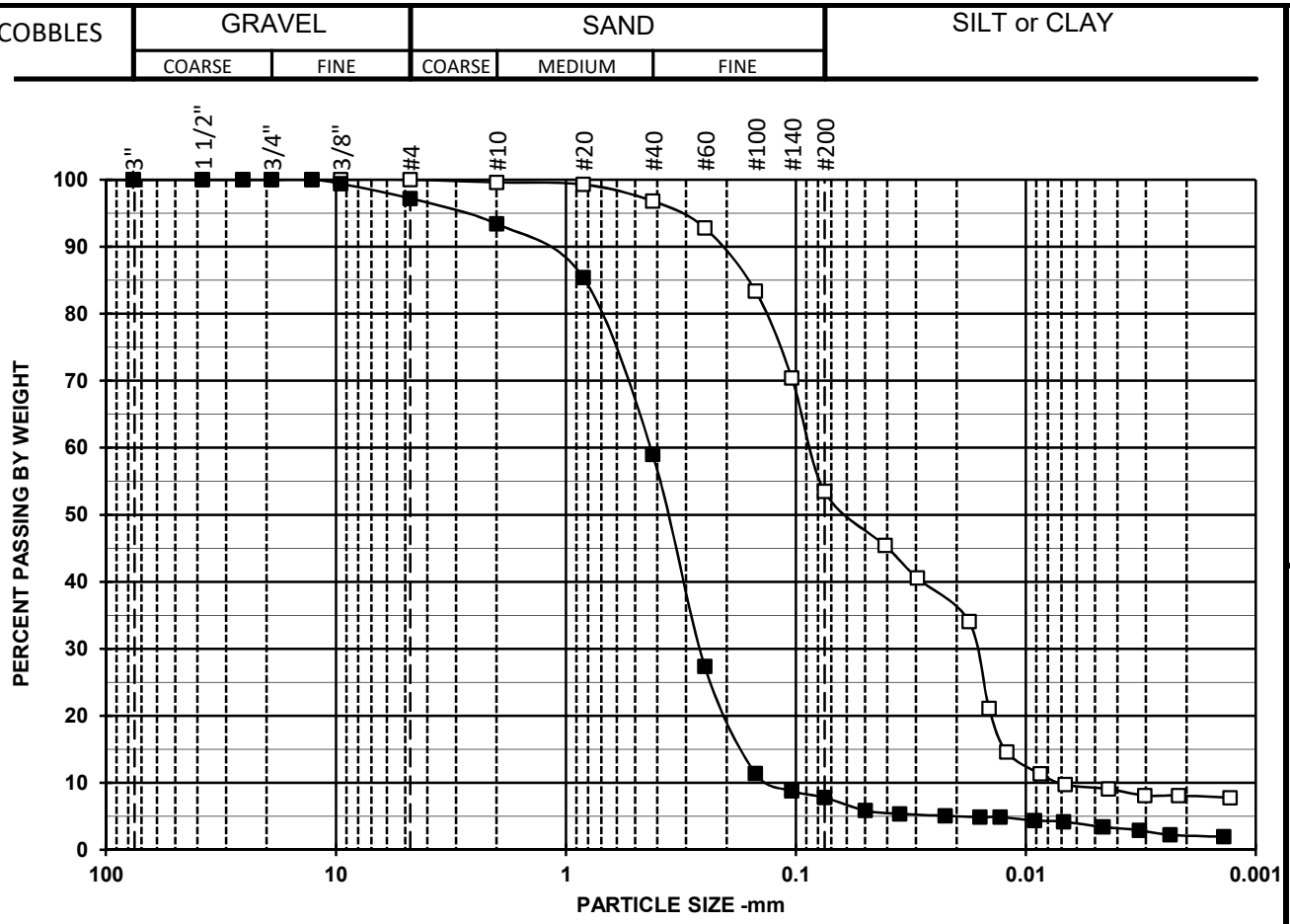
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	15.6				SW-SM		Brown, Well-graded sand with silt and gravel	11/01/18
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Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-318	VC-318	
Sample	VC-318-D0-3.5E	VC-318-D3.5-21.5E	
Depth	0-3.5	3.5-21.5	
% +3"	0.0	0.0	
% Gravel	0.0	2.8	
% SAND	46.5	89.4	
%C SAND	0.4	3.8	
%M SAND	2.8	34.4	
%F SAND	43.3	51.2	
% FINES	53.5	7.8	
D_{100} (mm)	4.750	12.700	
D_{60} (mm)	0.085	0.430	
D_{30} (mm)	0.017	0.260	
D_{10} (mm)	0.007	0.123	
Cc	0.500	1.300	
Cu	12.1	3.5	

Sieve Size/ID #	Percent Finer Data		
6"	100.0	100.0	
4"	100.0	100.0	
3"	100.0	100.0	
1 1/2"	100.0	100.0	
1"	100.0	100.0	
3/4"	100.0	100.0	
1/2"	100.0	100.0	
3/8"	100.0	99.4	
#4	100.0	97.2	
#10	99.6	93.4	
#20	99.3	85.4	
#40	96.8	59.0	
#60	92.8	27.4	
#100	83.4	11.4	
#140	70.4	8.8	
#200	53.5	7.8	
5μ m	9	4	
2μ m	8	2	
1μ m	8	2	

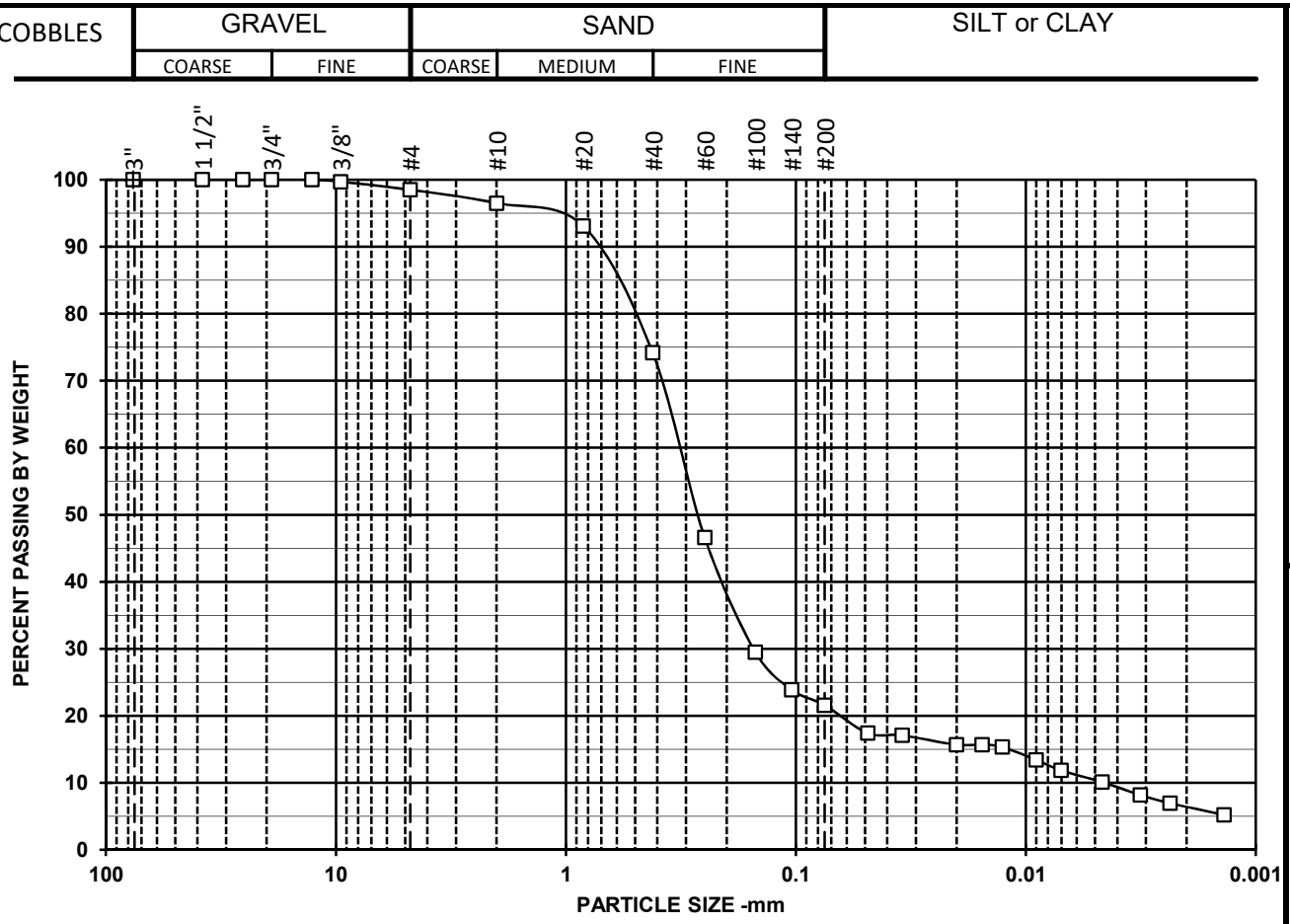
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	82.2				OH		Very dark gray, Sandy Organic silt	10/29/18
■	16.0				SP-SM		Brown, Poorly graded sand with silt	10/29/18
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-320		
Sample	VC-320-D0-19E		
Depth	0-19		
% +3"	0.0		
% Gravel	1.5		
% SAND	76.9		
%C SAND	2.0		
%M SAND	22.3		
%F SAND	52.6		
% FINES	21.6		
D_{100} (mm)	12.700		
D_{60} (mm)	0.321		
D_{30} (mm)	0.152		
D_{10} (mm)	0.005		
Cc	15.900		
Cu	70.5		

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	99.7
#4	98.5
#10	96.5
#20	93.1
#40	74.2
#60	46.6
#100	29.5
#140	23.9
#200	21.6
5μ m	10
2μ m	6
1μ m	4

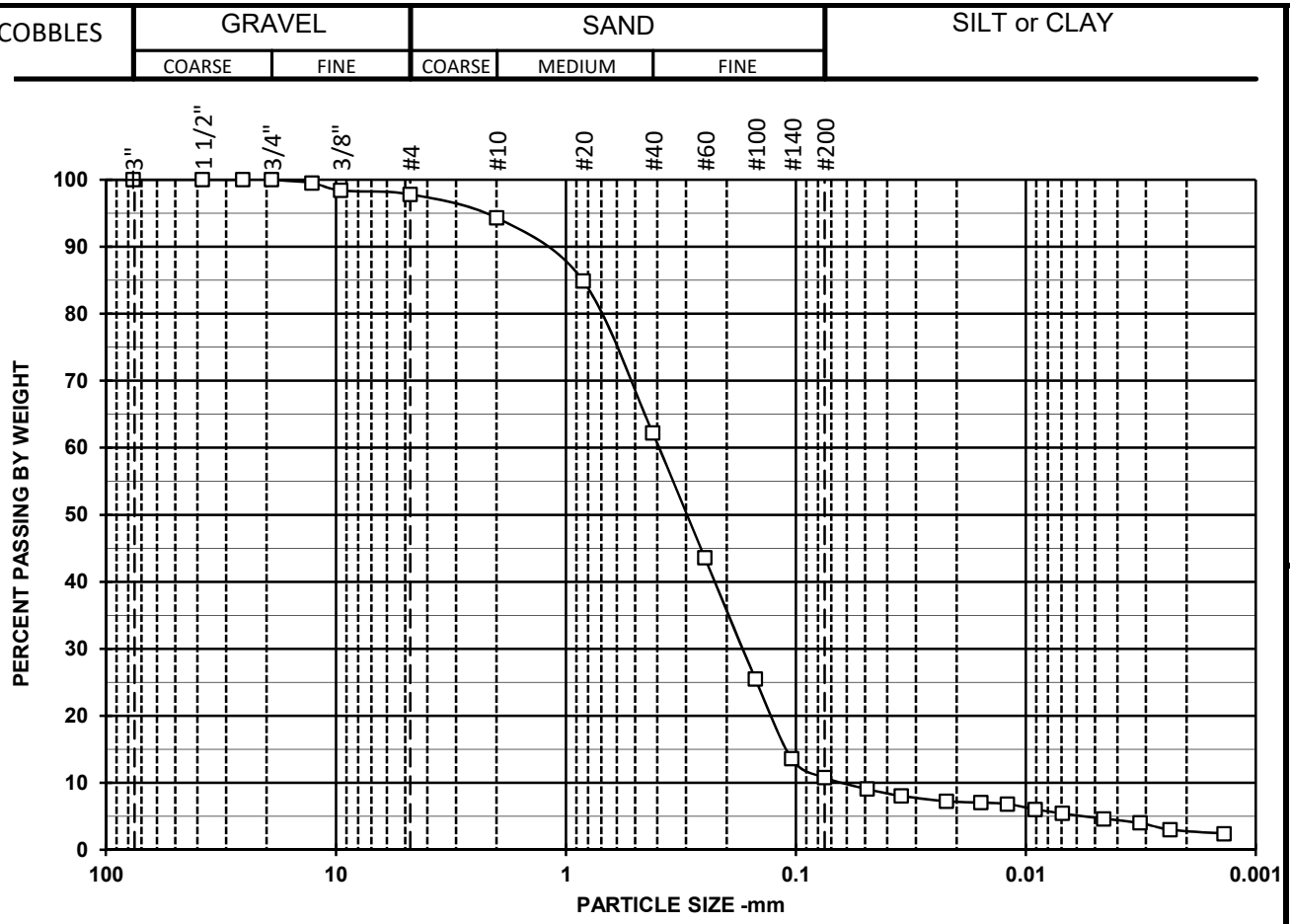
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	26.2				SC		Dark gray, Clayey sand shell fragments noted	10/29/18
■								
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Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-321		
Sample	'C-321-D0-20.5		
Depth	0-20.5		
% +3"	0.0		
% Gravel	2.2		
% SAND	87.0		
%C SAND	3.5		
%M SAND	32.1		
%F SAND	51.4		
% FINES	10.8		
D_{100} (mm)	19.050		
D_{60} (mm)	0.394		
D_{30} (mm)	0.170		
D_{10} (mm)	0.062		
Cc	1.200		
Cu	6.4		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	99.5		
3/8"	98.4		
#4	97.8		
#10	94.3		
#20	84.9		
#40	62.2		
#60	43.6		
#100	25.5		
#140	13.6		
#200	10.8		
5μ m	5		
2μ m	3		
1μ m	2		

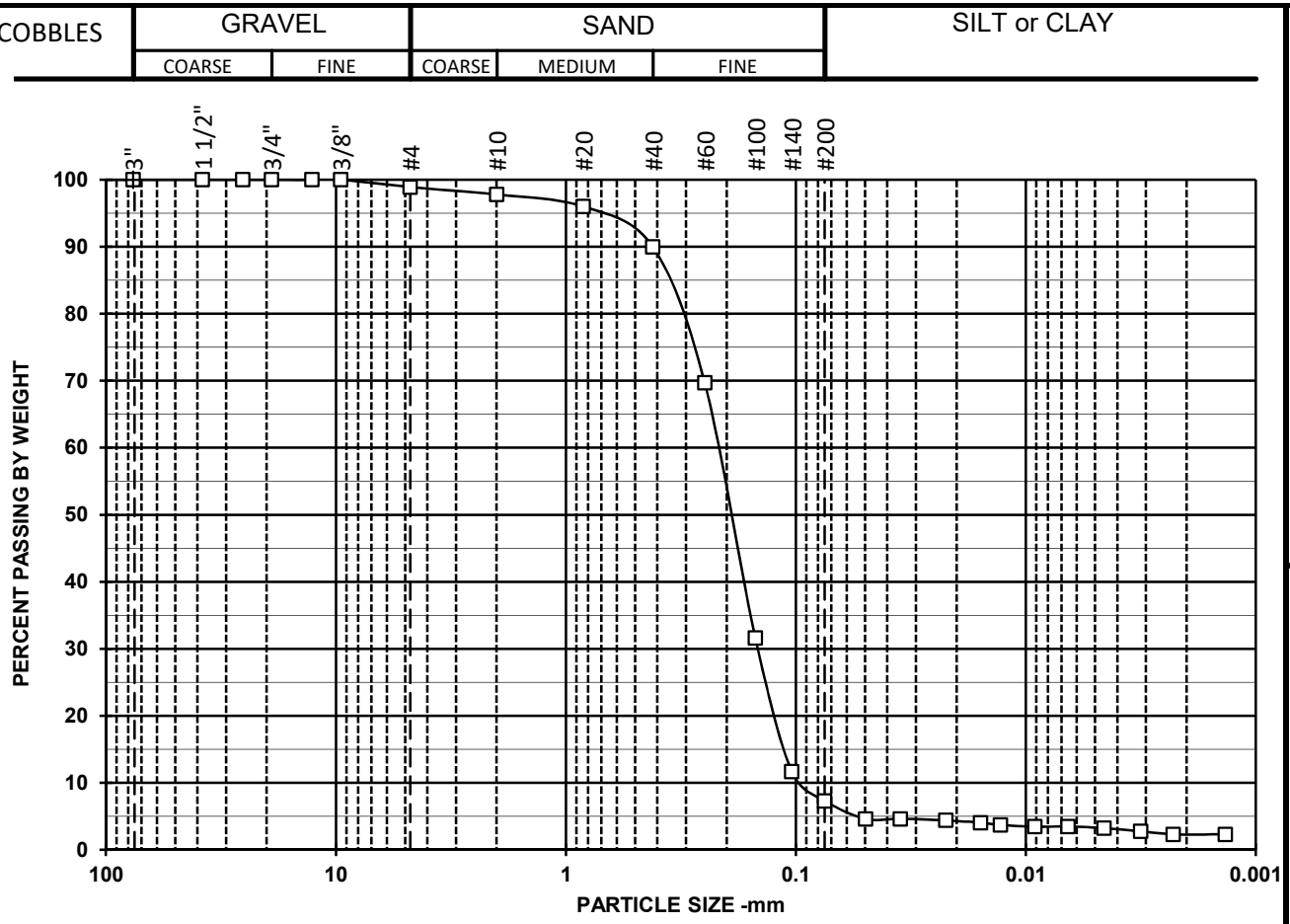
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	20.4				SW-SM		Dark gray, Well-graded sand with silt shell fragments noted	10/29/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring	VC-323		
Sample	VC-323-D0-22E		
Depth	0-22		
% +3"	0.0		
% Gravel	1.1		
% SAND	91.6		
%C SAND	1.1		
%M SAND	7.8		
%F SAND	82.7		
% FINES	7.3		
D_{100} (mm)	9.530		
D_{60} (mm)	0.219		
D_{30} (mm)	0.146		
D_{10} (mm)	0.092		
Cc	1.100		
Cu	2.4		

Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	98.9		
#10	97.8		
#20	96.0		
#40	90.0		
#60	69.7		
#100	31.6		
#140	11.7		
#200	7.3		
5μ m	3		
2μ m	2		
1μ m	2		

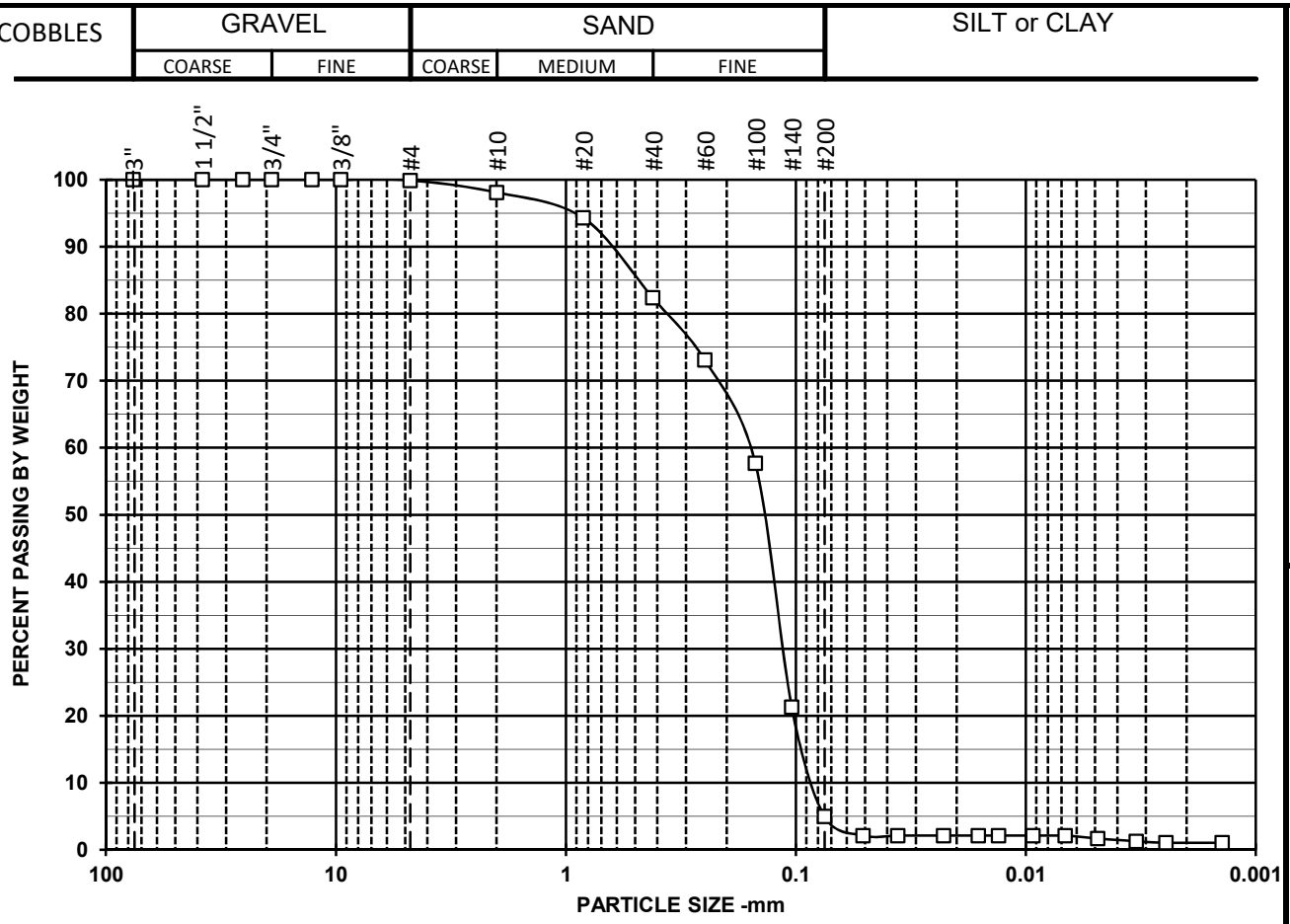
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	24.4				SP-SM		Gray, Poorly graded sand with silt shell fragments noted	10/29/18
■								
○								

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring			
Sample	2287-102618-0002		
Depth			
% +3"	0.0		
% Gravel	0.1		
% SAND	94.9		
%C SAND	1.8		
%M SAND	15.7		
%F SAND	77.4		
% FINES	5.0		
D_{100} (mm)	9.530		
D_{60} (mm)	0.162		
D_{30} (mm)	0.114		
D_{10} (mm)	0.083		
Cc	1.000		
Cu	1.9		

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	23.2				SP-SM		Dark gray, Poorly graded sand with silt shell fragments noted	10/29/18
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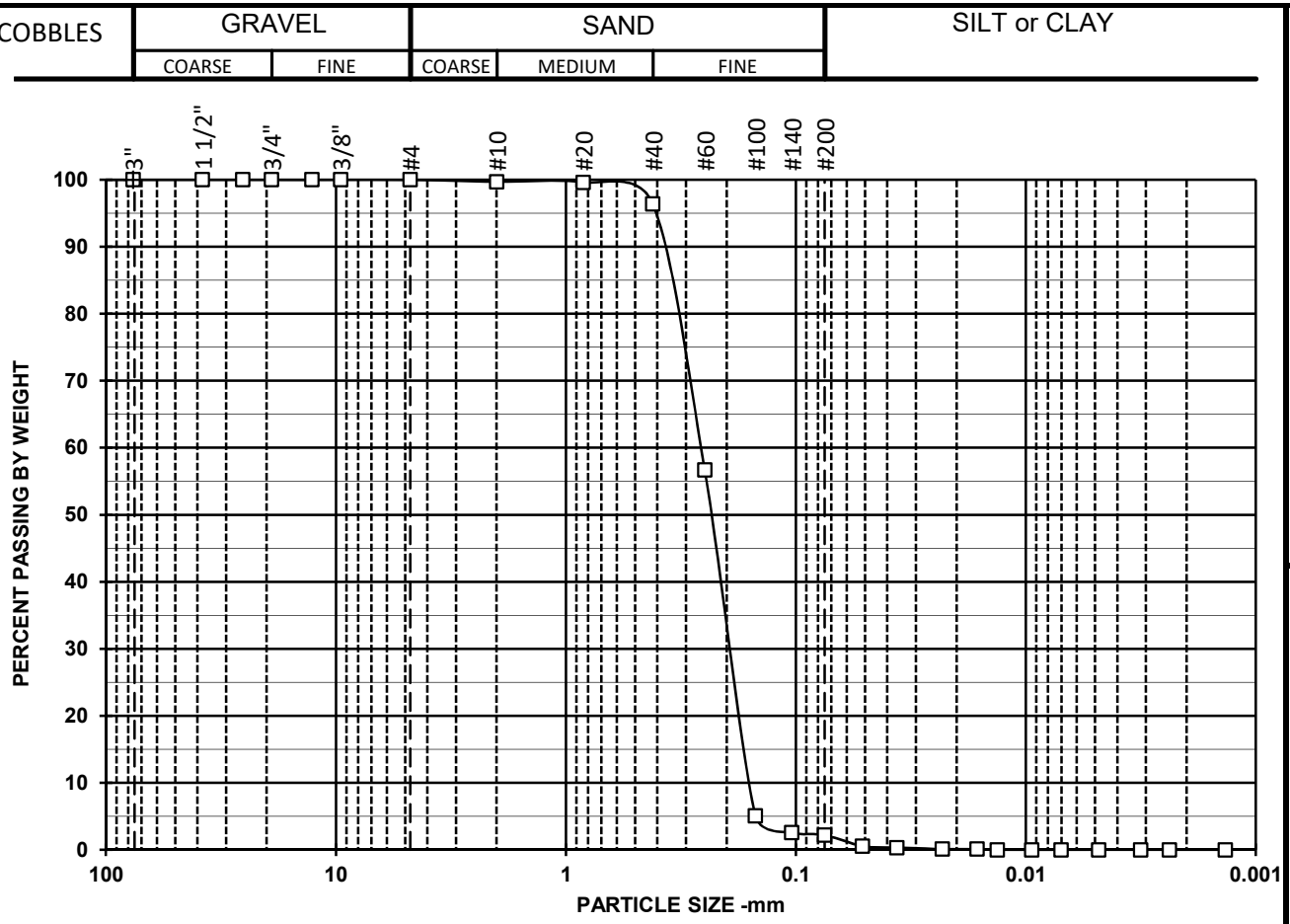
Sieve Size/ID #	Percent Finer Data		
6"	100.0		
4"	100.0		
3"	100.0		
1 1/2"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	99.9		
#10	98.1		
#20	94.3		
#40	82.4		
#60	73.1		
#100	57.7		
#140	21.3		
#200	5.0		
5μ m	2		
2μ m	1		
1μ m	1		

Haley & Aldrich #132614-006, SID2

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring			
Sample	2287-102618-0007		
Depth	0-7.5		
% +3"	0.0		
% Gravel	0.0		
% SAND	97.8		
%C SAND	0.3		
%M SAND	3.3		
%F SAND	94.2		
% FINES	2.2		
D_{100} (mm)	9.530		
D_{60} (mm)	0.260		
D_{30} (mm)	0.191		
D_{10} (mm)	0.157		
Cc	0.900		
Cu	1.7		

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	100.0
3/8"	100.0
#4	100.0
#10	99.7
#20	99.6
#40	96.4
#60	56.7
#100	5.1
#140	2.6
#200	2.2
5μ m	0
2μ m	0
1μ m	0

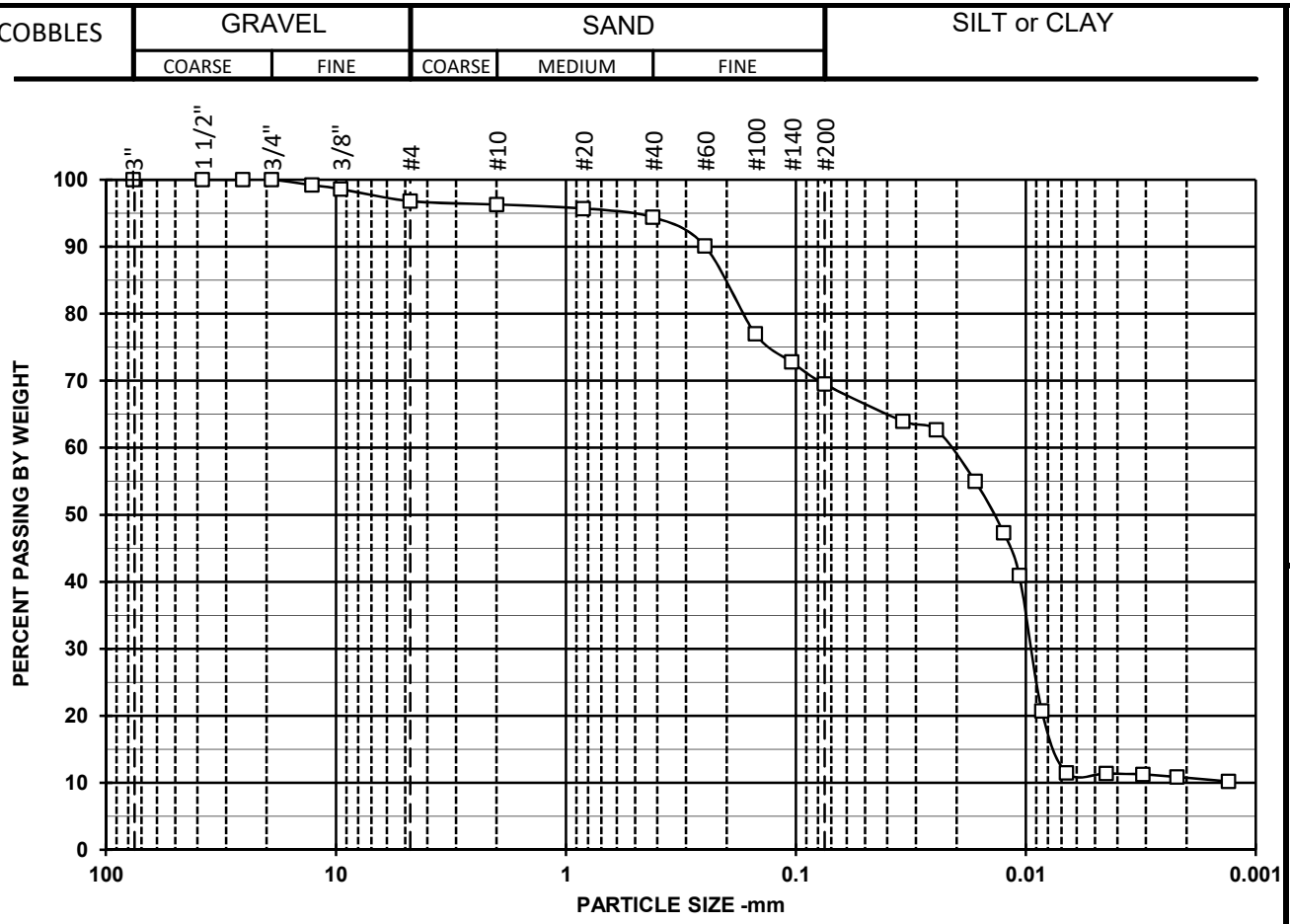
SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	22.6				SP		Gray, Poorly graded sand shell fragments noted	11/01/18
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Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION



Symbol	□	■	○
Boring			
Sample	2287-102918-0011		
Depth	0-7.5		
% +3"	0.0		
% Gravel	3.2		
% SAND	27.3		
%C SAND	0.5		
%M SAND	1.9		
%F SAND	24.9		
% FINES	69.5		
D_{100} (mm)	19.050		
D_{60} (mm)	0.021		
D_{30} (mm)	0.009		
D_{10} (mm)			
Cc			
Cu			

Sieve Size/ID #	Percent Finer Data
6"	100.0
4"	100.0
3"	100.0
1 1/2"	100.0
1"	100.0
3/4"	100.0
1/2"	99.2
3/8"	98.6
#4	96.8
#10	96.3
#20	95.7
#40	94.4
#60	90.1
#100	77.0
#140	72.8
#200	69.5
5μ m	12
2μ m	11
1μ m	10

SYMBOL	w (%)	LL	PL	PI	USCS	AASHTO	USCS DESCRIPTION AND REMARKS	DATE
□	102.9				OH		Black, Sandy Organic clay shell fragments noted	11/01/18
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Haley & Aldrich #132614-004

TerraSense, LLC #7788-18005

Northeast Supply Enhancement Project

PARTICLE SIZE DISTRIBUTION

APPENDIX H

Analytical Data Tables

HALEY ALDRICH

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore											
Location Name									COMP-A	COMP-A	COMP-A	VC-208	VC-208	VC-208	VC-211	VC-211	VC-211	VC-214	VC-214	VC-214	DEP-1	DEP-1	DEP-1
Sample Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-A-D0-15E	COMP-A-D0-15-A	COMP-A-D0-15-A	VC-208-D0-7.5E	VC-208-D0-7.5-A	VC-208-D0-7.5-A	VC-211-D0-7.5E	VC-211-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5E	VC-214-D0-7.5E-A	VC-214-D0-7.5-A	DEP-1-D0-7.5E	DEP-1-D0-7.5E-A	DEP-1-D0-7.5E-A
Sample Date									11/13/2018	11/21/2018	11/21/2018	11/12/2018	11/21/2018	11/21/2018	11/12/2018	11/21/2018	11/21/2018	10/29/2018	11/14/2018	11/14/2018	10/31/2018	11/15/2018	11/15/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1846405-02	L1847850-03	L1847850-03	L1846346-02	L1847850-02	L1847850-02	L1846346-01	L1847850-01	L1847850-01	L1844234-35	L1846705-09	L1846705-09	L1844690-06	L1846902-01	L1846902-01
Sample Depth (bgs)									0 - 15 (ft)	0 - 15 (ft)	0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									9,931	9,931	9,931	2,911	2,911	2,911	3,275	3,275	3,275	2,911	2,911	2,911	5,625	5,625	5,625
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																							
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00911 U	0.024 U	0.67 U	0.00685 U	0.026 U	0.67 U	0.00953 U	0.022 U	0.67 U	0.00686 U	0.031 U	0.67 U	0.00824 U	0.023 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.016 U	0.026 U	0.7 U	0.012 U	0.029 U	0.7 U	0.0167 U	0.025 U	0.7 U	0.012 U	0.034 U	0.7 U	0.0144 U	0.025 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.0166 U	0.046 U	0.93 U	0.0124 U	0.05 U	0.93 U	0.0173 U	0.044 U	0.93 U	0.0125 U	0.06 U	0.93 U	0.015 U	0.044 R	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.0114 U	0.043 U	0.72 U	0.00858 U	0.048 U	0.72 U	0.0119 U	0.041 U	0.72 U	0.0086 U	0.057 U	0.72 U	0.0103 U	0.042 R	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00855 U	0.043 U	0.68 U	0.00643 U	0.047 U	0.68 U	0.00895 U	0.041 U	0.68 U	0.00645 U	0.057 U	0.68 U	0.00774 U	0.042 R	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.0103 U	0.036 U	0.77 U	0.00773 U	0.04 U	0.77 U	0.0108 U	0.035 U	0.77 U	0.00774 U	0.048 U	0.77 U	0.0093 U	0.035 R	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.0158 U	0.072 U	1.6 U	0.0118 U	0.079 U	1.6 U	0.0165 U	0.069 U	1.6 U	0.0119 U	0.095 U	**1.6 J**	0.0143 U	0.07 R	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.163 U	0.1 U	5.5 U	0.123 U	0.12 U	5.5 U	0.17 U	0.1 U	5.5 U	0.123 U	0.14 U	5.5 U	0.148 U	0.1 R	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0067 U	0.037 U	0.84 U	0.00504 U	0.041 U	0.84 U	0.00701 U	0.036 U	0.84 U	0.00505 U	0.05 U	0.84 U	0.00606 U	0.036 R	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0247 U	0.03 U	1.1 U	0.0186 U	0.033 U	1.1 U	0.0258 U	0.028 U	1.1 U	0.0186 U	0.039 U	1.1 U	0.0223 U	0.029 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00042 U	0.021 U	0.03 U	0.00063 U	0.024 U	0.03 U	0.00045 U	0.02 U	0.03 U	0.00067 U	0.028 U	0.03 U	0.00079 U	0.021 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00631 U	0.025 U	0.63 U	0.00475 U	0.027 U	0.63 U	0.00661 U	0.024 U	0.63 U	0.00476 U	0.033 U	0.63 U	0.00572 U	0.024 R	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	0.00067 U	0.024 U	0.06 U	**0.0498**	**0.062 J**	0.06 U	0.00072 U	0.023 U	0.06 U	**0.198**	**0.16 J**	**0.11**	0.00126 U	0.023 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00823 U	0.035 U	1 U	0.00619 U	0.039 U	1 U	0.00861 U	0.034 U	1 U	0.0062 U	0.046 U	1 U	0.00745 U	0.034 R	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0155 U	0.041 U	1.1 U	0.0116 U	0.046 U	1.1 U	0.0162 U	0.04 U	1.1 U	0.0116 U	0.055 U	1.1 U	0.014 U	0.04 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.0103 U	0.037 U	1.5 U	0.00776 U	0.041 U	1.5 U	0.0108 U	0.035 U	1.5 U	0.00777 U	0.049 U	1.5 U	0.00934 U	0.036 R	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	0.0125 U	0.032 U	1.1 U	**0.0111 J**	**0.11 J**	**1.3 J**	0.0131 U	0.031 U	1.1 U	**0.0281 J**	**0.12 J**	**1.4 J**	0.0113 U	0.032 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.0163 U	0.058 U	1.4 U	0.0123 U	0.064 U	1.4 U	0.0171 U	0.055 U	1.4 U	0.0123 U	0.076 U	1.4 U	0.0148 U	0.056 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.01 U	0.042 U	1.2 U	0.00756 U	0.047 U	1.2 U	0.0105 U	0.041 U	1.2 U	0.00757 U	0.056 U	1.2 U	0.00909 U	0.041 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.184 U	0.11 U	2.1 U	0.138 U	0.12 U	2.1 U	0.192 U	0.1 U	2.1 U	0.138 U	0.14 U	2.1 U	0.166 U	0.1 R	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00899 U	0.025 U	0.73 U	0.00676 U	0.028 U	0.73 U	0.00941 U	0.024 U	0.73 U	0.00678 U	0.033 U	0.73 U	0.00814 U	0.024 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.0138 U	0.034 U	0.62 U	0.0104 U	0.037 U	0.62 U	0.0144 U	0.032 U	0.62 U	0.0104 U	0.044 U	0.62 U	0.0125 U	0.033 R	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00874 U	0.026 U	0.63 U	0.00658 U	**0.051 J**	0.63 U	0.00915 U	0.025 U	0.63 U	0.00659 U	0.034 U	0.63 U	0.00792 U	0.025 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00922 U	0.019 U	0.62 U	0.00694 U	0.021 U	0.62 U	0.00965 U	0.018 U	0.62 U	0.00695 U	0.025 U	0.62 U	0.00835 U	0.018 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.0129 U	0.093 U	1.3 U	0.00971 U	0.1 U	1.3 U	0.0135 U	0.09 U	1.3 U	0.00974 U	0.12 U	1.3 U	0.0117 U	0.091 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.526 U	0.063 U	1.8 U	0.396 U	0.069 U	1.8 U	0.55 U	0.06 U	1.8 U	0.397 U	0.083 U	1.8 U	0.476 U	0.061 R	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.00068 J**	0.019 U	0.04 U	**0.0743**	**0.063 J**	**0.3**	0.00065 U	0.018 U	**0.04 J**	**0.204**	**0.038 J**	**0.09 J**	0.00114 U	0.018 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.00161 J**	0.025 U	0.03 U	**0.0526**	**0.071 J**	0.03 U	0.00039 U	0.024 U	0.03 U	**0.157**	**0.1 J**	0.03 U	**0.00338 J**	0.025 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.012 U	0.024 U	0.85 U	0.00907 U	0.026 U	0.85 U	0.0126 U	0.023 U	0.85 U	0.00909 U	0.031 U	0.85 U	0.0109 U	0.023 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	0.00067 U	0.02 U	0.02 U	**0.152**	**0.15**	**0.14**	0.00072 U	0.019 U	**0.03 J**	**0.351**	**0.15 J**	**0.06 J**	0.00126 U	0.02 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.0083 U	0.079 U	1.8 U	0.00624 U	0.087 U	1.8 U	0.00869 U	0.076 U	1.8 U	0.00626 U	0.1 U	1.8 U	0.00752 U	0.077 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	0.0241 U	**0.047 J**	1.1 U	**0.0386 J**	**0.12 J**	**2.4 J**	0.0252 U	0.034 U	1.1 U	**0.043 J**	**0.19 J**	**3.4 J**	0.0218 U	0.034 U	1.1 U
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	0.00145 U	0.025 U	0.02 U	**0.296**	**0.32**	**0.05 J**	0.00156 U	0.024 U	0.02 U	**1.43** [C]	**0.43**	**0.02 J**	0.00272 U	0.025 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	0.00063 U	0.055 U	0.02 U	**0.203** [C]	**0.3** [C]	0.02 U	0.00068 U	0.053 U	0.02 U	**1.12** [AC]	**0.42** [C]	0.02 U	0.00119 U	0.054 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.00098 J**	0.019 U	0.02 U	**0.23**	**0.4**	**0.02 J**	**0.00079 J**	0.018 U	0.02 U	**1.01**	**0.5**	0.02 U	**0.0015 J**	0.018 U	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.00061 J**	0.026 U	0.02 U	**0.169**	**0.23**	0.02 U	**0.00056 J**	0.025 U	0.02 U	**0.723**	**0.34**	0.02 U	0.00084 U	0.026 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	0.00055 U	0.016 U	0.02 U	**0.125**	**0.13**	**0.02 J**	0.0006 U	0.015 U	0.02 U	**0.706**	**0.16**	0.02 U	0.00105 U	0.015 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	0.01 U	0.052 U	0.76 U	**0.0124 J**	0.058 U	0.76 U	0.0105 U	0.05 U	0.76 U	**0.0317 J**	0.069 U	0.76 U	0.00909 U	0.051 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00962 U	0.021 U	0.63 U	0.00724 U	0.024 U	0.63 U	0.0101 U	0.02 U	0.63 U	0.00725 U	0.028 U	0.63 U	0.00871 U	0.021 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0176 U	0.027 U	0.67 U	0.0132 U	0.03 U	0.67 U	0.0184 U	0.026 U	0.67 U	0.0132 U	0.036 U	0.67 U	0.0159 U	0.026 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.0251 U	**0.043 J**	0.91 U	**1.86**	**2.6**	0.91 U	0.0262 U	0.022 U	0.91 U	**4.98**	**4**	**5.9**	0.0227 U	**0.027 J**	**4.2**
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.0193 U	0.03 U	1.3 U	**0.018 J**	0.033 U	1.3 U	**0.0815 J**	0.029 U	1.3 U	**0.0287 J**	0.04 U	1.3 U	0.0175 U	0.029 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.014 U	0.048 U	3.6 U	0.0106 U	0.053 U	3.6 U	0.0147 U	0.046 U	3.6 U	0.0106 U	0.064 U	3.6 U	0.0127 U	0.047 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	0.0061 U	0.014 U	0.63 U	0.00459 U	0.016 U	0.63 U	0.00639 U	0.014 U	0.63 U	0.0046 U	**0.038 J**	0.63 U	0.00552 U	0.014 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.00065 J**	0.023 U	0.02 U	**0.188**	**0.34**	**0.04 J**	0.00051 U	0.022 U	0.02 U	**1.17**	**0.54**	**0.02 J**	**0.00097 J**	0.023 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	0.00055 U	0.026 U	0.02 U	**0.038**	**0.059 J**	0.02 U	0.0006 U	0.025 U	0.02 U	**0.195**	**0.082 J**	0.02 U	0.00105 U	0.025 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	0.00716 U	0.02 U	0.66 U	**0.0181 J**	**0.031 J**	0.66 U	0.00749 U	0.019 U	0.66 U	**0.0382 J**	**0.042 J**	0.66 U	0.00648 U	0.019 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	**0.0105 J**	0.02 U	0.63 U	0.00735 U	0.022 U	0.63 U	0.0102 U	0.02 U	0.63 U	**0.0376 J**	0.027 U	0.63 U	**0.0107 J**	0.02 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00746 U	0.022 U	0.65 U	0.00561 U	0.024 U	0.65 U	0.00781 U	0.021 U	0.65 U	0.00562 U	0.029 U	0.65 U	0.00676 U	0.021 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00911 U	0.02 U	0.69 U	0.00685 U	0.022 U	0.69 U	0.00953 U	0.019 U	0.69 U	0.00686 U	0.026 U	0.69 U	0.00824 U	0.019 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0396 U	0.07 U	1.1 U	0.0298 U	0.078 U	1.1 U	0.0414 U	0.067 U	1.1 U	0.0298 U	0.093 U	1.1 U	0.0358 U	0.069 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.00159 J**	0.026 U	0.01 U	**0.901**	**0.76**	**0.23**	0.00107 U	0.025 U	**0.02 J**	**2.77**	**0.66**	**0.13**	0.00186 U	0.025 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.0011 J**	0.022 U	0.02 U	**0.0402**	**0.066 J**	**0.16**	**0.00054 J**	0.021 U	**0.05 J**	**0.374**	**0.076 J**	**0.11**	**0.00078 J**	0.021 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.00932 U	0.022 U	0.58 U [D]	0.00701 U	0.024 U	0.58 U [D]	0.00975 U	0.021 U	0.58 U [D]	0.00702 U	0.028 U	0.58 U [D]	0.00844 U	0.021 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0186 U	0.028 U	0.72 U	0.014 U	0.031 U	0.72 U	0.0194 U	0.027 U	0.72 U	0.014 U	0.037 U	0.72 U	0.0168 U	0.027 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.105 U	0.14 U	7.8 U	0.0789 U	0.16 U	7.8 U	0.11 U	0.14 U	7.8 U	0.079 U	0.19 U	7.8 U	0.0949 U	0.14 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.016 U	0.036 U	0.68 U	0.012 U	0.04 U	0.68 U	0.0167 U	0.035 U	0.68 U	0.012 U	0.048 U	0.68 U	0.0145 U	0.036 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.00342 J**	0.031 U	0.02 U	**0.148**	**0.2**	0.02 U	**0.00356 J**	0.03 U	0.02 U	**0.651**	**0.26**	0.02 U	**0.00608 J**	0.031 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.0105 U	0.025 U	0.6 U	0.00789 U	0.028 U	0.6 U	0.011 U	0.024 U	0.6 U	0.0079 U	0.033 U	0.6 U	0.00949 U	0.024 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.00066 J**	0.027 U	0.04 U	**0.0546**	**0.09 J**	**0.09 JB**	0.00052 U	0.026 U	**0.06 JB**	**0.185**	**0.15 J**	**0.08 J**	**0.00106 J**	0.027 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.00997 U	0.033 U	0.75 U	0.0075 U	0.037 U	0.75 U	0.0104 U	0.032 U	0.75 U	0.00751 U	0.044 U	0.75 U	0.00902 U	0.032 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.0163 U	0.019 U	0.7 U	0.0122 U	0.021 U	0.7 U	0.017 U	0.018 U	0.7 U	0.0123 U	0.025 U	0.7 U	0.0147 U	0.018 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00672 U	0.018 U	0.64 U	0.00505 U	0.02 U	0.64 U	0.00703 U	0.018 U	0.64 U	0.00506 U	0.024 U	0.64 U	0.00608 U	0.018 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.172 U	0.05 U	3.4 U	0.129 U	0.055 U	3.4 U	0.18 U	0.048 U	3.4 U	0.13 U	0.066 U	3.4 U	0.156 U	0.048 R	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.00145 J**	0.016 U	0.02 U	**0.188**	**0.21**	**0.11**	**0.00084 J**	0.016 U	**0.04 J**	**2.21**	**0.39**	**0.32**	**0.00162 J**	0.016 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00909 U	0.027 U	1.9 U	0.00684 U	**0.047 J-**	1.9 U	0.00951 U	0.026 U	1.9 U	0.00685 U	0.035 U	1.9 U	0.00823 U	0.026 R	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.00098 J**	0.02 U	0.01 U	**0.596**	**0.72**	**0.19**	0.00059 U	0.019 U	**0.02 J**	**2.38**	**0.97**	**0.21**	0.00104 U	0.019 U	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.0105**	**0.09**	-	**1.9582**	**7.13**	**5.05**	**0.0815**	ND	**0.26**	**5.1873**	**9.816**	**13.45**	**0.0107**	**0.027**	**4.2**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**0.01373**	-	-	**3.5055**	-		**0.00629**	-		**15.834**	-		**0.01539**	-	
EPH (mg/kg)		-		-		-		-															
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	94.4 U	-		**128**	-		36 U	-		**109**	-		30.7 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-															
Aluminum	78000	-	NA	-	6000	73	4000	-	**5670**	**6660** [C]	**650**	**7720** [C]	**7420** [C]	**684**	**4190**	**4680**	**391**	**11200** [C]	**11600** [C]	**907**	**3660**	**5360**	**481**
Antimony	31	-	450	-	6	-	120	-	0.191 U	0.41 U	4.29 U	**5.25**	**2.69 J**	4.29 U	**0.343 J**	0.391 U	4.29 U	**5.57**	**3.14 J**	4.29 U	0.176 U	0.409 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**6.03**	**5.54**	1.65 U	**63.8** [ABC]	**40.2** [ABC]	**5.18** [D]	**5.41**	**4.87**	1.65 U	**70.1** [ABC]	**58.1** [ABC]	**6.69** [D]	**3.9**	**5.18**	1.65 U
Barium	16000	-	59000	-	2100	-	120000	-	**11.7**	**42.2**	**93.1**	**47.6**	**66.3**	**115**	**8.18**	**38.9**	**231**	**65.8**	**86.9**	**67**	**10.7**	**36.5**	**97.5**
Beryllium	16	-	140	-	0.7	34	20	-	**0.482**	**0.313 J**	1.07 U	**0.833** [C]	**0.41 J**	1.07 U	**0.48**	**0.206 J**	1.07 U	**0.895** [C]	**0.69 J**	1.07 U	**0.656**	**0.57**	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore												
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-A	COMP-A	COMP-A	VC-208	VC-208	VC-208	VC-211	VC-211	VC-211	VC-214	VC-214	VC-214	DEP-1	DEP-1	DEP-1
Sample Name									COMP-A-D0-15E	COMP-A-D0-15-A	COMP-A-D0-15-A	VC-208-D0-7.5E	VC-208-D0-7.5-A	VC-208-D0-7.5-A	VC-211-D0-7.5E	VC-211-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5E	VC-214-D0-7.5E-A	VC-214-D0-7.5E-A	DEP-1-D0-7.5E	DEP-1-D0-7.5E-A	DEP-1-D0-7.5E-A
Sample Date									11/13/2018	11/21/2018	11/21/2018	11/12/2018	11/21/2018	11/21/2018	11/12/2018	11/21/2018	11/21/2018	10/29/2018	11/14/2018	11/14/2018	10/31/2018	11/15/2018	11/15/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1846405-02	L1847850-03	L1847850-03	L1846346-02	L1847850-02	L1847850-02	L1846346-01	L1847850-01	L1847850-01	L1844234-35	L1846705-09	L1846705-09	L1844690-06	L1846902-01	L1846902-01
Sample Depth (bgs)									0 - 15 (ft)	0 - 15 (ft)	0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									9,931	9,931	9,931	2,911	2,911	2,911	3,275	3,275	3,275	2,911	2,911	2,911	5,625	5,625	5,625
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS
Cadmium	78	-	78	-	2	2	80	-	**0.055 J**	**0.194 J**	0.599 U	**1.31**	**0.927 J**	0.599 U	**0.084 J**	**0.196 J**	0.599 U	**1.8**	**1.63**	0.599 U	**0.041 J**	**0.226 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**1420**	**41200**	**210000**	**17100**	**47600**	**254000**	**3380**	**40400**	**352000**	**5920**	**55500**	**218000**	**922**	**33100**	**262000**
Chromium	NA	-	NA	-	NA	-	NA	-	**15.9**	**49.5**	**190**	**77.7**	**90.4**	**22.9**	**31.9**	**47.6**	**221**	**102**	**128**	**25.7**	**12.1**	**46**	**164**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.232 U	0.219 U		0.352 U	0.242 U		0.243 U	0.211 U		0.353 U	0.292 U		0.213 U	0.216 U	
Cobalt	1600	-	590	-	90	-	2000	-	**4.14**	**4.18**	1.63 U	**6.4**	**5.35**	1.63 U	**3.08**	**3.07**	1.63 U	**7.99**	**8.5**	1.63 U	**4.28**	**5.9**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**5.49**	**16.6**	**16.8**	**180**	**118**	**121**	**5.59**	**16**	**7.64 J**	**229**	**203**	**182**	**7.12**	**18**	**11.8**
Iron	NA	-	NA	-	NA	-	NA	-	**17600**	**15500**	191 U	**34000**	**21800**	191 U	**20400**	**15100**	191 U	**35700**	**25700**	191 U	**9870**	**10300**	191 U
Lead	400	-	800	-	90	23	100	-	**6.62**	**11.7**	3.43 U	**133** [C]	**78.1**	3.43 U	**9.63**	**10.3**	3.43 U	**159** [C]	**117** [C]	3.43 U	**7.24**	**11.1**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**3460**	**3720**	242 U	**3980**	**3740**	242 U	**2480**	**2730**	242 U	**5740**	**5860**	242 U	**2040**	**3060**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**146** [C]	**221** [C]	4.4 U	**160** [C]	**224** [C]	4.4 U	**111** [C]	**174** [C]	4.4 U	**236** [C]	**305** [C]	4.4 U	**85.8** [C]	**180** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**0.004 J**	0.022 U	0.091 U	**1.56** [C]	**1.47** [C]	0.091 U	**0.01 J**	0.022 U	0.091 U	**2.17** [C]	**2.47** [C]	0.091 U	**0.012 J**	0.018 U	0.091 U
Nickel	1600	-	23000	-	48	-	2000	-	**10.1**	**21**	**21.4**	**27.7**	**30.1**	**52.8**	**7.42**	**19**	**6.62 J**	**30.8**	**38.8**	**69.9**	**7.59**	**18.3**	**13.4 J**
Potassium	NA	-	NA	-	NA	-	NA	-	**1520**	**1560**	**27700**	**1580**	**1470**	**23900**	**1020**	**1260**	**28600**	**2260**	**2440**	**25000**	**984**	**1400**	**25100**
Selenium	390	-	5700	-	11	-	800	-	1.07 U	**0.292 J**	17.3 U	**4.36**	**2.28 J**	17.3 U	1.14 U	**0.371 J**	17.3 U	**6.59**	**3.73**	17.3 U	**1.81 J**	**0.419 J**	17.3 U
Silver	390	-	5700	-	1	26	800	-	0.069 U	0.306 U	1.63 U	**2.11** [C]	**1.19 J** [C]	1.63 U	0.074 U	0.292 U	1.63 U	**3.18** [C]	**2.35** [C]	1.63 U	0.063 U	0.304 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**3920**	**3170**	**130000**	**6950**	**4570**	**172000**	**3030**	**2800**	**99900**	**9300**	**6940**	**210000**	**3050**	**3090**	**109000**
Thallium	NA	-	NA	-	3	-	10	-	**0.092 J**	0.34 U	1.43 U	**0.219 J**	0.379 U	1.43 U	**0.143 J**	0.324 U	1.43 U	**0.184 J**	0.444 U	1.43 U	0.067 U	0.339 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**21.4**	**37.9**	15.7 U	**56.1**	**57.6**	15.7 U	**28.6**	**34.9**	15.7 U	**56.5**	**75.6**	**22.2 J**	**21.3**	**37.9**	15.7 U
Zinc	23000	-	110000	-	930	-	40000	-	**31.7**	**44.3**	34.1 U	**228**	**150**	34.1 U	**29.9**	**39.4**	34.1 U	**281**	**230**	34.1 U	**25**	**43.5**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-															
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00131 U	0.0117 U	0.016 U	0.00989 U	0.0129 U	0.016 U	0.00138 U	0.0107 U	0.016 U	0.0101 U	0.0145 U	0.016 U	0.0012 U	0.01 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00175 U	0.0132 U	0.022 U	0.0132 U	0.0145 U	0.022 U	0.00185 U	0.0121 U	0.022 U	0.0136 U	0.0164 U	0.022 U	0.00161 U	0.0113 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00168 U	0.028 U	0.046 U	0.0127 U	0.0308 U	0.046 U	0.00177 U	0.0256 U	0.046 U	0.013 U	0.0347 U	0.046 U	0.00154 U	0.024 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.0178 U	0.036 U	**0.227**	0.0196 U	0.036 U	0.00127 U	0.0163 U	0.036 U	**0.276**	**0.303**	**0.053 J**	0.0011 U	0.0152 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00151 U	0.0198 U	0.046 U	0.0114 U	**0.334 P**	0.046 U	0.00159 U	0.0181 U	0.046 U	0.0116 U	0.0245 U	0.046 U	0.00138 U	0.017 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.0144 U	0.017 U	**0.407**	**0.25 P**	0.017 U	0.00158 U	0.0132 U	0.017 U	**0.448**	**0.336**	0.017 U	0.00137 U	0.0124 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	0.00151 U	0.0244 U	0.034 U	**0.187**	**0.0813 J**	0.034 U	0.00159 U	0.0223 U	0.034 U	**0.145**	**0.115 J**	0.034 U	0.00138 U	0.0209 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00137 U	0.0168 U	0.033 U	0.0104 U	0.0184 U	0.033 U	0.00145 U	0.0154 U	0.033 U	0.0106 U	0.0208 U	0.033 U	0.00126 U	0.0144 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00118 U	0.0137 U	0.032 U	0.00896 U	0.015 U	0.032 U	0.00125 U	0.0125 U	0.032 U	0.00916 U	0.0169 U	0.032 U	0.00109 U	0.0117 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	ND	ND	-	**0.821** [AC]	**0.6653** [AC]	-	ND	ND	-	**0.869** [AC]	**0.754** [AC]	**0.053**	ND	ND	-
Other		-		-		-		-															
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**30.9**	**26.9**	**-**	**54.6**	**33.9**	**-**	**34.1**	**24.1**	**-**	**54.7**	**45.2**	**-**	**24.8**	**25.8**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**0.75**	-	-	**1.46**	-	-	**0.403**	-	-	**2.1**	-	-	**0.733**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**0.863**	-	-	**1.73**	-	-	**0.383**	-	-	**2.24**	-	-	**0.673**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**69.1**	**73.1**	**-**	**45.4**	**66.1**	**-**	**65.9**	**75.9**	**-**	**45.3**	**54.8**	**-**	**75.2**	**74.2**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**170**	**27**	**-**	**150**	**17**	**-**	**180**	**12**	**-**	**120**	**31**	**-**	**120**	**70**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.6**	**12.5**	**11.7**	**8.1**	**12.4**	**11.8**	**8.5**	**12.6**	**11.8**	**8.1**	**12.2**	**11.5**	**8.1**	**12.6**	**11.9**
Pesticides (mg/kg) (ug/L)		-		-		-		-															
4,4'-DDD	3	-	13	-	4	-	2	-	0.00004 U	0.00212 U	0.005 U	**0.00727**	**0.00814 P**	0.005 U	0.00005 U	0.00212 U	0.005 U	**0.00894**	**0.00854 IP**	0.005 U	0.00004 U	0.00194 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	0.00004 U	0.00137 U	0.004 U	**0.0289**	**0.0153 IP**	0.004 U	0.00005 U	0.00138 U	0.004 U	**0.0366**	0.00177 U	0.004 U	0.00004 U	0.00125 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	0.00004 U	0.00477 U	0.004 U	**0.002 IP**	0.00567 U	**0.005 JP**	0.00005 U	0.00479 U	0.004 U	**0.00314 IP**	0.00617 U	0.004 U	0.00004 U	0.00436 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00004 U	0.00209 U	0.002 U	0.00007 U	0.00248 U	0.002 U	0.00005 U	0.0021 U	0.002 U	0.00014 U	0.0027 U	0.002 U	0.00004 U	0.00191 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00004 U	0.0007 U	0.004 U	**0.00166 P**	0.00083 U	0.004 U	0.00005 U	0.0007 U	0.004 U	0.00014 U	0.0009 U	0.004 U	0.00004 U	0.00064 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00207 U	0.007 U	**0.00057 P**	0.00246 U	0.007 U	0.00005 U	0.00207 U	0.007 U	**0.00088**	0.00267 U	0.007 U	0.00004 U	0.00189 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00004 U	0.00225 U [C]	0.006 U	**0.00206** [C]	0.00267 U [C]	0.006 U	0.00005 U	0.00226 U [C]	0.006 U	0.00014 U	0.00291 U [C]	0.006 U	0.00004 U	0.00206 U [C]	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00238 U	0.0197 U	0.046 U	0.0036 U	0.0234 U	0.046 U	0.00252 U	0.0197 U	0.046 U	0.00736 U	0.0254 U	0.046 U	0.00218 U	0.018 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00116 U	0.005 U	0.00007 U	0.00138 U	0.005 U	0.00005 U	0.00117 U	0.005 U	0.00014 U	**0.0126**	0.005 U	0.00004 U	0.00106 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	0.00004 U	0.00186 U	0.004 U	**0.00353 IP** [C]	0.0022 U	0.004 U	0.00005 U	0.00186 U	0.004 U	**0.00116 IP**	0.0024 U	0.004 U	0.00004 U	0.0017 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.0014 U	0.003 U	0.00007 U	0.00166 U	0.003 U	0.00005 U	0.00141 U	0.003 U	0.00014 U	0.00181 U	0.003 U	0.00004 U	0.00128 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00198 U	0.005 U	0.00007 U	0.00236 U	0.005 U	0.00005 U	0.00199 U	0.005 U	0.00014 U	**0.00762 JIP**	0.005 U	0.00004 U	0.00181 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00004 U	0.00118 U	0.005 U	0.00007 U	0.0014 U	0.005 U	0.00005 U	0.00118 U	0.005 U	0.00014 U	0.00152 U	0.005 U	0.00004 U	0.00108 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00004 U	0.00101 U	0.004 U	**0.0073 P**	0.0012 U	0.004 U	0.00005 U	0.00102 U	0.004 U	0.00014 U	0.00131 U	0.004 U	0.00004 U	0.00092 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00014 U	0.0026 U	0.008 U	0.00021 U	0.00308 U	0.008 U	0.00015 U	0.0026 U	0.008 U	0.00044 U	0.00336 U	0.008 U	0.00013 U	0.00237 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00153 U	0.005 U	**0.00502 P**	0.00182 U	0.005 U	0.00005 U	0.00153 U	0.005 U	0.00014 U	0.00198 U	0.005 U	0.00004 U	0.0014 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00004 U	0.0011 U	0.004 U	0.00007 U	0.00131 U	0.004 U	0.00005 U	0.00111 U	0.004 U	0.00014 U	0.00143 U	0.004 U	0.00004 U	0.00101 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00196 U	0.006 U	**0.00672 P**	0.00233 U	0.006 U	0.00005 U	0.00196 U	0.006 U	**0.00893 I**	0.00253 U	0.006 U	0.00004 U	0.00179 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00004 U	0.00133 U	0.003 U	**0.00142 P**	0.00158 U	0.003 U	0.00005 U	0.00133 U	0.003 U	0.00014 U	0.00172 U	0.003 U	0.00004 U	0.00122 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00009 U	0.00334 U	0.004 U	**0.00367**	0.00396 U	0.004 U	0.0001 U	0.00335 U	0.004 U	0.00029 U	0.00431 U	0.004 U	0.00008 U	0.00305 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00047 U	0.00346 U	0.007 U	0.00071 U	0.00411 U	0.007 U	0.0005 U	0.00347 U	0.007 U	0.00146 U	0.00447 U	0.007 U	0.00043 U	0.00316 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00238 U	0.0312 U	0.063 U	0.0036 U	0.037 U	0.063 U	0.00252 U	0.0313 U	0.063 U	0.00736 U	0.0403 U	0.063 U	0.00218 U	0.0285 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan													
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-301	VC-301	VC-301	VC-303	VC-303	VC-303	VC-304	VC-304	VC-304	DEP-3	DEP-3	DEP-3	DEP-4	DEP-4	DEP-4
Sample Name									VC-301-REV-D0-7.5E	VC-301-REV-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E	VC-303-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E	VC-304-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E	DEP-3-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E	DEP-4-REV-D0-7.5E-A	DEP-4-REV-D0-7.5E-A
Sample Date									10/30/2018	11/15/2018	11/15/2018	10/31/2018	11/15/2018	11/15/2018	10/29/2018	11/14/2018	11/14/2018	10/31/2018	11/15/2018	11/15/2018	10/30/2018	11/15/2018	11/15/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844690-01	L1846902-05	L1846902-05	L1844690-07	L1846902-06	L1846902-06	L1844234-37	L1846705-21	L1846705-21	L1844690-05	L1846902-02	L1846902-02	L1844690-02	L1846902-03	L1846902-03
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									6,490	6,490	6,490	7,788	7,788	7,788	8,221	8,221	8,221	7,788	7,788	7,788	12,115	12,115	12,115
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																							
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00998 U	0.026 U	0.67 U	0.0109 U	0.031 U	0.67 U	0.00658 U	0.032 U	0.67 U	0.0123 U	0.031 U	0.67 U	0.0116 U	0.029 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.0175 U	0.029 U	0.7 U	0.0192 U	0.034 U	0.7 U	0.0115 U	0.035 U	0.7 U	0.0216 U	0.034 U	0.7 U	0.0202 U	0.032 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.0181 U	0.05 U	0.93 U	0.0199 U	0.061 U	0.93 U	0.012 U	0.062 U	0.93 U	0.0224 U	0.06 U	0.93 U	0.021 U	0.057 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.0125 U	0.048 U	0.72 U	0.0137 U	0.058 U	0.72 U	0.00823 U	0.059 U	0.72 U	0.0154 U	0.057 U	0.72 U	0.0145 U	0.054 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00937 U	0.047 U	0.68 U	0.0103 U	0.057 U	0.68 U	0.00618 U	0.058 U	0.68 U	0.0116 U	0.056 U	0.68 U	0.0108 U	0.053 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.0112 U	0.04 U	0.77 U	0.0124 U	0.048 U	0.77 U	0.00742 U	0.05 U	0.77 U	0.0139 U	0.048 U	0.77 U	0.013 U	0.045 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.0173 U	0.08 U	1.6 U	0.019 U	0.096 U	1.6 U	0.0114 U	0.098 U	1.6 U	0.0214 U	0.094 U	1.6 U	0.02 U	0.09 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.179 U	0.12 U	5.5 U	0.196 U	0.14 U	5.5 U	0.118 U	0.14 U	5.5 U	0.221 U	0.14 U	5.5 U	0.207 U	0.13 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00734 U	0.042 R	0.84 U	0.00805 U	0.05 R	0.84 U	0.00484 U	0.051 U	0.84 U	0.00907 U	0.049 R	0.84 U	0.00849 U	0.047 R	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.027 U	0.033 U	1.1 U	0.0297 U	0.04 U	1.1 U	0.0178 U	0.041 U	1.1 U	0.0334 U	0.039 U	1.1 U	0.0313 U	0.037 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00048 U	0.024 U	0.03 U	0.00052 U	0.029 U	0.03 U	0.00063 U	0.029 U	0.03 U	0.00057 U	0.028 U	0.03 U	0.00056 U	0.027 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00692 U	0.028 U	0.63 U	0.00759 U	0.033 U	0.63 U	0.00456 U	0.034 U	0.63 U	0.00856 U	0.032 U	0.63 U	0.00801 U	0.031 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	0.00077 U	0.026 U	0.06 U	0.00082 U	0.032 U	0.06 U	**0.00164 J**	0.033 U	0.06 U	**0.00211 J**	0.031 U	0.06 U	**0.00298 J**	0.03 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00902 U	0.039 U	1 U	0.00989 U	0.046 U	1 U	0.00594 U	0.048 U	1 U	0.0111 U	0.046 U	1 U	0.0104 U	0.044 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0169 U	0.046 U	1.1 U	0.0186 U	0.055 U	1.1 U	0.0112 U	0.057 U	1.1 U	0.0209 U	0.054 U	1.1 U	0.0196 U	0.052 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.0113 U	0.041 U	1.5 U	0.0124 U	0.049 U	1.5 U	0.00745 U	0.05 U	1.5 U	0.014 U	0.048 U	1.5 U	0.0131 U	0.046 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	0.0137 U	0.036 U	1.1 U	0.015 U	0.043 U	1.1 U	0.00904 U	0.044 U	1.1 U	0.017 U	0.043 U	1.1 U	0.0159 U	0.041 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.0179 U	0.064 U	1.4 U	0.0196 U	0.077 U	1.4 U	0.0118 U	0.079 U	1.4 U	0.0221 U	0.076 U	1.4 U	0.0207 U	0.072 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.011 U	0.047 U	1.2 U	0.0121 U	0.057 U	1.2 U	0.00725 U	0.058 U	1.2 U	0.0136 U	0.056 U	1.2 U	0.0127 U	0.053 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.201 U	0.12 R	2.1 U	0.221 U	0.14 R	2.1 U	0.133 U	0.15 U	2.1 U	0.249 U	0.14 R	2.1 U	0.233 U	0.14 R	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00985 U	0.028 U	0.73 U	0.0108 U	0.033 U	0.73 U	0.00649 U	0.034 U	0.73 U	0.0122 U	0.033 U	0.73 U	0.0114 U	0.031 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.0151 U	0.037 U	0.62 U	0.0166 U	0.045 U	0.62 U	0.00997 U	0.046 U	0.62 U	0.0187 U	0.044 U	0.62 U	0.0175 U	0.042 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00958 U	0.029 U	0.63 U	0.0105 U	0.035 U	0.63 U	0.00631 U	0.036 U	0.63 U	0.0118 U	0.034 U	0.63 U	0.0111 U	0.032 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.0101 U	0.021 U	0.62 U	0.0111 U	0.025 U	0.62 U	0.00666 U	0.026 U	0.62 U	0.0125 U	0.025 U	0.62 U	0.0117 U	0.024 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.0142 U	0.1 U	1.3 U	0.0155 U	0.12 U	1.3 U	0.00932 U	0.13 U	1.3 U	0.0175 U	0.12 U	1.3 U	0.0164 U	0.12 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.577 U	0.07 U	1.8 U	0.632 U	0.084 U	1.8 U	0.38 U	0.086 R	1.8 U	0.713 U	0.082 U	1.8 U	0.667 U	0.078 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	0.00069 U	0.021 U	0.04 U	0.00074 U	0.025 U	0.04 U	**0.00094 J**	0.026 U	0.04 U	**0.00118 J**	0.025 U	0.04 U	**0.00239 J**	0.024 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.0012 J**	0.028 U	0.03 U	0.00044 U	0.034 U	0.03 U	**0.0027 J**	0.034 U	0.03 U	**0.00178 J**	0.033 U	0.03 U	**0.00313 J**	0.032 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.0132 U	0.026 U	0.85 U	0.0145 U	0.031 U	0.85 U	0.0087 U	0.032 U	0.85 U	0.0163 U	0.031 U	0.85 U	0.0153 U	0.029 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	0.00077 U	0.022 U	0.02 U	0.00082 U	0.027 U	0.02 U	**0.00342 J**	0.027 U	0.02 U	**0.00565 J**	0.026 U	0.02 U	**0.00872**	0.025 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.0091 U	0.088 U	1.8 U	0.00998 U	0.1 U	1.8 U	0.006 U	0.11 U	1.8 U	0.0112 U	0.1 U	1.8 U	0.0105 U	0.099 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	0.0264 U	**0.051 J**	**1.4 J**	0.029 U	**0.064 J**	**1.8 J**	0.0174 U	**0.12 J**	**2.1 J**	**0.0734 J**	0.046 U	**1.3 J**	**0.0645 J**	**0.063 J**	**1.8 J**
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	0.00166 U	0.028 U	0.02 U	0.00177 U	0.034 U	0.02 U	**0.0104**	0.035 U	0.02 U	**0.0233**	0.033 U	0.02 U	**0.0336**	0.032 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	0.00072 U	0.061 U	0.02 U	0.00077 U	0.073 U	0.02 U	**0.011**	0.075 U	0.02 U	**0.0154**	0.072 U	0.02 U	**0.0242**	0.069 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.00114 J**	0.021 U	0.02 U	**0.00126 J**	0.025 U	0.02 U	**0.0129**	0.026 U	0.02 U	**0.0134**	0.025 U	0.02 U	**0.0273**	0.024 U	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.00102 J**	0.029 U	0.02 U	**0.00106 J**	0.035 U	0.02 U	**0.00949**	0.036 U	0.02 U	**0.0102**	0.035 U	0.02 U	**0.0146**	0.033 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.00065 J**	0.018 U	0.02 U	**0.00076 J**	0.021 U	0.02 U	**0.00889**	0.022 U	0.02 U	**0.0132**	0.021 U	0.02 U	**0.0174**	0.02 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	0.011 U	0.058 U	0.76 U	0.0121 U	0.07 U	0.76 U	0.00725 U	0.072 U	0.76 U	0.0136 U	0.068 U	0.76 U	0.0127 U	0.065 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.0105 U	0.024 U	0.63 U	0.0116 U	0.028 U	0.63 U	0.00695 U	0.029 U	0.63 U	0.013 U	0.028 U	0.63 U	0.0122 U	0.027 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0192 U	0.03 U	0.67 U	0.0211 U	0.036 U	0.67 U	0.0127 U	0.037 U	0.67 U	0.0238 U	0.036 U	0.67 U	0.0223 U	0.034 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.0275 U	**0.055 J**	**2.8 J**	0.0301 U	**0.036 J**	**2 J**	**0.0185 J**	0.032 U	0.91 U	0.034 U	0.031 U	0.91 U	0.0318 U	**0.044 J**	0.91 U
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.0212 U	0.033 U	1.3 U	0.0232 U	0.04 U	1.3 U	0.014 U	0.041 U	1.3 U	0.0262 U	0.039 U	1.3 U	0.0245 U	0.038 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.0154 U	0.054 U	3.6 U	0.0169 U	0.064 U	3.6 U	0.0101 U	0.066 U	3.6 U	0.019 U	0.063 U	3.6 U	0.0178 U	0.06 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	0.00669 U	0.016 U	0.63 U	0.00734 U	0.019 U	0.63 U	0.00441 U	0.02 U	0.63 U	0.00827 U	0.019 U	0.63 U	0.00774 U	0.018 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.00095 J**	0.026 U	0.02 U	**0.00118 J**	0.031 U	0.02 U	**0.00912**	0.032 U	0.02 U	**0.0131**	0.03 U	0.02 U	**0.0206**	0.029 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	0.00063 U	0.029 U	0.02 U	0.00068 U	0.035 U	0.02 U	**0.0021 J**	0.036 U	0.02 U	**0.00287 J**	0.034 U	0.02 U	**0.00424 J**	0.032 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	0.00784 U	0.022 U	0.66 U	0.0086 U	0.026 U	0.66 U	0.00517 U	0.027 U	0.66 U	0.0097 U	0.026 U	0.66 U	0.00908 U	0.025 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.0107 U	0.023 U	0.63 U	**0.0143 J**	0.027 U	0.63 U	**0.0211 J**	0.028 U	0.63 U	**0.014 J**	0.027 U	0.63 U	0.0124 U	0.026 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00818 U	0.024 U	0.65 U	0.00897 U	0.029 U	0.65 U	0.00539 U	0.03 U	0.65 U	0.0101 U	0.028 U	0.65 U	0.00946 U	0.027 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00998 U	0.022 U	0.69 U	0.0109 U	0.026 U	0.69 U	0.00658 U	0.027 U	0.69 U	0.0123 U	0.026 U	0.69 U	0.0116 U	0.025 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0434 U	0.078 U	1.1 U	0.0476 U	0.094 U	1.1 U	0.0286 U	0.096 U	1.1 U	0.0537 U	0.092 U	1.1 U	0.0502 U	0.088 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.00164 J**	0.029 U	0.01 U	**0.00239 J**	0.034 U	0.01 U	**0.0154**	0.035 U	0.01 U	**0.0328**	0.034 U	0.01 U	**0.0504**	0.032 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.00103 J**	0.024 U	0.02 U	**0.00099 J**	0.029 U	0.02 U	**0.00255 J**	0.03 U	0.02 U	**0.00435 J**	0.028 U	0.02 U	**0.00636 J**	0.027 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.0102 U	0.024 U	0.58 U [D]	0.0112 U	0.029 U	0.58 U [D]	0.00673 U	0.029 U	0.58 U [D]	0.0126 U	0.028 U	0.58 U [D]	0.0118 U	0.027 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0203 U	0.031 U	0.72 U	0.0223 U	0.037 U	0.72 U	0.0134 U	0.038 U	0.72 U	0.0251 U	0.037 U	0.72 U	0.0235 U	0.035 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.115 U	0.16 U	7.8 U	0.126 U	0.19 U	7.8 U	0.0757 U	0.19 U	7.8 U	0.142 U	0.19 U	7.8 U	0.133 U	0.18 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.0175 U	0.04 U	0.68 U	0.0192 U	0.049 U	0.68 U	0.0115 U	0.05 U	0.68 U	0.0217 U	0.048 U	0.68 U	0.0203 U	0.046 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.00414 J**	0.035 U	0.02 U	**0.00431 J**	0.042 U	0.02 U	**0.0135**	0.043 U	0.02 U	**0.0145**	0.041 U	0.02 U	**0.02**	0.039 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.0115 U	0.028 U	0.6 U	0.0126 U	0.034 U	0.6 U	0.00757 U	0.034 U	0.6 U	0.0142 U	0.033 U	0.6 U	0.0133 U	0.032 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.00078 J**	0.03 U	**0.04 J**	**0.00084 J**	0.037 U	0.04 U	**0.00394 J**	0.038 U	0.04 U	**0.0036 J**	0.036 U	0.04 U	**0.00512 J**	0.034 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.0109 U	0.037 U	0.75 U	0.012 U	0.044 U	0.75 U	0.0072 U	0.046 U	0.75 U	0.0135 U	0.044 U	0.75 U	0.0126 U	0.042 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.0178 U	0.021 U	0.7 U	0.0196 U	0.025 U	0.7 U	0.0118 U	0.026 U	0.7 U	0.0221 U	0.025 U	0.7 U	0.0206 U	0.024 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00736 U	0.02 U	0.64 U	0.00807 U	0.024 U	0.64 U	0.00485 U	0.025 U	0.64 U	0.0091 U	0.024 U	0.64 U	0.00852 U	0.023 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.188 U	0.055 U	3.4 U	0.207 U	0.066 U	3.4 U	0.124 U	0.068 U	3.4 U	0.233 U	0.065 U	3.4 U	0.218 U	0.062 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.00151 J**	0.018 U	0.02 U	**0.00182 J**	0.022 U	0.02 U	**0.00746 J**	0.022 U	0.02 U	**0.0103**	0.021 U	0.02 U	**0.0159**	0.02 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00996 U	0.03 U	1.9 U	0.0109 U	0.036 U	1.9 U	0.00656 U	0.036 U	1.9 U	0.0123 U	0.035 U	1.9 U	0.0115 U	0.033 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.00131 J**	0.022 U	0.01 U	**0.00152 J**	0.026 U	0.01 U	**0.0179**	0.027 U	0.01 U	**0.028**	0.026 U	0.01 U	**0.0391**	**0.024 J**	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	ND	**0.106**	**4.24**	**0.0143**	**0.1**	**3.8**	**0.0396**	**0.12**	**2.1**	**0.0874**	ND	**1.3**	**0.0645**	**0.131**	**1.8**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**0.01537**	-		**0.01613**	-		**0.13335**	-		**0.19574**	-		**0.29604**	-	
EPH (mg/kg)		-		-		-		-															
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	37.3 U	-		40.1 U	-		47.7 U	-		45.8 U	-		43.1 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-															
Aluminum	78000	-	NA	-	6000	73	4000	-	**7730** [C]	**9310** [C]	**730**	**9280** [C]	**11800** [C]	**1020**	**13000** [C]	**13700** [C]	**910**	**8230** [C]	**12400** [C]	**1010**	**13000** [C]	**13000** [C]	**1110**
Antimony	31	-	450	-	6	-	120	-	0.216 U	0.46 U	4.29 U	**0.756 J**	**0.801 J**	4.29 U	0.277 U	**3.65 J**	4.29 U	0.262 U	0.547 U	4.29 U	**0.241 J**	0.524 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**7.85**	**8.49**	1.65 U	**8.45**	**10.2**	1.65 U	**11.6**	**11.4**	**1.82 J**	**5.11**	**8.88**	1.65 U	**8.39**	**8.92**	**1.7 J**
Barium	16000	-	59000	-	2100	-	120000	-	**13.1**	**45.7**	**53.4**	**15.3**	**60.1**	**56.2**	**22.9**	**57.6**	**50.2**	**12.2**	**65.1**	**57.9**	**29.9**	**60.3**	**40.6**
Beryllium	16	-	140	-	0.7	34	20	-	**0.56**	**0.484 J**	1.07 U	**0.624**	**0.621 J**	1.07 U	**0.773** [C]	**0.545 J**	1.07 U	**0.638**	**0.676 J**	1.07 U	**0.836** [C]	**0.703** [C]	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan												
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-301	VC-301	VC-301	VC-303	VC-303	VC-303	VC-304	VC-304	VC-304	DEP-3	DEP-3	DEP-3	DEP-4	DEP-4	DEP-4
Sample Name									VC-301-REV-D0-7.5E	VC-301-REV-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E	VC-303-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E	VC-304-D0-7.5E-A	VC-304-D0-7.5E-A	DEP-3-D0-7.5E	DEP-3-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E	DEP-4-REV-D0-7.5E-A	DEP-4-REV-D0-7.5E-A
Sample Date									10/30/2018	11/15/2018	11/15/2018	10/31/2018	11/15/2018	11/15/2018	10/29/2018	11/14/2018	11/14/2018	10/31/2018	11/15/2018	11/15/2018	10/30/2018	11/15/2018	11/15/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844690-01	L1846902-05	L1846902-05	L1844690-07	L1846902-06	L1846902-06	L1844234-37	L1846705-21	L1846705-21	L1844690-05	L1846902-02	L1846902-02	L1844690-02	L1846902-03	L1846902-03
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									6,490	6,490	6,490	7,788	7,788	7,788	8,221	8,221	8,221	7,788	7,788	7,788	12,115	12,115	12,115
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Cadmium	78	-	78	-	2	2	80	-	**0.086 J**	**0.375 J**	0.599 U	**0.093 J**	**0.497 J**	0.599 U	**0.111 J**	**0.471 J**	0.599 U	**0.064 J**	**0.475 J**	0.599 U	**0.062 J**	**0.468 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**1920**	**41500**	**194000**	**1750**	**46700**	**168000**	**4160**	**51700**	**142000**	**7030**	**50600**	**169000**	**7670**	**49000**	**179000**
Chromium	NA	-	NA	-	NA	-	NA	-	**17.8**	**59.1**	**191**	**20.6**	**68.1**	**165**	**30.1**	**73**	**166**	**17**	**67.6**	**93**	**24.9**	**68.5**	**99.8**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.257 U	0.245 U		0.281 U	0.291 U		0.333 U	0.3 U		0.317 U	0.291 U		0.296 U	**0.278 J**	
Cobalt	1600	-	590	-	90	-	2000	-	**5.38**	**6.13**	1.63 U	**6.41**	**8.03**	1.63 U	**8.97**	**8.49**	**1.77 J**	**6.25**	**8.85**	**1.75 J**	**8.77**	**8.78**	**2.46 J**
Copper	3100	-	45000	-	11000	-	26000	-	**7.15**	**21.2**	**19.6**	**8.56**	**25.6**	**22.1**	**14.2**	**26.6**	**31**	**9.82**	**27.7**	**29.9**	**14.2**	**27.4**	**31.3**
Iron	NA	-	NA	-	NA	-	NA	-	**20700**	**18300**	191 U	**23200**	**23400**	191 U	**33600**	**27300**	191 U	**19500**	**23100**	191 U	**28000**	**23500**	191 U
Lead	400	-	800	-	90	23	100	-	**8.05**	**12.6**	3.43 U	**8.51**	**15.5**	3.43 U	**15.1**	**17.9**	3.43 U	**14.2**	**20.7**	3.43 U	**19.4**	**19.1**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**4640**	**5330**	242 U	**5480**	**6860**	242 U	**7450**	**7120**	242 U	**4710**	**6580**	242 U	**6210**	**6570**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**202** [C]	**299** [C]	4.4 U	**240** [C]	**371** [C]	4.4 U	**366** [C]	**411** [C]	4.4 U	**279** [C]	**419** [C]	4.4 U	**353** [C]	**426** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**0.015 J**	0.02 U	0.091 U	**0.015 J**	0.024 U	0.091 U	**0.05**	0.025 U	0.091 U	**0.08**	**0.025 J**	0.091 U	**0.076**	**0.025 J**	0.091 U
Nickel	1600	-	23000	-	48	-	2000	-	**13**	**24.7**	**21.3**	**15.8**	**33.6**	**26.4**	**22.8**	**31.3**	**30.8**	**14.6**	**34.5**	**41.7**	**19.2**	**31**	**45.3**
Potassium	NA	-	NA	-	NA	-	NA	-	**1930**	**2340**	**30200**	**2260**	**2690**	**31300**	**3070**	**3200**	**30000**	**1830**	**2820**	**29700**	**2530**	**2820**	**29500**
Selenium	390	-	5700	-	11	-	800	-	**1.99 J**	0.312 U	17.3 U	**2.41 J**	**0.511 J**	17.3 U	**3.07 J**	**1.28 J**	17.3 U	**2.3 J**	**0.662 J**	17.3 U	**2.42 J**	**0.813 J**	17.3 U
Silver	390	-	5700	-	1	26	800	-	0.078 U	0.342 U	1.63 U	**0.105 J**	0.391 U	1.63 U	**0.134 J**	0.417 U	1.63 U	0.094 U	0.407 U	1.63 U	0.087 U	0.39 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**5270**	**4520**	**158000**	**5090**	**3550**	**190000**	**8060**	**6200**	**162000**	**6290**	**6790**	**216000**	**7270**	**6480**	**199000**
Thallium	NA	-	NA	-	3	-	10	-	**0.083 J**	0.381 U	1.43 U	**0.433**	0.435 U	1.43 U	**0.131 J**	0.464 U	1.43 U	0.1 U	0.453 U	1.43 U	**0.108 J**	0.434 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**21.6**	**44.4**	15.7 U	**23.9**	**53.2**	**22.5 J**	**34.8**	**57.5**	**26.5 J**	**20.8**	**54.3**	**22.1 J**	**32.3**	**55.4**	**24.3 J**
Zinc	23000	-	110000	-	930	-	40000	-	**40.8**	**57.1**	34.1 U	**47.5**	**73.5**	34.1 U	**71.4**	**79.3**	34.1 U	**43.2**	**76.1**	34.1 U	**59.6**	**73.1**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-															
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00147 U	0.0118 U	0.016 U	0.00159 U	0.0146 U	0.016 U	0.0019 U	0.0145 U	0.016 U	0.00182 U	0.0147 U	0.016 U	0.00168 U	0.013 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00197 U	0.0133 U	0.022 U	0.00213 U	0.0165 U	0.022 U	0.00255 U	0.0163 U	0.022 U	0.00245 U	0.0166 U	0.022 U	0.00226 U	0.0147 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00188 U	0.0282 U	0.046 U	0.00204 U	0.035 U	0.046 U	0.00244 U	0.0346 U	0.046 U	0.00234 U	0.035 U	0.046 U	0.00216 U	0.031 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	0.00135 U	0.0179 U	0.036 U	0.00146 U	0.0222 U	0.036 U	**0.00549**	0.022 U	0.036 U	0.00168 U	0.0223 U	0.036 U	0.00155 U	0.0197 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00169 U	0.02 U	0.046 U	0.00183 U	0.0247 U	0.046 U	0.00219 U	0.0245 U	0.046 U	0.0021 U	0.0248 U	0.046 U	0.00194 U	0.022 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	0.00168 U	0.0146 U	0.017 U	0.00182 U	0.018 U	0.017 U	**0.00683**	0.0178 U	0.017 U	0.00209 U	0.0181 U	0.017 U	0.00193 U	0.016 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	0.00169 U	0.0246 U	0.034 U	0.00183 U	0.0305 U	0.034 U	**0.00247 J**	0.0301 U	0.034 U	0.0021 U	0.0305 U	0.034 U	0.00194 U	0.027 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00154 U	0.0169 U	0.033 U	0.00167 U	0.021 U	0.033 U	0.002 U	0.0207 U	0.033 U	0.00192 U	0.021 U	0.033 U	0.00177 U	0.0186 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00133 U	0.0138 U	0.032 U	0.00144 U	0.0171 U	0.032 U	0.00172 U	0.0169 U	0.032 U	0.00165 U	0.0171 U	0.032 U	0.00153 U	0.0152 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	ND	ND	-	ND	ND	-	**0.01479**	ND	-	ND	ND	-	ND	ND	-
Other		-		-		-		-															
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**37.8**	**34.8**	**-**	**43**	**45**	**-**	**52**	**46.6**	**-**	**49.6**	**45**	**-**	**45.9**	**42.5**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**0.984**	-	-	**1.4**	-	-	**1.5**	-	-	**1.46**	-	-	**1.66**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**0.98**	-	-	**1.27**	-	-	**1.56**	-	-	**1.45**	-	-	**1.52**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**62.2**	**65.2**	**-**	**57**	**55**	**-**	**48**	**53.4**	**-**	**50.4**	**55**	**-**	**54.1**	**57.5**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**180**	**61**	**-**	**130**	**59**	**-**	**130**	**34**	**-**	**120**	**74**	**-**	**130**	**71**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.6**	**12.5**	**11.6**	**9**	**12**	**11**	**9**	**12.**	**11.5**	**8.5**	**12**	**12**	**8.5**	**12.3**	**11.6**
Pesticides (mg/kg) (ug/L)		-		-		-		-															
4,4'-DDD	3	-	13	-	4	-	2	-	0.00005 U	0.00221 U	0.005 U	0.00005 U	0.00272 U	0.005 U	**0.00015**	0.00288 U	0.005 U	0.00006 U	0.00269 U	0.005 U	0.00006 U	0.00266 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	0.00005 U	0.00144 U	0.004 U	0.00005 U	0.00177 U	0.004 U	**0.00025**	0.00186 U	0.004 U	0.00006 U	0.00174 U	0.004 U	0.00006 U	0.00172 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	0.00005 U	0.00499 U	0.004 U	0.00005 U	0.00614 U	0.004 U	0.00006 U	0.00649 U	**0.017 JP**	0.00006 U	0.00606 U	0.004 U	0.00006 U	0.00599 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00005 U	0.00218 U	0.002 U	0.00005 U	0.00269 U	0.002 U	0.00006 U	0.00284 U	0.002 U	0.00006 U	0.00265 U	0.002 U	0.00006 U	0.00262 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00005 U	0.00073 U	0.004 U	0.00005 U	0.0009 U	0.004 U	0.00006 U	0.00095 U	0.004 U	0.00006 U	0.00089 U	0.004 U	0.00006 U	0.00088 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00216 U	0.007 U	0.00005 U	0.00266 U	0.007 U	0.00006 U	0.00281 U	0.007 U	0.00006 U	0.00262 U	0.007 U	0.00006 U	0.0026 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00005 U	0.00235 U [C]	0.006 U	0.00005 U	0.0029 U [C]	0.006 U	0.00006 U	0.00306 U [C]	0.006 U	0.00006 U	0.00286 U [C]	0.006 U	0.00006 U	0.00283 U [C]	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00267 U	0.0206 U	0.046 U	0.00289 U	0.0253 U	0.046 U	0.00346 U	0.0267 U	0.046 U	0.00332 U	0.025 U	0.046 U	0.00306 U	0.0247 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00122 U	0.005 U	0.00005 U	0.0015 U	0.005 U	0.00006 U	0.00158 U	0.005 U	0.00006 U	0.00148 U	0.005 U	0.00006 U	0.00146 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	0.00005 U	0.00194 U	0.004 U	0.00005 U	0.00239 U	0.004 U	0.00006 U	0.00252 U	0.004 U	0.00006 U	0.00236 U	0.004 U	0.00006 U	0.00233 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00147 U	0.003 U	0.00005 U	0.0018 U	0.003 U	0.00006 U	0.00191 U	0.003 U	0.00006 U	0.00178 U	0.003 U	0.00006 U	0.00176 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00207 U	0.005 U	0.00005 U	0.00255 U	0.005 U	0.00006 U	0.0027 U	0.005 U	0.00006 U	0.00252 U	0.005 U	0.00006 U	0.00249 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00005 U	0.00123 U	0.005 U	0.00005 U	0.00152 U	0.005 U	0.00006 U	0.0016 U	0.005 U	0.00006 U	0.00149 U	0.005 U	0.00006 U	0.00148 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00005 U	0.00106 U	0.004 U	0.00005 U	0.0013 U	0.004 U	0.00006 U	0.00138 U	0.004 U	0.00006 U	0.00129 U	0.004 U	0.00006 U	0.00127 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00016 U	0.00272 U	0.008 U	0.00017 U	0.00334 U	0.008 U	0.0002 U	0.00353 U	0.008 U	0.00019 U	0.0033 U	0.008 U	0.00018 U	0.00326 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.0016 U	0.005 U	0.00005 U	0.00197 U	0.005 U	0.00006 U	0.00208 U	0.005 U	0.00006 U	0.00194 U	0.005 U	0.00006 U	0.00192 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00005 U	0.00116 U	0.004 U	0.00005 U	0.00142 U	0.004 U	0.00006 U	0.0015 U	0.004 U	0.00006 U	0.0014 U	0.004 U	0.00006 U	0.00139 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00205 U	0.006 U	0.00005 U	0.00252 U	0.006 U	**0.00015 IP**	0.00266 U	0.006 U	0.00006 U	0.00249 U	0.006 U	0.00006 U	0.00246 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00005 U	0.00139 U	0.003 U	0.00005 U	0.00171 U	0.003 U	0.00006 U	0.00181 U	0.003 U	0.00006 U	0.00169 U	0.003 U	0.00006 U	0.00167 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.0001 U	0.00349 U	0.004 U	0.00011 U	0.0043 U	0.004 U	0.00013 U	0.00454 U	0.004 U	0.00013 U	0.00424 U	0.004 U	0.00012 U	0.00419 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00053 U	0.00362 U	0.007 U	0.00057 U	0.00446 U	0.007 U	0.00068 U	0.00471 U	0.007 U	0.00066 U	0.0044 U	0.007 U	0.00061 U	0.00435 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00267 U	0.0326 U	0.063 U	0.00289 U	0.0401 U	0.063 U	0.00346 U	0.0424 U	0.063 U	0.00332 U	0.0396 U	0.063 U	0.00306 U	0.0391 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan														
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	DEP-5	DEP-5	DEP-5	VC-216	VC-216	VC-216	VC-217	VC-217	VC-217	VC-218	VC-218	VC-218	COMP-G	COMP-G	COMP-G
Sample Name									DEP-5-REV-D0-7.5E	DEP-5-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E	VC-216-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E	VC-217-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E	VC-218-D0-7.5E-A	VC-218-D0-7.5E-A	COMP-G-D0-7.5E	COMP-G-D0-7.5E-A	COMP-G-D0-7.5E-A
Sample Date									10/30/2018	11/15/2018	11/15/2018	10/29/2018	11/14/2018	11/14/2018	10/29/2018	11/14/2018	11/14/2018	10/29/2018	11/09/2018	11/09/2018	10/28/2018	11/08/2018	11/08/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844690-03	L1846902-04	L1846902-04	L1844234-33	L1846705-10	L1846705-10	L1844234-32	L1846705-11	L1846705-11	L1844234-30	L1846705-12	L1846705-12	L1844234-28	L1846705-01	L1846705-01
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									11,249	11,249	11,249	4,759	4,759	4,759	6,057	6,057	6,057	4,759	4,759	4,759	14,711	14,711	14,711
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																							
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.0123 U	0.031 U	0.67 U	0.00668 U	0.031 U	0.67 U	0.00622 U	0.032 U	0.67 U	0.00703 U	0.033 U	0.67 U	0.00651 U	0.032 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.0216 U	0.034 U	0.7 U	0.0117 U	0.034 U	0.7 U	0.0109 U	0.035 U	0.7 U	0.0123 U	0.036 U	0.7 U	0.0114 U	0.035 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.0224 U	0.06 U	0.93 U	0.0121 U	0.059 U	0.93 U	0.0113 U	0.061 U	0.93 U	0.0128 U	0.063 U	0.93 U	0.0118 U	0.062 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.0154 U	0.056 U	0.72 U	0.00837 U	0.056 U	0.72 U	0.00779 U	0.058 U	0.72 U	0.00881 U	0.06 U	0.72 U	0.00815 U	0.058 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.0116 U	0.056 U	0.68 U	0.00628 U	0.056 U	0.68 U	0.00584 U	0.058 U	0.68 U	0.0066 U	0.059 U	0.68 U	0.00611 U	0.058 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.0139 U	0.047 U	0.77 U	0.00754 U	0.047 U	0.77 U	0.00702 U	0.049 U	0.77 U	0.00794 U	0.05 U	0.77 U	0.00734 U	0.049 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.0213 U	0.094 U	1.6 U	0.0116 U	0.093 U	1.6 U	0.0108 U	0.097 U	1.6 U	0.0122 U	0.1 U	1.6 U	0.0113 U	0.097 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.221 U	0.14 U	5.5 U	0.12 U	0.14 U	5.5 U	0.111 U	0.14 U	5.5 U	0.126 U	0.14 U	5.5 U	0.116 U	0.14 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00907 U	0.049 R	0.84 U	0.00491 U	0.049 U	0.84 U	0.00458 U	0.05 U	0.84 U	0.00517 U	0.052 U	0.84 U	0.00478 U	0.05 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0334 U	0.039 U	1.1 U	0.0181 U	0.039 U	1.1 U	0.0169 U	0.04 U	1.1 U	0.0191 U	0.041 U	1.1 U	0.0176 U	0.04 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00058 U	0.028 U	0.03 U	0.00064 U	0.028 U	0.03 U	0.00058 U	0.029 U	0.03 U	0.00067 U	0.03 U	0.03 U	0.00061 U	0.029 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00855 U	0.032 U	0.63 U	0.00463 U	0.032 U	0.63 U	0.00432 U	0.033 U	0.63 U	0.00488 U	0.034 U	0.63 U	0.00451 U	0.034 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.00189 J**	0.031 U	0.06 U	**0.00348 J**	0.031 U	0.06 U	**0.00804**	0.032 U	0.06 U	**0.0648**	**0.064 J**	0.06 U	**0.0525**	**0.053 J**	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.0111 U	0.046 U	1 U	0.00604 U	0.046 U	1 U	0.00562 U	0.047 U	1 U	0.00635 U	0.048 U	1 U	0.00588 U	0.047 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0209 U	0.054 U	1.1 U	0.0113 U	0.054 U	1.1 U	0.0106 U	0.056 U	1.1 U	0.0119 U	0.057 U	1.1 U	0.011 U	0.056 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.014 U	0.048 U	1.5 U	0.00757 U	0.048 U	1.5 U	0.00705 U	0.05 U	1.5 U	0.00796 U	0.051 U	1.5 U	0.00737 U	0.05 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	0.0169 U	0.042 U	1.1 U	0.00918 U	0.042 U	1.1 U	**0.0156 J**	0.044 U	1.1 U	**0.0417 J**	**0.063 J**	1.1 U	**0.0215 J**	**0.062 J**	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.0221 U	0.076 U	1.4 U	0.012 U	0.075 U	1.4 U	0.0112 U	0.078 U	1.4 U	0.0126 U	0.08 U	1.4 U	0.0117 U	0.078 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.0136 U	0.056 U	1.2 U	0.00737 U	0.055 U	1.2 U	0.00686 U	0.057 U	1.2 U	0.00776 U	0.059 U	1.2 U	0.00718 U	0.057 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.249 U	0.14 R	2.1 U	0.135 U	0.14 U	2.1 U	0.126 U	0.15 U	2.1 U	0.142 U	0.15 U	2.1 U	0.131 U	0.15 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.0122 U	0.033 U	0.73 U	0.0066 U	0.033 U	0.73 U	0.00615 U	0.034 U	0.73 U	0.00694 U	0.035 U	0.73 U	0.00643 U	0.034 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.0187 U	0.044 U	0.62 U	0.0101 U	0.044 U	0.62 U	0.00944 U	0.045 U	0.62 U	0.0107 U	0.047 U	0.62 U	0.00987 U	0.045 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.0118 U	0.034 U	0.63 U	0.00642 U	0.034 U	0.63 U	0.00598 U	0.035 U	0.63 U	0.00675 U	0.036 U	0.63 U	0.00625 U	0.035 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.0125 U	0.025 U	0.62 U	0.00677 U	0.025 U	0.62 U	0.0063 U	0.026 U	0.62 U	0.00712 U	0.026 U	0.62 U	0.00659 U	0.026 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.0175 U	0.12 U	1.3 U	0.00948 U	0.12 U	1.3 U	0.00883 U	0.12 U	1.3 U	0.00997 U	0.13 U	1.3 U	0.00923 U	0.13 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.712 U	0.082 U	1.8 U	0.386 U	0.082 U	1.8 U	0.36 U	0.084 U	1.8 U	0.406 U	0.087 U	1.8 U	0.376 U	0.085 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.00124 J**	0.025 U	0.04 U	**0.00151 J**	0.024 U	0.04 U	**0.00349 J**	0.025 U	0.04 U	**0.0244**	0.026 U	0.04 U	**0.0204**	0.025 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.00348 J**	0.033 U	0.03 U	**0.00364 J**	0.033 U	0.03 U	**0.0168**	0.034 U	0.03 U	**0.133**	**0.15 J**	0.03 U	**0.11**	**0.11 J**	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.0163 U	0.031 U	0.85 U	0.00884 U	0.031 U	0.85 U	0.00824 U	0.032 U	0.85 U	**0.0134 J**	0.033 U	0.85 U	0.00861 U	0.032 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.00355 J**	0.026 U	0.02 U	**0.00912**	0.026 U	0.02 U	**0.0193**	0.027 U	0.02 U	**0.147**	**0.13 J**	0.02 U	**0.114**	**0.095 J**	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.0112 U	0.1 U	1.8 U	0.00609 U	0.1 U	1.8 U	0.00568 U	0.11 U	1.8 U	0.00641 U	0.11 U	1.8 U	0.00593 U	0.11 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	0.0326 U	**0.072 J**	**2.2 J**	0.0177 U	**0.12 J**	**2.2 J**	**0.0167 J**	**0.1 J**	**2.1 J**	**0.0381 J**	**0.17 J**	**2.9 J**	**0.0208 J**	**0.14 J**	**3 J**
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.0159**	0.033 U	0.02 U	**0.0297**	0.033 U	0.02 U	**0.0809**	**0.052 J**	0.02 U	**0.526**	**0.3**	0.02 U	**0.402**	**0.22**	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.0119**	0.072 U	0.02 U	**0.0323**	0.072 U	0.02 U	**0.106**	**0.074 J**	0.02 U	**0.677** [AC]	**0.46** [C]	0.02 U	**0.519** [AC]	**0.32** [C]	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.00963**	0.025 U	0.02 U	**0.028**	**0.024 J**	0.02 U	**0.0917**	**0.096**	0.02 U	**0.476**	**0.55**	0.02 U	**0.379**	**0.4**	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.00809**	0.035 U	0.02 U	**0.0226**	0.034 U	0.02 U	**0.0744**	**0.053 J**	0.02 U	**0.439**	**0.34**	0.02 U	**0.34**	**0.22 J**	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.0075 J**	0.021 U	0.02 U	**0.0259**	0.02 U	0.02 U	**0.0616**	**0.026 J**	0.02 U	**0.434**	**0.16**	0.02 U	**0.338**	**0.12**	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	0.0136 U	0.068 U	0.76 U	0.00737 U	0.068 U	0.76 U	0.00686 U	0.07 U	0.76 U	**0.0259 J**	0.072 U	0.76 U	**0.0144 J**	0.071 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.013 U	0.028 U	0.63 U	0.00706 U	0.028 U	0.63 U	0.00658 U	0.029 U	0.63 U	0.00743 U	0.03 U	0.63 U	0.00688 U	0.029 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0238 U	0.035 U	0.67 U	0.0129 U	0.035 U	0.67 U	0.012 U	0.036 U	0.67 U	0.0136 U	0.038 U	0.67 U	0.0126 U	0.037 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.0339 U	**0.041 J**	0.91 U	0.0184 U	**0.03 J**	0.91 U	**0.0382 J**	**0.1 J**	0.91 U	**0.154**	**0.18 J**	0.91 U	**0.142**	**0.69**	0.91 U
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.0262 U	0.039 U	1.3 U	0.0142 U	0.039 U	1.3 U	0.0132 U	0.04 U	1.3 U	0.0149 U	0.042 U	1.3 U	**0.0156 J**	0.04 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.019 U	0.063 U	3.6 U	0.0103 U	0.063 U	3.6 U	0.0096 U	0.065 U	3.6 U	0.0108 U	0.067 U	3.6 U	0.01 U	0.065 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	0.00826 U	0.019 U	0.63 U	0.00448 U	0.019 U	0.63 U	0.00417 U	0.019 U	0.63 U	**0.0139 J**	0.02 U	0.63 U	0.00436 U	**0.034 J**	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.00893**	0.03 U	0.02 U	**0.0202**	0.03 U	0.02 U	**0.0639**	**0.054 J**	0.02 U	**0.419**	**0.34**	0.02 U	**0.304**	**0.24**	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.00203 J**	0.034 U	0.02 U	**0.0055 J**	0.034 U	0.02 U	**0.0191**	0.035 U	0.02 U	**0.114**	**0.078 J**	0.02 U	**0.0879**	**0.056 J**	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	0.00969 U	0.026 U	0.66 U	0.00525 U	0.026 U	0.66 U	**0.00654 J**	0.027 U	0.66 U	**0.0322 J**	**0.03 J**	0.66 U	**0.0174 J**	0.027 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	**0.0233 J**	0.027 U	0.63 U	**4.18**	0.027 U	0.63 U	0.00668 U	0.028 U	0.63 U	0.00755 U	0.028 U	0.63 U	0.00699 U	0.028 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.0101 U	0.028 U	0.65 U	0.00548 U	0.028 U	0.65 U	0.0051 U	0.029 U	0.65 U	0.00576 U	0.03 U	0.65 U	0.00533 U	0.029 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.0123 U	0.026 U	0.69 U	0.00668 U	0.026 U	0.69 U	0.00622 U	0.027 U	0.69 U	0.00703 U	0.028 U	0.69 U	0.00651 U	0.027 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0536 U	0.092 U	1.1 U	0.0291 U	0.092 U	1.1 U	0.0271 U	0.095 U	1.1 U	0.0306 U	0.098 U	1.1 U	0.0283 U	0.095 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.0173**	0.034 U	0.01 U	**0.0361**	0.034 U	0.01 U	**0.0665**	**0.06 J**	0.01 U	**0.572**	**0.38**	0.01 U	**0.448**	**0.29**	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.00302 J**	0.028 U	0.02 U	**0.00472 J**	0.028 U	0.02 U	**0.00698 J**	0.029 U	0.02 U	**0.0357**	**0.049 J**	0.02 U	**0.0283**	**0.034 J**	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.0126 U	0.028 U	0.58 U [D]	0.00684 U	0.028 U	0.58 U [D]	0.00637 U	0.029 U	0.58 U [D]	0.0072 U	0.03 U	0.58 U [D]	0.00666 U	0.029 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0251 U	0.037 U	0.72 U	0.0136 U	0.036 U	0.72 U	0.0127 U	0.038 U	0.72 U	0.0143 U	0.039 U	0.72 U	0.0133 U	0.038 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.142 U	0.19 U	7.8 U	0.0769 U	0.18 U	7.8 U	0.0717 U	0.19 U	7.8 U	0.081 U	0.2 U	7.8 U	0.0749 U	0.19 R	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.0216 U	0.048 U	0.68 U	0.0117 U	0.048 U	0.68 U	0.0109 U	0.049 U	0.68 U	0.0124 U	0.051 U	0.68 U	0.0114 U	0.049 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.0119**	0.041 U	0.02 U	**0.0272**	0.041 U	0.02 U	**0.0742**	**0.052 J**	0.02 U	**0.406**	**0.33**	0.02 U	**0.318**	**0.22**	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.0142 U	0.033 U	0.6 U	0.00769 U	0.033 U	0.6 U	0.00717 U	0.034 U	0.6 U	0.0081 U	0.035 U	0.6 U	0.00749 U	0.034 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.00435 J**	0.036 U	0.04 U	**0.00635 J**	0.036 U	0.04 U	**0.0136**	0.037 U	0.04 U	**0.117**	**0.14 J**	**0.27**	**0.0801**	**0.11 J**	**0.05 J**
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.0135 U	0.044 U	0.75 U	0.00731 U	0.043 U	0.75 U	0.00681 U	0.045 U	0.75 U	0.0077 U	0.046 U	0.75 U	0.00712 U	0.045 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.022 U	0.025 U	0.7 U	0.0119 U	0.024 U	0.7 U	0.0111 U	0.025 U	0.7 U	0.0126 U	0.026 U	0.7 U	0.0116 U	0.025 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00909 U	0.024 U	0.64 U	0.00493 U	0.024 U	0.64 U	0.00459 U	0.025 U	0.64 U	0.00519 U	0.025 U	0.64 U	0.0048 U	0.025 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.233 U	0.065 U	3.4 U	0.126 U	0.065 U	3.4 U	0.118 U	0.067 U	3.4 U	0.133 U	0.069 U	3.4 U	0.123 U	0.067 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.00722 J**	0.021 U	0.02 U	**0.0144**	0.021 U	0.02 U	**0.0316**	**0.029 J**	0.02 U	**0.223**	**0.17 J**	0.02 U	**0.185**	**0.14 J**	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.0123 U	0.035 U	1.9 U	0.00667 U	0.035 U	1.9 U	0.00621 U	0.036 U	1.9 U	0.00702 U	0.037 U	1.9 U	0.00649 U	0.036 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.0174**	0.026 U	0.01 U	**0.04**	**0.032 J**	0.01 U	**0.101**	**0.089 J**	**0.01 JB**	**0.72**	**0.56**	**0.08 JB**	**0.568**	**0.44**	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.0233**	**0.113**	**2.2**	**4.18**	**0.206**	**2.2**	**0.07704**	**0.785**	**2.11**	**0.3192**	**4.644**	**3.25**	**0.2317**	**3.994**	**3.05**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**0.13533**	-		**0.31072**	-		**0.83911**	-		**5.5279**	-		**4.2942**	-	
EPH (mg/kg)		-		-		-		-															
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	44.5 U	-		50.8 U	-		48.3 U	-		51.9 U	-		49.2 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-															
Aluminum	78000	-	NA	-	6000	73	4000	-	**12800** [C]	**13100** [C]	**986**	**11800** [C]	**13200** [C]	**1080**	**14200** [C]	**13800** [C]	**896**	**13100** [C]	**14000** [C]	**1010**	**9780** [C]	**13200** [C]	**1190**
Antimony	31	-	450	-	6	-	120	-	**0.26 J**	0.527 U	4.29 U	0.272 U	0.538 U	4.29 U	**0.468 J**	0.548 U	4.29 U	**2.96 J**	**1.48 J**	4.29 U	**2.27 J**	**0.948 J**	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**11**	**10.6**	**1.66 J**	**11.4**	**10.5**	**1.66 J**	**18.7**	**14.9**	**2.09 J**	**50.9** [ABC]	**42.2** [ABC]	**4.88 J** [B]	**31.4** [ABC]	**34.5** [ABC]	**4 J** [B]
Barium	16000	-	59000	-	2100	-	120000	-	**25.7**	**59.5**	**42.9**	**23.4**	**55.2**	**46.4**	**31.2**	**62.6**	**54.9**	**70.8**	**93.6**	**44.7**	**47.7**	**86.5**	**62.2**
Beryllium	16	-	140	-	0.7	34	20	-	**0.851** [C]	**0.68 J**	1.07 U	**0.74** [C]	**0.652 J**	1.07 U	**0.823** [C]	**0.677 J**	1.07 U	**0.899** [C]	**0.69 J**	1.07 U	**0.822** [C]	**0.679 J**	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan												
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	DEP-5	DEP-5	DEP-5	VC-216	VC-216	VC-216	VC-217	VC-217	VC-217	VC-218	VC-218	VC-218	COMP-G	COMP-G	COMP-G
Sample Name									DEP-5-REV-D0-7.5E	DEP-5-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E	VC-216-D0-7.5E-A	VC-216-D0-7.5E-A	VC-217-D0-7.5E	VC-217-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E	VC-218-D0-7.5E-A	VC-218-D0-7.5E-A	COMP-G-D0-7.5E	COMP-G-D0-7.5E-A	COMP-G-D0-7.5E-A
Sample Date									10/30/2018	11/15/2018	11/15/2018	10/29/2018	11/14/2018	11/14/2018	10/29/2018	11/14/2018	11/14/2018	10/29/2018	11/09/2018	11/09/2018	10/28/2018	11/08/2018	11/08/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844690-03	L1846902-04	L1846902-04	L1844234-33	L1846705-10	L1846705-10	L1844234-32	L1846705-11	L1846705-11	L1844234-30	L1846705-12	L1846705-12	L1844234-28	L1846705-01	L1846705-01
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									11,249	11,249	11,249	4,759	4,759	4,759	6,057	6,057	6,057	4,759	4,759	4,759	14,711	14,711	14,711
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Cadmium	78	-	78	-	2	2	80	-	**0.103 J**	**0.513 J**	0.599 U	**0.098 J**	**0.51 J**	0.599 U	**0.224 J**	**0.591 J**	0.599 U	**0.734**	**0.915 J**	0.599 U	**0.547**	**0.99 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**12400**	**53100**	**153000**	**6120**	**46200**	**156000**	**5590**	**52100**	**156000**	**7680**	**56700**	**158000**	**7720**	**53300**	**177000**
Chromium	NA	-	NA	-	NA	-	NA	-	**28.2**	**72.6**	**171**	**26.3**	**68.4**	**146**	**34.9**	**74.6**	**144**	**62.3**	**98.6**	**55.1**	**50.4**	**102**	**58**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.311 U	0.291 U		0.339 U	0.289 U		0.324 U	0.294 U		0.357 U	0.308 U		0.338 U	0.302 U	
Cobalt	1600	-	590	-	90	-	2000	-	**8.9**	**8.83**	**1.83 J**	**8.1**	**8.7**	**1.85 J**	**10**	**9.05**	1.63 U	**9.48**	**9.63**	1.63 U	**7.09**	**9.21**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**14**	**28.4**	**32.9**	**15.6**	**28.3**	**33.5**	**39.2**	**42.8**	**47.8**	**163**	**136**	**125**	**100**	**122**	**129**
Iron	NA	-	NA	-	NA	-	NA	-	**31300**	**24700**	191 U	**28400**	**23100**	191 U	**34600**	**24100**	191 U	**33200**	**25000**	191 U	**26000**	**25400**	191 U
Lead	400	-	800	-	90	23	100	-	**15.1**	**17.4**	3.43 U	**19**	**19.2**	3.43 U	**34.2**	**28.1**	3.43 U	**136** [C]	**102** [C]	3.43 U	**95** [C]	**94.6** [C]	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**7040**	**7170**	242 U	**6650**	**7050**	242 U	**8020**	**7510**	242 U	**7000**	**7290**	242 U	**5700**	**6940**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**371** [C]	**431** [C]	4.4 U	**326** [C]	**379** [C]	4.4 U	**379** [C]	**393** [C]	4.4 U	**347** [C]	**394** [C]	4.4 U	**258** [C]	**392** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**0.067**	0.025 U	0.091 U	**0.099**	**0.075 J**	0.091 U	**0.303** [C]	**0.294** [C]	0.091 U	**1.29** [C]	**2.82** [C]	0.091 U	**1.39** [C]	**1.72** [C]	0.091 U
Nickel	1600	-	23000	-	48	-	2000	-	**22.2**	**32.9**	**35.6**	**20.9**	**31.5**	**36.4**	**26.7**	**34.5**	**35**	**32.9**	**41.3**	**62.8**	**23.6**	**38.2**	**68.4**
Potassium	NA	-	NA	-	NA	-	NA	-	**3000**	**3180**	**31000**	**2660**	**3140**	**32600**	**3300**	**3340**	**32800**	**2800**	**3100**	**28700**	**2250**	**3000**	**33400**
Selenium	390	-	5700	-	11	-	800	-	**2.59 J**	**0.832 J**	17.3 U	**2.39 J**	0.366 U	17.3 U	**3.36 J**	**0.793 J**	17.3 U	**5.28**	**2.37 J**	17.3 U	**3.54 J**	**1.95 J**	17.3 U
Silver	390	-	5700	-	1	26	800	-	0.093 U	0.392 U	1.63 U	0.098 U	0.401 U	1.63 U	**0.338 J**	0.408 U	1.63 U	**1.89** [C]	**1.32 J** [C]	1.63 U	**1.58** [C]	**1.56** [C]	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**7200**	**6190**	**158000**	**7940**	**5730**	**188000**	**9000**	**7080**	**235000**	**9610**	**7630**	**203000**	**9670**	**7390**	**250000**
Thallium	NA	-	NA	-	3	-	10	-	**0.12 J**	0.437 U	1.43 U	**0.126 J**	0.446 U	1.43 U	**0.138 J**	0.454 U	1.43 U	**0.177 J**	0.472 U	1.43 U	**0.146 J**	0.446 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**33.6**	**57.3**	**32.1 J**	**32.2**	**54.5**	**31.6 J**	**36.6**	**58.7**	**33.9 J**	**40.6**	**64.6**	**24 J**	**32.1**	**64.1**	**28.6 J**
Zinc	23000	-	110000	-	930	-	40000	-	**66.7**	**77.8**	34.1 U	**66.8**	**80.2**	34.1 U	**98.3**	**97.7**	34.1 U	**237**	**197**	34.1 U	**172**	**191**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-															
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00178 U	0.0149 U	0.016 U	0.00191 U	0.0143 U	0.017 U	0.00185 U	0.0151 U	0.016 U	0.00205 U	0.0147 U	0.016 U	0.00194 U	0.0156 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00239 U	0.0168 U	0.022 U	0.00256 U	0.0161 U	0.024 U	0.00248 U	0.017 U	0.022 U	0.00275 U	0.0166 U	0.022 U	0.0026 U	0.0176 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00229 U	0.0355 U	0.046 U	0.00245 U	0.0341 U	0.05 U	0.00238 U	0.036 U	0.046 U	0.00263 U	0.0351 U	0.046 U	0.00249 U	0.0373 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	0.00164 U	0.0226 U	0.036 U	**0.00283 J**	0.0217 U	0.039 U	**0.00813**	0.0229 U	0.036 U	**0.0453**	0.0223 U	0.036 U	**0.0445**	0.0237 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00205 U	0.0251 U	0.046 U	0.0022 U	0.0241 U	0.049 U	0.00214 U	0.0255 U	0.046 U	0.00236 U	0.0248 U	0.046 U	0.00223 U	0.0264 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	0.00204 U	0.0183 U	0.017 U	**0.00453 J**	0.0176 U	0.018 U	**0.00996**	0.0186 U	0.017 U	**0.0982**	0.0181 U	0.017 U	**0.136**	**0.122 J**	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	0.00205 U	0.0309 U	0.034 U	0.0022 U	0.0297 U	0.037 U	**0.00363 J**	0.0314 U	0.034 U	**0.0258**	0.0306 U	0.034 U	**0.0363**	**0.0359 J**	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00187 U	0.0213 U	0.033 U	0.002 U	0.0204 U	0.036 U	0.00195 U	0.0216 U	0.033 U	0.00215 U	0.021 U	0.033 U	0.00204 U	0.0224 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00162 U	0.0173 U	0.032 U	0.00173 U	0.0167 U	0.034 U	0.00168 U	0.0176 U	0.032 U	0.00186 U	0.0171 U	0.032 U	0.00176 U	0.0182 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	ND	ND	-	**0.00736**	ND	-	**0.02172**	ND	-	**0.1693**	ND	-	**0.2168** [AC]	**0.1579**	-
Other		-		-		-		-															
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**48.6**	**45**	**-**	**52.8**	**44.7**	**-**	**50.6**	**45.5**	**-**	**55.2**	**48**	**-**	**52.6**	**47**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**1.62**	-	-	**1.73**	-	-	**1.68**	-	-	**2.78**	-	-	**2.36**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**1.63**	-	-	**1.76**	-	-	**1.68**	-	-	**2.39**	-	-	**2.35**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**51.4**	**55**	**-**	**47.2**	**55.3**	**-**	**49.4**	**54.5**	**-**	**44.8**	**52**	**-**	**47.4**	**53**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**130**	**67**	**-**	**130**	**37**	**-**	**130**	**45**	**-**	**120**	**45**	**-**	**130**	**40**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.6**	**12**	**12**	**8.5**	**11.9**	**11.4**	**8.6**	**11.9**	**11.6**	**8.4**	**12**	**11**	**8.5**	**12**	**12**
Pesticides (mg/kg) (ug/L)		-		-		-		-															
4,4'-DDD	3	-	13	-	4	-	2	-	0.00006 U	0.00275 U	0.005 U	**0.00007**	0.003 U	0.005 U	**0.00014**	0.00299 U	0.005 U	**0.00357**	0.00319 UIP	0.005 U	**0.00468**	**0.00449 JIP**	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	**0.00008 P**	0.00178 U	0.004 U	**0.0001 IP**	0.00195 U	0.004 U	**0.00027**	0.00194 U	0.004 U	**0.0207**	**0.0252**	0.004 U	**0.0272**	0.00195 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	0.00006 U	0.0062 U	0.004 U	0.00006 U	0.00678 U	0.004 U	**0.00009 IP**	0.00674 U	0.004 U	**0.00057 IP**	0.00719 U	0.004 U	**0.00276 IP**	0.00679 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00006 U	0.00271 U	0.002 U	0.00006 U	0.00297 U	0.002 U	0.00006 U	0.00295 U	0.002 U	**0.00125 P**	0.00315 U	0.002 U	0.00007 U	0.00297 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00006 U	0.00091 U	0.004 U	0.00006 U	0.00099 U	0.004 U	0.00006 U	0.00099 U	0.004 U	0.00007 U	0.00106 U	0.004 U	0.00007 U	0.001 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00268 U	0.007 U	0.00006 U	0.00294 U	0.007 U	0.00006 U	0.00292 U	0.007 U	0.00007 U	0.00312 U	0.007 U	0.00007 U	0.00294 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00006 U	0.00292 U [C]	0.006 U	0.00006 U	0.0032 U [C]	0.006 U	0.00006 U	0.00318 U [C]	0.006 U	0.00007 U	0.00339 U [C]	0.006 U	0.00007 U	0.0032 U [C]	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00324 U	0.0255 U	0.046 U	0.00347 U	0.0279 U	0.046 U	0.00337 U	0.0278 U	0.046 U	0.00373 U	0.0296 U	0.046 U	0.00353 U	0.028 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00151 U	0.005 U	0.00006 U	0.00165 U	0.005 U	0.00006 U	0.00164 U	0.005 U	0.00007 U	0.00175 U	0.005 U	0.00007 U	0.00165 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	0.00006 U	0.00241 U	0.004 U	0.00006 U	0.00263 U	0.004 U	0.00006 U	0.00262 U	0.004 U	**0.00018 IP**	0.0028 U	0.004 U	**0.00026 IP**	0.00264 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00182 U	0.003 U	0.00006 U	0.00199 U	0.003 U	0.00006 U	0.00198 U	0.003 U	0.00007 U	0.00211 U	0.003 U	0.00007 U	0.002 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00258 U	0.005 U	0.00006 U	0.00282 U	0.005 U	0.00006 U	0.0028 U	0.005 U	0.00007 U	0.00299 U	0.005 U	0.00007 U	0.00282 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00006 U	0.00153 U	0.005 U	0.00006 U	0.00167 U	0.005 U	0.00006 U	0.00166 U	0.005 U	0.00007 U	0.00177 U	0.005 U	0.00007 U	0.00168 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00006 U	0.00132 U	0.004 U	0.00006 U	0.00144 U	0.004 U	0.00006 U	0.00143 U	0.004 U	0.00007 U	0.00153 U	0.004 U	0.00007 U	0.00144 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00019 U	0.00337 U	0.008 U	0.0002 U	0.00369 U	0.008 U	0.0002 U	0.00367 U	0.008 U	0.00022 U	0.00391 U	0.008 U	0.00021 U	0.0037 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00198 U	0.005 U	0.00006 U	0.00217 U	0.005 U	0.00006 U	0.00216 U	0.005 U	0.00007 U	0.0023 U	0.005 U	0.00007 U	0.00218 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00006 U	0.00144 U	0.004 U	0.00006 U	0.00157 U	0.004 U	0.00006 U	0.00156 U	0.004 U	0.00007 U	0.00166 U	0.004 U	0.00007 U	0.00157 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00254 U	0.006 U	0.00006 U	0.00278 U	0.006 U	**0.00016 IP**	0.00277 U	0.006 U	**0.00081 IP**	0.00295 U	0.006 U	**0.00111 IP**	0.00279 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00006 U	0.00173 U	0.003 U	0.00006 U	0.00189 U	0.003 U	0.00006 U	0.00188 U	0.003 U	0.00007 U	0.002 U	0.003 U	0.00007 U	0.00189 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00012 U	0.00434 U	0.004 U	0.00013 U	0.00474 UIP	0.004 U	0.00013 U	0.00472 U	0.004 U	0.00014 U	0.00503 U	0.004 U	0.00014 U	0.00475 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00064 U	0.0045 U	0.007 U	0.00069 U	0.00492 U	0.007 U	0.00067 U	0.00489 U	0.007 U	0.00074 U	0.00522 U	0.007 U	0.0007 U	0.00493 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00324 U	0.0405 U	0.063 U	0.00347 U	0.0442 U	0.063 U	0.00337 U	0.044 U	0.063 U	0.00373 U	0.047 U	0.063 U	0.00353 U	0.0444 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
  [A] - Residential Direct Contact Soil Remediation Standard
  [B] - Non-Residential Direct Contact Soil Remediation Standard
  [C] - Impact to Groundwater Soil Screening Level
  [D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan										
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-222	VC-222	VC-222	VC-223	VC-223	VC-223	COMP-I	COMP-I	COMP-I	COMP-J	COMP-J
Sample Name									VC-222-D0-7.5E	VC-222-D0-7.5E-A	VC-222-D0-7.5E-A	VC-223-D0-7.5E	VC-223-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E	COMP-I-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E	COMP-J-D0-7.5E-A
Sample Date									10/28/2018	11/08/2018	11/08/2018	10/28/2018	11/08/2018	11/08/2018	10/28/2018	11/09/2018	11/09/2018	10/28/2018	11/09/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844234-24	L1846705-13	L1846705-13	L1844234-23	L1846705-14	L1846705-14	L1844234-22	L1846705-02	L1846705-02	L1844234-21	L1846705-04
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg
Approximate Volume by Sample (cy)									4,327	4,327	4,327	3,029	3,029	3,029	25,096	25,096	25,096	8,654	8,654
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																			
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00697 U	0.033 U	0.67 U	0.00633 U	0.032 U	0.67 U	0.00676 U	0.032 U	0.67 U	0.00515 U	0.026 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.0122 U	0.036 U	0.7 U	0.0111 U	0.035 U	0.7 U	0.0118 U	0.036 U	0.7 U	0.00902 U	0.029 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.0127 U	0.064 U	0.93 U	0.0115 U	0.061 U	0.93 U	0.0123 U	0.063 U	0.93 U	0.00935 U	0.051 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00872 U	0.06 U	0.72 U	0.00793 U	0.058 U	0.72 U	0.00847 U	0.059 U	0.72 U	0.00644 U	0.048 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00654 U	0.06 U	0.68 U	0.00595 U	0.057 U	0.68 U	0.00635 U	0.059 U	0.68 U	0.00483 U	0.048 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00786 U	0.051 U	0.77 U	0.00714 U	0.049 U	0.77 U	0.00763 U	0.05 U	0.77 U	0.00581 U	0.04 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.0121 U	0.1 U	1.6 U	0.011 U	0.096 U	1.6 U	0.0117 U	0.099 U	1.6 U	0.00891 U	0.08 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.125 U	0.15 U	5.5 U	0.113 U	0.14 U	5.5 U	0.121 U	0.14 U	5.5 U	0.0921 U	0.12 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00512 U	0.052 U	0.84 U	0.00466 U	0.05 U	0.84 U	0.00497 U	0.052 U	0.84 U	0.00378 U	0.042 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0189 U	0.042 U	1.1 U	0.0172 U	0.04 U	1.1 U	0.0183 U	0.041 U	1.1 U	0.0139 U	0.033 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00066 U	0.03 U	0.03 U	0.00058 U	0.029 U	0.03 U	0.00066 U	0.03 U	0.03 U	0.0005 U	0.024 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00483 U	0.035 U	0.63 U	0.00439 U	0.033 U	0.63 U	0.00469 U	0.034 U	0.63 U	0.00357 U	0.028 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.0541**	**0.045 J**	0.06 U	**0.0315**	0.032 U	0.06 U	0.00104 U	0.033 U	0.06 U	**0.00106 J**	0.027 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00629 U	0.049 U	1 U	0.00572 U	0.047 U	1 U	0.00611 U	0.048 U	1 U	0.00465 U	0.039 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0118 U	0.058 U	1.1 U	0.0108 U	0.055 U	1.1 U	0.0115 U	0.057 U	1.1 U	0.00874 U	0.046 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00789 U	0.052 U	1.5 U	0.00717 U	0.05 U	1.5 U	0.00766 U	0.051 U	1.5 U	0.00583 U	0.041 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	**0.0385 J**	**0.06 J**	1.1 U	**0.0249 J**	0.044 U	1.1 U	0.0093 U	0.045 U	1.1 U	0.00707 U	0.036 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.0125 U	0.08 U	1.4 U	0.0114 U	0.077 U	1.4 U	0.0121 U	0.079 U	1.4 U	0.00922 U	0.064 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00768 U	0.059 U	1.2 U	0.00699 U	0.057 U	1.2 U	0.00746 U	0.058 U	1.2 U	0.00568 U	0.047 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.14 U	0.15 U	2.1 U	0.128 U	0.14 U	2.1 U	0.136 U	0.15 U	2.1 U	0.104 U	0.12 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00688 U	0.035 U	0.73 U	0.00625 U	0.034 U	0.73 U	0.00668 U	0.034 U	0.73 U	0.00508 U	0.028 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.0106 U	0.047 U	0.62 U	0.00961 U	0.045 U	0.62 U	0.0103 U	0.046 U	0.62 U	0.00781 U	0.038 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00669 U	0.036 U	0.63 U	0.00608 U	0.035 U	0.63 U	0.0065 U	0.036 U	0.63 U	0.00494 U	0.029 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00706 U	0.026 U	0.62 U	0.00641 U	0.025 U	0.62 U	0.00685 U	0.026 U	0.62 U	0.00521 U	0.021 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00988 U	0.13 U	1.3 U	0.00898 U	0.12 U	1.3 U	0.00959 U	0.13 U	1.3 U	0.0073 U	0.1 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.402 U	0.088 U	1.8 U	0.366 U	0.084 U	1.8 U	0.391 U	0.086 U	1.8 U	0.297 U	0.07 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.0203**	0.026 U	0.04 U	**0.0113**	0.025 U	0.04 U	0.00094 U	0.026 U	0.04 U	0.00071 U	0.021 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.129**	**0.11 J**	0.03 U	**0.0704**	**0.071 J**	0.03 U	0.00056 U	0.035 U	0.03 U	**0.00182 J**	0.028 U
Acetophenone	2	-	5	-	3	-	14000	-	**0.00922 J**	0.033 U	0.85 U	**0.0101 J**	0.032 U	0.85 U	0.00895 U	0.032 U	0.85 U	0.00681 U	0.026 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.135**	**0.082 J**	0.02 U	**0.0898**	**0.063 J**	0.02 U	**0.00159 J**	0.028 U	0.02 U	**0.00219 J**	0.022 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.00635 U	0.11 U	1.8 U	0.00578 U	0.1 U	1.8 U	0.00617 U	0.11 U	1.8 U	0.00469 U	0.088 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	**0.0565 J**	**0.16 J**	**3.5 J**	**0.0456 J**	**0.1 J**	**3.5 J**	0.0179 U	**0.09 J**	**1.8 J**	0.0136 U	**0.079 J**
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.432**	**0.24**	0.02 U	**0.274**	**0.17**	0.02 U	0.00225 U	0.035 U	0.02 U	**0.00642**	0.028 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.566** [AC]	**0.32** [C]	0.02 U	**0.385** [C]	**0.24** [C]	0.02 U	**0.00141 J**	0.076 U	0.02 U	**0.00715**	0.061 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.447**	**0.37**	0.02 U	**0.293**	**0.28**	0.02 U	**0.00192 J**	0.026 U	0.02 U	**0.00585 J**	0.021 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.377**	**0.22 J**	0.02 U	**0.265**	**0.17 J**	0.02 U	**0.00134 J**	0.036 U	0.02 U	**0.00589 J**	0.03 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.345**	**0.13**	0.02 U	**0.23**	**0.1**	0.02 U	**0.00176 J**	0.022 U	0.02 U	**0.0059 J**	0.018 U
Biphenyl	61	-	240	-	140	-	6000	-	**0.0224 J**	0.073 U	0.76 U	**0.0188 J**	0.07 U	0.76 U	0.00746 U	0.072 U	0.76 U	0.00568 U	0.058 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00736 U	0.03 U	0.63 U	0.00669 U	0.029 U	0.63 U	0.00715 U	0.029 U	0.63 U	0.00544 U	0.024 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0134 U	0.038 U	0.67 U	0.0122 U	0.036 U	0.67 U	0.013 U	0.037 U	0.67 U	0.00993 U	0.03 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	**0.527**	**0.3 J**	**1 J**	**0.457**	**2.4**	**5.2**	0.0186 U	**0.05 J**	0.91 U	0.0142 U	**0.028 J**
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	**0.0206 J**	0.042 U	1.3 U	**0.0248 J**	0.04 U	1.3 U	0.0144 U	0.041 U	1.3 U	0.0109 U	0.034 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.0107 U	0.067 U	3.6 U	0.00977 U	0.065 U	3.6 U	0.0104 U	0.066 U	3.6 U	0.00794 U	0.054 U
Carbazole	24	-	96	-	NA	-	NA	-	0.00467 U	0.02 U	0.63 U	**0.0101 J**	0.019 U	0.63 U	0.00453 U	0.02 U	0.63 U	0.00345 U	0.016 U
Chrysene	450	-	1700	-	80	-	2	-	**0.349**	**0.26**	0.02 U	**0.235**	**0.18**	0.02 U	**0.00228 J**	0.032 U	0.02 U	**0.00483 J**	0.026 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.103**	**0.055 J**	0.02 U	**0.0662**	**0.041 J**	0.02 U	0.00086 U	0.036 U	0.02 U	**0.00124 J**	0.029 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	**0.0278 J**	0.028 U	0.66 U	**0.0206 J**	0.027 U	0.66 U	0.00532 U	0.027 U	0.66 U	0.00404 U	0.022 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00748 U	0.028 U	0.63 U	0.0068 U	0.027 U	0.63 U	0.00726 U	0.028 U	0.63 U	0.00552 U	0.023 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00571 U	0.03 U	0.65 U	0.00519 U	0.029 U	0.65 U	0.00554 U	0.03 U	0.65 U	0.00422 U	0.024 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00697 U	0.028 U	0.69 U	0.00633 U	0.027 U	0.69 U	0.00676 U	0.027 U	0.69 U	0.00515 U	0.022 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0303 U	0.098 U	1.1 U	0.0275 U	0.094 U	1.1 U	0.0294 U	0.097 U	1.1 U	0.0224 U	0.078 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.485**	**0.29**	0.01 U	**0.275**	**0.22**	0.01 U	**0.00407 J**	0.036 U	0.01 U	**0.0063 J**	0.029 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.0299**	**0.03 J**	0.02 U	**0.0181**	0.029 U	0.02 U	**0.00191 J**	0.03 U	0.02 U	**0.00129 J**	0.024 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.00713 U	0.03 U	0.58 U [D]	0.00648 U	0.029 U	0.58 U [D]	0.00692 U	0.03 U	0.58 U [D]	0.00527 U	0.024 U
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0142 U	0.039 U	0.72 U	0.0129 U	0.038 U	0.72 U	0.0138 U	0.038 U	0.72 U	0.0105 U	0.031 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0802 U	0.2 U	7.8 U	0.0729 U	0.19 U	7.8 U	0.0779 U	0.2 U	7.8 U	0.0592 U	0.16 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.0122 U	0.051 U	0.68 U	0.0111 U	0.049 U	0.68 U	0.0119 U	0.05 U	0.68 U	0.00904 U	0.041 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.352**	**0.21**	0.02 U	**0.252**	**0.17**	0.02 U	**0.00564 J**	0.043 U	0.02 U	**0.00862**	0.035 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.00802 U	0.035 U	0.6 U	0.00729 U	0.034 U	0.6 U	0.00779 U	0.035 U	0.6 U	0.00592 U	0.028 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.0792**	**0.089 J**	**0.05 J**	**0.0494**	**0.059 J**	**0.05 J**	**0.00125 J**	0.038 U	0.04 U	**0.00205 J**	0.031 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.00763 U	0.046 U	0.75 U	0.00693 U	0.045 U	0.75 U	0.0074 U	0.046 U	0.75 U	0.00563 U	0.037 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.0124 U	0.026 U	0.7 U	0.0113 U	0.025 U	0.7 U	0.0121 U	0.026 U	0.7 U	0.0092 U	0.021 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00514 U	0.026 U	0.64 U	0.00467 U	0.025 U	0.64 U	0.00499 U	0.025 U	0.64 U	0.0038 U	0.02 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.132 U	0.069 U	3.4 U	0.12 U	0.066 U	3.4 U	0.128 U	0.068 U	3.4 U	0.0972 U	0.055 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.195**	**0.12 J**	0.02 U	**0.104**	**0.089 J**	0.02 U	**0.00346 J**	0.022 U	0.02 U	**0.00384 J**	0.018 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00695 U	0.037 U	1.9 U	0.00632 U	0.036 U	1.9 U	0.00675 U	**0.17 J**	1.9 U	0.00514 U	0.03 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.603**	**0.43**	**0.07 JB**	**0.321**	**0.32**	**0.05 JB**	**0.00368 J**	0.027 U	0.01 U	**0.00894**	0.022 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.70202**	**3.521**	**4.62**	**0.6119**	**4.673**	**8.8**	ND	**0.31**	**1.8**	ND	**0.107**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**4.7015**	-		**2.9707**	-		**0.03031**	-		**0.07339**	-
EPH (mg/kg)		-		-		-		-											
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	**102**	-		47.2 U	-		49.8 U	-		38.8 U	-
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-											
Aluminum	78000	-	NA	-	6000	73	4000	-	**13700** [C]	**13400** [C]	**1010**	**10900** [C]	**13700** [C]	**1110**	**9560** [C]	**13600** [C]	**803**	**5960**	**9600** [C]
Antimony	31	-	450	-	6	-	120	-	**3.5**	**1.17 J**	4.29 U	**1.53 J**	**0.632 J**	4.29 U	**0.662 J**	0.558 U	4.29 U	0.212 U	0.462 U
Arsenic	19	22	19	22	19	22	3	11	**45** [ABC]	**33.9** [ABC]	**3.78 J** [B]	**21.8** [ABC]	**21.9** [ABC]	**2.79 J**	**8.38**	**11.1**	1.65 U	**6.16**	**8.51**
Barium	16000	-	59000	-	2100	-	120000	-	**67.4**	**87**	**55.4**	**40.7**	**78.4**	**50.2**	**17**	**58.1**	**77.5**	**9.79**	**45.7**
Beryllium	16	-	140	-	0.7	34	20	-	**0.933** [C]	**0.687 J**	1.07 U	**0.721** [C]	**0.676 J**	1.07 U	**0.615 J**	**0.66 J**	1.07 U	**0.391 J**	**0.438 J**

									Nearshore-Raritan										
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-J	VC-311	VC-311	VC-311
Sample Name									COMP-J-D0-7.5E-A	VC-311-D0-7.5E	VC-311-D0-7.5E-A	VC-311-D0-7.5E-A
Sample Date									11/09/2018	10/28/2018	11/09/2018	11/09/2018
Sample Type									Primary	Primary	Primary	Primary
Lab Sample ID									L1846705-04	L1844234-14	L1846705-03	L1846705-03
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									SPLP	Raw	Amended	SPLP
									ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									8,654	11,682	11,682	11,682
Soil Description									HARS	HARS	HARS	HARS
Semi-Volatile Organic Compounds (mg/kg) (ug/L)												
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.67 U	0.00375 U	0.02 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.7 U	0.00657 U	0.022 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.93 U	0.00681 U	0.038 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.72 U	0.00469 U	0.036 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.68 U	0.00352 U	0.036 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.77 U	0.00423 U	0.03 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	1.6 U	0.00649 U	0.06 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	5.5 U	0.0671 U	0.088 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.84 U	0.00276 U	0.031 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	1.1 U	0.0102 U	0.025 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.03 U	0.00063 U	0.018 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.63 U	0.0026 U	0.021 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.00106 J**	0.00101 U	0.02 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	1 U	0.00339 U	0.029 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	1.1 U	0.00636 U	0.035 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	1.5 U	0.00424 U	0.031 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	1.1 U	0.00515 U	0.027 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	1.4 U	0.00672 U	0.048 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	1.2 U	0.00414 U	0.036 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	2.1 U	0.0756 U	0.091 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.73 U	0.0037 U	0.021 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.62 U	0.00569 U	0.028 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.63 U	0.0036 U	0.022 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.62 U	0.0038 U	0.016 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	1.3 U	0.00532 U	0.078 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	1.8 U	0.217 U	0.052 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	0.04 U	0.00091 U	0.016 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	0.03 U	0.00054 U	0.021 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.85 U	0.00496 U	0.02 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	0.02 U	0.00101 U	0.017 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	1.8 U	0.00342 U	0.066 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	**1.7 J**	0.00992 U	0.029 U	1.1 U
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	0.02 U	0.00218 U	0.021 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	0.02 U	0.00095 U	0.046 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	0.02 U	0.00084 U	0.016 U	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	0.02 U	0.00067 U	0.022 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	0.02 U	0.00084 U	0.013 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	0.76 U	0.00414 U	0.044 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.63 U	0.00396 U	0.018 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.67 U	0.00723 U	0.023 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.91 U	0.0103 U	**0.037 J**	0.91 U
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	1.3 U	0.00796 U	0.025 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	3.6 U	0.00578 U	0.04 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	0.63 U	0.00251 U	0.012 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	0.02 U	0.00071 U	0.019 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	0.02 U	0.00084 U	0.022 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	0.66 U	0.00295 U	0.017 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.63 U	**0.0751**	0.017 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.65 U	0.00307 U	0.018 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.69 U	0.00375 U	0.017 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	1.1 U	0.0163 U	0.059 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	0.01 U	0.00149 U	0.022 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	0.02 U	0.00054 U	0.018 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.58 U [D]	0.00384 U	0.018 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.72 U	0.00764 U	0.023 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	7.8 U	0.0432 U	0.12 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.68 U	0.00658 U	0.031 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.00448 J**	0.026 U	0.02 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.6 U	0.00432 U	0.021 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.04 J**	0.00073 U	0.023 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.75 U	0.0041 U	0.028 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.7 U	0.0067 U	0.016 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.64 U	0.00276 U	0.015 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	3.4 U	0.0708 U	0.042 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	0.02 U	0.00096 U	0.014 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	1.9 U	0.00374 U	0.022 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	0.01 U	0.00083 U	0.016 U	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**1.74**	**0.0751**	**0.037**	-
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-		**0.00448**	-	
EPH (mg/kg)		-		-		-		-				
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-		28.8 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-				
Aluminum	78000	-	NA	-	6000	73

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan											
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-222	VC-222	VC-222	VC-223	VC-223	VC-223	COMP-I	COMP-I	COMP-I	COMP-J	COMP-J	COMP-J	VC-311	VC-311	VC-311
Sample Name									VC-222-D0-7.5E	VC-222-D0-7.5E-A	VC-222-D0-7.5E-A	VC-223-D0-7.5E	VC-223-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E	COMP-I-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-J-D0-7.5E	COMP-J-D0-7.5E-A	COMP-J-D0-7.5E-A	VC-311-D0-7.5E	VC-311-D0-7.5E-A	VC-311-D0-7.5E-A
Sample Date									10/28/2018	11/08/2018	11/08/2018	10/28/2018	11/08/2018	11/08/2018	10/28/2018	11/09/2018	11/09/2018	10/28/2018	11/09/2018	11/09/2018	10/28/2018	11/09/2018	11/09/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844234-24	L1846705-13	L1846705-13	L1844234-23	L1846705-14	L1846705-14	L1844234-22	L1846705-02	L1846705-02	L1844234-21	L1846705-04	L1846705-04	L1844234-14	L1846705-03	L1846705-03
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									4,327	4,327	4,327	3,029	3,029	3,029	25,096	25,096	25,096	8,654	8,654	8,654	11,682	11,682	11,682
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Cadmium	78	-	78	-	2	2	80	-	**0.976**	**1.1 J**	0.599 U	**0.594**	**0.906 J**	0.599 U	**0.076 J**	**0.543 J**	0.599 U	**0.053 J**	**0.389 J**	0.599 U	0.032 U	**0.325 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**17800**	**64000**	**173000**	**11800**	**56300**	**167000**	**10600**	**52100**	**132000**	**15100**	**52800**	**192000**	**866**	**37600**	**414000**
Chromium	NA	-	NA	-	NA	-	NA	-	**79**	**106**	**68.1**	**51**	**94.8**	**86.6**	**20.9**	**74.4**	**113**	**14.6**	**59**	**165**	**12.7**	**56.4**	**194**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.353 U	0.306 U		0.321 U	0.291 U		0.343 U	0.301 U		0.264 U	0.245 U		0.192 U	0.184 U	
Cobalt	1600	-	590	-	90	-	2000	-	**10.1**	**9.33**	1.63 U	**8.18**	**9.22**	**1.74 J**	**6.36**	**8.86**	1.63 U	**4.62**	**6.5**	1.63 U	**2.55**	**3.6**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**165**	**136**	**162**	**86**	**97.6**	**124**	**8.76**	**26.9**	**19.3**	**7.32**	**22.8**	**25.8**	**8.94**	**22.8**	**7.15 J**
Iron	NA	-	NA	-	NA	-	NA	-	**36300**	**24500**	191 U	**28300**	**23700**	191 U	**23600**	**25300**	191 U	**16500**	**17800**	191 U	**18900**	**16000**	191 U
Lead	400	-	800	-	90	23	100	-	**143** [C]	**98.9** [C]	3.43 U	**81.9**	**72**	3.43 U	**8.17**	**15.7**	3.43 U	**8.81**	**14**	3.43 U	**5.07**	**9.23**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**7710**	**7200**	242 U	**6390**	**7230**	242 U	**6200**	**7740**	242 U	**3770**	**5470**	242 U	**1490**	**2760**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**381** [C]	**380** [C]	4.4 U	**315** [C]	**381** [C]	4.4 U	**355** [C]	**470** [C]	4.4 U	**197** [C]	**324** [C]	**8.13 J**	**50.8**	**155** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**1.6** [C]	**1.58** [C]	0.091 U	**1.08** [C]	**1.48** [C]	0.091 U	**0.014 J**	0.025 U	0.091 U	**0.042**	**0.027 J**	0.091 U	**0.01 J**	0.015 U	0.091 U
Nickel	1600	-	23000	-	48	-	2000	-	**35.1**	**39.6**	**79.4**	**24.8**	**38**	**63.4**	**17**	**33.3**	**22.6**	**11.3**	**25.9**	**26.9**	**6.16**	**19.9**	5.56 U
Potassium	NA	-	NA	-	NA	-	NA	-	**2990**	**3090**	**32500**	**2470**	**3150**	**32100**	**2520**	**3530**	**32400**	**1430**	**2360**	**31800**	**574**	**968**	**21100**
Selenium	390	-	5700	-	11	-	800	-	**6.47**	**2.54 J**	17.3 U	**3.45 J**	**1.81 J**	17.3 U	**2.46 J**	**0.734 J**	17.3 U	**1.78 J**	**0.657 J**	17.3 U	**1.01 J**	**0.369 J**	17.3 U
Silver	390	-	5700	-	1	26	800	-	**2.71** [C]	**1.81** [C]	1.63 U	**1.51** [C]	**1.19 J** [C]	1.63 U	**0.13 J**	0.415 U	1.63 U	0.077 U	0.344 U	1.63 U	0.058 U	0.248 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**9980**	**7780**	**258000**	**8180**	**6960**	**197000**	**9000**	**7710**	**245000**	**4710**	**4680**	**151000**	**2100**	**1570**	**67000**
Thallium	NA	-	NA	-	3	-	10	-	**1.24**	0.46 U	1.43 U	**0.174 J**	0.453 U	1.43 U	**0.159 J**	0.462 U	1.43 U	0.081 U	0.383 U	1.43 U	0.062 U	0.277 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**45.2**	**64.4**	**27.2 J**	**32.3**	**60.8**	**29.1 J**	**24.4**	**57.7**	**33.6 J**	**15.4**	**44**	15.7 U	**22**	**40.8**	15.7 U
Zinc	23000	-	110000	-	930	-	40000	-	**269**	**202**	34.1 U	**161**	**162**	34.1 U	**46.7**	**79.6**	34.1 U	**40.1**	**64**	34.1 U	**21.4**	**41.5**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-															
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00199 U	0.0142 U	0.016 U	0.00182 U	0.0152 U	0.016 U	0.00193 U	0.0148 U	0.016 U	0.0015 U	0.0126 U	0.016 U	0.00108 U	0.0499 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00267 U	0.0161 U	0.022 U	0.00244 U	0.0172 U	0.022 U	0.00258 U	0.0167 U	0.022 U	0.00201 U	0.0143 U	0.022 U	0.00144 U	0.0563 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00255 U	0.034 U	0.046 U	0.00234 U	0.0363 U	0.046 U	0.00247 U	0.0353 U	0.046 U	0.00192 U	0.0302 U	0.046 U	0.00138 U	0.119 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	**0.0723**	0.0216 U	0.036 U	**0.0429**	0.0231 U	0.036 U	0.00178 U	0.0225 U	0.036 U	0.00138 U	0.0192 U	0.036 U	0.00099 U	0.0757 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00229 U	0.0241 U	0.046 U	0.0021 U	0.0257 U	0.046 U	0.00222 U	0.025 U	0.046 U	0.00173 U	0.0213 U	0.046 U	0.00124 U	0.0842 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	**0.148**	**0.102 J**	0.017 U	**0.0554**	**0.0881 J**	0.017 U	0.00221 U	0.0182 U	0.017 U	0.00172 U	0.0156 U	0.017 U	0.00123 U	0.0614 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	**0.0492**	**0.0336 J**	0.034 U	**0.0188**	0.0316 U	0.034 U	0.00222 U	0.0308 U	0.034 U	0.00173 U	0.0263 U	0.034 U	0.00124 U	0.104 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00209 U	0.0204 U	0.033 U	0.00192 U	0.0217 U	0.033 U	0.00203 U	0.0212 U	0.033 U	0.00157 U	0.0181 U	0.033 U	0.00113 U	0.0713 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.0018 U	0.0166 U	0.032 U	0.00165 U	0.0177 U	0.032 U	0.00175 U	0.0173 U	0.032 U	0.00136 U	0.0147 U	0.032 U	0.00097 U	0.0582 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	**0.2695** [AC]	**0.1356**	-	**0.1171**	**0.0881**	-	ND	ND	-	ND	ND	-	ND	ND	-
Other		-		-		-		-															
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**54.7**	**47.7**	**-**	**50.1**	**45.1**	**-**	**53.3**	**46.8**	**-**	**39.4**	**34.7**	**-**	**16.7**	**12.9**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**2.17**	-	-	**1.98**	-	-	**1.52**	-	-	**1.08**	-	-	**0.173**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**2.16**	-	-	**2.14**	-	-	**1.49**	-	-	**0.897**	-	-	**0.21**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**45.3**	**52.3**	**-**	**49.9**	**54.9**	**-**	**46.7**	**53.2**	**-**	**60.6**	**65.3**	**-**	**83.3**	**87.1**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**130**	**46**	**-**	**150**	**46**	**-**	**170**	**33**	**-**	**180**	**36**	**-**	**170**	**33**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.6**	**11.8**	**11.5**	**8.2**	**11.8**	**11.6**	**8.4**	**11.8**	**11.5**	**8.**	**12.2**	**11.6**	**7.7**	**12.6**	**11.9**
Pesticides (mg/kg) (ug/L)		-		-		-		-															
4,4'-DDD	3	-	13	-	4	-	2	-	**0.00427**	**0.0157 P**	0.005 U	**0.00102**	0.00287 UIP	0.005 U	0.00006 U	0.00317 U	0.005 U	0.00005 U	0.00249 U	0.005 U	0.00003 U	0.00179 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	**0.0214**	**0.0224**	0.004 U	**0.00452**	**0.00447 JIP**	0.004 U	0.00006 U	0.00205 U	0.004 U	**0.0001 P**	0.00162 U	0.004 U	0.00003 U	0.00116 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	**0.00071 IP**	0.00681 U	0.004 U	**0.00152 IP**	0.00647 U	0.004 U	0.00006 U	0.00714 U	0.004 U	0.00005 U	0.00562 U	0.004 U	0.00003 U	0.00404 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00007 U	0.00298 U	0.002 U	0.00006 U	0.00283 U	0.002 U	0.00006 U	0.00313 U	0.002 U	0.00005 U	0.00246 U	0.002 U	0.00003 U	0.00177 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00007 U	0.001 U	0.004 U	0.00006 U	0.00095 U	0.004 U	0.00006 U	0.00105 U	0.004 U	0.00005 U	0.00082 U	0.004 U	0.00003 U	0.00059 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00295 U	0.007 U	**0.00013 IP**	0.0028 U	0.007 U	0.00006 U	0.00309 U	0.007 U	0.00005 U	0.00243 U	0.007 U	0.00003 U	0.00175 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00007 U	0.00321 U [C]	0.006 U	0.00006 U	0.00305 U [C]	0.006 U	0.00006 U	0.00337 U [C]	0.006 U	0.00005 U	0.00265 U [C]	0.006 U	0.00003 U	0.0019 U	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00362 U	0.028 U	0.046 U	0.00332 U	0.0267 U	0.046 U	0.00351 U	0.0294 U	0.046 U	0.00272 U	0.0231 U	0.046 U	0.00196 U	0.0166 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00166 U	0.005 U	0.00006 U	0.00158 U	0.005 U	0.00006 U	0.00174 U	0.005 U	0.00005 U	0.00137 U	0.005 U	0.00003 U	0.00098 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	**0.00044 IP**	0.00264 U	0.004 U	**0.00031 IP**	0.00252 U	0.004 U	0.00006 U	0.00278 U	0.004 U	0.00005 U	0.00218 U	0.004 U	0.00003 U	0.00157 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.002 U	0.003 UIP	0.00006 U	0.0019 U	0.003 U	0.00006 U	0.0021 U	0.003 U	0.00005 U	0.00165 U	0.003 U	0.00003 U	0.00118 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00283 U	0.005 U	**0.00176 P**	0.00269 U	0.005 U	0.00006 U	0.00297 U	0.005 U	0.00005 U	0.00233 U	0.005 U	0.00003 U	0.00168 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00007 U	0.00168 U	0.005 U	0.00006 U	0.0016 U	0.005 U	0.00006 U	0.00176 U	0.005 U	0.00005 U	0.00138 U	0.005 U	0.00003 U	0.00099 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00007 U	0.00145 U	0.004 U	0.00006 U	0.00138 U	0.004 U	0.00006 U	0.00152 U	0.004 U	0.00005 U	0.00119 U	0.004 U	0.00003 U	0.00085 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00021 U	0.0037 U	0.008 U	0.00019 U	0.00352 U	0.008 U	0.00021 U	0.00388 U	0.008 U	0.00016 U	0.00306 U	0.008 U	0.00011 U	0.0022 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00218 U	0.005 U	0.00006 U	0.00207 U	0.005 U	0.00006 U	0.00229 U	0.005 U	0.00005 U	0.0018 U	0.005 U	0.00003 U	0.00129 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00007 U	0.00158 U	0.004 U	0.00006 U	0.0015 U	0.004 U	0.00006 U	0.00165 U	0.004 U	0.00005 U	0.0013 U	0.004 U	0.00003 U	0.00093 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	**0.00176 IP**	0.00279 U	0.006 U	0.00006 U	0.00266 U	0.006 U	0.00006 U	0.00293 U	0.006 U	0.00005 U	0.0023 U	0.006 U	0.00003 U	0.00166 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00007 U	0.0019 U	0.003 U	0.00006 U	0.0018 U	0.003 U	0.00006 U	0.00199 U	0.003 U	0.00005 U	0.00157 U	0.003 U	0.00003 U	0.00112 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00014 U	0.00476 U	0.004 U	0.00013 U	0.00453 U	0.004 U	0.00014 U	0.005 U	0.004 U	0.0001 U	0.00393 U	0.004 U	0.00007 U	0.00282 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00072 U	0.00494 U	0.007 U	0.00066 U	0.0047 U	0.007 U	0.00069 U	0.00518 U	0.007 U	0.00054 U	0.00408 U	0.007 U	0.00039 U	0.00293 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00362 U	0.0444 U	0.063 U	0.00332 U	0.0423 U	0.063 U	0.00351 U	0.0466 U	0.063 U	0.00272 U	0.0367 U	0.063 U	0.00196 U	0.0263 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan			Raritan Bay							
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-K	COMP-K	COMP-K	COMP-L	COMP-L	COMP-L	VC-229	VC-229	VC-229	COMP-M	COMP-M	COMP-M
Sample Name									COMP-K-D0-7.5E	COMP-K-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E	COMP-L-D0-20.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E	VC-229-D0-28E-A	VC-229-D0-28E-A	COMP-M-D0-27E	COMP-M-D0-27E-A	COMP-M-D0-27E-A
Sample Date									10/28/2018	11/09/2018	11/09/2018	10/20/2018	10/26/2018	10/26/2018	10/20/2018	10/28/2018	10/28/2018	10/20/2018	10/26/2018	10/26/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844234-20	L1846705-05	L1846705-05	L1843139-04	L1844053-01	L1844053-01	L1843139-09	L1844053-03	L1844053-03	L1843139-08	L1844053-02	L1844053-02
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									24,229	24,229	24,229	30,927	30,927	30,927	33,428	33,428	33,428	40,099	40,099	40,099
Soil Description									HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																				
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00368 U	0.02 U	0.67 U	0.00609 U	0.03 U	0.67 U	0.00615 U	0.029 U	0.67 U	0.00613 U	0.029 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.00644 U	0.022 U	0.7 U	0.0107 U	0.033 U	0.7 U	0.0108 U	0.032 U	0.7 U	0.0107 U	0.032 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.00668 U	0.038 U	0.93 U	0.0111 U	0.058 U	0.93 U	0.0112 U	0.056 U	0.93 U	0.0111 U	0.056 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.0046 U	0.036 U	0.72 U	0.00763 U	0.055 U	0.72 U	0.0077 U	0.053 U	0.72 U	0.00768 U	0.054 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00345 U	0.036 U	0.68 U	0.00572 U	0.054 U	0.68 U	0.00577 U	0.053 U	0.68 U	0.00576 U	0.053 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00415 U	0.03 U	0.77 U	0.00687 U	0.046 U	0.77 U	0.00693 U	0.045 U	0.77 U	0.00692 U	0.045 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.00636 U	0.06 U	1.6 U	0.0105 U	0.091 U	1.6 U	0.0106 U	0.088 U	1.6 U	0.0106 U	0.089 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.0658 U	0.088 U	5.5 U	0.109 U	0.13 U	5.5 U	0.11 U	0.13 U	5.5 U	0.11 U	0.13 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0027 U	0.031 U	0.84 U	0.00448 U	0.047 U	0.84 U	0.00452 U	0.046 U	0.84 U	0.00451 U	0.046 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00996 U	0.025 U	1.1 U	0.0165 U	0.038 U	1.1 U	0.0166 U	0.037 U	1.1 U	0.0166 U	0.037 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00073 U	0.018 U	0.03 U	0.00058 U	0.027 U	0.03 U	0.00057 U	0.026 U	0.03 U	0.00057 U	0.027 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00255 U	0.021 U	0.63 U	0.00422 U	0.031 U	0.63 U	0.00426 U	0.03 U	0.63 U	0.00425 U	0.031 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	0.00117 U	0.02 U	0.06 U	**0.00099 J**	0.03 U	0.06 U	0.0009 U	0.029 U	0.06 U	**0.00264 J**	0.03 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00332 U	0.029 U	1 U	0.0055 U	0.044 U	1 U	0.00555 U	0.043 U	1 U	0.00554 U	0.043 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.00624 U	0.034 U	1.1 U	0.0103 U	0.052 U	1.1 U	0.0104 U	0.051 U	1.1 U	0.0104 U	0.051 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00416 U	0.031 U	1.5 U	0.0069 U	0.047 U	1.5 U	0.00696 U	0.046 U	1.5 U	0.00694 U	0.046 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	0.00505 U	0.027 U	1.1 U	0.00837 U	0.041 U	1.1 U	0.00844 U	0.04 U	1.1 U	0.00842 U	0.04 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.00659 U	0.048 U	1.4 U	0.0109 U	0.073 U	1.4 U	0.011 U	0.071 U	1.4 U	0.011 U	0.072 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00405 U	0.036 U	1.2 U	0.00672 U	0.054 U	1.2 U	0.00678 U	0.052 U	1.2 U	0.00676 U	0.053 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.0741 U	0.09 U	2.1 U	0.123 U	0.14 U	2.1 U	0.124 U	0.13 U	2.1 U	0.124 U	0.13 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00363 U	0.021 U	0.73 U	0.00602 U	0.032 U	0.73 U	0.00607 U	0.031 U	0.73 U	0.00605 U	0.031 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.00558 U	0.028 U	0.62 U	0.00924 U	0.042 U	0.62 U	0.00932 U	0.041 U	0.62 U	0.0093 U	0.042 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00353 U	0.022 U	0.63 U	0.00585 U	0.033 U	0.63 U	0.0059 U	0.032 U	0.63 U	0.00589 U	0.032 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00372 U	0.016 U	0.62 U	0.00617 U	0.024 U	0.62 U	0.00622 U	0.023 U	0.62 U	0.00621 U	0.023 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00521 U	0.078 U	1.3 U	0.00864 U	0.12 U	1.3 U	0.00872 U	0.12 U	1.3 U	0.00869 U	0.12 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.212 U	0.052 U	1.8 U	0.352 U	0.079 R	1.8 U	0.355 U	0.077 U	1.8 U	0.354 U	0.078 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	0.00105 U	0.016 U	0.04 U	0.00083 U	0.024 U	0.04 U	0.00081 U	0.023 U	0.04 U	**0.00122 J**	0.023 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	0.00063 U	0.021 U	0.03 U	**0.0007 J**	0.032 U	0.03 U	0.00049 U	0.031 U	0.03 U	**0.00377 J**	0.031 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.00486 U	0.02 U	0.85 U	0.00806 U	0.03 U	0.85 U	0.00814 U	0.029 U	0.85 U	0.00812 U	0.029 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	0.00117 U	0.017 U	0.02 U	**0.00214 J**	0.025 U	0.02 U	**0.00109 J**	0.025 U	0.02 U	**0.00607 J**	0.025 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.00335 U	0.066 U	1.8 U	0.00555 U	0.1 U	1.8 U	0.0056 U	0.097 U	1.8 U	0.00559 U	0.098 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	0.00973 U	0.029 U	1.1 U	0.0161 U	**0.092 J**	**1.9 J**	0.0163 U	**0.1 J**	**1.6 J**	0.0162 U	**0.086 J**	**2 J**
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	0.00251 U	0.021 U	0.02 U	**0.00521 J**	0.032 U	0.02 U	0.00195 U	0.031 U	0.02 U	**0.0312**	0.031 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	0.0011 U	0.046 U	0.02 U	**0.00366 J**	0.07 U	0.02 U	0.00085 U	0.068 U	0.02 U	**0.0228**	0.068 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.00119 J**	0.016 U	0.02 U	**0.00421 J**	0.024 U	0.02 U	**0.00149 J**	0.023 U	0.02 U	**0.0271**	**0.025 J**	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.00098 J**	0.022 U	0.02 U	**0.0031 J**	0.034 U	0.02 U	**0.00105 J**	0.033 U	0.02 U	**0.0194**	0.033 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	0.00097 U	0.013 U	0.02 U	**0.00264 J**	0.02 U	0.02 U	0.00075 U	0.019 U	0.02 U	**0.018**	0.02 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	0.00405 U	0.044 U	0.76 U	0.00672 U	0.066 U	0.76 U	0.00678 U	0.064 U	0.76 U	0.00676 U	0.065 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00388 U	0.018 U	0.63 U	0.00644 U	0.027 U	0.63 U	0.0065 U	0.026 U	0.63 U	0.00648 U	0.026 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.00709 U	0.023 U	0.67 U	0.0117 U	0.034 U	0.67 U	0.0118 U	0.033 U	0.67 U	0.0118 U	0.034 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.0101 U	**0.022 J**	0.91 U	**0.182**	**0.67**	**4.9**	**0.0435 J**	**0.088 J**	0.91 U	**0.559**	**0.35**	**10**
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.0078 U	0.025 U	1.3 U	**0.211**	0.038 U	1.3 U	0.013 U	0.037 U	1.3 U	**0.0144 J**	0.037 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.00567 U	0.04 U	3.6 U	0.00939 U	0.061 U	3.6 U	0.00948 U	0.059 U	3.6 U	0.00945 U	0.06 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	0.00246 U	0.012 U	0.63 U	0.00408 U	0.018 U	0.63 U	0.00412 U	0.018 U	0.63 U	0.00411 U	0.018 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	0.00082 U	0.019 U	0.02 U	**0.00388 J**	0.029 U	0.02 U	**0.00138 J**	0.028 U	0.02 U	**0.0232**	0.029 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	0.00097 U	0.022 U	0.02 U	0.00076 U	0.033 U	0.02 U	0.00075 U	0.032 U	0.02 U	**0.00421 J**	0.032 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	0.00289 U	0.017 U	0.66 U	0.00479 U	0.025 U	0.66 U	0.00483 U	0.024 U	0.66 U	0.00482 U	0.025 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00395 U	0.017 U	0.63 U	0.00654 U	0.026 U	0.63 U	0.0066 U	0.025 U	0.63 U	**0.0352 J**	0.025 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00301 U	0.018 U	0.65 U	0.00499 U	0.027 U	0.65 U	0.00504 U	0.027 U	0.65 U	0.00502 U	0.027 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00368 U	0.017 U	0.69 U	0.00609 U	0.025 U	0.69 U	0.00615 U	0.024 U	0.69 U	0.00613 U	0.025 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.016 U	0.059 U	1.1 U	0.0265 U	0.089 U	1.1 U	0.0267 U	0.087 U	1.1 U	0.0267 U	0.087 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	0.00172 U	0.022 U	0.01 U	**0.00869**	0.033 U	0.01 U	**0.00341 J**	0.032 U	0.01 U	**0.0292**	0.032 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	0.00062 U	0.018 U	0.02 U	**0.00267 J**	0.027 U	0.02 U	**0.002 J**	0.027 U	0.02 U	**0.00316 J**	0.027 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.00376 U	0.018 U	0.58 U [D]	0.00623 U	0.027 U	0.58 U [D]	0.00629 U	0.026 U	0.58 U [D]	0.00627 U	0.027 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.00749 U	0.023 U	0.72 U	0.0124 U	0.035 U	0.72 U	0.0125 U	0.034 U	0.72 U	0.0125 U	0.035 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0423 U	0.12 U	7.8 U	0.0701 U	0.18 U	7.8 U	0.0708 U	0.18 U	7.8 U	0.0706 U	0.18 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.00646 U	0.03 U	0.68 U	0.0107 U	0.046 U	0.68 U	0.0108 U	0.045 U	0.68 U	0.0108 U	0.045 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.00579 J**	0.026 U	0.02 U	**0.00673 J**	0.04 U	0.02 U	**0.00458 J**	0.039 U	0.02 U	**0.0214**	0.039 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.00423 U	0.021 U	0.6 U	0.00701 U	0.032 U	0.6 U	0.00708 U	0.031 U	0.6 U	0.00706 U	0.031 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	0.00084 U	0.023 U	0.04 U	**0.00202 J**	0.035 U	0.04 U	**0.00113 J**	0.034 U	0.04 U	**0.00434 J**	0.034 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.00402 U	0.028 U	0.75 U	0.00667 U	0.042 U	0.75 U	0.00673 U	0.041 U	0.75 U	0.00671 U	0.041 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.00657 U	0.016 U	0.7 U	0.0109 U	0.024 U	0.7 U	0.011 U	0.023 U	0.7 U	0.011 U	0.023 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00271 U	0.015 U	0.64 U	0.00449 U	0.023 U	0.64 U	0.00453 U	0.023 U	0.64 U	0.00452 U	0.023 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.0694 U	0.041 U	3.4 U	0.115 U	0.063 U	3.4 U	0.116 U	0.061 U	3.4 U	0.116 U	0.062 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	0.00111 U	0.014 U	0.02 U	**0.00496 J**	0.02 U	0.02 U	**0.00299 J**	0.02 U	0.02 U	**0.0104**	0.02 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00367 U	0.022 U	1.9 U	0.00608 U	0.034 U	1.9 U	0.00613 U	0.033 U	1.9 U	0.00612 U	0.033 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.0015 J**	0.016 U	0.01 U	**0.00842**	0.025 U	0.01 U	**0.00217 J**	0.024 U	0.01 U	**0.0286**	**0.025 J**	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	ND	**0.022**	-	**0.393**	**0.762**	**6.8**	**0.0435**	**0.188**	**1.6**	**0.6086**	**0.486**	**12**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**0.00946**	-		**0.06002**	-		**0.02129**	-		**0.25671**	-	
EPH (mg/kg)		-		-		-		-												
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	26.9 U	-		44.5 U	-		46.6 U	-		44.9 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-												
Aluminum	78000	-	NA	-	6000	73	4000	-	**2950**	**5160**	**654**	**14100** [C]	**13600** [C]	**1460**	**15800** [C]	**16200** [C]	**1150**	**17000** [C]	**15300** [C]	**996**
Antimony	31	-	450	-	6	-	120	-	**0.178 J**	0.341 U	4.29 U	**0.283 J**	**0.868 J**	4.29 U	**0.455 J**	0.509 U	4.29 U	**0.748 J**	0.51 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**2.94**	**4.55**	1.65 U	**9.33**	**9.37**	1.65 U	**10.7**	**11.1**	1.65 U	**13**	**11.5**	**2.5 J**
Barium	16000	-	59000	-	2100	-	120000	-	**5.64**	**37**	**386**	**26.3**	**58.8**	**49.5**	**30**	**69**	**29.8**	**32.9**	**66**	**22.1**
Beryllium	16	-	140	-	0.7	34	20	-	**0.236 J**	**0.233 J**	1.07 U	**0.826** [C]	**0.651 J**	1.07 U	**0.978** [C]	**0.791** [C]	1.07 U	**1.02** [C]	**0.738** [C]	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Nearshore-Raritan						Raritan Bay					
Location Name									COMP-K	COMP-K	COMP-K	COMP-L	COMP-L	COMP-L	VC-229	VC-229	VC-229	COMP-M	COMP-M	COMP-M
Sample Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-K-D0-7.5E	COMP-K-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-L-D0-20.5E	COMP-L-D0-20.5E-A	COMP-L-D0-20.5E-A	VC-229-D0-28E	VC-229-D0-28E-A	VC-229-D0-28E-A	COMP-M-D0-27E	COMP-M-D0-27E-A	COMP-M-D0-27E-A
Sample Date									10/28/2018	11/09/2018	11/09/2018	10/20/2018	10/26/2018	10/26/2018	10/20/2018	10/28/2018	10/28/2018	10/20/2018	10/26/2018	10/26/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844234-20	L1846705-05	L1846705-05	L1843139-04	L1844053-01	L1844053-01	L1843139-09	L1844053-03	L1844053-03	L1843139-08	L1844053-02	L1844053-02
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									24,229	24,229	24,229	30,927	30,927	30,927	33,428	33,428	33,428	40,099	40,099	40,099
Soil Description									HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Cadmium	78	-	78	-	2	2	80	-	0.031 U	**0.242 J**	0.599 U	**0.129 J**	**0.434 J**	0.599 U	**0.091 J**	**0.482 J**	0.599 U	**0.174 J**	**0.524 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**601**	**37500**	**455000**	**7040**	**57000**	**151000**	**5910**	**53700**	**125000**	**9220**	**63100**	**123000**
Chromium	NA	-	NA	-	NA	-	NA	-	**7.88**	**50.6**	**230**	**29.3**	**71.7**	**130**	**33.9**	**80.5**	**138**	**38.8**	**83**	**139**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.19 U	0.182 U		0.314 U	0.277 U		0.313 U	0.272 U		0.31 U	0.275 U	
Cobalt	1600	-	590	-	90	-	2000	-	**3.4**	**4.79**	1.63 U	**9.54**	**8.6**	1.63 U	**10.3**	**9.29**	1.63 U	**10.9**	**8.9**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**7.05**	**20.5**	**5.02 J**	**13**	**27.7**	**27.3**	**13**	**30.8**	**22.6**	**17.3**	**34.8**	**25.5**
Iron	NA	-	NA	-	NA	-	NA	-	**10400**	**10900**	191 U	**31000**	**26300**	191 U	**35200**	**32300**	191 U	**37400**	**31200**	191 U
Lead	400	-	800	-	90	23	100	-	**4.15**	**11**	3.43 U	**13.8**	**17.4**	3.43 U	**13.9**	**18.7**	3.43 U	**17.7**	**21.8**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**1530**	**2930**	242 U	**8330**	**7780**	242 U	**9260**	**8680**	242 U	**9750**	**8400**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**89.2** [C]	**205** [C]	4.4 U	**378** [C]	**447** [C]	4.4 U	**415** [C]	**533** [C]	4.4 U	**463** [C]	**502** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**0.014 J**	0.015 U	0.091 U	**0.035**	0.023 U	**0.056 J**	**0.016 J**	0.023 U	**0.066 J**	**0.117** [C]	**0.063 J**	**0.068 J**
Nickel	1600	-	23000	-	48	-	2000	-	**6.51**	**22.4**	5.56 U	**24.8**	**32.6**	**27.3**	**27.4**	**35.4**	**26**	**28.6**	**33.9**	**27.4**
Potassium	NA	-	NA	-	NA	-	NA	-	**414**	**898**	**22300**	**3430**	**3320**	**34400**	**3930**	**3840**	**35400**	**4110**	**3650**	**35800**
Selenium	390	-	5700	-	11	-	800	-	0.894 U	0.232 U	17.3 U	**3.56 J**	**0.786 J**	17.3 U	**2.92 J**	**0.965 J**	17.3 U	**3.44 J**	**0.899 J**	17.3 U
Silver	390	-	5700	-	1	26	800	-	0.058 U	0.254 U	1.63 U	0.092 U	0.384 U	1.63 U	0.092 U	0.379 U	1.63 U	**0.293 J**	0.38 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**1720**	**1600**	**76300**	**8820**	**7050**	**200000**	**8570**	**7750**	**205000**	**7300**	**6050**	**173000**
Thallium	NA	-	NA	-	3	-	10	-	0.061 U	0.283 U	1.43 U	**0.168 J**	0.427 U	1.43 U	**0.182 J**	0.422 U	1.43 U	**0.224 J**	0.423 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**11.2**	**33.4**	15.7 U	**34.7**	**59.4**	**35.2 J**	**39.6**	**63.8**	**47 J**	**40.4**	**64.8**	**61.1**
Zinc	23000	-	110000	-	930	-	40000	-	**21.3**	**239**	34.1 U	**69.7**	**74**	34.1 U	**77**	**82.6**	34.1 U	**87.6**	**85.9**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-												
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00106 U	0.0087 U	0.016 U	0.00179 U	0.0134 U	0.016 U	0.00174 U	0.0136 U	0.016 U	0.00178 U	0.0146 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00143 U	0.00982 U	0.022 U	0.0024 U	0.0151 U	0.022 U	0.00234 U	0.0154 U	0.022 U	0.00238 U	0.0164 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00136 U	0.0208 U	0.046 U	0.0023 U	0.032 U	0.046 U	0.00224 U	0.0325 U	0.046 U	0.00228 U	0.0348 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	0.00097 U	0.0132 U	0.036 U	0.00165 U	0.0204 U	0.036 U	0.0016 U	0.0207 U	0.036 U	**0.0152**	0.0221 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00123 U	0.0147 U	0.046 U	0.00206 U	0.0226 U	0.046 U	0.00201 U	0.023 U	0.046 U	0.00205 U	0.0246 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	0.00122 U	0.0107 U	0.017 U	0.00205 U	0.0165 U	0.017 U	0.002 U	0.0168 U	0.017 U	**0.0202**	**0.0191 J**	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	0.00123 U	0.0181 U	0.034 U	0.00206 U	0.0279 U	0.034 U	0.00201 U	0.0284 U	0.034 U	**0.00965**	0.0303 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00112 U	0.0124 U	0.033 U	0.00188 U	0.0192 U	0.033 U	0.00183 U	0.0195 U	0.033 U	0.00187 U	0.0208 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00096 U	0.0101 U	0.032 U	0.00162 U	0.0156 U	0.032 U	0.00158 U	0.0159 U	0.032 U	0.00161 U	0.017 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	ND	ND	-	ND	ND	-	ND	ND	-	**0.04505**	**0.0191**	-
Other		-		-		-		-												
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**15.9**	**12**	**-**	**49**	**42.2**	**-**	**48.9**	**41.3**	**-**	**48.4**	**41.8**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**0.093**	-	-	**1.34**	-	-	**1.52**	-	-	**1.44**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**0.069**	-	-	**1.34**	-	-	**1.52**	-	-	**1.54**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**84.1**	**88**	**-**	**51**	**57.8**	**-**	**51.1**	**58.7**	**-**	**51.6**	**58.2**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**180**	**25**	**-**	**160**	**60**	**-**	**160**	**45**	**-**	**160**	**54**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**7.6**	**13**	**12**	**9**	**12.1**	**11.8**	**8.4**	**12.**	**11.4**	**8.6**	**12.**	**11.4**
Pesticides (mg/kg) (ug/L)		-		-		-		-												
4,4'-DDD	3	-	13	-	4	-	2	-	0.00003 U	0.00163 U	0.005 U	0.00006 U	0.00273 U	0.005 U	0.00006 U	0.00274 U	0.005 U	**0.00018**	0.0028 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	0.00003 U	0.00106 U	0.004 U	0.00006 U	0.00177 U	0.004 U	0.00006 U	0.00178 U	0.004 U	**0.00057**	0.00182 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	0.00003 U	0.00368 U	0.004 U	0.00006 U	0.00616 U	0.004 U	0.00006 U	0.00618 U	**0.009 J**	**0.00008 IP**	0.00632 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00003 U	0.00161 U	0.002 U	0.00006 U	0.0027 U	0.002 U	0.00006 U	0.0027 U	0.002 U	0.00006 U	0.00276 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00003 U	0.00054 U	0.004 U	0.00006 U	0.0009 U	0.004 U	0.00006 U	0.0009 U	0.004 U	**0.00011**	0.00092 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00159 U	0.007 U	0.00006 U	0.00267 U	0.007 U	0.00006 U	0.00268 U	0.007 U	0.00006 U	0.00274 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00003 U	0.00174 U	0.006 U	0.00006 U	0.0029 U [C]	0.006 U	0.00006 U	0.00291 U [C]	0.006 U	0.00006 U	0.00298 U [C]	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00194 U	0.0152 U	0.046 U	0.00326 U	0.0254 U	0.046 U	0.00317 U	0.0254 U	0.046 U	0.00324 U	0.026 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00089 U	0.005 U	0.00006 U	0.0015 U	0.005 U	0.00006 U	0.0015 U	0.005 U	0.00006 U	0.00154 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	0.00003 U	0.00143 U	0.004 U	0.00006 U	0.00239 U	0.004 U	0.00006 U	0.0024 U	0.004 U	0.00006 U	0.00245 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00108 U	0.003 U	0.00006 U	0.00181 U	0.003 U	0.00006 U	0.00182 U	0.003 U	0.00006 U	0.00186 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00153 U	0.005 U	0.00006 U	0.00256 U	0.005 U	0.00006 U	0.00257 U	0.005 U	0.00006 U	0.00262 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00003 U	0.0009 U	0.005 U	0.00006 U	0.00152 U	0.005 U	0.00006 U	0.00152 U	0.005 U	0.00006 U	0.00156 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00003 U	0.00078 U	0.004 U	0.00006 U	0.00131 U	0.004 U	0.00006 U	0.00131 U	0.004 U	0.00006 U	0.00134 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00011 U	0.002 U	0.008 U	0.00019 U	0.00335 U	0.008 U	0.00018 U	0.00336 U	0.008 U	**0.00021 P**	0.00344 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00118 U	0.005 U	0.00006 U	0.00197 U	0.005 U	0.00006 U	0.00198 U	0.005 U	0.00006 U	0.00202 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00003 U	0.00085 U	0.004 U	0.00006 U	0.00143 U	0.004 U	0.00006 U	0.00143 U	0.004 U	0.00006 U	0.00146 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00151 U	0.006 U	0.00006 U	0.00253 U	0.006 U	0.00006 U	0.00254 U	0.006 U	**0.00036**	0.00259 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00003 U	0.00102 U	0.003 U	0.00006 U	0.00172 U	0.003 U	0.00006 U	0.00172 U	0.003 U	0.00006 U	0.00176 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00007 U	0.00257 U	0.004 U	0.00013 U	0.00431 U	0.004 U	0.00012 U	0.00432 U	0.004 U	0.00012 U	0.00442 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00038 U	0.00267 U	0.007 U	0.00064 U	0.00447 U	0.007 U	0.00063 U	0.00448 U	0.007 U	0.00064 U	0.00458 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00194 U	0.024 U	0.063 U	0.00326 U	0.0402 U	0.063 U	0.00317 U	0.0403 U	0.063 U	0.00324 U	0.0412 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan Bay													
Location Name									DEP-6	DEP-6	DEP-6	DEP-6	DEP-6	DEP-6	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N
Sample Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	DEP-6-D0-13.5E	DEP-6-D0-13.5E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E	DEP-6-D13.5-27E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E	COMP-N-D0-4E-A	COMP-N-D0-4E-A	COMP-N-D4-22.5E	COMP-N-D4-22.5E-A	COMP-N-D4-22.5E-A	
Sample Date									10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/26/2018	10/26/2018	10/22/2018	10/27/2018	10/27/2018	
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	
Lab Sample ID									L1843140-13	L1844053-10	L1844053-10	L1843140-14	L1844053-11	L1844053-11	L1843140-07	L1844053-04	L1844053-04	L1843140-08	L1844053-05	L1844053-05	
Sample Depth (bgs)									0 - 14 (ft)	0 - 14 (ft)	0 - 14 (ft)	14 - 27 (ft)	14 - 27 (ft)	14 - 27 (ft)	0 - 4 (ft)	0 - 4 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)	
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	
Approximate Volume by Sample (cy)									22,242	22,242	22,242	22,242	22,242	22,242	25,231	25,231	25,231	25,231	25,231	25,231	
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																					
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00742 U	0.034 U	0.67 U	0.00585 U	0.029 U	0.67 U	0.00651 U	0.032 U	0.67 U	0.00563 U	0.028 U	0.67 U	
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.013 U	0.038 U	0.7 U	0.0102 U	0.032 U	0.7 U	0.0114 U	0.035 U	0.7 U	0.00987 U	0.031 U	0.7 U	
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.0135 U	0.067 U	0.93 U	0.0106 U	0.057 U	0.93 U	0.0118 U	0.062 U	0.93 U	0.0102 U	0.055 U	0.93 U	
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00929 U	0.063 U	0.72 U	0.00732 U	0.054 U	0.72 U	0.00816 U	0.059 U	0.72 U	0.00705 U	0.052 U	0.72 U	
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00697 U	0.062 U	0.68 U	0.00549 U	0.053 U	0.68 U	0.00612 U	0.058 U	0.68 U	0.00529 U	0.052 U	0.68 U	
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00837 U	0.053 U	0.77 U	0.0066 U	0.045 U	0.77 U	0.00735 U	0.049 U	0.77 U	0.00636 U	0.044 U	0.77 U	
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.0128 U	0.1 U	1.6 U	0.0101 U	0.089 U	1.6 U	0.0113 U	0.098 U	1.6 U	0.00975 U	0.087 U	1.6 U	
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.133 U	0.15 U	5.5 U	0.105 U	0.13 U	5.5 U	0.117 U	0.14 U	5.5 U	0.101 U	0.13 U	5.5 U	
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00546 U	0.055 U	0.84 U	0.0043 U	0.046 U	0.84 U	0.00479 U	0.051 U	0.84 U	0.00414 U	0.045 U	0.84 U	
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0201 U	0.044 U	1.1 U	0.0158 U	0.037 U	1.1 U	0.0176 U	0.04 U	1.1 U	0.0153 U	0.036 U	1.1 U	
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00701 U	0.031 U	0.03 U	0.00055 U	0.027 U	0.03 U	0.00621 U	0.029 U	0.03 U	0.00053 U	0.026 U	0.03 U	
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00514 U	0.036 U	0.63 U	0.00406 U	0.031 U	0.63 U	0.00452 U	0.034 U	0.63 U	0.00391 U	0.03 U	0.63 U	
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.067 J**	**0.088 J**	0.06 U	0.00088 U	0.03 U	0.06 U	**0.0444 J**	**0.064 J**	0.06 U	**0.00094 J**	0.029 U	0.06 U	
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.0067 U	0.051 U	1 U	0.00528 U	0.043 U	1 U	0.00588 U	0.048 U	1 U	0.00509 U	0.042 U	1 U	
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0126 U	0.06 U	1.1 U	0.00993 U	0.051 U	1.1 U	0.011 U	0.056 U	1.1 U	0.00956 U	0.05 U	1.1 U	
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.0084 U	0.054 U	1.5 U	0.00662 U	0.046 U	1.5 U	0.00738 U	0.05 U	1.5 U	0.00638 U	0.045 U	1.5 U	
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	**0.0521 J**	**0.11 J**	1.1 U	0.00804 U	0.04 U	1.1 U	**0.0356 J**	**0.073 J**	1.1 U	0.00774 U	0.04 U	1.1 U	
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.0133 U	0.084 U	1.4 U	0.0105 U	0.072 U	1.4 U	0.0117 U	0.079 U	1.4 U	0.0101 U	0.07 U	1.4 U	
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00818 U	0.062 U	1.2 U	0.00645 U	0.053 U	1.2 U	0.00718 U	0.058 U	1.2 U	0.00621 U	0.052 U	1.2 U	
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.15 U	0.16 U	2.1 U	0.118 U	0.13 U	2.1 U	0.131 U	0.15 U	2.1 U	0.114 U	0.13 U	2.1 U	
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00732 U	0.037 U	0.73 U	0.00578 U	0.031 U	0.73 U	0.00643 U	0.034 U	0.73 U	0.00556 U	0.03 U	0.73 U	
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.0112 U	0.049 U	0.62 U	0.00887 U	0.042 U	0.62 U	0.00988 U	0.046 U	0.62 U	0.00855 U	0.041 U	0.62 U	
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00712 U	0.038 U	0.63 U	0.00562 U	0.032 U	0.63 U	0.00625 U	**0.066 J**	0.63 U	0.00541 U	0.032 U	0.63 U	
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00751 U	0.028 U	0.62 U	0.00592 U	0.024 U	0.62 U	0.0066 U	0.026 U	0.62 U	0.0057 U	0.023 U	0.62 U	
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.0105 U	0.14 U	1.3 U	0.0083 U	0.12 U	1.3 U	0.00924 U	0.13 U	1.3 U	0.00799 U	0.11 U	1.3 U	
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.429 U	0.092 U	1.8 U	0.338 U	0.078 U	1.8 U	0.376 U	0.085 U	1.8 U	0.326 U	0.076 U	1.8 U	
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.0244 J**	**0.031 J**	0.04 U	0.00079 U	0.023 U	0.04 U	**0.0198 J**	0.026 U	0.04 U	**0.00099 J**	0.023 U	0.04 U	
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.0826 J**	**0.12 J**	0.03 U	0.00047 U	0.031 U	0.03 U	**0.0718 J**	**0.1 J**	0.03 U	0.00045 U	0.031 U	0.03 U	
Acetophenone	2	-	5	-	3	-	14000	-	**0.0123 J**	0.034 U	0.85 U	0.00774 U	0.029 U	0.85 U	0.00862 U	0.032 U	0.85 U	0.00746 U	0.029 U	0.85 U	
Anthracene	17000	-	30000	-	2400	-	43	-	**0.109**	**0.13 J**	0.02 U	**0.00145 J**	0.025 U	0.02 U	**0.0848**	**0.11 J**	**0.02 J**	**0.00194 J**	0.024 U	0.02 U	
Atrazine	210	-	2400	-	0.2	-	60	-	0.00676 U	0.12 U	1.8 U	0.00533 U	0.098 U	1.8 U	0.00594 U	0.11 U	1.8 U	0.00514 U	0.096 U	1.8 U	
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	**0.068 J**	**0.25 J**	**5.3**	0.0155 U	**0.092 J**	**2.2 J**	**0.0698**	**0.18 J**	**3.4 J**	0.0149 U	**0.097 J**	**1.6 J**	
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.45**	**0.34**	0.02 U	0.0019 U	0.032 U	0.02 U	**0.312**	**0.28**	0.02 U	**0.004 J**	0.031 U	0.02 U	
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.34** [C]	**0.44** [C]	0.02 U	0.00083 U	0.068 U	0.02 U	**0.295** [C]	**0.37** [C]	0.02 U	**0.00231 J**	0.067 U	0.02 U	
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.383**	**0.52**	0.02 U	**0.0016 J**	0.023 U	0.02 U	**0.227**	**0.4**	0.02 U	**0.00327 J**	0.023 U	0.02 U	
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.244**	**0.27**	0.02 U	**0.00119 J**	0.033 U	0.02 U	**0.196**	**0.24**	0.02 U	**0.00259 J**	0.032 U	0.02 U	
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.207**	**0.16**	0.02 U	0.00073 U	0.02 U	0.02 U	**0.206**	**0.13**	0.02 U	**0.0023 J**	0.019 U	0.02 U	
Biphenyl	61	-	240	-	140	-	6000	-	**0.0351 J**	0.076 U	0.76 U	0.00645 U	0.065 U	0.76 U	**0.0282 J**	0.071 U	0.76 U	0.00621 U	0.064 U	0.76 U	
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00784 U	0.031 U	0.63 U	0.00618 U	0.027 U	0.63 U	0.00688 U	0.029 U	0.63 U	0.00595 U	0.026 U	0.63 U	
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0143 U	0.04 U	0.67 U	0.0113 U	0.034 U	0.67 U	0.0126 U	0.037 U	0.67 U	0.0109 U	0.033 U	0.67 U	
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	**7.15**	**4.2**	0.91 U	**0.0333 J**	**0.088 J**	0.91 U	**3.12**	**2.4**	**3.6**	**0.0452 J**	**0.13 J**	0.91 U	
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	**0.0745 J**	0.044 U	1.3 U	0.0124 U	0.037 U	1.3 U	**0.0326 J**	0.041 U	1.3 U	0.012 U	0.036 U	1.3 U	
Caprolactam	31000	-	340000	-	12	-	70000	-	**0.0718 J**	0.07 U	3.6 U	0.00902 U	0.06 U	3.6 U	0.01 U	0.066 U	3.6 U	0.00869 U	0.058 U	3.6 U	
Carbazole	24	-	96	-	NA	-	NA	-	**0.024 J**	0.021 U	0.63 U	0.00392 U	0.018 U	0.63 U	**0.0174 J**	**0.021 J**	0.63 U	0.00378 U	0.017 U	0.63 U	
Chrysene	450	-	1700	-	80	-	2	-	**0.274**	**0.34**	0.02 U	**0.00145 J**	0.029 U	0.02 U	**0.218**	**0.26**	0.02 U	**0.00378 J**	0.028 U	0.02 U	
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.0518 J**	**0.066 J**	0.02 U	0.00073 U	0.032 U	0.02 U	**0.0408 J**	**0.067 J**	0.02 U	0.0007 U	0.032 U	0.02 U	
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	**0.0348 J**	**0.036 J**	0.66 U	0.0046 U	0.025 U	0.66 U	**0.029 J**	0.027 U	0.66 U	0.00443 U	0.024 U	0.66 U	
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00796 U	0.03 U	0.63 U	0.00628 U	0.025 U	0.63 U	0.00699 U	0.028 U	0.63 U	0.00605 U	0.025 U	0.63 U	
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00608 U	0.032 U	0.65 U	0.00479 U	0.027 U	0.65 U	0.00534 U	0.029 U	0.65 U	0.00462 U	0.026 U	0.65 U	
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	**0.0457 J**	0.029 U	0.69 U	0.00585 U	0.025 U	0.69 U	**0.0148 J**	**0.028 J**	0.69 U	0.00563 U	0.024 U	0.69 U	
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0323 U	0.1 U	1.1 U	0.0254 U	0.087 U	1.1 U	0.0283 U	0.096 U	1.1 U	0.0245 U	0.085 U	1.1 U	
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.483**	**0.47**	**0.02 J**	**0.00384 J**	0.032 U	0.01 U	**0.333**	**0.36**	**0.03 J**	**0.00915**	0.031 U	0.01 U	
Fluorene	2300	-	24000	-	170	-	2000	-	**0.0338 J**	**0.049 J**	**0.05 J**	**0.00236 J**	0.027 U	0.02 U	**0.0254 J**	**0.04 J**	**0.05 J**	**0.00274 J**	0.026 U	0.02 U	
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.00759 U	0.031 U	0.58 U [D]	0.00599 U	0.027 U	0.58 U [D]	0.00666 U	0.029 U	0.58 U [D]	0.00576 U	0.026 U	0.58 U [D]	
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0151 U	0.041 U	0.72 U	0.0119 U	0.035 U	0.72 U	0.0133 U	0.038 U	0.72 U	0.0115 U	0.034 U	0.72 U	
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0854 U	0.21 U	7.8 U	0.0674 U	0.18 U	7.8 U	0.075 U	0.19 U	7.8 U	0.0649 U	0.17 U	7.8 U	
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.013 U	0.053 U	0.68 U	0.0103 U	0.045 U	0.68 U	0.0114 U	0.05 U	0.68 U	0.0099 U	0.044 U	0.68 U	
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.248**	**0.28**	0.02 U	**0.00462 J**	0.039 U	0.02 U	**0.208**	**0.23**	0.02 U	**0.00576 J**	0.038 U	0.02 U	
Isophorone	510	-	2000	-	0.2	-	800	-	0.00854 U	0.037 U	0.6 U	0.00674 U	0.031 U	0.6 U	0.0075 U	0.034 U	0.6 U	0.00649 U	0.031 U	0.6 U	
Naphthalene	6	-	17	-	25	-	6000	-	**0.0922**	**0.13 J**	**0.05 J**	**0.00101 J**	0.034 U	0.04 U	**0.0624 J**	**0.1 J**	**0.08 J**	**0.00182 J**	0.033 U	0.04 U	
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.00812 U	0.049 U	0.75 U	0.0064 U	0.042 U	0.75 U	0.00713 U	0.045 U	0.75 U	0.00617 U	0.04 U	0.75 U	
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.0133 U	0.028 U	0.7 U	0.0105 U	0.023 U	0.7 U	0.0116 U	0.026 U	0.7 U	0.0101 U	0.023 U	0.7 U	
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00547 U	0.027 U	0.64 U	0.00431 U	0.023 U	0.64 U	0.0048 U	0.025 U	0.64 U	0.00415 U	0.022 U	0.64 U	
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.14 U	0.072 U	3.4 U	0.11 U	0.062 U	3.4 U	0.123 U	0.068 U	3.4 U	0.106 U	0.06 U	3.4 U	
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.215**	**0.22**	0.02 U	**0.0032 J**	0.02 U	0.02 U	**0.145**	**0.16 J**	**0.04 J**	**0.00756**	0.02 U	0.02 U	
Phenol	18000	-	210000	-	8	-	40000	-	**0.0115 J**	**0.093 J**	1.9 U	0.00584 U	0.033 U	1.9 U	**0.0298 J**	0.036 U	1.9 U	0.00562 U	0.032 U	1.9 U	
Pyrene	1700	-	18000	-	840	-	140	-	**0.519**	**0.52**	**0.03 J**	**0.00235 J**	0.024 U	0.01 U	**0.372**	**0.42**	**0.05 J**	**0.00759**	0.024 U	0.01 U	
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**7.5798**	**8.863**	**5.45**	**0.0333**	**0.18**	**2.2**	**3.3772**	**6.099**	**7.27**	**0.0452**	**0.227**	**1.6**	
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**3.8238**	-		**0.02307**	-		**2.8614**	-		**0.05674**	-		
EPH (mg/kg)		-		-		-		-													
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	**145**	-		43.4 U	-		48.7 U	-		42.3 U	-		
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-													
Aluminum	78000	-	NA	-	6000	73	4000	-	**14200** [C]	**13200** [C]	**719**	**17200** [C]	**13600** [C]	**985**	**13100** [C]	**13800** [C]	**792**	**16000** [C]	**14000** [C]	**1010**	
Antimony	31	-	450	-	6	-	120	-	**1.78 J**	**1.69 J**	4.29 U	**0.271 J**	0.506 U	4.29 U	**1.31 J**	**0.952 J**	4.29 U	**0.349 J**	**0.516 J**	**7.04 J**	
Arsenic	19	22	19	22	19	22	3	11	**30.3** [ABC]	**24.8** [ABC]	**5.38** [B]	**12.3**	**10.8**	**2.21 J**	**24.8** [ABC]	**22.2** [ABC]	**4.25 J** [B]	**12.1**	**11.2**	**3.24 J** [B]	
Barium	16000	-	59000	-	2100	-	120000	-	**83.7**	**98.4**	**53**	**32.5**	**55.7**	**22.1**	**62.5**	**90.7**	**47.2**	**31.1**	**56.7**	**28.2**	
Beryllium	16	-	140	-	0.7	34	20	-	**1.04** [C]	**0.7 J**	1.07 U	**0.905** [C]	**0.665**	1.07 U	**0.926** [C]	**0.707 J** [C]	1.07 U	**0.991** [C]	**0.684**	1.07 U	

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan Bay													
Location Name									DEP-6	DEP-6	DEP-6	DEP-6	DEP-6	DEP-6	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N	COMP-N
Sample Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	DEP-6-D0-13.5E	DEP-6-D0-13.5E-A	DEP-6-D0-13.5E	DEP-6-D13.5-27E	DEP-6-D13.5-27E-A	DEP-6-D13.5-27E-A	COMP-N-D0-4E	COMP-N-D0-4E-A	COMP-N-D0-4E-A	COMP-N-D4-22.5E	COMP-N-D4-22.5E-A	COMP-N-D4-22.5E-A	COMP-N-D4-22.5E-A
Sample Date									10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/26/2018	10/26/2018	10/22/2018	10/27/2018	10/27/2018	10/27/2018	10/27/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843140-13	L1844053-10	L1844053-10	L1843140-14	L1844053-11	L1844053-11	L1843140-07	L1844053-04	L1844053-04	L1843140-08	L1844053-05	L1844053-05	L1844053-05	L1844053-05
Sample Depth (bgs)									0 - 14 (ft)	0 - 14 (ft)	0 - 14 (ft)	14 - 27 (ft)	14 - 27 (ft)	14 - 27 (ft)	0 - 4 (ft)	0 - 4 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									22,242	22,242	22,242	22,242	22,242	22,242	25,231	25,231	25,231	25,231	25,231	25,231	25,231	25,231	25,231
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Cadmium	78	-	78	-	2	2	80	-	**2.66** [C]	**2.2** [C]	0.599 U	**0.116 J**	**0.466 J**	0.599 U	**1.65**	**1.6**	0.599 U	**0.161 J**	**0.503 J**	0.599 U		
Calcium	NA	-	NA	-	NA	-	NA	-	**9780**	**65800**	**191000**	**8890**	**51900**	**105000**	**8570**	**68500**	**194000**	**9130**	**56800**	**114000**		
Chromium	NA	-	NA	-	NA	-	NA	-	**151**	**174**	**53.2**	**38.2**	**68.7**	**139**	**99.8**	**140**	**62**	**35.2**	**70.7**	**129**		
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	**0.798 J**	0.325 U		0.295 U	0.272 U		0.339 U	0.298 U		**0.327 J**	0.267 U			
Cobalt	1600	-	590	-	90	-	2000	-	**10.4**	**10.2**	**4.15 J**	**11.2**	**8.89**	1.63 U	**9.63**	**9.1**	**2.12 J**	**10.4**	**9.28**	1.63 U		
Copper	3100	-	45000	-	11000	-	26000	-	**175**	**159**	**251**	**15**	**26.8**	**19.3**	**111**	**120**	**190**	**15.3**	**27.7**	**20.2**		
Iron	NA	-	NA	-	NA	-	NA	-	**36300**	**30800**	191 U	**38400**	**28300**	191 U	**33400**	**30500**	191 U	**36400**	**28900**	**271 J**		
Lead	400	-	800	-	90	23	100	-	**192** [C]	**142** [C]	3.43 U	**15**	**16.5**	3.43 U	**120** [C]	**91.2** [C]	3.43 U	**14.7**	**17.6**	3.43 U		
Magnesium	NA	-	NA	-	NA	-	NA	-	**8360**	**7570**	242 U	**9580**	**7570**	242 U	**7960**	**7580**	242 U	**8910**	**7430**	242 U		
Manganese	11000	-	5900	-	65	111	1000	-	**575** [C]	**639** [C]	4.4 U	**433** [C]	**432** [C]	4.4 U	**491** [C]	**557** [C]	4.4 U	**386** [C]	**423** [C]	4.4 U		
Mercury	23	-	65	-	0.1	42	40	-	**2.78** [C]	**2.64** [C]	**0.061 J**	**0.019 J**	0.023 U	**0.057 J**	**1.3** [C]	**1.66** [C]	**0.07 J**	**0.018 J**	0.022 U	**0.061 J**		
Nickel	1600	-	23000	-	48	-	2000	-	**37.2**	**46.2**	**90.4**	**28.8**	**33.1**	**22.6**	**33.9**	**40.2**	**82.1**	**27.7**	**34.3**	**19 J**		
Potassium	NA	-	NA	-	NA	-	NA	-	**3380**	**3130**	**25500**	**4180**	**3380**	**33100**	**3100**	**3140**	**29200**	**3890**	**3430**	**33100**		
Selenium	390	-	5700	-	11	-	800	-	**4.24 J**	**1.89 J**	17.3 U	**3.42 J**	**0.958 J**	17.3 U	**3.74 J**	**1.82 J**	17.3 U	**3.47 J**	**0.761 J**	17.3 U		
Silver	390	-	5700	-	1	26	800	-	**6.02** [C]	**4.82** [C]	1.63 U	**0.088 J**	0.376 U	1.63 U	**3.47** [C]	**2.91** [C]	1.63 U	**0.103 J**	0.365 U	**3.76 J**		
Sodium	NA	-	NA	-	NA	-	NA	-	**13500**	**9820**	**224000**	**6130**	**4900**	**141000**	**10800**	**8300**	**205000**	**5620**	**4180**	**126000**		
Thallium	NA	-	NA	-	3	-	10	-	**0.226 J**	0.501 U	1.43 U	**0.156 J**	0.419 U	1.43 U	**0.222 J**	0.454 U	1.43 U	**0.177 J**	0.406 U	1.43 U		
Vanadium	78	-	1100	-	NA	-	NA	-	**53.4**	**75.1**	**36 J**	**41.6**	**56.7**	**80.3**	**42.4**	**69.8**	**27.2 J**	**40.9**	**59.5**	**70.6**		
Zinc	23000	-	110000	-	930	-	40000	-	**373**	**291**	34.1 U	**83.1**	**75.6**	34.1 U	**253**	**210**	34.1 U	**78.7**	**79.4**	34.1 U		
PCBs (mg/kg) (ug/L)		-		-		-		-														
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.0106 U	0.0161 U	0.016 U	0.00169 U	0.0144 U	0.016 U	0.00191 U	0.0156 U	0.016 U	0.00164 U	0.0147 U	0.016 U		
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.0143 U	0.0182 U	0.022 U	0.00226 U	0.0162 U	0.022 U	0.00256 U	0.0176 U	0.022 U	0.00219 U	0.0166 U	0.022 U		
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.0136 U	0.0384 U	0.046 U	0.00216 U	0.0343 U	0.046 U	0.00245 U	0.0372 U	0.046 U	0.0021 U	0.0351 U	0.046 U		
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	**0.382**	**0.607**	0.036 U	0.00155 U	0.0218 U	0.036 U	**0.157**	**0.314 P**	0.036 U	0.0015 U	0.0223 U	0.036 U		
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.0123 U	0.0272 U	0.046 U	0.00194 U	0.0243 U	0.046 U	0.0022 U	0.0264 U	0.046 U	0.00188 U	0.0248 U	0.046 U		
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	**0.573 P**	**0.212**	0.017 U	0.00193 U	0.0177 U	0.017 U	**0.148**	**0.13**	0.017 U	0.00187 U	0.0181 U	0.017 U		
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	**0.232**	**0.0889**	0.034 U	0.00194 U	0.0299 U	0.034 U	**0.0687**	**0.0533 J**	0.034 U	0.00188 U	0.0306 U	0.034 U		
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.0112 U	0.023 U	0.033 U	0.00177 U	0.0206 U	0.033 U	0.00201 U	0.0223 U	0.033 U	0.00172 U	0.021 U	0.033 U		
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00964 U	0.0188 U	0.032 U	0.00153 U	0.0168 U	0.032 U	0.00173 U	0.0182 U	0.032 U	0.00148 U	0.0172 U	0.032 U		
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	**1.187** [ABC]	**0.9079** [AC]	-	ND	ND	-	**0.3737** [AC]	**0.4973** [AC]	-	ND	ND	-		
Other		-		-		-		-														
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**57.4**	**50.8**	**-**	**45.8**	**41.1**	**-**	**52.8**	**46.4**	**-**	**45**	**40**	**-**		
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**3.22**	-	-	**1.39**	-	-	**2.44**	-	-	**1.36**	-	-		
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**3.09**	-	-	**1.39**	-	-	**2.38**	-	-	**1.38**	-	-		
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**42.6**	**49.2**	**-**	**54.2**	**58.9**	**-**	**47.2**	**53.6**	**-**	**55**	**60**	**-**		
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**140**	**33**	**-**	**160**	**54**	**-**	**160**	**29**	**-**	**150**	**37**	**-**		
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.1**	**12.2**	**11.4**	**8.5**	**11.9**	**11.3**	**8.2**	**12.4**	**11.5**	**9**	**12**	**11**		
Pesticides (mg/kg) (ug/L)		-		-		-		-														
4,4'-DDD	3	-	13	-	4	-	2	-	**0.00544**	**0.00498 J**	0.005 U	0.00006 U	0.00282 U	0.005 U	**0.00455**	**0.00495 J**	0.005 U	0.00005 U	0.00268 U	0.005 U		
4,4'-DDE	2	-	9	-	18	-	2	-	**0.0177**	**0.0107**	0.004 U	**0.00006 P**	0.00183 U	0.004 U	**0.0156**	**0.0144 P**	0.004 U	**0.00011 P**	0.00174 U	0.004 U		
4,4'-DDT	2	-	8	-	11	-	2	-	**0.00242 IP**	0.00725 U	0.004 U	0.00006 U	0.00635 U	0.004 U	**0.00136 IP**	0.00667 U	**0.013 J**	0.00005 U	0.00604 U	**0.008 J**		
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	**0.00098 P**	0.00317 U	0.002 U	0.00006 U	0.00278 U	0.002 U	**0.00095 P**	0.00292 U	0.002 U	0.00005 U	0.00264 U	0.002 U		
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	**0.0014 P**	0.00107 U	0.004 U	0.00006 U	0.00093 U	0.004 U	**0.00097 P**	0.00098 U	0.004 U	0.00005 U	0.00088 U	0.004 U		
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00314 U	0.007 U	0.00006 U	0.00275 U	0.007 U	0.00006 U	0.00289 U	0.007 U	0.00005 U	0.00261 U	0.007 U		
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00007 U	0.00342 U [C]	0.006 U	0.00006 U	0.00299 U [C]	0.006 U	0.00006 U	0.00314 U [C]	0.006 U	0.00005 U	0.00284 U [C]	0.006 U		
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00387 U	0.0299 U	0.046 U	0.00307 U	0.0262 U	0.046 U	0.00347 U	0.0275 U	0.046 U	0.00297 U	0.0248 U	0.046 U		
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00176 U	0.005 U	0.00006 U	0.00155 U	0.005 U	0.00006 U	0.00162 U	0.005 U	0.00005 U	0.00147 U	0.005 U		
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	**0.00117 IP**	**0.00312 JPI** [C]	0.004 U	0.00006 U	0.00247 U	0.004 U	**0.00078 IP**	0.00259 U	0.004 U	0.00005 U	0.00234 U	0.004 U		
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00213 U	0.003 U	0.00006 U	0.00186 U	0.003 U	0.00006 U	0.00196 U	0.003 U	0.00005 U	0.00177 U	0.003 U		
Endosulfan II	NA	-	NA	-	NA	-	NA	-	**0.00764 P**	0.00301 U	0.005 U	0.00006 U	0.00264 U	0.005 U	**0.00393 P**	0.00277 U	0.005 U	0.00005 U	0.00251 U	0.005 U		
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00007 U	0.00179 U	0.005 U	0.00006 U	0.00157 U	0.005 U	0.00006 U	**0.0054**	0.005 U	0.00005 U	0.00149 U	0.005 U		
Endrin	23	-	340	-	1	-	40	-	0.00007 U	0.00154 U	0.004 U	0.00006 U	0.00135 U	0.004 U	0.00006 U	0.00142 U	0.004 U	0.00005 U	0.00128 U	0.004 U		
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	**0.00466 P**	0.00394 U	0.008 U	0.00018 U	0.00345 U	0.008 U	**0.00246 P**	0.00363 U	**0.013 J**	0.00017 U	0.00328 U	0.008 U		
Endrin ketone	NA	-	NA	-	NA	-	NA	-	**0.00369 P**	0.00232 U	0.005 U	0.00006 U	0.00203 U	0.005 U	**0.00177 P**	0.00214 U	0.005 U	0.00005 U	0.00193 U	0.005 U		
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	**0.00073 P**	0.00168 U	0.004 U	0.00006 U	0.00147 U	0.004 U	**0.0004 P**	0.00154 U	0.004 U	0.00005 U	0.0014 U	0.004 U		
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	**0.00714 I**	0.00298 U	0.006 U	0.00006 U	0.0026 U	0.006 U	**0.00351**	0.00274 U	0.006 U	0.00005 U	0.00248 U	0.006 U		
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00007 U	0.00202 U	0.003 U	0.00006 U	0.00177 U	0.003 U	**0.00122 P**	0.00186 U	0.003 U	0.00005 U	0.00168 U	0.003 U		
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00015 U	**0.0189** [C]	0.004 U	0.00012 U	0.00444 U	0.004 U	0.00013 U	**0.0139 J** [C]	0.004 U	0.00011 U	0.00422 U	0.004 U		
Methoxychlor	390	-	5700	-	160	-	45	-	0.00077 U	0.00526 U	0.007 U	0.00061 U	0.00461 U	0.007 U	0.00069 U	0.00484 U	0.007 U	0.00059 U	0.00438 U	0.007 U		
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00387 U	0.0473 U	0.063 U	0.00307 U	0.0414 U	0.063 U	0.00347 U	0.0435 U	0.063 U	0.00297 U	0.0394 U	0.063 U		

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Location Name									Raritan Bay													
Sample Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	DEP-7 DEP-7-D0-15E	DEP-7 DEP-7-D0-15E-A	DEP-7 DEP-7-D0-15E-A	DEP-7 DEP-7-D15-20E	DEP-7 DEP-7-D15-20E-A	DEP-7 DEP-7-D15-20E-A	VC-235 VC-235-D0-13.7E	VC-235 VC-235-D0-13.7E-A	VC-235 VC-235-D0-13.7E-A	VC-235 VC-235-D13.7-24E	VC-235 VC-235-D13.7-24E-A	VC-235 VC-235-D13.7-24E-A
Sample Date									10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/28/2018	10/28/2018	10/22/2018	10/28/2018	10/28/2018	10/22/2018	10/28/2018	10/28/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843140-11	L1844053-08	L1844053-08	L1843140-12	L1844053-09	L1844053-09	L1843140-09	L1844053-06	L1844053-06	L1843140-10	L1844053-07	L1844053-07
Sample Depth (bgs)									0 - 15 (ft)	0 - 15 (ft)	0 - 15 (ft)	15 - 20 (ft)	15 - 20 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	0 - 15.3 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									23,338	23,338	23,338	23,338	23,338	23,338	17,306	17,306	17,306	17,306	17,306	17,306
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																				
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00656 U	0.034 U	0.67 U	0.00577 U	0.03 U	0.67 U	0.00715 U	0.035 U	0.67 U	0.00577 U	0.029 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.0115 U	0.037 U	0.7 U	0.0101 U	0.033 U	0.7 U	0.0125 U	0.039 U	0.7 U	0.0101 U	0.032 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.0119 U	0.066 U	0.93 U	0.0105 U	0.058 U	0.93 U	0.013 U	0.068 U	0.93 U	0.0105 U	0.056 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00821 U	0.062 U	0.72 U	0.00723 U	0.055 U	0.72 U	0.00895 U	0.064 U	0.72 U	0.00722 U	0.054 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00616 U	0.062 U	0.68 U	0.00542 U	0.054 U	0.68 U	0.00671 U	0.064 U	0.68 U	0.00542 U	0.053 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.0074 U	0.052 U	0.77 U	0.00651 U	0.046 U	0.77 U	0.00806 U	0.054 U	0.77 U	0.00651 U	0.045 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.0114 U	0.1 U	1.6 U	0.00999 U	0.091 U	1.6 U	0.0124 U	0.11 U	1.6 U	0.00998 U	0.089 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.117 U	0.15 U	5.5 U	0.103 U	0.13 U	5.5 U	0.128 U	0.16 U	5.5 U	0.103 U	0.13 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00482 U	0.054 U	0.84 U	0.00424 U	0.047 U	0.84 U	0.00526 U	0.056 U	0.84 U	0.00424 U	0.046 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0178 U	0.043 U	1.1 U	0.0156 U	0.038 U	1.1 U	0.0194 U	0.044 U	1.1 U	0.0156 U	0.037 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.0065 U	0.031 U	0.03 U	0.00055 U	0.027 U	0.03 U	0.00687 U	0.032 U	0.03 U	0.00055 U	0.027 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00455 U	0.036 U	0.63 U	0.004 U	0.031 U	0.63 U	0.00496 U	0.037 U	0.63 U	0.004 U	0.031 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.0473 J**	**0.06 J**	0.06 U	0.00087 U	0.03 U	0.06 U	**0.0447 J**	**0.046 J**	0.06 U	**0.00184 J**	0.03 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00592 U	0.05 U	1 U	0.00522 U	0.044 U	1 U	0.00646 U	0.052 U	1 U	0.00521 U	0.043 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0111 U	0.06 U	1.1 U	0.0098 U	0.052 U	1.1 U	0.0121 U	0.062 U	1.1 U	0.00979 U	0.051 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00743 U	0.053 U	1.5 U	0.00654 U	0.047 U	1.5 U	0.00809 U	0.055 U	1.5 U	0.00653 U	0.046 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	**0.0296 J**	**0.081 J**	1.1 U	0.00793 U	0.041 U	1.1 U	**0.033 J**	**0.073 J**	1.1 U	0.00792 U	0.04 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.0118 U	0.083 U	1.4 U	0.0103 U	0.073 U	1.4 U	0.0128 U	0.086 U	1.4 U	0.0103 U	0.072 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00723 U	0.061 U	1.2 U	0.00637 U	0.054 U	1.2 U	0.00788 U	0.063 U	1.2 U	0.00636 U	0.053 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.132 U	0.16 U	2.1 U	0.116 U	0.14 U	2.1 U	0.144 U	0.16 U	2.1 U	0.116 U	0.13 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00648 U	0.036 U	0.73 U	0.0057 U	0.032 U	0.73 U	0.00706 U	0.037 U	0.73 U	0.00569 U	0.031 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.00995 U	0.048 U	0.62 U	0.00876 U	0.042 U	0.62 U	0.0108 U	0.05 U	0.62 U	0.00875 U	0.042 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.0063 U	0.037 U	0.63 U	0.00554 U	0.033 U	0.63 U	0.00686 U	0.039 U	0.63 U	0.00554 U	0.032 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00664 U	0.027 U	0.62 U	0.00585 U	0.024 U	0.62 U	0.00724 U	0.028 U	0.62 U	0.00584 U	0.023 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.0093 U	0.13 U	1.3 U	0.00819 U	0.12 U	1.3 U	0.0101 U	0.14 U	1.3 U	0.00818 U	0.12 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.379 U	0.09 U	1.8 U	0.334 U	0.079 U	1.8 U	0.413 U	0.093 U	1.8 U	0.333 U	0.078 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.0188 J**	0.027 U	0.04 U	0.00079 U	0.024 U	0.04 U	**0.0207 J**	0.028 U	0.04 U	0.00079 U	0.023 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.0603 J**	**0.088 J**	0.03 U	0.00047 U	0.032 U	0.03 U	**0.0642 J**	**0.069 J**	0.03 U	**0.00286 J**	0.031 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.00868 U	0.034 U	0.85 U	0.00764 U	0.03 U	0.85 U	**0.0144 J**	0.035 U	0.85 U	0.00763 U	0.029 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.0835**	**0.1 J**	0.02 U	**0.00141 J**	0.025 U	0.02 U	**0.0919**	**0.079 J**	0.02 U	**0.00353 J**	0.025 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.00598 U	0.11 U	1.8 U	0.00526 U	0.1 U	1.8 U	0.00652 U	0.12 U	1.8 U	0.00526 U	0.098 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	**0.0591 J**	**0.18 J**	**3.5 J**	0.0153 U	**0.1 J**	**1.8 J**	**0.0805**	**0.22 J**	**4.8 J**	0.0153 U	**0.093 J**	**2.1 J**
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.35**	**0.31**	0.02 U	0.00188 U	0.032 U	0.02 U	**0.384**	**0.26**	0.02 U	**0.012**	0.031 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.281** [C]	**0.41** [C]	0.02 U	0.00082 U	0.07 U	0.02 U	**0.334** [C]	**0.34** [C]	0.02 U	**0.0081**	0.068 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.266**	**0.45**	0.02 U	**0.00198 J**	0.024 U	0.02 U	**0.319**	**0.38**	0.02 U	**0.00692 J**	0.023 U	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.192**	**0.24 J**	0.02 U	**0.00143 J**	0.034 U	0.02 U	**0.233**	**0.21 J**	0.02 U	**0.00685 J**	0.033 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.196**	**0.14**	0.02 U	**0.00085 J**	0.02 U	0.02 U	**0.22**	**0.12**	0.02 U	**0.00605 J**	0.02 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	**0.0236 J**	0.075 U	0.76 U	0.00637 U	0.066 U	0.76 U	**0.0278 J**	0.078 U	0.76 U	0.00636 U	0.065 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00693 U	0.031 U	0.63 U	0.0061 U	0.027 U	0.63 U	0.00755 U	0.032 U	0.63 U	0.00609 U	0.026 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0126 U	0.039 U	0.67 U	0.0111 U	0.034 U	0.67 U	0.0138 U	0.04 U	0.67 U	0.0111 U	0.034 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	**5**	**4.3**	0.91 U	**0.0304 J**	**0.097 J**	**1.2 J**	**3.54**	**1**	**1.6 J**	**0.107**	**0.17 J**	0.91 U
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	**0.0427 J**	0.043 U	1.3 U	0.0122 U	0.038 U	1.3 U	**0.0473 J**	0.045 U	1.3 U	0.0122 U	0.037 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.0101 U	0.07 U	3.6 U	0.0089 U	0.061 U	3.6 U	0.011 U	0.072 U	3.6 U	0.00889 U	0.06 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	**0.0135 J**	0.021 U	0.63 U	0.00387 U	0.018 U	0.63 U	**0.0174 J**	0.021 U	0.63 U	0.00386 U	0.018 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.219**	**0.3**	0.02 U	**0.00163 J**	0.029 U	0.02 U	**0.245**	**0.24**	0.02 U	**0.00792**	0.029 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.0456 J**	**0.058 J**	0.02 U	0.00072 U	0.033 U	0.02 U	**0.048 J**	**0.062 J**	0.02 U	**0.00135 J**	0.032 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	**0.0255 J**	0.029 U	0.66 U	0.00454 U	0.025 U	0.66 U	**0.0293 J**	0.03 U	0.66 U	0.00453 U	0.025 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00704 U	0.029 U	0.63 U	0.0062 U	0.026 U	0.63 U	0.00767 U	0.03 U	0.63 U	0.00619 U	0.025 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00537 U	0.031 U	0.65 U	0.00473 U	0.027 U	0.65 U	0.00586 U	0.032 U	0.65 U	0.00472 U	0.027 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00656 U	0.029 U	0.69 U	0.00577 U	0.025 U	0.69 U	**0.014 J**	0.03 U	0.69 U	0.00577 U	0.025 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0285 U	0.1 U	1.1 U	0.0251 U	0.089 U	1.1 U	0.0311 U	0.1 U	1.1 U	0.0251 U	0.087 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.373**	**0.44**	**0.02 J**	**0.00376 J**	0.033 U	0.01 U	**0.432**	**0.36**	**0.02 J**	**0.0115**	0.032 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.0281 J**	0.031 U	**0.04 J**	**0.00222 J**	0.027 U	0.02 U	**0.0292 J**	**0.032 J**	**0.04 J**	**0.00256 J**	0.027 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.00671 U	0.031 U	0.58 U [D]	0.00591 U	0.027 U	0.58 U [D]	0.00731 U	0.032 U	0.58 U [D]	0.0059 U	0.027 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0134 U	0.04 U	0.72 U	0.0118 U	0.035 U	0.72 U	0.0146 U	0.042 U	0.72 U	0.0118 U	0.035 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0755 U	0.2 U	7.8 U	0.0665 U	0.18 U	7.8 U	0.0823 U	0.21 U	7.8 U	0.0664 U	0.18 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.0115 U	0.052 U	0.68 U	0.0101 U	0.046 U	0.68 U	0.0126 U	0.054 U	0.68 U	0.0101 U	0.045 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.219**	**0.24**	0.02 U	**0.00478 J**	0.04 U	0.02 U	**0.243**	**0.21**	0.02 U	**0.00968**	0.039 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.00755 U	0.036 U	0.6 U	0.00665 U	0.032 U	0.6 U	0.00823 U	0.038 U	0.6 U	0.00664 U	0.031 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.0653 J**	**0.1 J**	**0.07 J**	**0.00102 J**	0.035 U	0.04 U	**0.0622 J**	**0.082 J**	**0.07 J**	**0.0029 J**	0.034 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.00718 U	0.048 U	0.75 U	0.00632 U	0.042 U	0.75 U	0.00782 U	0.05 U	0.75 U	0.00631 U	0.041 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.0117 U	0.027 U	0.7 U	0.0103 U	0.024 U	0.7 U	0.0128 U	0.028 U	0.7 U	0.0103 U	0.023 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00484 U	0.026 U	0.64 U	0.00426 U	0.023 U	0.64 U	0.00527 U	0.027 U	0.64 U	0.00425 U	0.023 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.124 U	0.072 U	3.4 U	0.109 U	0.063 U	3.4 U	0.135 U	0.074 U	3.4 U	0.109 U	0.062 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.15**	**0.17 J**	0.02 U	**0.00314 J**	0.02 U	0.02 U	**0.175**	**0.15 J**	0.02 U	**0.00654 J**	0.02 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	**0.00951 J**	**0.22 J**	1.9 U	0.00576 U	0.034 U	1.9 U	**0.0138 J**	0.04 U	1.9 U	0.00575 U	0.033 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.395**	**0.46**	**0.02 J**	**0.00299 J**	0.025 U	0.01 U	**0.446**	**0.4**	**0.03 J**	**0.0124**	0.024 U	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**5.20351**	**8.347**	**3.65**	**0.0304**	**0.197**	**3**	**3.8175**	**4.333**	**6.56**	**0.107**	**0.263**	**2.1**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**2.9899**	-		**0.02521**	-		**3.3919**	-		**0.103**	-	
EPH (mg/kg)		-		-		-		-												
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	48.4 U	-		42.1 U	-		51.8 U	-		42.5 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-												
Aluminum	78000	-	NA	-	6000	73	4000	-	**12300** [C]	**13000** [C]	**819**	**14600** [C]	**15600** [C]	**749**	**14200** [C]	**14300** [C]	**784**	**15400** [C]	**14600** [C]	**850**
Antimony	31	-	450	-	6	-	120	-	**1.16 J**	**1.21 J**	4.29 U	**0.262 J**	0.53 U	4.29 U	**1.19 J**	**1.59 J**	4.29 U	**0.303 J**	**0.808 J**	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**21.1** [ABC]	**20.9** [ABC]	**3.3 J** [D]	**11**	**11.8**	**1.72 J**	**21.4** [ABC]	**19.2** [ABC]	**3.29 J** [D]	**11.6**	**11.2**	**1.81 J**
Barium	16000	-	59000	-	2100	-	120000	-	**55.6**	**86.8**	**50**	**28.4**	**64.2**	**22.5**	**65.8**	**95.6**	**52**	**28.8**	**59.7**	**19.7**
Beryllium	16	-	140	-	0.7	34	20	-	**0.878** [C]	**0.66 J**	1.07 U	**0.94** [C]	**0.766** [C]	1.07 U	**0.981** [C]	**0.714 J** [C]	1.07 U	**0.967** [C]	**0.726** [C]	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan Bay											
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	DEP-7	DEP-7	DEP-7	DEP-7	DEP-7	DEP-7	VC-235	VC-235	VC-235	VC-235	VC-235	VC-235
Sample Name									DEP-7-D0-15E	DEP-7-D0-15E-A	DEP-7-D0-15E-A	DEP-7-D15-20E	DEP-7-D15-20E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E	VC-235-D0-13.7E-A	VC-235-D0-13.7E-A	VC-235-D13.7-24E	VC-235-D13.7-24E-A	VC-235-D13.7-24E-A
Sample Date									10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/28/2018	10/28/2018	10/22/2018	10/28/2018	10/28/2018	10/22/2018	10/28/2018	10/28/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843140-11	L1844053-08	L1844053-08	L1843140-12	L1844053-09	L1844053-09	L1843140-09	L1844053-06	L1844053-06	L1843140-10	L1844053-07	L1844053-07
Sample Depth (bgs)									0 - 15 (ft)	0 - 15 (ft)	0 - 15 (ft)	15 - 20 (ft)	15 - 20 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	0 - 15.3 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
Approximate Volume by Sample (cy)									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Soil Description									23,338	23,338	23,338	23,338	23,338	23,338	17,306	17,306	17,306	17,306	17,306	17,306
									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Cadmium	78	-	78	-	2	2	80	-	**1.54**	**1.7**	0.599 U	**0.13 J**	**0.516 J**	0.599 U	**1.57**	**1.57 J**	0.599 U	**0.179 J**	**0.52 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**8910**	**65600**	**194000**	**8850**	**58000**	**114000**	**12700**	**70400**	**197000**	**8140**	**53600**	**112000**
Chromium	NA	-	NA	-	NA	-	NA	-	**96.8**	**138**	**63**	**32.7**	**75.3**	**160**	**104**	**140**	**50.8**	**36.3**	**71.5**	**139**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	**0.38 J**	0.319 U		**0.529 J**	0.279 U		0.365 U	0.327 U		0.296 U	0.275 U	
Cobalt	1600	-	590	-	90	-	2000	-	**9.28**	**9.82**	**3.1 J**	**9.25**	**9.62**	1.63 U	**11.6**	**10.7**	**4.03 J**	**9.94**	**9.2**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**109**	**114**	**184**	**13.1**	**29.2**	**20.4**	**123**	**120**	**200**	**16.7**	**29.1**	**17.1**
Iron	NA	-	NA	-	NA	-	NA	-	**31200**	**28900**	191 U	**32600**	**30500**	191 U	**35700**	**29900**	191 U	**34600**	**29100**	191 U
Lead	400	-	800	-	90	23	100	-	**116** [C]	**102** [C]	3.43 U	**12.3**	**18.5**	3.43 U	**139** [C]	**116** [C]	3.43 U	**16.6**	**19.1**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**7360**	**7590**	242 U	**8080**	**8270**	242 U	**8620**	**8210**	242 U	**8710**	**7720**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**460** [C]	**573** [C]	4.4 U	**354** [C]	**466** [C]	4.4 U	**654** [C]	**681** [C]	4.4 U	**380** [C]	**444** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**1.81** [C]	**1.68** [C]	**0.063 J**	**0.016 J**	0.023 U	**0.065 J**	**2.06** [C]	**1.7** [C]	**0.059 J**	**0.087**	**0.027 J**	**0.058 J**
Nickel	1600	-	23000	-	48	-	2000	-	**31.2**	**42.2**	**88.4**	**24.4**	**35.9**	**16.1 J**	**36.1**	**45.1**	**86.2**	**25.8**	**34.3**	**19 J**
Potassium	NA	-	NA	-	NA	-	NA	-	**3020**	**3040**	**27600**	**3740**	**3850**	**30000**	**3290**	**3380**	**27500**	**3770**	**3650**	**32400**
Selenium	390	-	5700	-	11	-	800	-	**3.38 J**	**1.58 J**	17.3 U	**2.56 J**	**1.34 J**	17.3 U	**4.21 J**	**1.78 J**	17.3 U	**3.36 J**	**1.18 J**	17.3 U
Silver	390	-	5700	-	1	26	800	-	**3.49** [C]	**3.12** [C]	1.63 U	0.084 U	0.394 U	1.63 U	**3.91** [C]	**3.34** [C]	1.63 U	**0.187 J**	0.387 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**9530**	**7820**	**198000**	**5080**	**4460**	**106000**	**11900**	**10400**	**234000**	**5500**	**4470**	**107000**
Thallium	NA	-	NA	-	3	-	10	-	**0.176 J**	0.483 U	1.43 U	**0.146 J**	0.439 U	1.43 U	**0.218 J**	0.511 U	1.43 U	**0.15 J**	0.431 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**40.7**	**68.7**	**33.4 J**	**38.7**	**63.5**	**67.8**	**47.2**	**71.2**	**25.1 J**	**38.7**	**58.3**	**80.6**
Zinc	23000	-	110000	-	930	-	40000	-	**246**	**228**	34.1 U	**71.5**	**82.9**	34.1 U	**300**	**251**	34.1 U	**78.9**	**81.9**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-												
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00377 U	0.0158 U	0.016 U	0.00166 U	0.0149 U	0.016 U	0.00208 U	0.0169 U	0.016 U	0.00167 U	0.0136 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00505 U	0.0178 U	0.022 U	0.00222 U	0.0168 U	0.022 U	0.00279 U	0.019 U	0.022 U	0.00224 U	0.0153 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00483 U	0.0376 U	0.046 U	0.00213 U	0.0356 U	0.046 U	0.00266 U	0.0403 U	0.046 U	0.00214 U	0.0325 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	**0.215**	**0.395**	0.036 U	0.00153 U	0.0226 U	0.036 U	**0.146**	**0.228**	0.036 U	**0.00574**	0.0206 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00434 U	0.0266 U	0.046 U	0.00191 U	0.0252 U	0.046 U	0.00239 U	0.0285 U	0.046 U	0.00192 U	0.023 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	**0.278**	**0.215**	0.017 U	0.0019 U	0.0184 U	0.017 U	**0.132**	**0.138**	0.017 U	**0.00774**	0.0168 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	**0.111**	**0.0636 J**	0.034 U	0.00191 U	0.031 U	0.034 U	**0.0641**	0.0351 U	0.034 U	**0.00328 J**	0.0283 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00396 U	0.0225 U	0.033 U	0.00174 U	0.0213 U	0.033 U	0.00218 U	0.0241 U	0.033 U	0.00175 U	0.0194 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00341 U	0.0184 U	0.032 U	0.0015 U	0.0174 U	0.032 U	0.00188 U	0.0197 U	0.032 U	0.00151 U	0.0159 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	**0.604** [AC]	**0.6736** [AC]	-	ND	ND	-	**0.3421** [AC]	**0.366** [AC]	-	**0.01676**	ND	-
Other		-		-		-		-												
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**52.7**	**49.8**	**-**	**45.2**	**42.6**	**-**	**56.2**	**51.1**	**-**	**46**	**41.8**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**2.35**	-	-	**1.42**	-	-	**2.69**	-	-	**1.41**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**2.29**	-	-	**1.44**	-	-	**2.76**	-	-	**1.42**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**47.3**	**50.2**	**-**	**54.8**	**57.4**	**-**	**43.8**	**48.9**	**-**	**54**	**58.2**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**140**	**37**	**-**	**130**	**40**	**-**	**160**	**33**	**-**	**140**	**45**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**7.9**	**12.3**	**11.6**	**8.4**	**12.**	**11.3**	**8.3**	**12.3**	**11.5**	**8**	**12.**	**11.3**
Pesticides (mg/kg) (ug/L)		-		-		-		-												
4,4'-DDD	3	-	13	-	4	-	2	-	**0.00311**	**0.00364 J**	0.005 U	0.00006 U	0.00268 U	0.005 U	**0.00247**	0.00322 U	0.005 U	**0.00013**	0.0028 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	**0.00983**	**0.00838 J**	0.004 U	**0.00015 P**	0.00174 U	0.004 U	**0.00733**	**0.00522 J**	0.004 U	**0.00032**	0.00181 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	**0.00123 IP**	**0.00885 J**	**0.011 J**	0.00006 U	0.00604 U	0.004 U	**0.00124 IP**	0.00727 U	0.004 U	0.00006 U	0.0063 U	**0.007 J**
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	**0.00094 P**	0.00304 U	0.002 U	0.00006 U	0.00264 U	0.002 U	**0.00073 P**	0.00318 U	0.002 U	**0.00021 P**	0.00276 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	**0.00082 P**	0.00102 U	0.004 U	0.00006 U	0.00088 U	0.004 U	**0.00072 P**	0.00107 U	0.004 U	0.00006 U	0.00092 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00301 U	0.007 U	0.00006 U	0.00261 U	0.007 U	**0.0004**	0.00315 U	0.007 U	0.00006 U	0.00273 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00006 U	0.00328 U [C]	0.006 U	0.00006 U	0.00285 U [C]	0.006 U	0.00007 U	0.00343 U [C]	0.006 U	0.00006 U	0.00297 U [C]	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00343 U	0.0286 U	0.046 U	0.00302 U	0.0249 U	0.046 U	0.00378 U	0.0299 U	0.046 U	0.00303 U	0.026 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00169 U	0.005 U	0.00006 U	0.00147 U	0.005 U	0.00007 U	0.00177 U	0.005 U	0.00006 U	0.00154 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	**0.00622 P** [C]	**0.0047 J** [C]	0.004 U	0.00006 U	0.00234 U	0.004 U	**0.0006 IP**	0.00282 UPI	0.004 U	0.00006 U	0.00245 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00006 U	0.00204 U	0.003 U	0.00006 U	0.00177 U	0.003 U	0.00007 U	0.00214 U	0.003 U	0.00006 U	0.00185 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	**0.00399 P**	0.00289 U	0.005 U	0.00006 U	0.00251 U	0.005 U	**0.00327 P**	0.00302 U	0.005 U	**0.00011 P**	0.00262 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00006 U	**0.00602 P**	0.005 U	0.00006 U	0.00149 U	0.005 U	0.00007 U	**0.00552**	0.005 U	0.00006 U	0.00155 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	**0.00405 P**	0.00148 U	0.004 U	0.00006 U	0.00128 U	0.004 U	0.00007 U	0.00154 U	0.004 U	0.00006 U	0.00134 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	**0.00242 P**	0.00378 U	0.008 U	0.00018 U	0.00328 U	0.008 U	**0.0021 P**	0.00395 U	**0.016 J**	0.00018 U	0.00343 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	**0.00191 P**	0.00223 U	0.005 U	0.00006 U	0.00193 U	0.005 U	**0.00157 P**	0.00233 U	0.005 U	0.00006 U	0.00202 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	**0.00048 P**	0.00161 U	0.004 U	0.00006 U	0.0014 U	0.004 U	**0.00037 P**	0.00168 U	0.004 U	**0.00021**	0.00146 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	**0.00372**	0.00285 U	0.006 U	**0.00006 P**	0.00248 U	0.006 U	**0.00322**	0.00298 U	0.006 U	**0.00014**	0.00259 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00006 U	0.00194 U	0.003 U	0.00006 U	0.00168 U	0.003 U	0.00007 U	0.00203 U	0.003 U	0.00006 U	0.00176 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00013 U	**0.0117 J** [C]	0.004 U	0.00012 U	0.00422 U	0.004 U	0.00015 U	**0.00873 J**	0.004 U	0.00012 U	0.00441 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00068 U	0.00504 U	0.007 U	0.0006 U	0.00438 U	0.007 U	0.00075 U	0.00527 U	0.007 U	0.0006 U	0.00457 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00343 U	0.0454 U	0.063 U	0.00302 U	0.0394 U	0.063 U	0.00378 U	0.0474 U	0.063 U	0.00303 U	0.0412 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan Bay												Raritan-Chapel		
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-O	COMP-O	COMP-O	COMP-O	COMP-O	COMP-O	VC-238	VC-238	VC-238	COMP-P	COMP-P	COMP-P	COMP-Q	COMP-Q	COMP-Q
Sample Name									COMP-O-D0-2E	COMP-O-D0-2E-A	COMP-O-D0-2E-A	COMP-O-D2-25E	COMP-O-D2-25E-A	COMP-O-D2-25E-A	VC-238-D0-28E	VC-238-D0-28E-A	VC-238-D0-28E-A	COMP-P-D0-23E	COMP-P-D0-23E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E	COMP-Q-D0-10.5E-A	COMP-Q-D0-10.5E-A
Sample Date									10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/27/2018	10/27/2018	10/23/2018	10/27/2018	10/27/2018	10/23/2018	10/27/2018	10/27/2018	10/29/2018	11/14/2018	11/14/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843140-15	L1844053-12	L1844053-12	L1843140-16	L1844053-13	L1844053-13	L1843140-28	L1844053-19	L1844053-19	L1843140-27	L1844053-18	L1844053-18	L1844234-41	L1846705-06	L1846705-06
Sample Depth (bgs)									0 - 3 (ft)	0 - 3 (ft)	0 - 3 (ft)	3 - 25 (ft)	3 - 25 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 9 to 23 (ft)	0 - 9 to 23 (ft)	0 - 9 to 23 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									38,647	38,647	38,647	38,647	38,647	38,647	23,482	23,482	23,482	35,769	35,769	35,769	36,406	36,406	36,406
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																							
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00713 U	0.036 U	0.67 U	0.00588 U	0.029 U	0.67 U	0.00584 U	0.03 U	0.67 U	0.00556 U	0.028 U	0.67 U	0.00398 U	0.021 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.0125 U	0.039 U	0.7 U	0.0103 U	0.032 U	0.7 U	0.0102 U	0.033 U	0.7 U	0.00975 U	0.031 U	0.7 U	0.00697 U	0.024 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.013 U	0.069 U	0.93 U	0.0107 U	0.057 U	0.93 U	0.0106 U	0.057 U	0.93 U	0.0101 U	0.055 U	0.93 U	0.00723 U	0.041 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00893 U	0.065 U	0.72 U	0.00736 U	0.054 U	0.72 U	0.00731 U	0.054 U	0.72 U	0.00697 U	0.052 U	0.72 U	0.00498 U	0.039 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.0067 U	0.064 U	0.68 U	0.00552 U	0.053 U	0.68 U	0.00548 U	0.054 U	0.68 U	0.00523 U	0.052 U	0.68 U	0.00374 U	0.039 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00804 U	0.055 U	0.77 U	0.00664 U	0.045 U	0.77 U	0.00658 U	0.046 U	0.77 U	0.00628 U	0.044 U	0.77 U	0.00449 U	0.033 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.0123 U	0.11 U	1.6 U	0.0102 U	0.089 U	1.6 U	0.0101 U	0.09 U	1.6 U	0.00963 U	0.087 U	1.6 U	0.00689 U	0.065 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.128 U	0.16 U	5.5 U	0.105 U	0.13 U	5.5 U	0.104 U	0.13 U	5.5 U	0.0996 U	0.13 U	5.5 U	0.0712 U	0.095 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00524 U	0.056 U	0.84 U	0.00432 U	0.047 U	0.84 U	0.00429 U	0.047 U	0.84 U	0.00409 U	0.045 U	0.84 U	0.00293 U	0.034 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0193 U	0.045 U	1.1 U	0.0159 U	0.037 U	1.1 U	0.0158 U	0.038 U	1.1 U	0.0151 U	0.036 U	1.1 U	0.0108 U	0.027 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00699 U	0.032 U	0.03 U	0.00058 U	0.027 U	0.03 U	0.00054 U	0.027 U	0.03 U	0.00054 U	0.026 U	0.03 U	0.00067 U	0.02 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00494 U	0.037 U	0.63 U	0.00408 U	0.031 U	0.63 U	0.00405 U	0.031 U	0.63 U	0.00386 U	0.03 U	0.63 U	0.00276 U	0.022 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.0305 J**	**0.048 J**	0.06 U	0.00092 U	0.03 U	0.06 U	0.00086 U	0.03 U	0.06 U	**0.00157 J**	0.029 U	0.06 U	**0.00146 J**	0.022 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00644 U	0.053 U	1 U	0.00531 U	0.044 U	1 U	0.00527 U	0.044 U	1 U	0.00503 U	0.042 U	1 U	0.00359 U	0.032 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0121 U	0.062 U	1.1 U	0.00998 U	0.052 U	1.1 U	0.00991 U	0.052 U	1.1 U	0.00945 U	0.05 U	1.1 U	0.00676 U	0.038 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00807 U	0.056 U	1.5 U	0.00666 U	0.046 U	1.5 U	0.00661 U	0.047 U	1.5 U	0.0063 U	0.045 U	1.5 U	0.00451 U	0.034 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	**0.0259 J**	**0.061 J**	1.1 U	0.00808 U	0.04 U	1.1 U	0.00802 U	0.041 U	1.1 U	0.00765 U	0.039 U	1.1 U	0.00547 U	0.03 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.0128 U	0.087 U	1.4 U	0.0105 U	0.072 U	1.4 U	0.0104 U	0.073 U	1.4 U	0.00997 U	0.07 U	1.4 U	0.00713 U	0.052 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00786 U	0.064 U	1.2 U	0.00649 U	0.053 U	1.2 U	0.00644 U	0.054 U	1.2 U	0.00614 U	0.051 U	1.2 U	0.00439 U	0.039 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.144 U	0.16 U	2.1 U	0.119 U	0.13 U	2.1 U	0.118 U	0.14 U	2.1 U	0.112 U	0.13 U	2.1 U	0.0802 U	0.098 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00704 U	0.038 U	0.73 U	0.00581 U	0.031 U	0.73 U	0.00576 U	0.032 U	0.73 U	0.0055 U	0.03 U	0.73 U	0.00393 U	0.023 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.0108 U	0.051 U	0.62 U	0.00892 U	0.042 U	0.62 U	0.00885 U	0.042 U	0.62 U	0.00844 U	0.041 U	0.62 U	0.00604 U	0.03 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00685 U	0.039 U	0.63 U	0.00565 U	0.032 U	0.63 U	0.0056 U	0.033 U	0.63 U	0.00534 U	0.031 U	0.63 U	0.00382 U	0.024 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00722 U	0.029 U	0.62 U	0.00596 U	0.024 U	0.62 U	0.00591 U	0.024 U	0.62 U	0.00564 U	0.023 U	0.62 U	0.00403 U	0.017 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.0101 U	0.14 U	1.3 U	0.00834 U	0.12 U	1.3 U	0.00828 U	0.12 U	1.3 U	0.00789 U	0.11 U	1.3 U	0.00564 U	0.085 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.412 U	0.095 U	1.8 U	0.34 U	0.078 U	1.8 U	0.337 U	0.079 U	1.8 U	0.322 U	0.076 U	1.8 U	0.23 U	0.057 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.0153 J**	0.028 U	0.04 U	0.00083 U	0.023 U	0.04 U	0.00077 U	0.024 U	0.04 U	**0.00098 J**	0.023 U	0.04 U	0.00096 U	0.017 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.0523 J**	**0.093 J**	0.03 U	0.0005 U	0.031 U	0.03 U	0.00046 U	0.032 U	0.03 U	**0.00432 J**	0.03 U	0.03 U	**0.0092**	0.023 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	**0.0109 J**	0.036 U	0.85 U	0.00778 U	0.029 U	0.85 U	0.00772 U	0.03 U	0.85 U	0.00737 U	0.028 U	0.85 U	0.00527 U	0.021 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.0729 J**	**0.098 J**	0.02 U	**0.00111 J**	0.025 U	0.02 U	**0.00188 J**	0.025 U	0.02 U	**0.0073**	0.024 U	0.02 U	**0.0118**	**0.023 J**	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.0065 U	0.12 U	1.8 U	0.00536 U	0.098 U	1.8 U	0.00532 U	0.1 U	1.8 U	0.00507 U	0.095 U	1.8 U	0.00363 U	0.072 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	**0.0786**	**0.21 J**	**3.2 J**	0.0156 U	**0.093 J**	**1.9 J**	0.0154 U	**0.1 J**	**2 J**	0.0147 U	**0.083 J**	**1.9 J**	0.0105 U	0.032 U	1.1 U
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.348**	**0.34**	0.02 U	0.002 U	0.032 U	0.02 U	**0.00298 J**	0.032 U	0.02 U	**0.0335**	0.031 U	0.02 U	**0.0514**	**0.065 J**	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.311** [C]	**0.44** [C]	0.02 U	0.00087 U	0.068 U	0.02 U	**0.00158 J**	0.069 U	0.02 U	**0.029**	0.066 U	0.02 U	**0.0723**	**0.077 J**	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.303**	**0.5**	0.02 U	**0.0016 J**	0.023 U	0.02 U	**0.00203 J**	0.024 U	0.02 U	**0.0215**	0.023 U	0.02 U	**0.0429**	**0.085**	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.198**	**0.26 J**	0.02 U	**0.00114 J**	0.033 U	0.02 U	**0.0013 J**	0.033 U	0.02 U	**0.0214**	0.032 U	0.02 U	**0.0392**	**0.042 J**	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.187**	**0.18**	0.02 U	0.00077 U	0.02 U	0.02 U	**0.00158 J**	0.02 U	0.02 U	**0.0199**	0.019 U	0.02 U	**0.0449**	**0.026 J**	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	**0.0171 J**	0.079 U	0.76 U	0.00649 U	0.065 U	0.76 U	0.00644 U	0.066 U	0.76 U	0.00614 U	0.063 U	0.76 U	0.00439 U	0.048 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00754 U	0.032 U	0.63 U	0.00622 U	0.027 U	0.63 U	0.00617 U	0.027 U	0.63 U	0.00588 U	0.026 U	0.63 U	0.0042 U	0.019 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0138 U	0.041 U	0.67 U	0.0113 U	0.034 U	0.67 U	0.0112 U	0.034 U	0.67 U	0.0107 U	0.033 U	0.67 U	0.00767 U	0.025 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	**0.304**	**0.34**	0.91 U	**0.0452 J**	**0.11 J**	0.91 U	0.0161 U	**0.12 J**	0.91 U	0.0153 U	**0.16 J**	0.91 U	0.011 U	0.021 U	**1.5 J**
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	**0.0231 J**	0.045 U	1.3 U	0.0125 U	0.037 U	1.3 U	0.0124 U	0.038 U	1.3 U	0.0118 U	0.036 U	1.3 U	0.00844 U	0.027 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.011 U	0.073 U	3.6 U	0.00907 U	0.06 U	3.6 U	0.009 U	0.061 U	3.6 U	0.00858 U	0.058 U	3.6 U	0.00614 U	0.044 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	**0.0123 J**	0.022 U	0.63 U	0.00394 U	0.018 U	0.63 U	0.00391 U	0.018 U	0.63 U	0.00373 U	0.017 U	0.63 U	0.00267 U	**0.016 J**	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.232**	**0.31**	0.02 U	**0.00144 J**	0.029 U	0.02 U	**0.0024 J**	0.029 U	0.02 U	**0.0212**	0.028 U	0.02 U	**0.045**	**0.063 J**	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.0487 J**	**0.066 J**	0.02 U	0.00077 U	0.032 U	0.02 U	0.00071 U	0.033 U	0.02 U	**0.00405 J**	0.032 U	0.02 U	**0.00962**	0.024 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	**0.021 J**	0.03 U	0.66 U	0.00462 U	0.025 U	0.66 U	0.00459 U	0.025 U	0.66 U	0.00437 U	0.024 U	0.66 U	0.00313 U	0.018 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00766 U	0.031 U	0.63 U	0.00631 U	0.025 U	0.63 U	0.00626 U	0.026 U	0.63 U	0.00597 U	0.025 U	0.63 U	**0.00451 J**	0.018 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00584 U	0.033 U	0.65 U	0.00482 U	0.027 U	0.65 U	0.00478 U	0.027 U	0.65 U	0.00456 U	0.026 U	0.65 U	0.00326 U	0.02 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	**0.00899 J**	0.03 U	0.69 U	0.00588 U	0.025 U	0.69 U	0.00584 U	0.025 U	0.69 U	0.00556 U	0.024 U	0.69 U	0.00398 U	0.018 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.031 U	0.11 U	1.1 U	0.0256 U	0.088 U	1.1 U	0.0254 U	0.089 U	1.1 U	0.0242 U	0.085 U	1.1 U	0.0173 U	0.064 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.369**	**0.46**	0.01 U	**0.00302 J**	0.032 U	0.01 U	**0.00633 J**	0.033 U	0.01 U	**0.0376**	0.031 U	0.01 U	**0.0353**	**0.091 J**	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.0207 J**	0.033 U	0.02 U	**0.00148 J**	0.027 U	0.02 U	**0.00159 J**	0.027 U	0.02 U	**0.00334 J**	0.026 U	**0.03 J**	**0.0017 J**	0.02 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.0073 U	0.032 U	0.58 U [D]	0.00602 U	0.027 U	0.58 U [D]	0.00597 U	0.027 U	0.58 U [D]	0.00569 U	0.026 U	0.58 U [D]	0.00407 U	0.02 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0145 U	0.042 U	0.72 U	0.012 U	0.035 U	0.72 U	0.0119 U	0.035 U	0.72 U	0.0113 U	0.034 U	0.72 U	0.00811 U	0.025 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0821 U	0.22 U	7.8 U	0.0677 U	0.18 U	7.8 U	0.0672 U	0.18 U	7.8 U	0.0641 U	0.17 U	7.8 U	0.0458 U	0.13 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.0125 U	0.055 U	0.68 U	0.0103 U	0.045 U	0.68 U	0.0102 U	0.046 U	0.68 U	0.00977 U	0.044 U	0.68 U	0.00699 U	0.033 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.224**	**0.29**	0.02 U	**0.00484 J**	0.039 U	0.02 U	**0.00478 J**	0.04 U	0.02 U	**0.0227**	0.038 U	0.02 U	**0.0396**	**0.042 J**	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.00821 U	0.038 U	0.6 U	0.00677 U	0.031 U	0.6 U	0.00672 U	0.032 U	0.6 U	0.00641 U	0.03 U	0.6 U	0.00458 U	0.023 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.0452 J**	**0.082 J**	**0.05 J**	**0.00076 J**	0.034 U	0.04 U	**0.00076 J**	0.035 U	0.04 U	**0.0035 J**	0.033 U	0.04 U	**0.00405 J**	0.025 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.0078 U	0.05 U	0.75 U	0.00644 U	0.042 U	0.75 U	0.00639 U	0.042 U	0.75 U	0.00609 U	0.04 U	0.75 U	0.00436 U	0.03 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.0127 U	0.028 U	0.7 U	0.0105 U	0.023 U	0.7 U	0.0104 U	0.024 U	0.7 U	0.00995 U	0.023 U	0.7 U	0.00711 U	0.017 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00526 U	0.028 U	0.64 U	0.00434 U	0.023 U	0.64 U	0.0043 U	0.023 U	0.64 U	0.0041 U	0.022 U	0.64 U	0.00293 U	0.017 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.135 U	0.075 U	3.4 U	0.111 U	0.062 U	3.4 U	0.11 U	0.062 U	3.4 U	0.105 U	0.06 U	3.4 U	0.0752 U	0.045 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.138**	**0.17 J**	0.02 U	**0.00248 J**	0.02 U	0.02 U	**0.00493 J**	0.02 U	0.02 U	**0.0152**	0.02 U	0.02 U	**0.00949**	**0.039 J**	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	**0.0301 J**	**2.6**	1.9 U	0.00587 U	**0.048 J**	1.9 U	0.00582 U	0.034 U	1.9 U	0.00555 U	0.032 U	1.9 U	0.00397 U	0.024 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.396**	**0.52**	**0.02 J**	**0.00264 J**	0.024 U	0.01 U	**0.00518 J**	0.025 U	0.01 U	**0.0422**	**0.036 J**	0.01 U	**0.0573**	**0.11 J**	**0.08 J**
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.53199**	**7.068**	**3.27**	**0.0452**	**0.251**	**1.9**	ND	**0.22**	**2**	ND	**0.279**	**1.93**	**0.00451**	**0.679**	**1.58**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**2.9916**	-		**0.02051**	-		**0.03732**	-		**0.28926**	-		**0.47522**	-	
EPH (mg/kg)		-		-		-		-															
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	54.1 U	-		43.9 U	-		42.9 U	-		42.1 U	-		29.2 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-															
Aluminum	78000	-	NA	-	6000	73	4000	-	**12000** [C]	**12900** [C]	**1290**	**17000** [C]	**13000** [C]	**954**	**12600** [C]	**13000** [C]	**1030**	**12300** [C]	**11400** [C]	**1470**	**3620**	**5420**	**546**
Antimony	31	-	450	-	6	-	120	-	**1.58 J**	**0.867 J**	4.29 U	**0.441 J**	0.521 U	4.29 U	**0.248 J**	0.514 U	**31.5 J**	**0.311 J**	0.486 U	4.29 U	**0.213 J**	0.373 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**12.5**	**13.5**	**2.25 J**	**12.6**	**10.3**	**2.53 J**	**9.08**	**10.3**	1.65 U	**9.72**	**9.18**	1.65 U	**4.61**	**4.16**	1.65 U
Barium	16000	-	59000	-	2100	-	120000	-	**43.3**	**77.9**	**58**	**32**	**54.3**	**25.9**	**23.6**	**55.3**	**26.6**	**24.5**	**50.5**	**32.4**	**7.85**	**35.4**	**299**
Beryllium	16	-	140	-	0.7	34	20	-	**0.803** [C]	**0.626 J**	1.07 U	**1.12** [C]	**0.672 J**	1.07 U	**0.799** [C]	**0.649 J**	1.07 U	**0.775** [C]	**0.563 J**	1.07 U	**0.254 J**	**0.235 J**	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan Bay											Raritan-Chapel		
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-O	COMP-O	COMP-O	COMP-O	COMP-O	COMP-O	VC-238	VC-238	VC-238	COMP-P	COMP-P	COMP-P	COMP-Q	COMP-Q	COMP-Q
Sample Name									COMP-O-D0-2E	COMP-O-D0-2E-A	COMP-O-D0-2E-A	COMP-O-D2-25E	COMP-O-D2-25E-A	COMP-O-D2-25E-A	VC-238-D0-28E	VC-238-D0-28E-A	VC-238-D0-28E-A	COMP-P-D0-23E	COMP-P-D0-23E-A	COMP-P-D0-23E-A	COMP-Q-D0-10.5E	COMP-Q-D0-10.5E-A	COMP-Q-D0-10.5E-A
Sample Date									10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/27/2018	10/27/2018	10/23/2018	10/27/2018	10/27/2018	10/23/2018	10/27/2018	10/27/2018	10/29/2018	11/14/2018	11/14/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843140-15	L1844053-12	L1844053-12	L1843140-16	L1844053-13	L1844053-13	L1843140-28	L1844053-19	L1844053-19	L1843140-27	L1844053-18	L1844053-18	L1844234-41	L1846705-06	L1846705-06
Sample Depth (bgs)									0 - 3 (ft)	0 - 3 (ft)	0 - 3 (ft)	3 - 25 (ft)	3 - 25 (ft)	3 - 25 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 9 to 23 (ft)	0 - 9 to 23 (ft)	0 - 9 to 23 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									38,647	38,647	38,647	38,647	38,647	38,647	23,482	23,482	23,482	35,769	35,769	35,769	36,406	36,406	36,406
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS
Cadmium	78	-	78	-	2	2	80	-	**0.708**	**0.995 J**	0.599 U	**0.129 J**	**0.494 J**	0.599 U	**0.068 J**	**0.446 J**	0.599 U	**0.109 J**	**0.422 J**	0.599 U	**0.074 J**	**0.284 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**12000**	**68700**	**185000**	**8140**	**48200**	**113000**	**5830**	**49200**	**118000**	**13600**	**45100**	**137000**	**1440**	**35200**	**418000**
Chromium	NA	-	NA	-	NA	-	NA	-	**61.1**	**108**	**76.2**	**37.4**	**70.4**	**122**	**26.9**	**68.7**	**165**	**27.1**	**65.9**	**144**	**9.1**	**44.6**	**228**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.366 U	0.33 U		0.302 U	0.274 U		0.298 U	0.275 U		0.288 U	0.268 U		0.205 U	0.2 U	
Cobalt	1600	-	590	-	90	-	2000	-	**9.56**	**9.82**	**4.61 J**	**11.1**	**8.93**	1.63 U	**8.05**	**8.58**	1.63 U	**8.64**	**7.74**	1.63 U	**4.02**	**4.58**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**66.5**	**81**	**146**	**14.3**	**25.5**	**16.9**	**10.6**	**25**	**19.8**	**12.8**	**24.8**	**23.5**	**8.61**	**19.9**	**11.4**
Iron	NA	-	NA	-	NA	-	NA	-	**27800**	**26800**	191 U	**39100**	**26400**	191 U	**28300**	**25800**	191 U	**28200**	**22500**	191 U	**12200**	**10800**	191 U
Lead	400	-	800	-	90	23	100	-	**92.4** [C]	**80.9**	3.43 U	**14.6**	**16.6**	3.43 U	**10.8**	**16.2**	3.43 U	**15.4**	**17.1**	3.43 U	**10.1**	**14.2**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**7630**	**7850**	242 U	**9770**	**7230**	242 U	**8000**	**7430**	242 U	**7510**	**6610**	242 U	**1970**	**3170**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**389** [C]	**494** [C]	4.4 U	**449** [C]	**434** [C]	4.4 U	**327** [C]	**429** [C]	4.4 U	**342** [C]	**388** [C]	4.4 U	**78.5** [C]	**167** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**1.03** [C]	**1.07** [C]	**0.062 J**	**0.013 J**	0.023 U	**0.055 J**	**0.014 J**	0.023 U	**0.064 J**	**0.076**	**0.036 J**	**0.066 J**	**0.119** [C]	**0.148** [C]	0.091 U
Nickel	1600	-	23000	-	48	-	2000	-	**28.2**	**39.6**	**78.5**	**28.3**	**32.5**	**17.5 J**	**20.3**	**31.9**	**17.6 J**	**22.1**	**29.2**	**25.9**	**9.91**	**20**	**6.23 J**
Potassium	NA	-	NA	-	NA	-	NA	-	**2880**	**2800**	**32100**	**4140**	**3270**	**36300**	**3290**	**3260**	**33900**	**2940**	**2820**	**34600**	**561**	**1080**	**22100**
Selenium	390	-	5700	-	11	-	800	-	**3.88 J**	**1.16 J**	17.3 U	**4.24**	**0.988 J**	17.3 U	**2.71 J**	**1.03 J**	17.3 U	**2.91 J**	**1.12 J**	17.3 U	**1.12 J**	0.253 U	17.3 U
Silver	390	-	5700	-	1	26	800	-	**2.12** [C]	**1.89** [C]	1.63 U	0.089 U	0.388 U	1.63 U	0.088 U	0.383 U	1.63 U	0.086 U	0.362 U	1.63 U	0.062 U	0.278 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**11800**	**6740**	**232000**	**6000**	**4820**	**157000**	**9850**	**6730**	**206000**	**7450**	**6080**	**204000**	**1720**	**2470**	**93000**
Thallium	NA	-	NA	-	3	-	10	-	**0.5**	0.506 U	1.43 U	**0.226 J**	0.432 U	1.43 U	**0.146 J**	0.426 U	1.43 U	**0.174 J**	0.403 U	1.43 U	0.065 U	0.309 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**34**	**63.2**	**33 J**	**43**	**57.2**	**71.1**	**30.5**	**55.5**	**51.8**	**32.3**	**51.9**	**44.1 J**	**12.4**	**30.5**	15.7 U
Zinc	23000	-	110000	-	930	-	40000	-	**215**	**197**	34.1 U	**93.1**	**77.3**	34.1 U	**67.4**	**74.6**	34.1 U	**67.8**	**69.8**	34.1 U	**57.5**	**95.5**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-															
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00205 U	0.0179 U	0.016 U	0.00168 U	0.0146 U	0.016 U	0.0017 U	0.0146 U	0.016 U	0.00162 U	0.0144 U	0.016 U	0.00116 U	0.00976 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00275 U	0.0202 U	0.022 U	0.00226 U	0.0165 U	0.022 U	0.00227 U	0.0164 U	0.022 U	0.00218 U	0.0162 U	0.022 U	0.00155 U	0.011 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00263 U	0.0428 U	0.046 U	0.00216 U	0.0349 U	0.046 U	0.00218 U	0.0348 U	0.046 U	0.00208 U	0.0343 U	0.046 U	0.00148 U	0.0233 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	**0.105**	**0.143 P**	0.036 U	0.00155 U	0.0222 U	0.036 U	0.00156 U	0.0221 U	0.036 U	0.00149 U	0.0218 U	0.036 U	0.00106 U	0.0148 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00236 U	0.0303 U	0.046 U	0.00194 U	0.0247 U	0.046 U	0.00195 U	0.0246 U	0.046 U	0.00187 U	0.0243 U	0.046 U	0.00133 U	0.0165 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	**0.123 P**	**0.217**	0.017 U	0.00193 U	0.018 U	0.017 U	0.00194 U	0.018 U	0.017 U	0.00186 U	0.0177 U	0.017 U	0.00132 U	0.012 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	**0.0498**	0.0373 U	0.034 U	0.00194 U	0.0304 U	0.034 U	0.00195 U	0.0304 U	0.034 U	0.00187 U	0.0299 U	0.034 U	0.00133 U	0.0203 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00216 U	0.0256 U	0.033 U	0.00177 U	0.0209 U	0.033 U	0.00178 U	0.0208 U	0.033 U	0.0017 U	0.0206 U	0.033 U	0.00121 U	0.014 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00186 U	0.0209 U	0.032 U	0.00152 U	0.017 U	0.032 U	0.00154 U	0.017 U	0.032 U	0.00147 U	0.0168 U	0.032 U	0.00105 U	0.0114 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	**0.2778** [AC]	**0.36** [AC]	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-
Other		-		-		-		-															
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**56.3**	**51.6**	**-**	**47**	**41.7**	**-**	**46.4**	**41.9**	**-**	**44.5**	**40.3**	**-**	**22**	**19.9**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**2.26**	-	-	**1.47**	-	-	**1.45**	-	-	**1.24**	-	-	**0.226**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**2.44**	-	-	**1.46**	-	-	**1.41**	-	-	**1.28**	-	-	**0.168**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**43.7**	**48.4**	**-**	**53**	**58.3**	**-**	**53.6**	**58.1**	**-**	**55.5**	**59.7**	**-**	**78**	**80.1**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**160**	**31**	**-**	**150**	**37**	**-**	**140**	**37**	**-**	**150**	**42**	**-**	**130**	**25**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.5**	**12.2**	**11.5**	**9**	**11.9**	**11.4**	**8.4**	**11.9**	**11.4**	**8.6**	**12.**	**11.5**	**8**	**12.6**	**11.8**
Pesticides (mg/kg) (ug/L)		-		-		-		-															
4,4'-DDD	3	-	13	-	4	-	2	-	**0.00168**	**0.0034 J**	0.005 U	0.00006 U	0.0028 U	0.005 U	0.00006 U	0.00269 U	0.005 U	0.00005 U	0.0027 U	0.005 U	0.00004 U	0.00201 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	**0.00387**	0.0022 U	0.004 U	0.00006 U	0.00181 U	0.004 U	**0.00008 P**	0.00175 U	0.004 U	**0.0001 P**	0.00175 U	0.004 U	0.00004 U	0.0013 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	**0.00325 P**	0.00767 U	**0.018 J**	0.00006 U	0.0063 U	0.004 U	0.00006 U	0.00607 U	**0.007 J**	0.00005 U	0.00608 U	0.004 U	0.00004 U	0.00453 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	**0.00093 P**	0.00336 U	0.002 U	0.00006 U	0.00276 U	0.002 U	0.00006 U	0.00266 U	0.002 U	0.00005 U	0.00266 U	0.002 U	0.00004 U	0.00198 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	**0.00021**	0.00113 U	0.004 U	0.00006 U	0.00092 U	0.004 U	0.00006 U	0.00089 U	0.004 U	0.00005 U	0.00089 U	0.004 U	0.00004 U	0.00066 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	**0.00031**	0.00332 U	0.007 U	0.00006 U	0.00273 U	0.007 U	0.00006 U	0.00263 U	0.007 U	0.00005 U	0.00263 U	0.007 U	0.00004 U	0.00196 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00007 U	0.00362 U [C]	0.006 U	0.00006 U	0.00297 U [C]	0.006 U	0.00006 U	0.00286 U [C]	0.006 U	0.00005 U	0.00286 U [C]	0.006 U	0.00004 U	0.00214 U [C]	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00373 U	0.0316 U	0.046 U	0.00306 U	0.026 U	0.046 U	0.00308 U	0.025 U	0.046 U	0.00295 U	0.025 U	0.046 U	0.0021 U	0.0186 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00187 U	0.005 U	0.00006 U	0.00154 U	0.005 U	0.00006 U	0.00148 U	0.005 U	0.00005 U	0.00148 U	0.005 U	0.00004 U	0.0011 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	**0.00031 IP**	0.00298 U	0.004 U	0.00006 U	0.00245 U	0.004 U	0.00006 U	0.00236 U	0.004 U	0.00005 U	0.00236 U	0.004 U	0.00004 U	0.00176 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00225 U	0.003 U	0.00006 U	0.00185 U	0.003 U	0.00006 U	0.00178 U	0.003 U	0.00005 U	0.00178 U	0.003 U	0.00004 U	0.00133 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	**0.00234 P**	0.00319 U	0.005 U	0.00006 U	0.00262 U	0.005 U	0.00006 U	0.00252 U	0.005 U	0.00005 U	0.00252 U	0.005 U	0.00004 U	0.00188 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00007 U	**0.00516**	0.005 U	0.00006 U	0.00156 U	0.005 U	0.00006 U	0.0015 U	0.005 U	0.00005 U	0.0015 U	0.005 U	0.00004 U	0.00112 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00007 U	0.00163 U	0.004 U	0.00006 U	0.00134 U	0.004 U	0.00006 U	0.00129 U	0.004 U	0.00005 U	0.00129 U	0.004 U	0.00004 U	0.00096 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	**0.00137 P**	0.00417 U	**0.011 J**	0.00018 U	0.00343 U	0.008 U	0.00018 U	0.0033 U	0.008 U	0.00017 U	0.00331 U	0.008 U	0.00012 U	0.00246 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00007 U	0.00246 U	0.005 U	0.00006 U	0.00202 U	0.005 U	0.00006 U	0.00194 U	0.005 U	0.00005 U	0.00194 U	0.005 U	0.00004 U	0.00145 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	**0.00017 P**	0.00178 U	0.004 U	0.00006 U	0.00146 U	0.004 U	0.00006 U	0.00141 U	0.004 U	0.00005 U	0.00141 U	0.004 U	0.00004 U	0.00105 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	**0.0022**	0.00315 U	0.006 U	0.00006 U	0.00259 U	0.006 U	0.00006 U	0.00249 U	0.006 U	0.00005 U	0.00249 U	0.006 U	0.00004 U	0.00186 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00007 U	0.00214 U	0.003 U	0.00006 U	0.00176 U	0.003 U	0.00006 U	0.00169 U	0.003 U	0.00005 U	0.00169 U	0.003 U	0.00004 U	0.00126 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00014 U	0.00536 U	0.004 U	0.00012 U	0.00441 U	0.004 U	0.00012 U	0.00425 U	0.004 U	0.00011 U	0.00425 U	0.004 U	0.00008 U	0.00317 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00074 U	0.00556 U	0.007 U	0.00061 U	0.00457 U	0.007 U	0.00061 U	0.0044 U	0.007 U	0.00058 U	0.00441 U	0.007 U	0.00041 U	0.00328 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00373 U	0.0501 U	0.063 U	0.00306 U	0.0412 U	0.063 U	0.00308 U	0.0396 U	0.063 U	0.00295 U	0.0397 U	0.063 U	0.0021 U	0.0296 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan-Chapel											
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-244	VC-244	VC-244	VC-245	VC-245	VC-245	VC-246	VC-246	VC-246	COMP-R	COMP-R	COMP-R
Sample Name									VC-244-D0-4E	VC-244-D0-4E-A	VC-244-D0-4E-A	VC-245-D0-4E	VC-245-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E	VC-246-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E	COMP-R-D4-10.5E-A	COMP-R-D4-10.5E-A
Sample Date									10/26/2018	11/07/2018	11/07/2018	10/26/2018	11/07/2018	11/07/2018	10/26/2018	11/07/2018	11/07/2018	10/26/2018	11/07/2018	11/07/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844234-08	L1846705-15	L1846705-15	L1844234-06	L1846705-16	L1846705-16	L1844234-04	L1846705-17	L1846705-17	L1844234-10	L1846705-07	L1846705-07
Sample Depth (bgs)									0 - 5 (ft)	0 - 5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.9 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	0 - 4.8 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	4.9 - 10.5 (ft)	4.9 - 10.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630	8,084	8,084	8,084
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																				
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.0042 U	0.023 U	0.67 U	0.00461 U	0.023 U	0.67 U	0.00538 U	0.026 U	0.67 U	0.00412 U	0.02 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.00736 U	0.026 U	0.7 U	0.00807 U	0.026 U	0.7 U	0.00943 U	0.028 U	0.7 U	0.00722 U	0.022 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.00764 U	0.045 U	0.93 U	0.00837 U	0.045 U	0.93 U	0.00978 U	0.049 U	0.93 U	0.00749 U	0.039 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00526 U	0.043 U	0.72 U	0.00577 U	0.043 U	0.72 U	0.00674 U	0.047 U	0.72 U	0.00516 U	0.037 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00395 U	0.042 U	0.68 U	0.00433 U	0.042 U	0.68 U	0.00505 U	0.046 U	0.68 U	0.00387 U	0.037 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00474 U	0.036 U	0.77 U	0.0052 U	0.036 U	0.77 U	0.00607 U	0.039 U	0.77 U	0.00465 U	0.031 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.00728 U	0.071 U	1.6 U	0.00798 U	0.071 U	1.6 U	0.00932 U	0.078 U	1.6 U	0.00714 U	0.062 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.0752 U	0.1 U	5.5 U	0.0825 U	0.1 U	5.5 U	0.0963 U	0.11 U	5.5 U	0.0738 U	0.091 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00309 U	0.037 U	0.84 U	0.00339 U	0.037 U	0.84 U	0.00396 U	0.041 U	0.84 U	0.00303 U	0.032 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0114 U	0.029 U	1.1 U	0.0125 U	0.03 U	1.1 U	0.0146 U	0.032 U	1.1 U	0.0112 U	0.026 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00081 U	0.021 U	0.03 U	0.00044 U	0.021 U	0.03 U	0.00051 U	0.023 U	0.03 U	0.00071 U	0.018 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00291 U	0.024 U	0.63 U	0.00319 U	0.024 U	0.63 U	0.00373 U	0.027 U	0.63 U	0.00286 U	0.021 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.0219**	**0.027 J**	0.06 U	**0.0316**	**0.043 J**	0.06 U	**0.067**	**0.074 J**	0.06 U	0.00114 U	0.021 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.0038 U	0.034 U	1 U	0.00416 U	0.035 U	1 U	0.00486 U	0.038 U	1 U	0.00372 U	0.03 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.00713 U	0.041 U	1.1 U	0.00782 U	0.041 U	1.1 U	0.00914 U	0.045 U	1.1 U	0.007 U	0.036 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00476 U	0.036 U	1.5 U	0.00522 U	0.037 U	1.5 U	0.00609 U	0.04 U	1.5 U	0.00467 U	0.032 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	**0.0171 J**	**0.037 J-**	1.1 U	**0.0243 J**	**0.051 J-**	1.1 U	**0.0514 J**	**0.096 J-**	1.1 U	0.00566 U	0.028 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.00753 U	0.057 U	1.4 U	0.00826 U	0.057 U	1.4 U	0.00964 U	0.063 U	1.4 U	0.00739 U	0.05 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00464 U	0.042 U	1.2 U	0.00508 U	0.042 U	1.2 U	0.00594 U	0.046 U	1.2 U	0.00455 U	0.037 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.0848 U	0.11 U	2.1 U	0.0929 U	0.11 U	2.1 U	0.108 U	0.12 U	2.1 U	0.0832 U	0.094 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00415 U	0.025 U	0.73 U	0.00455 U	0.025 U	0.73 U	0.00531 U	0.027 U	0.73 U	0.00407 U	0.022 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.00637 U	0.033 U	0.62 U	0.00699 U	0.033 U	0.62 U	0.00816 U	0.036 U	0.62 U	0.00625 U	0.029 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00404 U	0.026 U	0.63 U	0.00442 U	0.026 U	0.63 U	0.00517 U	0.028 U	0.63 U	0.00396 U	0.022 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00426 U	0.019 U	0.62 U	0.00467 U	0.019 U	0.62 U	0.00545 U	0.02 U	0.62 U	0.00418 U	0.016 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00596 U	0.092 U	1.3 U	0.00653 U	0.092 U	1.3 U	0.00763 U	0.1 U	1.3 U	0.00585 U	0.081 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.243 U	0.062 U	1.8 U	0.266 U	0.062 U	1.8 U	0.311 U	0.068 U	1.8 U	0.238 U	0.054 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.015**	0.019 U	0.04 U	**0.0259**	**0.027 J**	0.04 U	**0.0473**	**0.049 J**	0.04 U	0.00103 U	0.016 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.0672**	**0.094 J**	0.03 U	**0.144**	**0.18**	0.03 U	**0.242**	**0.25**	0.03 U	0.00061 U	0.022 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.00556 U	0.023 U	0.85 U	0.0061 U	0.023 U	0.85 U	0.00712 U	0.026 U	0.85 U	0.00546 U	0.02 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.146**	**0.13**	0.02 U	**0.218**	**0.24**	**0.02 J**	**0.48**	**0.38**	**0.02 J**	0.00114 U	0.017 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.00383 U	0.078 U	1.8 U	0.0042 U	0.078 U	1.8 U	0.00491 U	0.086 U	1.8 U	0.00376 U	0.068 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	0.0111 U	**0.086 J**	**2.1 J**	0.0122 U	**0.097 J**	**2.4 J**	0.0142 U	**0.13 J**	**3.2 J**	0.0109 U	0.03 U	1.1 U
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.582**	**0.44**	0.02 U	**0.896** [C]	**0.78**	0.02 U	**1.86** [C]	**1.3** [C]	0.02 U	0.00245 U	0.022 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.679** [AC]	**0.52** [AC]	0.02 U	**1.44** [AC]	**1.1** [AC]	0.02 U	**2.43** [ABC]	**1.6** [AC]	0.02 U	**0.00207 J**	0.048 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.473**	**0.56**	0.02 U	**0.765**	**1.1**	0.02 U	**1.17**	**1.7**	0.02 U	**0.00175 J**	0.016 U	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.361**	**0.3**	0.02 U	**0.668**	**0.6**	0.02 U	**1.18**	**0.96**	0.02 U	**0.00116 J**	0.023 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.371**	**0.19**	0.02 U	**0.653**	**0.28**	0.02 U	**1.13**	**0.47**	0.02 U	**0.00186 J**	0.014 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	**0.0107 J**	0.052 U	0.76 U	**0.018 J**	0.052 U	0.76 U	**0.0347 J**	0.057 U	0.76 U	0.00455 U	0.045 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00444 U	0.021 U	0.63 U	0.00487 U	0.021 U	0.63 U	0.00569 U	0.023 U	0.63 U	0.00436 U	0.018 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0081 U	0.027 U	0.67 U	0.00889 U	0.027 U	0.67 U	0.0104 U	0.029 U	0.67 U	0.00795 U	0.023 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	**0.0126 J**	**0.035 J**	0.91 U	**0.0152 J**	**0.037 J**	0.91 U	0.0148 U	**0.052 J**	0.91 U	0.0113 U	**0.022 J**	**0.98 J**
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.00892 U	0.03 U	1.3 U	0.00978 U	0.03 U	1.3 U	0.0114 U	0.032 U	1.3 U	0.00875 U	0.026 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.00648 U	0.048 U	3.6 U	**0.00804 J**	0.048 U	3.6 U	**0.0184 J**	0.052 U	3.6 U	0.00636 U	0.042 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	**0.00945 J**	0.014 U	0.63 U	**0.0159 J**	**0.022 J**	0.63 U	**0.031 J**	**0.035 J**	0.63 U	0.00276 U	0.012 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.487**	**0.42**	0.02 U	**0.71**	**0.73**	0.02 U	**1.54**	**1.1**	0.02 U	**0.00197 J**	0.02 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.106**	**0.078**	0.02 U	**0.175**	**0.14**	0.02 U	**0.365**	**0.24**	0.02 U	0.00094 U	0.022 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	**0.0164 J**	0.02 U	0.66 U	**0.0249 J**	**0.028 J**	0.66 U	**0.0467 J**	**0.045 J**	0.66 U	0.00324 U	0.017 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00451 U	0.02 U	0.63 U	0.00495 U	0.02 U	0.63 U	**0.00961 J**	0.022 U	0.63 U	**0.00459 J**	0.018 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00344 U	0.021 U	0.65 U	0.00378 U	0.021 U	0.65 U	0.00441 U	0.023 U	0.65 U	0.00338 U	0.019 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.0042 U	0.02 U	0.69 U	0.00461 U	0.02 U	0.69 U	0.00538 U	0.022 U	0.69 U	0.00412 U	0.017 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0183 U	0.07 U	1.1 U	0.02 U	0.07 U	1.1 U	0.0234 U	0.076 U	1.1 U	0.0179 U	0.061 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.6**	**0.62**	**0.03 J**	**0.919**	**1.1**	**0.03 J**	**2.05**	**1.7**	**0.03 J**	**0.00331 J**	0.022 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.024**	**0.033 J**	0.02 U	**0.0381**	**0.059 J**	0.02 U	**0.0723**	**0.091 J**	0.02 U	0.00061 U	0.019 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.0043 U	0.021 U	0.58 U [D]	0.00471 U	0.021 U	0.58 U [D]	0.00551 U	0.023 U	0.58 U [D]	0.00422 U	0.019 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.00856 U	0.028 U	0.72 U	0.00939 U	0.028 U	0.72 U	0.011 U	0.03 U	0.72 U	0.0084 U	0.024 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0484 U	0.14 U	7.8 U	0.053 U	0.14 U	7.8 U	0.062 U	0.15 U	7.8 U	0.0475 U	0.12 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.00738 U	0.036 U	0.68 U	0.00809 U	0.036 U	0.68 U	0.00945 U	0.04 U	0.68 U	0.00724 U	0.032 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.376**	**0.3**	0.02 U	**0.622**	**0.56**	0.02 U	**1.06**	**0.88**	0.02 U	**0.00602 J**	0.027 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.00484 U	0.025 U	0.6 U	0.0053 U	0.025 U	0.6 U	0.0062 U	0.027 U	0.6 U	0.00475 U	0.022 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.0633**	**0.091 J**	**0.05 J**	**0.09**	**0.14 J**	**0.07 J**	**0.182**	**0.24**	**0.13**	**0.00125 J**	0.024 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.0046 U	0.033 U	0.75 U	0.00504 U	0.033 U	0.75 U	0.00589 U	0.036 U	0.75 U	0.00451 U	0.029 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.00751 U	0.019 U	0.7 U	0.00824 U	0.019 U	0.7 U	0.00962 U	0.02 U	0.7 U	0.00737 U	0.016 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.0031 U	0.018 U	0.64 U	0.0034 U	0.018 U	0.64 U	0.00397 U	0.02 U	0.64 U	0.00304 U	0.016 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.0794 U	0.049 U	3.4 U	0.087 U	0.049 U	3.4 U	0.102 U	0.054 U	3.4 U	0.0779 U	0.043 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.203**	**0.22**	**0.03 J**	**0.358**	**0.4**	**0.04 J**	**0.684**	**0.66**	**0.03 J**	**0.00179 J**	0.014 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00419 U	0.026 U	1.9 U	0.0046 U	0.026 U	1.9 U	0.00537 U	**0.036 J-**	1.9 U	0.00411 U	0.023 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.755**	**0.85**	**0.21**	**1.66**	**1.5**	**0.46**	**2.61**	**2.2**	**0.4**	**0.00305 J**	0.017 U	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.06625**	**5.031**	**2.42**	**0.10634**	**9.214**	**3.02**	**0.19181**	**14.288**	**3.81**	**0.00459**	**0.022**	**0.98**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**5.3304**	-		**9.4136**	-		**17.1696**	-		**0.02423**	-	
EPH (mg/kg)		-		-		-		-												
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	**79.9**	-		**86**	-		**54.2**	-		30 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-												
Aluminum	78000	-	NA	-	6000	73	4000	-	**4910**	**6320** [C]	**637**	**4600**	**6840** [C]	**571**	**8280** [C]	**9140** [C]	**730**	**2820**	**4480**	**450**
Antimony	31	-	450	-	6	-	120	-	**0.312 J**	0.403 U	4.29 U	**0.481 J**	0.387 U	4.29 U	**0.733 J**	0.428 U	4.29 U	0.171 U	0.361 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**6.53**	**6.41**	1.65 U	**7.88**	**9.06**	1.65 U	**13.8**	**12.7**	1.65 U	**2.75**	**3.49**	1.65 U
Barium	16000	-	59000	-	2100	-	120000	-	**18.6**	**43.9**	**158**	**19.9**	**50.7**	**156**	**37.3**	**63.9**	**106**	**5.2**	**33.7**	**389**
Beryllium	16	-	140	-	0.7	34	20	-	**0.274 J**	**0.244 J**	1.07 U	**0.282 J**	**0.275 J**	1.07 U	**0.477 J**	**0.394 J**	1.07 U	**0.183 J**	**0.18 J**	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan-Chapel									
Location Name									VC-244	VC-244	VC-244	VC-245	VC-245	VC-245	VC-246	VC-246	VC-246	COMP-R	COMP-R	COMP-R
Sample Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-244-D0-4E	VC-244-D0-4E-A	VC-244-D0-4E-A	VC-245-D0-4E	VC-245-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E	VC-246-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E	COMP-R-D4-10.5E-A	COMP-R-D4-10.5E-A
Sample Date									10/26/2018	11/07/2018	11/07/2018	10/26/2018	11/07/2018	11/07/2018	10/26/2018	11/07/2018	11/07/2018	10/26/2018	11/07/2018	11/07/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844234-08	L1846705-15	L1846705-15	L1844234-06	L1846705-16	L1846705-16	L1844234-04	L1846705-17	L1846705-17	L1844234-10	L1846705-07	L1846705-07
Sample Depth (bgs)									0 - 5 (ft)	0 - 5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.9 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	0 - 4.8 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	4.9 - 10.5 (ft)	4.9 - 10.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630	8,084	8,084	8,084
Soil Description									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS
Cadmium	78	-	78	-	2	2	80	-	**0.143 J**	**0.318 J**	0.599 U	**0.154 J**	**0.377 J**	0.599 U	**0.295 J**	**0.518 J**	0.599 U	0.033 U	**0.209 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**12000**	**46100**	**289000**	**3320**	**42700**	**285000**	**4150**	**42500**	**219000**	**3170**	**39700**	**404000**
Chromium	NA	-	NA	-	NA	-	NA	-	**14.8**	**50.2**	**170**	**14.4**	**52.9**	**121**	**25.8**	**64.7**	**108**	**7.97**	**49.3**	**233**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.216 U	0.216 U		0.235 U	0.217 U		0.276 U	0.24 U		0.209 U	0.191 U	
Cobalt	1600	-	590	-	90	-	2000	-	**4.01**	**4.75**	**1.93 J**	**3.92**	**5.23**	1.63 U	**6.61**	**6.85**	**2.65 J**	**3.27**	**4.07**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**17.6**	**26.8**	**55.3**	**22.9**	**38.1**	**54.3**	**46.7**	**53**	**83.3**	**3.47**	**15.9**	**10.1**
Iron	NA	-	NA	-	NA	-	NA	-	**11500**	**10100**	191 U	**11000**	**11000**	191 U	**19200**	**14700**	191 U	**8220**	**9090**	191 U
Lead	400	-	800	-	90	23	100	-	**39.3**	**31.4**	3.43 U	**51.7**	**54.2**	3.43 U	**99** [C]	**82.7**	3.43 U	**3.17**	**7.98**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**3040**	**3870**	242 U	**2910**	**4150**	242 U	**5040**	**5450**	242 U	**1860**	**2890**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**172** [C]	**233** [C]	4.4 U	**142** [C]	**223** [C]	4.4 U	**236** [C]	**271** [C]	4.4 U	**82.1** [C]	**170** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**0.703** [C]	**0.726** [C]	0.091 U	**0.834** [C]	**1.25** [C]	0.091 U	**1.67** [C]	**1.98** [C]	0.091 U	0.002 U	0.016 U	0.091 U
Nickel	1600	-	23000	-	48	-	2000	-	**11.3**	**21.2**	**43.6**	**11.8**	**24**	**42.8**	**21.2**	**29.3**	**54.5**	**7.21**	**19**	5.56 U
Potassium	NA	-	NA	-	NA	-	NA	-	**1170**	**1610**	**27800**	**1100**	**1650**	**26900**	**1890**	**2170**	**30400**	**626**	**1030**	**19700**
Selenium	390	-	5700	-	11	-	800	-	**1.29 J**	0.274 U	17.3 U	**1.47 J**	**0.509 J**	17.3 U	**1.82 J**	**0.315 J**	17.3 U	0.955 U	**0.56 J**	17.3 U
Silver	390	-	5700	-	1	26	800	-	**0.171 J**	0.3 U	1.63 U	**0.244 J**	0.288 U	1.63 U	**0.65 J**	0.318 U	1.63 U	0.062 U	0.268 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**4110**	**3900**	**141000**	**4400**	**3880**	**136000**	**6200**	**5160**	**178000**	**2420**	**2120**	**78500**
Thallium	NA	-	NA	-	3	-	10	-	**0.09 J**	0.334 U	**1.48 J**	**0.088 J**	0.321 U	1.43 U	**0.162 J**	0.354 U	1.43 U	0.065 U	0.299 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**15**	**34.7**	15.7 U	**13.9**	**37**	15.7 U	**24.6**	**46.3**	15.7 U	**7.74**	**29.1**	15.7 U
Zinc	23000	-	110000	-	930	-	40000	-	**54.1**	**63.9**	34.1 U	**62.5**	**82.3**	34.1 U	**120**	**115**	34.1 U	**16**	**34.8**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-												
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00121 U	0.0109 U	0.016 U	0.00135 U	0.0119 U	0.016 U	0.00158 U	0.0123 U	0.016 U	0.00118 U	0.0098 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00162 U	0.0123 U	0.022 U	0.00181 U	0.0135 U	0.022 U	0.00212 U	0.0139 U	0.022 U	0.00158 U	0.0111 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00155 U	0.026 U	0.046 U	0.00173 U	0.0285 U	0.046 U	0.00202 U	0.0294 U	0.046 U	0.00152 U	0.0234 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	**0.00377**	0.0166 U	0.036 U	**0.00314 JP**	0.0181 U	0.036 U	0.00145 U	0.0187 U	0.036 U	0.00109 U	0.0149 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00139 U	0.0184 U	0.046 U	0.00155 U	0.0202 U	0.046 U	0.00182 U	0.0208 U	0.046 U	0.00136 U	0.0166 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	**0.00375**	0.0134 U	0.017 U	**0.00214 J**	0.0147 U	0.017 U	0.00181 U	0.0152 U	0.017 U	0.00135 U	0.0121 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	**0.00145 J**	0.0227 U	0.034 U	0.00155 U	0.0248 U	0.034 U	0.00182 U	0.0256 U	0.034 U	0.00136 U	0.0204 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00127 U	0.0156 U	0.033 U	0.00142 U	0.0171 U	0.033 U	0.00166 U	0.0176 U	0.033 U	0.00124 U	0.014 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.0011 U	0.0127 U	0.032 U	0.00122 U	0.0139 U	0.032 U	0.00143 U	0.0144 U	0.032 U	0.00107 U	0.0114 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	**0.00897**	ND	-	**0.00528**	ND	-	ND	ND	-	ND	ND	-
Other		-		-		-		-												
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**26**	**25.9**	**-**	**32**	**26.2**	**-**	**42.1**	**33.2**	**-**	**23.3**	**16.3**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**0.793**	-	-	**0.775**	-	-	**1.03**	-	-	**0.122**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**0.631**	-	-	**0.81**	-	-	**1.32**	-	-	**0.102**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**74**	**74.1**	**-**	**68**	**73.8**	**-**	**57.9**	**66.8**	**-**	**76.7**	**83.7**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**180**	**39**	**-**	**180**	**39**	**-**	**190**	**37**	**-**	**170**	**21**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8**	**12.3**	**11.7**	**8**	**12.4**	**11.7**	**7.9**	**12.2**	**11.6**	**8.5**	**12.6**	**11.9**
Pesticides (mg/kg) (ug/L)		-		-		-		-												
4,4'-DDD	3	-	13	-	4	-	2	-	**0.00008**	0.002 U	0.005 U	**0.0002 P**	0.00211 U	0.005 U	**0.00045 P**	0.00231 U	0.005 U	0.00004 U	0.00201 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	**0.0002 IP**	0.0013 U	0.004 U	**0.0001 IP**	0.00137 U	0.004 U	**0.00022 IP**	0.0015 U	0.004 U	0.00004 U	0.0013 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	**0.00009 IP**	0.00451 U	0.004 U	**0.00018 P**	0.00475 U	0.004 U	**0.00017**	0.00522 U	**0.014 J**	0.00004 U	0.00454 UIP	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00004 U	0.00197 U	0.002 U	0.00004 U	0.00208 U	0.002 U	0.00005 U	0.00228 U	0.002 U	0.00004 U	0.00199 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00004 U	0.00066 U	0.004 U	0.00004 U	0.0007 U	0.004 U	0.00005 U	0.00076 U	0.004 U	0.00004 U	0.00066 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00195 U	0.007 U	0.00004 U	0.00206 U	0.007 U	0.00005 U	0.00226 U	0.007 U	0.00004 U	0.00197 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00004 U	0.00212 U [C]	0.006 U	0.00004 U	0.00224 U [C]	0.006 U	0.00005 U	0.00246 U [C]	0.006 U	0.00004 U	0.00214 U [C]	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.0022 U	0.0186 U	0.046 U	0.00245 U	0.0196 U	0.046 U	0.00287 U	0.0215 U	0.046 U	0.00215 U	0.0187 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.0011 U	0.005 U	0.00004 U	0.00116 U	0.005 U	0.00005 U	0.00127 U	0.005 U	0.00004 U	0.0011 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	0.00004 UI	0.00175 U	0.004 U	**0.00004 IP**	0.00185 U	0.004 U	0.00005 U	0.00203 U	0.004 U	0.00004 U	0.00176 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00132 U	0.003 U	0.00004 U	0.0014 U	0.003 U	0.00005 U	0.00153 U	0.003 U	0.00004 U	0.00133 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	**0.00008 P**	0.00187 U	0.005 U	**0.00015**	0.00198 U	0.005 U	**0.00017 P**	0.00217 U	0.005 U	0.00004 U	0.00189 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00004 U	0.00111 U	0.005 U	0.00004 U	0.00117 U	0.005 U	0.00005 U	0.00129 U	0.005 U	0.00004 U	0.00112 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00004 U	0.00095 U	0.004 U	0.00004 U	0.00101 U	0.004 U	0.00005 U	0.00111 U	0.004 U	0.00004 U	0.00096 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00013 U	0.00245 U	0.008 U	0.00014 U	0.00259 U	0.008 U	0.00017 U	0.00284 U	0.008 U	0.00012 U	0.00247 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00144 U	0.005 U	0.00004 U	0.00152 U	0.005 U	0.00005 U	0.00167 U	0.005 U	0.00004 U	0.00145 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00004 U	0.00104 U	0.004 U	0.00004 U	0.0011 U	0.004 U	0.00005 U	0.00121 U	0.004 U	0.00004 U	0.00105 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00185 U	0.006 U	0.00004 U	0.00195 U	0.006 U	0.00005 U	0.00214 U	0.006 U	0.00004 U	0.00186 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00004 U	0.00126 U	0.003 U	0.00004 U	0.00132 U	0.003 U	0.00005 U	0.00145 U	0.003 U	0.00004 U	0.00126 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00008 U	0.00315 U	0.004 U	0.00009 U	0.00332 U	0.004 U	0.00011 U	0.00365 U	0.004 U	0.00008 U	0.00318 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00043 U	0.00327 U	0.007 U	0.00048 U	0.00345 U	0.007 U	0.00057 U	0.00378 U	0.007 U	0.00042 U	0.00329 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.0022 U	0.0294 U	0.063 U	0.00245 U	0.031 U	0.063 U	0.00287 U	0.034 U	0.063 U	0.00215 U	0.0296 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan-Chapel						Chapel Hill								
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-247	VC-247	VC-247	VC-247	VC-247	VC-247	VC-318	VC-318	VC-318	VC-318	VC-318	VC-318	VC-320	VC-320	VC-320
Sample Name									VC-247-D0-4E	VC-247-D0-4E-A	VC-247-D0-4E-A	VC-247-D4-21.5E	VC-247-D4-21.5E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E	VC-318-D3.5-21.5E	VC-318-D0-3.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E	VC-320-D0-19E-A	VC-320-D0-19E-A
Sample Date									10/23/2018	10/31/2018	10/31/2018	10/23/2018	10/31/2018	10/31/2018	10/23/2018	10/23/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843846-08	L1844937-04	L1844937-04	L1843846-09	L1844937-05	L1844937-05	L1843846-10	L1843846-11	L1844937-09	L1844937-09	L1844937-10	L1844937-10	L1843846-12	L1844937-11	L1844937-11
Sample Depth (bgs)									0 - 4.7 (ft)	0 - 4.7 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	4.7 - 21.5 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 3.7 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 19 (ft)	0 - 19 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Raw	Amended	SPLP	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									10,769	10,769	10,769	28,108	28,108	28,108	20,338	20,337	20,338	20,338	20,339	20,340	16,618	16,618	16,618
Soil Description									UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																							
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00528 U	0.026 U	0.67 U	0.00409 U	0.02 U	0.67 U	0.00608 U	0.00355 U	0.026 U	0.67 U	0.019 U	0.67 U	0.00363 U	0.021 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.00925 U	0.029 U	0.7 U	0.00716 U	0.022 U	0.7 U	0.0107 U	0.00621 U	0.029 U	0.7 U	0.021 U	0.7 U	0.00636 U	0.023 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.00959 U	0.051 U	0.93 U	0.00743 U	0.039 U	0.93 U	0.011 U	0.00644 U	0.051 U	0.93 U	0.037 U	0.93 U	0.0066 U	0.041 R	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00661 U	0.049 U	0.72 U	0.00512 U	0.037 U	0.72 U	0.00762 U	0.00444 U	0.049 U	0.72 U	0.035 U	0.72 U	0.00454 U	0.039 R	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00496 U	0.048 U	0.68 U	0.00384 U	0.037 U	0.68 U	0.00571 U	0.00333 U	0.048 U	0.68 U	0.035 U	0.68 U	0.00341 U	0.038 R	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00596 U	0.041 U	0.77 U	0.00461 U	0.031 U	0.77 U	0.00686 U	0.004 U	0.041 U	0.77 U	0.029 U	0.77 U	0.00409 U	0.032 R	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	**0.0131 J**	0.081 U	1.6 U	0.00708 U	0.062 U	1.6 U	0.0105 U	0.00614 U	0.081 U	1.6 U	0.058 U	1.6 U	0.00628 U	0.064 R	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.0945 U	0.12 R	5.5 U	0.0732 U	0.091 R	5.5 U	0.109 U	0.0635 U	0.12 R	5.5 U	0.085 R	5.5 U	0.065 U	0.094 R	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00388 U	0.042 U	0.84 U	0.003 U	0.032 U	0.84 U	0.00447 U	0.00261 U	0.042 U	0.84 U	0.03 U	0.84 U	0.00267 U	0.034 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0143 U	0.034 U	1.1 U	0.0111 U	0.026 U	1.1 U	0.0165 U	0.00961 U	0.034 U	1.1 U	0.024 U	1.1 U	0.00984 U	0.027 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.00052 U	0.024 U	0.03 U	0.00079 U	0.018 U	0.03 U	0.0006 U	0.0007 U	0.024 U	0.03 U	0.017 U	0.03 U	0.00069 U	0.019 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00366 U	0.028 U	0.63 U	0.00283 U	0.021 U	0.63 U	0.00422 U	0.00246 U	0.028 U	0.63 U	0.02 U	0.63 U	0.00252 U	0.022 R	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.0918**	**0.059 J**	0.06 U	0.00126 U	0.02 U	0.06 U	**0.0607**	0.00111 U	**0.059 J**	**0.07 J**	0.019 U	0.06 U	0.00109 U	0.021 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00477 U	0.039 U	1 U	0.00369 U	0.03 U	1 U	0.0055 U	0.0032 U	0.039 U	1 U	0.028 U	1 U	0.00328 U	0.031 R	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.00896 U	0.047 U	1.1 U	0.00694 U	0.036 U	1.1 U	0.0103 U	0.00602 U	0.047 U	1.1 U	0.034 U	1.1 U	0.00616 U	0.037 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00598 U	0.042 U	1.5 U	0.00463 U	0.032 U	1.5 U	0.00689 U	0.00402 U	0.042 U	1.5 U	0.03 U	1.5 U	0.00411 U	0.033 R	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	**0.0569**	**0.076 J**	1.1 U	0.00562 U	0.028 U	1.1 U	**0.0421 J**	0.00487 U	**0.066 J**	1.1 U	0.026 U	1.1 U	0.00499 U	0.029 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.00946 U	0.065 U	1.4 U	0.00732 U	0.05 U	1.4 U	0.0109 U	0.00636 U	0.065 U	1.4 U	0.047 U	1.4 U	0.0065 U	0.052 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00582 U	0.048 U	1.2 U	0.00451 U	0.037 U	1.2 U	0.00671 U	0.00391 U	0.048 U	1.2 U	0.034 U	1.2 U	0.004 U	0.038 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.106 U	0.12 U	2.1 U	0.0824 U	0.093 U	2.1 U	0.123 U	0.0715 U	0.12 U	2.1 U	0.088 U	2.1 U	0.0732 U	0.097 R	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00521 U	0.028 U	0.73 U	0.00404 U	0.022 U	0.73 U	0.00601 U	0.0035 U	0.028 U	0.73 U	0.02 U	0.73 U	0.00358 U	0.022 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.00801 U	0.038 U	0.62 U	0.0062 U	0.029 U	0.62 U	0.00923 U	0.00538 U	0.038 U	0.62 U	0.027 U	0.62 U	0.0055 U	0.03 R	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00507 U	0.029 U	0.63 U	0.00392 U	0.022 U	0.63 U	0.00584 U	0.0034 U	0.029 U	0.63 U	0.021 U	0.63 U	0.00348 U	0.023 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00535 U	0.021 U	0.62 U	0.00414 U	0.016 U	0.62 U	0.00616 U	0.00359 U	0.021 U	0.62 U	0.015 U	0.62 U	0.00368 U	0.017 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00749 U	0.1 U	1.3 U	0.0058 U	0.08 U	1.3 U	0.00863 U	0.00503 U	0.1 U	1.3 U	0.076 U	1.3 U	0.00515 U	0.084 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.305 U	0.071 U	1.8 U	0.236 U	0.054 U	1.8 U	0.352 U	0.205 U	0.071 U	1.8 U	0.051 U	1.8 U	0.21 U	0.056 R	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.0864**	**0.048 J**	**0.08 J**	0.00114 U	0.016 U	0.04 U	**0.0323**	0.001 U	0.021 U	**0.05 J**	0.015 U	0.04 U	0.00098 U	0.017 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.359**	**0.26**	0.03 U	**0.0035 J**	0.022 U	0.03 U	**0.12**	**0.00067 J**	**0.12 J**	0.03 U	0.02 U	0.03 U	**0.00106 J**	0.023 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.00699 U	0.027 U	0.85 U	0.00541 U	0.02 U	0.85 U	0.00805 U	0.00469 U	0.027 U	0.85 U	0.019 U	0.85 U	0.0048 U	0.021 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.516**	**0.36**	**0.07 J**	0.00126 U	0.017 U	0.02 U	**0.173**	0.00111 U	**0.13 J**	**0.03 J**	0.016 U	0.02 U	0.00109 U	0.018 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.00481 U	0.089 U	1.8 U	0.00373 U	0.068 U	1.8 U	0.00555 U	0.00323 U	0.089 U	1.8 U	0.064 U	1.8 U	0.00331 U	0.071 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	**0.034 J**	**0.1 J**	**2.8 J**	0.0108 U	0.03 U	1.1 U	**0.0559 J**	0.00939 U	**0.15 J**	**3.5 J**	0.028 U	1.1 U	0.00961 U	**0.032 J**	1.1 U
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**2.27** [C]	**1.2** [C]	**0.04 J**	**0.0129**	0.022 U	0.02 U	**0.683**	0.00238 U	**0.37**	0.02 U	0.021 U	0.02 U	0.00236 U	0.023 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**2.07** [ABC]	**1.2** [AC]	0.02 U	**0.0138**	0.047 U	0.02 U	**0.675** [AC]	0.00104 U	**0.36** [C]	0.02 U	0.045 U	0.02 U	0.00103 U	0.049 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**1.28**	**1.2**	0.02 U	**0.00733 J**	0.016 U	0.02 U	**0.462**	0.00092 U	**0.39**	0.02 U	0.015 U	0.02 U	0.00091 U	0.017 U	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**1.01**	**0.7**	0.02 U	**0.00749 J**	0.023 U	0.02 U	**0.376**	0.00073 U	**0.23**	0.02 U	0.022 U	0.02 U	0.00072 U	0.024 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**1.07**	**0.43**	0.02 U	**0.00696 J**	0.014 U	0.02 U	**0.434**	0.00092 U	**0.13**	0.02 U	0.013 U	0.02 U	0.0009 U	0.014 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	**0.0408 J**	0.059 U	0.76 U	0.00451 U	0.045 U	0.76 U	**0.0308 J**	0.00391 U	0.059 U	0.76 U	0.042 U	0.76 U	0.004 U	0.047 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00558 U	0.024 U	0.63 U	0.00432 U	0.018 U	0.63 U	0.00643 U	0.00375 U	0.024 U	0.63 U	0.017 U	0.63 U	0.00384 U	0.019 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.0102 U	0.03 U	0.67 U	0.00788 U	0.023 U	0.67 U	0.0117 U	0.00684 U	0.031 U	0.67 U	0.022 U	0.67 U	0.007 U	0.024 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.0145 U	**0.37**	0.91 U	0.0112 U	**0.058 J**	0.91 U	**2.85**	0.00976 U	**1.3**	0.91 U	0.019 U	0.91 U	0.00999 U	**0.12 J**	0.91 U
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.0112 U	0.034 U	1.3 U	0.00867 U	0.026 U	1.3 U	**0.0456 J**	0.00752 U	0.034 U	1.3 U	0.024 U	1.3 U	0.0077 U	0.027 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.00814 U	0.054 U	3.6 U	0.0063 U	0.042 U	3.6 U	0.00938 U	0.00547 U	0.054 U	3.6 U	0.039 U	3.6 U	0.0056 U	0.043 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	**0.0304 J**	0.016 U	0.63 U	0.00274 U	0.012 U	0.63 U	**0.0249 J**	0.00238 U	0.016 U	0.63 U	0.012 U	0.63 U	0.00243 U	0.013 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**1.38**	**1**	**0.04 J**	**0.0077 J**	0.02 U	0.02 U	**0.488**	0.00078 U	**0.32**	0.02 U	0.019 U	0.02 U	0.00077 U	0.021 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.283**	**0.19**	0.02 U	**0.00168 J**	0.022 U	0.02 U	**0.0935**	0.00092 U	**0.06 J**	0.02 U	0.021 U	0.02 U	0.0009 U	0.023 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	**0.0551 J**	**0.037 J**	0.66 U	0.00321 U	0.017 U	0.66 U	**0.0312 J**	0.00279 U	0.022 U	0.66 U	0.016 U	0.66 U	0.00285 U	0.018 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00567 U	0.023 U	0.63 U	0.00439 U	0.018 U	0.63 U	0.00653 U	0.00381 U	0.023 U	0.63 U	0.017 U	0.63 U	0.0039 U	0.018 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00432 U	0.024 U	0.65 U	0.00335 U	0.019 U	0.65 U	0.00499 U	0.0029 U	0.024 U	0.65 U	0.018 U	0.65 U	0.00297 U	0.019 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00528 U	0.022 U	0.69 U	0.00409 U	0.017 U	0.69 U	0.00608 U	0.00355 U	0.022 U	0.69 U	0.016 U	0.69 U	0.00363 U	0.018 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.023 U	0.079 U	1.1 U	0.0178 U	0.061 U	1.1 U	0.0265 U	0.0154 U	0.079 U	1.1 U	0.057 U	1.1 U	0.0158 U	0.063 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**2.21**	**1.4**	**0.22**	**0.00695 J**	0.022 U	0.01 U	**0.677**	0.00164 U	**0.39**	**0.05 J**	0.021 U	0.01 U	0.00161 U	0.023 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.0994**	**0.081 J**	**0.04 J**	0.00068 U	0.019 U	0.02 U	**0.0355**	0.00059 U	**0.038 J**	**0.04 J**	0.018 U	0.02 U	**0.00105 J**	0.019 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.0054 U	0.024 U	0.58 U [D]	0.00418 U	0.018 U	0.58 U [D]	0.00623 U	0.00363 U	0.024 U	0.58 U [D]	0.017 U	0.58 U [D]	0.00371 U	0.019 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.0108 U	0.032 U	0.72 U	0.00833 U	0.024 U	0.72 U	0.0124 U	0.00723 U	0.032 U	0.72 U	0.023 U	0.72 U	0.0074 U	0.025 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0608 U	0.16 U	7.8 U	0.047 U	0.12 U	7.8 U	0.0701 U	0.0408 U	0.16 U	7.8 U	0.12 U	7.8 U	0.0418 U	0.13 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.00927 U	0.041 U	0.68 U	0.00718 U	0.031 U	0.68 U	0.0107 U	0.00623 U	0.041 U	0.68 U	0.03 U	0.68 U	0.00637 U	0.033 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.938**	**0.68**	0.02 U	**0.0123**	0.027 U	0.02 U	**0.34**	0.00255 U	**0.22**	0.02 U	0.026 U	0.02 U	**0.00497 J**	0.028 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.00608 U	0.028 U	0.6 U	0.0047 U	0.022 U	0.6 U	0.00701 U	0.00408 U	0.028 U	0.6 U	0.02 U	0.6 U	0.00418 U	0.022 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.234**	**0.2 J**	**0.05 J**	**0.00195 J**	0.024 U	0.04 U	**0.0993**	0.0008 U	**0.1 J**	**0.32**	0.022 U	0.04 U	**0.00088 J**	0.024 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.00578 U	0.038 U	0.75 U	0.00447 U	0.029 U	0.75 U	0.00666 U	0.00388 U	0.038 U	0.75 U	0.027 U	0.75 U	0.00397 U	0.03 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.00944 U	0.021 U	0.7 U	0.00731 U	0.016 U	0.7 U	0.0109 U	0.00634 U	0.021 U	0.7 U	0.015 U	0.7 U	0.00649 U	0.017 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00389 U	0.021 U	0.64 U	0.00301 U	0.016 U	0.64 U	0.00449 U	0.00262 U	0.021 U	0.64 U	0.015 U	0.64 U	0.00268 U	0.016 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.0997 U	0.056 U	3.4 U	0.0772 U	0.043 U	3.4 U	0.115 U	0.067 U	0.056 U	3.4 U	0.04 U	3.4 U	0.0685 U	0.044 R	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.747**	**0.59**	0.02 U	**0.00177 J**	0.014 U	0.02 U	**0.307**	0.00105 U	**0.18**	0.02 U	0.013 U	0.02 U	**0.00117 J**	0.014 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00527 U	0.03 U	1.9 U	0.00408 U	0.023 U	1.9 U	0.00607 U	0.00354 U	**0.11 J**	1.9 U	0.022 U	1.9 U	0.00362 U	0.024 R	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**2.73**	**1.6**	**0.55**	**0.0112**	**0.018 J**	**0.02 J**	**0.89**	0.00091 U	**0.49**	**0.09 J**	0.016 U	0.01 U	0.0009 U	0.018 U	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.2303**	**11.781**	**3.89**	ND	**0.076**	**0.02**	**3.0805**	ND	**5.213**	**4.15**	ND	-	ND	**0.152**	-
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**17.3746**	-		**0.09553**	-		**5.9463**	**0.00067**	-		-		**0.00913**	-	
EPH (mg/kg)		-		-		-		-															
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	**110**	-		30.7 U	-		**161**	26.3 U	-		-		**32.6**	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-															
Aluminum	78000	-	NA	-	6000	73	4000	-	**6960** [C]	**6060** [C]	**772**	**3050**	**5860**	**495**	**6830** [C]	**3930**	**7890** [C]	**834**	**4390**	**848**	**4840**	**5610**	**650**
Antimony	31	-	450	-	6	-	120	-	**0.757 J**	0.449 U	4.29 U	**0.198 J**	0.348 U	4.29 U	**0.96 J**	**0.165 J**	0.465 U	4.29 U	0.33 U	4.29 U	0.153 U	0.349 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**15.6**	**5.42**	1.65 U	**2.48**	**10.9**	1.65 U	**12.6**	**3.34**	**11.3**	**1.65 J**	**4.13**	1.65 U	**6.08**	**5.79**	1.65 U
Barium	16000	-	59000	-	2100	-	120000	-	**47.1**	**49.7**	**105**	**7.64**	**55.2**	**452**	**47.8**	**50.8**	**72.8**	**117**	**37.8**	**296**	**7.5**	**31.3**	**123**
Beryllium	16	-	140	-	0.7	34	20	-	**0.43 J**	**0.272 J**	1.07 U	**0.236 J**	**0.247 J**	1.07 U	**0.466 J**	**0.291 J**	**0.343 J**	1.07 U	**0.173 J**	1.07 U	**0.337 J**	**0.276 J**	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan-Chapel						Chapel Hill								
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-247	VC-247	VC-247	VC-247	VC-247	VC-247	VC-318	VC-318	VC-318	VC-318	VC-318	VC-318	VC-320	VC-320	VC-320
Sample Name									VC-247-D0-4E	VC-247-D0-4E-A	VC-247-D0-4E-A	VC-247-D4-21.5E	VC-247-D4-21.5E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E	VC-318-D3.5-21.5E	VC-318-D0-3.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E-A	VC-318-D3.5-21.5E-A	VC-320-D0-19E	VC-320-D0-19E-A	VC-320-D0-19E-A
Sample Date									10/23/2018	10/31/2018	10/31/2018	10/23/2018	10/31/2018	10/31/2018	10/23/2018	10/23/2018	10/31/2018	10/31/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843846-08	L1844937-04	L1844937-04	L1843846-09	L1844937-05	L1844937-05	L1843846-10	L1843846-11	L1844937-09	L1844937-09	L1844937-10	L1844937-10	L1843846-12	L1844937-11	L1844937-11
Sample Depth (bgs)									0 - 4.7 (ft)	0 - 4.7 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	4.7 - 21.5 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	0 - 3.7 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 19 (ft)	0 - 19 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Raw	Amended	SPLP	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									10,769	10,769	10,769	28,108	28,108	28,108	20,338	20,337	20,338	20,338	20,339	20,340	16,618	16,618	16,618
Soil Description									UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Cadmium	78	-	78	-	2	2	80	-	**0.392**	0.116 U	0.599 U	0.034 U	**0.256 J**	0.599 U	**1.56**	0.03 U	**1.1 J**	0.599 U	0.085 U	0.599 U	0.03 U	**0.11 J**	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**6560**	**55000**	**235000**	**1930**	**35400**	**488000**	**13100**	**227 J**	**54200**	**220000**	**31700**	**405000**	**678**	**31100**	**336000**
Chromium	NA	-	NA	-	NA	-	NA	-	**27.9**	**66.5**	**97**	**7.31**	**49.8**	**207**	**75.4**	**11.6**	**104**	**74.4**	**55.7**	**260**	**13.2**	**44.8**	**166**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.271 U	0.245 U		0.211 U	0.189 U		0.309 U	**0.249 J**	0.249 U		**19.1**		0.184 U	0.194 U	
Cobalt	1600	-	590	-	90	-	2000	-	**5.72**	**5.54**	**1.89 J**	**3.78**	**4.44**	1.63 U	**6.92**	**3.83**	**6.65**	**3.8 J**	**3.78**	1.63 U	**4.52**	**4.74**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**47.2**	**24.6**	**89.4**	**5.87**	**43**	**9 J**	**74.4**	**8.68**	**76.7**	**197**	**15.9**	3.84 U	**5.02**	**16**	**9.34 J**
Iron	NA	-	NA	-	NA	-	NA	-	**16300**	**13000**	191 U	**9960**	**10900**	191 U	**19700**	**18700**	**17100**	191 U	**13700**	191 U	**16900**	**14200**	191 U
Lead	400	-	800	-	90	23	100	-	**98.5** [C]	**12.8**	3.43 U	**3.7**	**58.6**	3.43 U	**101** [C]	**4.39**	**71.7**	3.43 U	**7.89**	3.43 U	**4.91**	**9.16**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**4460**	**3900**	242 U	**1780**	**3620**	242 U	**4740**	**1590**	**4900**	242 U	**2200**	242 U	**1890**	**2720**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**223** [C]	**245** [C]	4.4 U	**72.1** [C]	**219** [C]	4.4 U	**311** [C]	**69** [C]	**364** [C]	4.4 U	**141** [C]	4.4 U	**146** [C]	**209** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**1.5** [C]	**1.72** [C]	0.039 U	0.002 U	0.016 U	0.039 U	**1.22** [C]	0.002 U	**1.25** [C]	0.039 U	0.015 U	0.039 U	**0.004 J**	0.016 U	0.039 U
Nickel	1600	-	23000	-	48	-	2000	-	**18.8**	**25.8**	**57.2**	**7.4**	**21.3**	5.56 U	**21.8**	**11.1**	**30**	**95.5**	**18.9**	5.56 U	**9.35**	**18.4**	**11.6 J**
Potassium	NA	-	NA	-	NA	-	NA	-	**1760**	**1250**	**23900**	**485**	**1480**	**20800**	**1810**	**558**	**2040**	**24600**	**983**	**19700**	**1060**	**1310**	**24200**
Selenium	390	-	5700	-	11	-	800	-	**1.74 J**	0.305 U	17.3 U	0.968 U	0.236 U	17.3 U	**1.61 J**	0.856 U	**0.318 J**	17.3 U	0.224 U	17.3 U	**1.02 J**	0.237 U	17.3 U
Silver	390	-	5700	-	1	26	800	-	**0.776 J**	0.334 U	1.63 U	0.063 U	**0.421 J**	1.63 U	**2.65** [C]	0.055 U	**2.06** [C]	1.63 U	0.245 U	1.63 U	0.055 U	0.26 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**5740**	**2020**	**109000**	**1590**	**3470**	**52800**	**7710**	**933**	**5160**	**150000**	**1150**	**45400**	**1720**	**2050**	**77400**
Thallium	NA	-	NA	-	3	-	10	-	**0.213 J**	0.372 U	1.43 U	**0.068 J**	0.289 U	1.43 U	**0.182 J**	0.058 U	0.386 U	1.43 U	0.273 U	1.43 U	0.059 U	0.289 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**23.2**	**38.5**	15.7 U	**9.9**	**31.9**	15.7 U	**31.6**	**21**	**49.2**	15.7 U	**31.7**	15.7 U	**16.6**	**31.5**	15.7 U
Zinc	23000	-	110000	-	930	-	40000	-	**115**	**45.3**	34.1 U	**18.1**	**82.5**	34.1 U	**165**	**18.2**	**135**	34.1 U	**27.6**	34.1 U	**24.3**	**35.4**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-															
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00155 U	0.00429 U	0.016 U	0.00119 U	0.00334 U	0.016 U	0.00873 U	0.00103 U	0.00436 U	0.016 U	0.00314 U	0.016 U	0.00105 U	0.00357 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00208 U	0.00484 U	0.022 U	0.00159 U	0.00376 U	0.022 U	0.0117 U	0.00138 U	0.00492 U	0.022 U	0.00355 U	0.022 U	0.0014 U	0.00403 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00199 U	0.0102 U	0.046 U	0.00152 U	0.00797 U	0.046 U	0.0112 U	0.00132 U	0.0104 U	0.046 U	0.0075 U	0.046 U	0.00134 U	0.00852 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	0.00142 U	0.00651 U	0.036 U	0.00109 U	0.00506 U	0.036 U	**0.287**	0.00094 U	**0.132**	0.036 U	0.00477 U	0.036 U	0.00096 U	0.00542 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00178 U	0.00725 U	0.046 U	0.00137 U	0.00564 U	0.046 U	0.0101 U	0.00119 U	0.00736 U	0.046 U	0.00531 U	0.046 U	0.0012 U	0.00603 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	0.00177 U	0.00529 U	0.017 U	0.00136 U	0.00411 U	0.017 U	**0.269**	0.00118 U	**0.0991**	0.017 U	0.00387 U	0.017 U	0.0012 U	0.0044 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	0.00178 U	0.00893 U	0.034 U	0.00137 U	0.00694 U	0.034 U	**0.109**	0.00119 U	**0.0343 J**	0.034 U	0.00654 U	0.034 U	0.0012 U	0.00742 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00163 U	0.00614 U	0.033 U	0.00125 U	0.00477 U	0.033 U	0.00918 U	0.00108 U	0.00623 U	0.033 U	0.0045 U	0.033 U	0.0011 U	0.0051 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.0014 U	0.00501 U	0.032 U	0.00108 U	0.00389 U	0.032 U	0.00791 U	0.00093 U	0.00508 U	0.032 U	0.00367 U	0.032 U	0.00094 U	0.00416 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	ND	ND	-	ND	ND	-	**0.665** [AC]	ND	**0.2654** [AC]	-	ND	-	ND	ND	-
Other		-		-		-		-															
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**40.9**	**34.8**	**-**	**24.3**	**15.2**	**-**	**48.2**	**11.7**	**35.7**	**-**	**11.5**	**-**	**13**	**17.7**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**1.15**	-	-	**0.119**	-	-	**1.28**	**0.016**	-	-	-	-	**0.979**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**1.12**	-	-	**0.125**	-	-	**1.32**	**0.012**	-	-	-	-	**0.993**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**59.1**	**65.2**	**-**	**75.7**	**84.8**	**-**	**51.8**	**88.3**	**64.3**	**-**	**88.5**	**-**	**87**	**82.3**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**170**	**28**	**-**	**160**	**20**	**-**	**160**	**150**	**20**	**-**	**17**	**-**	**160**	**17**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.4**	**12.3**	**11.7**	**8.1**	**12.6**	**12.**	**8.5**	**8.1**	**12.3**	**11.8**	**12.5**	**12.1**	**8**	**12.4**	**12.**
Pesticides (mg/kg) (ug/L)		-		-		-		-															
4,4'-DDD	3	-	13	-	4	-	2	-	0.00005 U	0.00086 U	0.005 U	0.00004 U	0.00065 U	0.005 U	**0.00367**	0.00003 U	**0.00189 J**	0.005 U	0.00063 U	0.005 U	0.00003 U	0.00065 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	**0.00026 IP**	0.00056 U	0.004 U	0.00004 U	0.00042 U	0.004 U	**0.0154**	0.00003 U	0.00054 U	0.004 U	0.0004 U	0.004 U	0.00003 U	0.00042 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	**0.00016 I**	0.00195 U	0.004 U	0.00004 U	0.00147 U	0.004 U	**0.00158 IP**	0.00003 U	0.00191 U	0.004 U	0.00142 U	0.004 U	0.00003 U	0.00148 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00005 U	0.00085 U	0.002 U	0.00004 U	0.00064 U	0.002 U	0.00006 U	0.00003 U	0.00083 U	0.002 U	0.00062 U	0.002 U	0.00003 U	0.00064 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00005 U	0.00028 U	0.004 U	0.00004 U	0.00021 U	0.004 U	0.00006 U	0.00003 U	0.00028 U	0.004 U	0.0002 U	0.004 U	0.00003 U	0.00021 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00005 UI	0.00084 U	0.007 U	0.00004 U	0.00063 U	0.007 U	**0.00052**	0.00003 U	0.00082 U	0.007 U	0.00061 U	0.007 U	0.00003 U	0.00064 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00005 U	0.00091 U	0.006 U	0.00004 U	0.00069 U	0.006 U	0.00006 U	0.00003 U	0.0009 U	0.006 U	0.00067 U	0.006 U	0.00003 U	0.00069 U	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00282 U	0.00802 U	0.046 U	0.00216 U	0.00607 U	0.046 U	0.00318 U	0.00188 U	0.00787 U	0.046 U	0.00586 U	0.046 U	0.0019 U	0.00611 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00005 U	**0.00057 JPI**	0.005 U	0.00004 U	0.00035 U	0.005 U	0.00006 U	0.00003 U	0.00046 U	0.005 U	0.00034 U	0.005 U	0.00003 U	0.00036 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	**0.00007**	**0.00119 J**	0.004 U	0.00004 U	0.00057 U	0.004 U	**0.00081 IP**	0.00003 U	0.00074 U	0.004 U	0.00055 U	0.004 U	0.00003 U	0.00057 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00057 U	0.003 U	0.00004 U	0.00043 U	0.003 U	0.00006 U	0.00003 U	0.00056 U	0.003 U	0.00041 U	0.003 U	0.00003 U	0.00043 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	**0.00009 IP**	0.0008 U	0.005 U	0.00004 U	0.00061 U	0.005 U	**0.00033 IP**	0.00003 U	0.00079 U	0.005 U	0.00059 U	0.005 U	0.00003 U	0.00061 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	**0.00061**	0.00048 U	0.005 U	0.00004 U	0.00036 U	0.005 U	0.00006 U	0.00003 U	0.00047 U	0.005 U	0.00035 U	0.005 U	0.00003 U	0.00036 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00005 U	0.00041 U	0.004 U	0.00004 U	0.00031 U	0.004 U	0.00006 U	0.00003 U	0.0004 U	0.004 U	0.0003 U	0.004 U	0.00003 U	0.00031 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00016 U	0.00106 U	0.008 U	0.00012 U	0.0008 U	0.008 U	**0.00036 IP**	0.00011 U	0.00104 U	0.008 U	0.00077 U	0.008 U	0.00011 U	0.0008 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00062 U	0.005 U	0.00004 U	0.00047 U	0.005 U	0.00006 U	0.00003 U	0.00061 U	0.005 U	0.00045 U	0.005 U	0.00003 U	0.00047 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00005 U	0.00045 U	0.004 U	0.00004 U	0.00034 U	0.004 U	0.00006 U	0.00003 U	0.00044 U	0.004 U	0.00033 U	0.004 U	0.00003 U	0.00034 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00005 U	0.00079 U	0.006 U	0.00004 U	0.0006 U	0.006 U	0.00006 U	0.00003 U	0.00078 U	0.006 U	0.00058 U	0.006 U	0.00003 U	0.0006 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00005 U	0.00054 U	0.003 U	0.00004 U	0.00041 U	0.003 U	0.00006 U	0.00003 U	0.00053 U	0.003 U	0.00039 U	0.003 U	0.00003 U	0.00041 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00011 U	0.00136 U	0.004 U	0.00008 U	0.00103 U	0.004 U	0.00012 U	0.00007 U	0.00134 U	0.004 U	0.00099 U	0.004 U	0.00007 U	0.00104 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00056 U	0.00141 U	0.007 U	0.00043 U	0.00107 U	0.007 U	0.00063 U	0.00037 U	0.00138 U	0.007 U	0.00103 U	0.007 U	0.00037 U	0.00108 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00282 U	0.0127 U	0.063 U	0.00216 U	0.00962 U	0.063 U	0.00318 U	0.00188 U	0.0125 U	0.063 U	0.00929 U	0.063 U	0.0019 U	0.00968 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Chapel Hill						Chapel-Ambrose								
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-321	VC-321	VC-321	VC-323	VC-323	VC-323	VC-251	VC-251	VC-251	VC-252	VC-252	VC-252	VC-253	VC-253	VC-253
Sample Name									VC-321-D0-20.5E	VC-321-D0-20.5E-A	VC-321-D0-20.5E-A	VC-323-D0-22E	VC-323-D0-22E-A	VC-323-D0-22E-A	VC-251-D0-7.5E	VC-251-D0-7.5E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E	VC-252-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E	VC-253-D0-7.5E-A	VC-253-D0-7.5E-A
Sample Date									10/23/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018	10/26/2018	11/08/2018	11/08/2018	10/26/2018	11/07/2018	11/07/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843846-13	L1844937-12	L1844937-12	L1843846-14	L1844937-13	L1844937-13	L1843846-15	L1844937-06	L1844937-06	L1844234-03	L1846705-18	L1846705-18	L1844234-01	L1846705-20	L1846705-20
Sample Depth (bgs)									0 - 20.5 (ft)	0 - 20.5 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 22 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									20,738	20,738	20,738	26,093	26,093	26,093	9,065	9,065	9,065	9,058	9,058	9,058	5,720	5,720	5,720
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																							
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00365 U	0.021 U	0.67 U	0.00411 U	0.021 U	0.67 U	0.00427 U	0.021 U	0.67 U	0.00404 U	0.02 U	0.67 U	0.00375 U	0.02 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.0064 U	0.023 U	0.7 U	0.0072 U	0.023 U	0.7 U	0.00747 U	0.023 U	0.7 U	0.00707 U	0.022 U	0.7 U	0.00657 U	0.022 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.00664 U	0.04 U	0.93 U	0.00747 U	0.04 R	0.93 U	0.00775 U	0.041 U	0.93 U	0.00733 U	0.039 U	0.93 U	0.00681 U	0.038 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00457 U	0.038 U	0.72 U	0.00515 U	0.038 R	0.72 U	0.00534 U	0.039 U	0.72 U	0.00505 U	0.037 U	0.72 U	0.0047 U	0.036 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00343 U	0.038 U	0.68 U	0.00386 U	0.037 R	0.68 U	0.00401 U	0.038 U	0.68 U	0.00379 U	0.036 U	0.68 U	0.00352 U	0.036 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00412 U	0.032 U	0.77 U	0.00464 U	0.032 U	0.77 U	0.00481 U	0.032 U	0.77 U	0.00455 U	0.031 U	0.77 U	0.00423 U	0.031 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.00632 U	0.064 U	1.6 U	0.00712 U	0.063 U	1.6 U	0.00738 U	0.064 U	1.6 U	0.00699 U	0.061 U	1.6 U	0.00649 U	0.06 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.0654 U	0.093 R	5.5 U	0.0736 U	0.092 R	5.5 U	0.0764 U	0.094 R	5.5 U	0.0722 U	0.09 U	5.5 U	0.0671 U	0.089 U	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00268 U	0.033 U	0.84 U	0.00302 U	0.033 R	0.84 U	0.00314 U	0.034 U	0.84 U	0.00297 U	0.032 U	0.84 U	0.00276 U	0.032 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0099 U	0.026 U	1.1 U	0.0111 U	0.026 U	1.1 U	0.0116 U	0.027 U	1.1 U	0.0109 U	0.025 U	1.1 U	0.0102 U	0.025 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	**0.00272 J**	0.019 U	0.03 U	0.00081 U	0.019 U	0.03 U	**0.00164 J**	0.019 U	0.03 U	0.00077 U	0.018 U	0.03 U	0.00071 U	0.018 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.00253 U	0.022 U	0.63 U	0.00285 U	0.022 R	0.63 U	0.00296 U	0.022 U	0.63 U	0.0028 U	0.021 U	0.63 U	0.0026 U	0.021 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.00391 J**	0.021 U	0.06 U	**0.00247 J**	0.021 U	**0.1**	**0.00785 J**	0.021 U	0.06 U	**0.00158 J**	0.02 U	0.06 U	0.00114 U	0.02 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.0033 U	0.031 U	1 U	0.00371 U	0.031 U	1 U	0.00385 U	0.031 U	1 U	0.00364 U	0.03 U	1 U	0.00339 U	0.03 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.0062 U	0.037 U	1.1 U	0.00698 U	0.036 R	1.1 U	0.00724 U	0.037 U	1.1 U	0.00685 U	0.035 U	1.1 U	0.00636 U	0.035 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00413 U	0.033 U	1.5 U	0.00465 U	0.032 R	1.5 U	0.00483 U	0.033 U	1.5 U	0.00457 U	0.032 U	1.5 U	0.00425 U	0.031 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	0.00502 U	0.029 U	1.1 U	0.00565 U	0.028 U	1.1 U	0.00586 U	0.029 U	1.1 U	0.00554 U	0.028 U	1.1 U	0.00515 U	0.028 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.00654 U	0.051 U	1.4 U	0.00737 U	0.05 U	1.4 U	0.00764 U	0.052 U	1.4 U	0.00723 U	0.049 U	1.4 U	0.00672 U	0.049 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00403 U	0.038 U	1.2 U	0.00453 U	0.037 U	1.2 U	0.0047 U	0.038 U	1.2 U	0.00445 U	0.036 U	1.2 U	0.00414 U	0.036 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.0736 U	0.096 U	2.1 U	0.0829 U	0.095 R	2.1 U	0.086 U	0.097 U	2.1 U	0.0814 U	0.092 U	2.1 U	0.0756 U	0.091 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.0036 U	0.022 U	0.73 U	0.00406 U	0.022 U	0.73 U	0.00421 U	0.022 U	0.73 U	0.00398 U	0.021 U	0.73 U	0.0037 U	0.021 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.00554 U	0.03 U	0.62 U	0.00623 U	0.029 R	0.62 U	0.00647 U	0.03 U	0.62 U	0.00612 U	0.029 U	0.62 U	0.00569 U	0.028 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.0035 U	0.023 U	0.63 U	0.00395 U	0.023 U	0.63 U	0.0041 U	0.023 U	0.63 U	0.00387 U	0.022 U	0.63 U	0.0036 U	0.022 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.0037 U	0.017 U	0.62 U	0.00416 U	0.016 U	0.62 U	0.00432 U	0.017 U	0.62 U	0.00409 U	0.016 U	0.62 U	0.0038 U	0.016 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00518 U	0.083 U	1.3 U	0.00583 U	0.082 U	1.3 U	0.00605 U	0.084 U	1.3 U	0.00572 U	0.08 U	1.3 U	0.00532 U	0.079 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.211 U	0.056 U	1.8 U	0.237 U	0.055 R	1.8 U	0.246 U	0.056 U	1.8 U	0.233 U	0.054 U	1.8 U	0.217 U	0.053 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.00263 J**	0.017 U	0.04 U	**0.00153 J**	0.016 U	0.04 U	**0.00766 J**	0.017 U	0.04 U	**0.00126 J**	0.016 U	0.04 U	0.00103 U	0.016 U	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.00343 J**	0.022 U	0.03 U	**0.00402 J**	0.022 U	0.03 U	**0.012**	0.023 U	0.03 U	**0.00243 J**	0.022 U	0.03 U	0.00061 U	0.021 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.00483 U	0.021 U	0.85 U	0.00544 U	0.021 U	0.85 U	0.00565 U	0.021 U	0.85 U	0.00534 U	0.02 U	0.85 U	0.00496 U	0.02 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.00116 J**	0.018 U	0.02 U	**0.00554 J**	0.018 U	0.02 U	**0.0136**	0.018 U	0.02 U	**0.0023 J**	0.017 U	0.02 U	0.00114 U	0.017 U	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.00333 U	0.07 U	1.8 U	0.00375 U	0.069 U	1.8 U	0.00389 U	0.071 U	1.8 U	0.00368 U	0.067 U	1.8 U	0.00342 U	0.067 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	0.00967 U	0.031 U	1.1 U	0.0109 U	**0.056 J**	1.1 U	**0.0142 J**	**0.036 J**	**1.2 J**	0.0107 U	0.03 U	1.1 U	0.00993 U	0.03 U	1.1 U
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.00258 J**	0.022 U	0.02 U	**0.0204**	**0.031 J**	0.02 U	**0.0347**	**0.032 J**	**0.02 J**	**0.00583 J**	0.022 U	0.02 U	0.00245 U	0.021 U	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.00322 J**	0.049 U	0.02 U	**0.0235**	0.048 U	0.02 U	**0.0394**	0.049 U	0.02 U	**0.0063 J**	0.047 U	0.02 U	**0.00132 J**	0.046 U	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.00288 J**	0.017 U	0.02 U	**0.0148**	**0.032 J**	0.02 U	**0.0336**	**0.036 J**	0.02 U	**0.00608 J**	0.016 U	0.02 U	**0.00166 J**	0.016 U	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.00261 J**	0.023 U	0.02 U	**0.0118**	0.023 U	0.02 U	**0.028**	0.024 U	0.02 U	**0.00468 J**	0.023 U	0.02 U	**0.00119 J**	0.022 U	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.00279 J**	0.014 U	0.02 U	**0.015**	0.014 U	0.02 U	**0.028**	**0.016 J**	0.02 U	**0.00577 J**	0.013 U	0.02 U	**0.00123 J**	0.013 U	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	0.00403 U	0.046 U	0.76 U	0.00453 U	0.046 U	0.76 U	0.0047 U	0.047 U	0.76 U	0.00445 U	0.045 U	0.76 U	0.00414 U	0.044 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00386 U	0.019 U	0.63 U	0.00434 U	0.019 U	0.63 U	0.00451 U	0.019 U	0.63 U	0.00426 U	0.018 U	0.63 U	0.00396 U	0.018 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.00704 U	0.024 U	0.67 U	0.00793 U	0.024 U	0.67 U	0.00823 U	0.024 U	0.67 U	0.00778 U	0.023 U	0.67 U	0.00723 U	0.023 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.01 U	**0.064 J**	0.91 U	**0.015 J**	0.02 U	**2.4 J**	**0.25**	**0.46**	0.91 U	**0.019 J**	**0.027 J**	**3.2**	0.0103 U	**0.023 J**	0.91 U
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.00775 U	0.027 U	1.3 U	0.00872 U	0.026 U	1.3 U	0.00905 U	0.027 U	1.3 U	0.00856 U	0.026 U	1.3 U	0.00796 U	0.025 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.00563 U	0.043 U	3.6 U	0.00634 U	0.042 U	3.6 U	0.00658 U	0.043 U	3.6 U	0.00622 U	0.041 U	3.6 U	0.00578 U	0.041 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	0.00245 U	0.013 U	0.63 U	0.00275 U	0.012 U	0.63 U	0.00286 U	0.013 U	0.63 U	0.0027 U	0.012 U	0.63 U	0.00251 U	0.012 U	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.00211 J**	0.02 U	0.02 U	**0.0164**	**0.023 J**	0.02 U	**0.0276**	**0.028 J**	0.02 U	**0.00476 J**	0.02 U	0.02 U	**0.00101 J**	0.02 U	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	0.00084 U	0.023 U	0.02 U	**0.00323 J**	0.023 U	0.02 U	**0.00673 J**	0.023 U	0.02 U	**0.0012 J**	0.022 U	0.02 U	0.00094 U	0.022 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	0.00287 U	0.018 U	0.66 U	0.00323 U	0.017 U	0.66 U	0.00335 U	0.018 U	0.66 U	0.00317 U	0.017 U	0.66 U	0.00295 U	0.017 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00392 U	0.018 U	0.63 U	0.00441 U	0.018 U	0.63 U	0.00458 U	0.018 U	0.63 U	0.00433 U	0.017 U	0.63 U	0.00402 U	0.017 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00299 U	0.019 U	0.65 U	0.00337 U	0.019 U	0.65 U	0.0035 U	0.019 U	0.65 U	0.00331 U	0.018 U	0.65 U	0.00307 U	0.018 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00365 U	0.018 U	0.69 U	0.00411 U	0.017 U	0.69 U	0.00427 U	0.018 U	0.69 U	0.00404 U	0.017 U	0.69 U	0.00375 U	0.017 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0159 U	0.062 U	1.1 U	0.0179 U	0.062 U	1.1 U	0.0186 U	0.063 U	1.1 U	0.0176 U	0.06 U	1.1 U	0.0163 U	0.059 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**0.00383 J**	0.023 U	0.01 U	**0.023**	**0.028 J**	0.01 U	**0.0442**	**0.05 J**	**0.03 J**	**0.00793 J**	0.022 U	0.01 U	**0.0018 J**	0.022 U	0.01 U
Fluorene	2300	-	24000	-	170	-	2000	-	**0.00116 J**	0.019 U	0.02 U	**0.00159 J**	0.019 U	**0.02 J**	**0.00979 J**	0.019 U	0.02 U	**0.00162 J**	0.018 U	0.02 U	0.00061 U	0.018 U	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.00374 U	0.019 U	0.58 U [D]	0.0042 U	0.019 U	0.58 U [D]	0.00436 U	0.019 U	0.58 U [D]	0.00413 U	0.018 U	0.58 U [D]	0.00384 U	0.018 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.00744 U	0.025 U	0.72 U	0.00838 U	0.024 U	0.72 U	0.00869 U	0.025 U	0.72 U	0.00822 U	0.024 U	0.72 U	0.00764 U	0.024 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.042 U	0.13 U	7.8 U	0.0473 U	0.12 R	7.8 U	0.0491 U	0.13 U	7.8 U	0.0465 U	0.12 U	7.8 U	0.0432 U	0.12 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.00641 U	0.032 U	0.68 U	0.00722 U	0.032 U	0.68 U	0.00749 U	0.033 U	0.68 U	0.00709 U	0.031 U	0.68 U	0.00659 U	0.031 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.00687 J**	0.028 U	0.02 U	**0.0174**	0.028 U	0.02 U	**0.0328**	0.028 U	0.02 U	**0.0102**	0.027 U	0.02 U	**0.0059 J**	0.026 U	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.0042 U	0.022 U	0.6 U	0.00473 U	0.022 U	0.6 U	0.00491 U	0.022 U	0.6 U	0.00465 U	0.022 U	0.6 U	0.00432 U	0.021 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.00369 J**	0.024 U	0.04 U	**0.00509 J**	0.024 U	**0.58**	**0.0103 J**	0.024 U	0.04 U	**0.00237 J**	0.023 U	0.04 U	**0.00134 J**	0.023 U	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.004 U	0.03 U	0.75 U	0.0045 U	0.029 U	0.75 U	0.00467 U	0.03 U	0.75 U	0.00442 U	0.028 U	0.75 U	0.0041 U	0.028 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.00653 U	0.017 U	0.7 U	0.00735 U	0.016 U	0.7 U	0.00763 U	0.017 U	0.7 U	0.00722 U	0.016 U	0.7 U	0.0067 U	0.016 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00269 U	0.016 U	0.64 U	0.00303 U	0.016 U	0.64 U	0.00314 U	0.016 U	0.64 U	0.00298 U	0.016 U	0.64 U	0.00276 U	0.016 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.069 U	0.044 U	3.4 U	0.0776 U	0.043 R	3.4 U	0.0806 U	0.044 U	3.4 U	0.0762 U	0.042 U	3.4 U	0.0708 U	0.042 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.00246 J**	0.014 U	0.02 U	**0.00693 J**	0.014 U	0.02 U	**0.0221**	**0.028 J**	0.02 U	**0.00451 J**	0.014 U	0.02 U	**0.00134 J**	0.014 U	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00364 U	0.024 U	1.9 U	0.0041 U	0.023 R	1.9 U	0.00426 U	0.024 U	1.9 U	0.00403 U	0.023 U	1.9 U	0.00374 U	0.022 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.00426 J**	0.017 U	0.01 U	**0.0386**	**0.035 J**	**0.02 J**	**0.0515**	**0.061 J**	**0.04 J**	**0.00944 J**	0.017 U	**0.02 JB**	**0.00202 J**	0.016 U	0.01 U
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	ND	**0.064**	-	**0.015**	**0.205**	**3.12**	**0.2642**	**0.747**	**1.29**	**0.019**	**0.027**	**3.22**	ND	**0.023**	-
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**0.05231**	-		**0.2113**	-		**0.41147**	-		**0.07826**	-		**0.01881**	-	
EPH (mg/kg)		-		-		-		-															
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	26.7 U	-		31.8 U	-		31.3 U	-		**52.9**	-		28.4 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-															
Aluminum	78000	-	NA	-	6000	73	4000	-	**3500**	**4550**	**538**	**2370**	**3790**	**512**	**2080**	**3190**	**512**	**759**	**2890**	**433**	**569**	**2510**	**338**
Antimony	31	-	450	-	6	-	120	-	**2.39**	**0.84 J**	4.29 U	**0.76 J**	**1.03 J**	4.29 U	**0.557 J**	0.362 U	4.29 U	0.165 U	0.357 U	**5.01 J**	**0.843 J**	0.35 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**8.09**	**4.39**	1.65 U	**2.78**	**4.1**	1.65 U	**3.22**	**3.61**	1.65 U	**1.4**	**2.75**	1.65 U	**0.907**	**2.26**	1.65 U
Barium	16000	-	59000	-	2100	-	120000	-	**4.76**	**33.2**	**272**	**8.67**	**34.1**	**351**	**6.5**	**34.1**	**495**	**3.21 J**	**31.9**	**649**	**1.4 J**	**27.7**	**715**
Beryllium	16	-	140	-	0.7	34	20	-	**0.382**	**0.124 J**	1.07 U	**0.153 J**	**0.056 J**	1.07 U	**0.144 J**	**0.095 J**	1.07 U	0.106 U	**0.075 J**	1.07 U	0.102 U	**0.055 J**	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Chapel Hill						Chapel-Ambrose								
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	VC-321	VC-321	VC-321	VC-323	VC-323	VC-323	VC-251	VC-251	VC-251	VC-252	VC-252	VC-252	VC-253	VC-253	VC-253
Sample Name									VC-321-D0-20.5E	VC-321-D0-20.5E-A	VC-321-D0-20.5E-A	VC-323-D0-22E	VC-323-D0-22E-A	VC-323-D0-22E-A	VC-251-D0-7.5E	VC-251-D0-7.5E-A	VC-251-D0-7.5E-A	VC-252-D0-7.5E	VC-252-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E	VC-253-D0-7.5E-A	VC-253-D0-7.5E-A
Sample Date									10/23/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018	10/26/2018	11/08/2018	11/08/2018	10/26/2018	11/07/2018	11/07/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843846-13	L1844937-12	L1844937-12	L1843846-14	L1844937-13	L1844937-13	L1843846-15	L1844937-06	L1844937-06	L1844234-03	L1846705-18	L1846705-18	L1844234-01	L1846705-20	L1846705-20
Sample Depth (bgs)									0 - 20.5 (ft)	0 - 20.5 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 22 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									20,738	20,738	20,738	26,093	26,093	26,093	9,065	9,065	9,065	9,058	9,058	9,058	5,720	5,720	5,720
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL
Cadmium	78	-	78	-	2	2	80	-	**0.079 J**	**0.229 J**	0.599 U	**0.052 J**	**0.158 J**	0.599 U	**0.272**	**0.152 J**	0.599 U	0.032 U	**0.094 J**	0.599 U	0.031 U	0.09 U	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**3950**	**38200**	**384000**	**2380**	**37300**	**461000**	**11000**	**43100**	**451000**	**1880**	**36600**	**499000**	**1100**	**33400**	**537000**
Chromium	NA	-	NA	-	NA	-	NA	-	**13.2**	**48.9**	**163**	**7.76**	**45.2**	**202**	**19**	**50.7**	**98.8**	**2.6**	**44.1**	**174**	**1.98 J**	**39.8**	**320**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.189 U	0.194 U		0.213 U	0.193 U		0.217 U	0.196 U		0.206 U	0.19 U		0.193 U	**1.39**	
Cobalt	1600	-	590	-	90	-	2000	-	**3.1**	**3.69**	1.63 U	**2.33**	**3.06**	1.63 U	**3.31**	**3.76**	**2.03 J**	**1.19**	**2.34**	1.63 U	**0.731**	**1.78 J**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**5.32**	**16.4**	**14.9**	**3.73**	**15**	**14**	**20**	**22.8**	**45.4**	**2.08 J**	**15**	**20.2**	**0.809 J**	**13.1**	**9.62 J**
Iron	NA	-	NA	-	NA	-	NA	-	**22200**	**8380**	191 U	**5960**	**6480**	191 U	**5310**	**4850**	191 U	**1840**	**3400**	191 U	**1350**	**2770**	191 U
Lead	400	-	800	-	90	23	100	-	**4.49**	**9.56**	3.43 U	**5.77**	**9.38**	3.43 U	**30.7**	**20.7**	**4.12 J**	**6.57**	**10.8**	**3.87 J**	**1.22**	**6.52**	3.43 U
Magnesium	NA	-	NA	-	NA	-	NA	-	**1780**	**2960**	242 U	**1440**	**2580**	242 U	**1590**	**2340**	242 U	**725**	**2190**	242 U	**536**	**1920**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**198** [C]	**162** [C]	4.4 U	**67** [C]	**147** [C]	4.4 U	**263** [C]	**333** [C]	4.4 U	**265** [C]	**340** [C]	4.4 U	**48.8**	**134** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**0.011 J**	0.016 U	0.039 U	**0.055**	**0.017 J**	0.039 U	**0.164** [C]	**0.158** [C]	0.039 U	**0.025**	**0.018 J**	0.091 U	0.002 U	0.016 U	0.091 U
Nickel	1600	-	23000	-	48	-	2000	-	**8.93**	**17.9**	**12.2 J**	**5.84**	**16**	5.56 U	**8.23**	**19.4**	**50.3**	**2.28**	**15.1**	**12.8 J**	**1.5**	**13.8**	5.56 U
Potassium	NA	-	NA	-	NA	-	NA	-	**597**	**1140**	**21900**	**602**	**928**	**17400**	**608**	**772**	**20200**	**250**	**688**	**17900**	**196**	**599**	**18900**
Selenium	390	-	5700	-	11	-	800	-	**1.15 J**	**0.592 J**	17.3 U	0.974 U	**0.482 J**	17.3 U	0.99 U	0.246 U	17.3 U	0.924 U	**0.385 J**	17.3 U	0.881 U	0.238 U	17.3 U
Silver	390	-	5700	-	1	26	800	-	**0.096 J**	0.27 U	1.63 U	0.063 U	0.262 U	1.63 U	**0.791**	**0.362 J**	1.63 U	0.06 U	0.266 U	1.63 U	0.057 U	0.261 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**1850**	**2290**	**83500**	**1020**	**998**	**38100**	**3610**	**2450**	**89600**	**2180**	**2080**	**74800**	**1770**	**1780**	**75100**
Thallium	NA	-	NA	-	3	-	10	-	**0.096 J**	0.301 U	1.43 U	0.067 U	0.292 U	1.43 U	0.068 U	0.3 U	1.43 U	**0.076 J**	0.296 U	1.43 U	**0.124 J**	0.29 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**29.6**	**29.4**	15.7 U	**7.64**	**26.2**	15.7 U	**10.9**	**27.1**	15.7 U	**3.17**	**24.3**	15.7 U	**2.05**	**21.2**	15.7 U
Zinc	23000	-	110000	-	930	-	40000	-	**29.5**	**35.2**	34.1 U	**15.4**	**31.2**	34.1 U	**51.4**	**49.2**	34.1 U	**9.86 J**	**30.3**	34.1 U	**3.88 J**	**80.4**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-															
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00108 U	0.00341 U	0.016 U	0.0012 U	0.00346 U	0.016 U	0.00125 U	0.00344 U	0.016 U	0.00118 U	0.0091 U	0.016 U	0.00111 U	0.0091 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00146 U	0.00385 U	0.022 U	0.00162 U	0.0039 U	0.022 U	0.00167 U	0.00388 U	0.022 U	0.00158 U	0.0103 U	0.022 U	0.00148 U	0.0103 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.00139 U	0.00814 U	0.046 U	0.00155 U	0.00825 U	0.046 U	0.0016 U	0.00821 U	0.046 U	0.00151 U	0.0217 U	0.046 U	0.00142 U	0.0217 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	**0.00209 J**	0.00518 U	0.036 U	**0.00193 J**	0.00525 U	0.036 U	**0.0129**	**0.012 J**	0.036 U	0.00108 U	0.0138 U	0.036 U	0.00102 U	0.0138 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00125 U	0.00576 U	0.046 U	0.00139 U	0.00584 U	0.046 U	0.00144 U	0.00581 U	0.046 U	0.00135 U	0.0154 U	0.046 U	0.00128 U	0.0154 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	**0.00192 J**	0.0042 U	0.017 U	**0.0027 J**	0.00426 U	0.017 U	**0.0177**	**0.0159 J**	0.017 U	**0.0019 J**	0.0112 U	0.017 U	0.00127 U	0.0112 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	0.00125 U	0.0071 U	0.034 U	0.00139 U	0.0072 U	0.034 U	**0.00727**	0.00715 U	0.034 U	0.00135 U	0.0189 U	0.034 U	0.00128 U	0.0189 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00114 U	0.00488 U	0.033 U	0.00127 U	0.00494 U	0.033 U	0.00131 U	0.00492 U	0.033 U	0.00124 U	0.013 U	0.033 U	0.00116 U	0.013 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00098 U	0.00398 U	0.032 U	0.00109 U	0.00403 U	0.032 U	0.00113 U	0.00401 U	0.032 U	0.00106 U	0.0106 U	0.032 U	0.001 U	0.0106 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	**0.00401**	ND	-	**0.00463**	ND	-	**0.03787**	**0.0279**	-	**0.0019**	ND	-	ND	ND	-
Other		-		-		-		-															
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**15.3**	**17.7**	**-**	**25**	**17.1**	**-**	**26.4**	**18.2**	**-**	**22.2**	**15.7**	**-**	**17.2**	**15.2**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**0.215**	-	-	**0.175**	-	-	**0.399**	-	-	**0.072**	-	-	**0.022**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**0.23**	-	-	**0.139**	-	-	**0.464**	-	-	**0.09**	-	-	**0.038**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**84.7**	**82.3**	**-**	**75**	**82.9**	**-**	**73.6**	**81.8**	**-**	**77.8**	**84.3**	**-**	**82.8**	**84.8**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**160**	**11**	**-**	**140**	**9.7**	**-**	**150**	**20**	**-**	**200**	**25**	**-**	**190**	**19**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.1**	**12.5**	**11.8**	**8**	**12.5**	**11.8**	**8.4**	**12.5**	**12.**	**7.5**	**12.3**	**11.7**	**7.7**	**12.4**	**11.8**
Pesticides (mg/kg) (ug/L)		-		-		-		-															
4,4'-DDD	3	-	13	-	4	-	2	-	0.00003 U	0.00068 U	0.005 U	0.00004 U	0.00067 U	0.005 U	**0.00037**	0.00066 U	0.005 U	0.00004 U	0.00183 U	0.005 U	0.00004 U	0.00184 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	**0.0002 IP**	0.00044 U	0.004 U	**0.00005**	0.00043 U	0.004 U	**0.00121 I**	**0.00152 J**	0.004 U	0.00004 U	0.00119 U	0.004 U	0.00004 U	0.00119 U	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	**0.00006 IP**	0.00154 U	0.004 U	0.00004 U	0.00152 U	0.004 U	**0.00015 IP**	0.0015 U	0.004 U	0.00004 U	0.00413 U	**0.01 J**	0.00004 U	0.00414 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00003 U	0.00067 U	0.002 U	0.00004 U	0.00066 U	0.002 U	0.00004 U	0.00065 U	0.002 U	0.00004 U	0.00181 U	0.002 U	0.00004 U	0.00182 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00003 U	0.00022 U	0.004 U	0.00004 U	0.00022 U	0.004 U	0.00004 U	0.00022 U	0.004 U	0.00004 U	0.0006 U	0.004 U	0.00004 U	0.00061 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00066 U	0.007 U	0.00004 U	0.00065 U	0.007 U	**0.00011**	0.00065 U	0.007 U	0.00004 U	0.00179 U	0.007 U	0.00004 U	0.0018 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00003 U	0.00072 U	0.006 U	0.00004 U	0.00071 U	0.006 U	0.00004 U	0.0007 U	0.006 U	0.00004 U	0.00195 U	0.006 U	0.00004 U	0.00195 U	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00197 U	0.00636 U	0.046 U	0.00219 U	0.00625 U	0.046 U	0.00227 U	0.00618 U	0.046 U	0.00214 U	0.017 U	0.046 U	0.00201 U	0.0171 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00037 U	0.005 U	0.00004 U	0.00037 U	0.005 U	0.00004 U	0.00036 U	0.005 U	0.00004 U	0.00101 U	0.005 U	0.00004 U	0.00101 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	0.00003 UI	0.0006 U	0.004 U	0.00004 UI	0.00059 U	0.004 U	**0.00008 IP**	0.00058 U	0.004 U	0.00004 U	0.0016 U	0.004 U	0.00004 U	0.00161 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00045 U	0.003 U	0.00004 U	0.00044 U	0.003 U	0.00004 U	0.00044 U	0.003 U	0.00004 U	0.00121 U	0.003 U	0.00004 U	0.00122 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00064 U	0.005 U	0.00004 UI	0.00063 U	0.005 U	0.00004 U	0.00062 U	0.005 U	0.00004 U	0.00172 U	0.005 U	0.00004 U	0.00172 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00003 U	0.00038 U	0.005 U	0.00004 U	0.00037 U	0.005 U	0.00004 U	0.00037 U	0.005 U	0.00004 U	0.00102 U	0.005 U	0.00004 U	0.00102 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00003 U	0.00032 U	0.004 U	0.00004 U	0.00032 U	0.004 U	0.00004 U	**0.00032 J**	0.004 U	0.00004 U	0.00087 U	0.004 U	0.00004 U	0.00088 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00011 U	0.00084 U	0.008 U	0.00013 U	0.00082 U	0.008 U	0.00013 U	0.00081 U	0.008 U	0.00012 U	0.00225 U	0.008 U	0.00012 U	0.00226 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00049 U	0.005 U	0.00004 U	0.00048 U	0.005 U	0.00004 U	0.00048 U	0.005 U	0.00004 U	0.00132 U	0.005 U	0.00004 U	0.00133 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00003 U	0.00035 U	0.004 U	0.00004 U	0.00035 U	0.004 U	0.00004 U	0.00034 U	0.004 U	0.00004 U	0.00095 U	0.004 U	0.00004 U	0.00096 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00003 U	0.00063 U	0.006 U	0.00004 U	0.00062 U	0.006 U	0.00004 U	0.00061 U	0.006 U	0.00004 U	0.0017 U	0.006 U	0.00004 U	0.0017 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00003 U	0.00043 U	0.003 U	0.00004 U	**0.00106**	0.003 U	0.00004 U	0.00041 U	0.003 U	0.00004 U	0.00115 U	0.003 U	0.00004 U	0.00116 U	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00007 U	0.00108 U	0.004 U	0.00008 U	0.00106 U	0.004 U	0.00009 U	0.00105 U	0.004 U	0.00008 U	0.00289 U	0.004 U	0.00008 U	0.0029 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00039 U	0.00112 U	0.007 U	0.00043 U	0.0011 U	0.007 U	0.00045 U	0.00109 U	0.007 U	0.00042 U	0.003 U	0.007 U	0.0004 U	0.00301 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00197 U	0.0101 U	0.063 U	0.00219 U	0.00991 U	0.063 U	0.00227 U	0.00979 U	0.063 U	0.00214 U	0.027 U	0.063 U	0.00201 U	0.0271 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Ambrose Channel						East of Ambrose					
Location Name									COMP-S	COMP-S	COMP-S	COMP-T	COMP-T	COMP-T	VC-255	VC-255	VC-255	VC-256	VC-256	VC-256
Sample Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-S-D0-0-21E	COMP-S-D0-0-21E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E	COMP-T-D0-22.5E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E	VC-255-D0-7.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E	VC-256-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Date									10/25/2018	10/31/2018	10/31/2018	10/25/2018	10/31/2018	10/31/2018	10/26/2018	11/02/2018	11/02/2018	10/26/2018	11/02/2018	11/02/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843846-05	L1844937-02	L1844937-02	L1843846-06	L1844937-03	L1844937-03	L1843846-20	L1844937-07	L1844937-07	L1843846-18	L1844937-08	L1844937-08
Sample Depth (bgs)									0 - 21 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									14,050	14,050	14,050	32,450	32,450	32,450	8,179	8,179	8,179	8,611	8,611	8,611
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL
Semi-Volatile Organic Compounds (mg/kg) (ug/L)																				
1,2,4,5-Tetrachlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00404 U	0.021 U	0.67 U	0.00352 U	0.019 U	0.67 U	0.00399 U	0.021 U	0.67 U	0.00403 U	0.02 U	0.67 U
2,2'-oxybis(1-Chloropropane)	23	-	67	-	5	-	6000	-	0.00707 U	0.024 U	0.7 U	0.00617 U	0.021 U	0.7 U	0.00698 U	0.023 U	0.7 U	0.00706 U	0.022 U	0.7 U
2,3,4,6-Tetrachlorophenol	NA	-	NA	-	NA	-	NA	-	0.00734 U	0.041 U	0.93 U	0.0064 U	0.037 R	0.93 U	0.00724 U	0.04 U	0.93 U	0.00733 U	0.039 U	0.93 U
2,4,5-Trichlorophenol	6100	-	68000	-	68	-	14000	-	0.00506 U	0.039 U	0.72 U	0.00441 U	0.035 R	0.72 U	0.00499 U	0.038 U	0.72 U	0.00505 U	0.037 U	0.72 U
2,4,6-Trichlorophenol	19	-	74	-	0.2	-	20	-	0.00379 U	0.039 U	0.68 U	0.0033 U	0.035 R	0.68 U	0.00374 U	0.038 U	0.68 U	0.00378 U	0.037 U	0.68 U
2,4-Dichlorophenol	180	-	2100	-	0.2	-	400	-	0.00456 U	0.033 U	0.77 U	0.00397 U	0.03 R	0.77 U	0.0045 U	0.032 U	0.77 U	0.00455 U	0.031 U	0.77 U
2,4-Dimethylphenol	1200	-	14000	-	1	-	2000	-	0.00699 U	0.065 U	1.6 U	0.00609 U	0.058 R	1.6 U	0.0069 U	0.063 U	1.6 U	0.00698 U	0.062 U	1.6 U
2,4-Dinitrophenol	120	-	1400	-	0.3	-	200	-	0.0723 U	0.096 R	5.5 U	0.063 U	0.085 R	5.5 U	0.0714 U	0.092 R	5.5 U	0.0722 U	0.09 R	5.5 U
2,4-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.00297 U	0.034 U	0.84 U	0.00259 U	0.03 U	0.84 U	0.00293 U	0.033 U	0.84 U	0.00296 U	0.032 U	0.84 U
2,6-Dinitrotoluene	0.7	-	3	-	NA	-	NA	-	0.0109 U	0.027 U	1.1 U	0.00954 U	0.024 U	1.1 U	0.0108 U	0.026 U	1.1 U	0.0109 U	0.026 U	1.1 U
2-Chloronaphthalene	NA	-	NA	-	NA	-	NA	-	0.0008 U	0.02 U	0.03 U	**0.00166 J**	0.017 U	0.03 U	0.00076 U	0.019 U	0.03 U	**0.00138 J**	0.018 U	0.03 U
2-Chlorophenol	310	-	2200	-	0.8	-	800	-	0.0028 U	0.022 U	0.63 U	0.00244 U	0.02 R	0.63 U	0.00276 U	0.022 U	0.63 U	0.00279 U	0.021 U	0.63 U
2-Methylnaphthalene	230	-	2400	-	8	-	600	-	**0.0132**	**0.024 J**	0.06 U	**0.00194 J**	0.019 U	0.06 U	**0.00309 J**	0.021 U	0.06 U	**0.00514 J**	0.02 U	0.06 U
2-Methylphenol (o-Cresol)	310	-	3400	-	NA	-	NA	-	0.00365 U	0.032 U	1 U	0.00318 U	0.028 R	1 U	0.0036 U	0.031 U	1 U	0.00364 U	0.03 U	1 U
2-Nitroaniline	39	-	23000	-	NA	-	NA	-	0.00685 U	0.038 U	1.1 U	0.00598 U	0.034 U	1.1 U	0.00677 U	0.036 U	1.1 U	0.00684 U	0.036 U	1.1 U
2-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.00457 U	0.034 U	1.5 U	0.00399 U	0.03 R	1.5 U	0.00451 U	0.032 U	1.5 U	0.00456 U	0.032 U	1.5 U
3&4-Methylphenol	NA	-	NA	-	NA	-	NA	-	**0.0107 J**	0.03 U	1.1 U	0.00484 U	0.026 U	1.1 U	0.00548 U	0.028 U	1.1 U	0.00554 U	0.028 U	1.1 U
3,3'-Dichlorobenzidine	1	-	4	-	0.2	-	30	-	0.00724 U	0.052 U	1.4 U	0.00631 U	0.047 U	1.4 U	0.00714 U	0.051 U	1.4 U	0.00722 U	0.05 U	1.4 U
3-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00445 U	0.039 U	1.2 U	0.00388 U	0.035 U	1.2 U	0.0044 U	0.037 U	1.2 U	0.00445 U	0.036 U	1.2 U
4,6-Dinitro-2-methylphenol	6	-	68	-	0.3	-	14	-	0.0814 U	0.098 U	2.1 U	0.071 U	0.088 R	2.1 U	0.0804 U	0.095 U	2.1 U	0.0813 U	0.093 U	2.1 U
4-Bromophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00399 U	0.023 U	0.73 U	0.00348 U	0.02 U	0.73 U	0.00394 U	0.022 U	0.73 U	0.00398 U	0.022 U	0.73 U
4-Chloro-3-methylphenol	NA	-	NA	-	NA	-	NA	-	0.00612 U	0.03 U	0.62 U	0.00534 U	0.027 R	0.62 U	0.00605 U	0.03 U	0.62 U	0.00611 U	0.029 U	0.62 U
4-Chloroaniline	NA	-	NA	-	NA	-	NA	-	0.00388 U	0.024 U	0.63 U	0.00338 U	0.021 U	0.63 U	0.00383 U	0.023 U	0.63 U	0.00387 U	0.022 U	0.63 U
4-Chlorophenyl phenyl ether	NA	-	NA	-	NA	-	NA	-	0.00409 U	0.017 U	0.62 U	0.00356 U	0.015 U	0.62 U	0.00404 U	0.017 U	0.62 U	0.00408 U	0.016 U	0.62 U
4-Nitroaniline	NA	-	NA	-	NA	-	NA	-	0.00572 U	0.085 U	1.3 U	0.00499 U	0.076 U	1.3 U	0.00565 U	0.082 U	1.3 U	0.00572 U	0.08 U	1.3 U
4-Nitrophenol	NA	-	NA	-	NA	-	NA	-	0.233 U	0.057 U	1.8 U	0.203 U	0.051 R	1.8 U	0.23 U	0.055 U	1.8 U	0.233 U	0.054 U	1.8 U
Acenaphthene	3400	-	37000	-	110	-	4200	-	**0.0511**	**0.042 J**	**0.24**	**0.00158 J**	0.015 U	0.04 U	**0.00177 J**	0.016 U	0.04 U	**0.018**	**0.03 J**	0.04 U
Acenaphthylene	NA	-	300000	-	NA	-	NA	-	**0.0317**	**0.038 J**	0.03 U	**0.00151 J**	0.02 U	0.03 U	**0.00727 J**	0.022 U	0.03 U	**0.0079 J**	0.022 U	0.03 U
Acetophenone	2	-	5	-	3	-	14000	-	0.00534 U	0.021 U	0.85 U	0.00466 U	0.019 U	0.85 U	0.00528 U	0.021 U	0.85 U	0.00534 U	0.02 U	0.85 U
Anthracene	17000	-	30000	-	2400	-	43	-	**0.308**	**0.21**	**0.21**	0.00111 U	0.016 U	0.02 U	**0.0186**	**0.041 J**	0.02 U	**0.072**	**0.073 J**	0.02 U
Atrazine	210	-	2400	-	0.2	-	60	-	0.00368 U	0.072 U	1.8 U	0.00321 U	0.064 U	1.8 U	0.00363 U	0.069 U	1.8 U	0.00368 U	0.068 U	1.8 U
Benzaldehyde	6100	-	68000	-	NA	-	NA	-	0.0107 U	0.032 U	**1.1 J**	0.00932 U	0.028 U	1.1 U	0.0106 U	0.031 U	1.1 U	0.0107 U	0.03 U	1.1 U
Benzo(a)anthracene	5	-	17	-	0.8	6	1	-	**0.601**	**0.35**	**0.03 J**	0.00239 U	0.021 U	0.02 U	**0.0292**	**0.056 J**	0.02 U	**0.162**	**0.16**	0.02 U
Benzo(a)pyrene	0.5	13	2	2	0.2	36	0.1	-	**0.478** [C]	**0.3** [C]	0.02 U	0.00105 U	0.045 U	0.02 U	**0.0345**	**0.053 J**	0.02 U	**0.155**	**0.16**	0.02 U
Benzo(b)fluoranthene	5	-	17	-	2	-	1	-	**0.333**	**0.35**	0.02 U	0.00093 U	0.015 U	0.02 U	**0.0231**	**0.059**	0.02 U	**0.0972**	**0.18**	0.02 U
Benzo(g,h,i)perylene	380000	-	30000	-	NA	-	NA	-	**0.219**	**0.16**	0.02 U	0.00073 U	0.022 U	0.02 U	**0.0297**	**0.041 J**	0.02 U	**0.0847**	**0.1 J**	0.02 U
Benzo(k)fluoranthene	45	-	170	-	25	-	0.8	-	**0.328**	**0.12**	0.02 U	0.00092 U	0.013 U	0.02 U	**0.0231**	**0.023 J**	0.02 U	**0.0954**	**0.065**	0.02 U
Biphenyl	61	-	240	-	140	-	6000	-	**0.00976 J**	0.048 U	0.76 U	0.00388 U	0.042 U	0.76 U	0.0044 U	0.046 U	0.76 U	0.00445 U	0.045 U	0.76 U
bis(2-Chloroethoxy)methane	NA	-	NA	-	NA	-	NA	-	0.00427 U	0.02 U	0.63 U	0.00372 U	0.017 U	0.63 U	0.00421 U	0.019 U	0.63 U	0.00426 U	0.018 U	0.63 U
bis(2-Chloroethyl)ether	0.4	-	2	-	0.2	-	7	-	0.00779 U	0.025 U	0.67 U	0.00679 U	0.022 U	0.67 U	0.00769 U	0.024 U	0.67 U	0.00778 U	0.023 U	0.67 U
bis(2-Ethylhexyl)phthalate	35	-	140	-	1200	-	40	-	0.0111 U	**0.044 J**	0.91 U	0.00969 U	**0.025 J**	0.91 U	0.011 U	**0.038 J**	0.91 U	0.0111 U	0.02 U	0.91 U
Butyl benzylphthalate	1200	-	14000	-	230	-	2000	-	0.00857 U	0.027 U	1.3 U	0.00747 U	0.024 U	1.3 U	0.00846 U	0.026 U	1.3 U	0.00855 U	0.026 U	1.3 U
Caprolactam	31000	-	340000	-	12	-	70000	-	0.00623 U	0.044 U	3.6 U	0.00543 U	0.039 U	3.6 U	0.00615 U	0.042 U	3.6 U	0.00622 U	0.042 U	3.6 U
Carbazole	24	-	96	-	NA	-	NA	-	**0.021 J**	**0.015 J**	0.63 U	0.00236 U	0.012 U	0.63 U	0.00267 U	0.013 U	0.63 U	**0.0131 J**	**0.018 J**	0.63 U
Chrysene	450	-	1700	-	80	-	2	-	**0.474**	**0.31**	**0.02 J**	**0.00083 J**	0.019 U	0.02 U	**0.0288**	**0.05 J**	0.02 U	**0.132**	**0.14**	0.02 U
Dibenz(a,h)anthracene	0.5	-	2	-	0.8	-	0.3	-	**0.0632**	**0.042 J**	0.02 U	0.00092 U	0.021 U	0.02 U	**0.00562 J**	0.023 U	0.02 U	**0.019**	0.022 U	0.02 U
Dibenzofuran	NA	-	NA	-	NA	-	NA	-	**0.0376 J**	**0.031 J**	0.66 U	0.00277 U	0.016 U	0.66 U	0.00313 U	0.017 U	0.66 U	**0.00991 J**	0.017 U	0.66 U
Diethyl phthalate	49000	-	550000	-	88	-	120000	-	0.00433 U	0.019 U	0.63 U	0.00378 U	0.017 U	0.63 U	0.00428 U	0.018 U	0.63 U	0.00433 U	0.018 U	0.63 U
Dimethyl phthalate	NA	-	NA	-	NA	-	NA	-	0.00331 U	0.02 U	0.65 U	0.00288 U	0.018 U	0.65 U	0.00327 U	0.019 U	0.65 U	0.0033 U	0.018 U	0.65 U
Di-n-butylphthalate	6100	-	68000	-	760	-	11000	-	0.00404 U	0.018 U	0.69 U	0.00352 U	0.016 U	0.69 U	0.00399 U	0.018 U	0.69 U	0.00403 U	0.017 U	0.69 U
Di-n-octyl phthalate	2400	-	27000	-	3300	-	20	-	0.0176 U	0.064 U	1.1 U	0.0153 U	0.057 U	1.1 U	0.0173 U	0.062 U	1.1 U	0.0175 U	0.06 U	1.1 U
Fluoranthene	2300	-	24000	-	1300	-	210	-	**1**	**0.64**	**0.38**	**0.00179 J**	0.021 U	**0.02 J**	**0.0422**	**0.11 J**	**0.02 J**	**0.296**	**0.34**	**0.04 J**
Fluorene	2300	-	24000	-	170	-	2000	-	**0.0814**	**0.064 J**	**0.2**	**0.00094 J**	0.018 U	0.02 U	**0.00302 J**	0.019 U	0.02 U	**0.0157**	**0.027 J**	0.02 U
Hexachlorobenzene	0.3	-	1	-	0.2	-	0.4	-	0.00413 U	0.02 U	0.58 U [D]	0.0036 U	0.018 U	0.58 U [D]	0.00408 U	0.019 U	0.58 U [D]	0.00412 U	0.018 U	0.58 U [D]
Hexachlorobutadiene	6	-	25	-	0.9	-	8	-	0.00823 U	0.026 U	0.72 U	0.00717 U	0.023 U	0.72 U	0.00812 U	0.024 U	0.72 U	0.00822 U	0.024 U	0.72 U
Hexachlorocyclopentadiene	45	-	110	-	320	-	800	-	0.0465 U	0.13 U	7.8 U	0.0405 U	0.12 U	7.8 U	0.0459 U	0.12 U	7.8 U	0.0464 U	0.12 U	7.8 U
Hexachloroethane	12	-	48	-	0.2	-	40	-	0.00709 U	0.033 U	0.68 U	0.00618 U	0.03 U	0.68 U	0.007 U	0.032 U	0.68 U	0.00708 U	0.031 U	0.68 U
Indeno(1,2,3-cd)pyrene	5	-	17	-	7	-	0.2	-	**0.226**	**0.17**	0.02 U	**0.005 J**	0.026 U	0.02 U	**0.0288**	**0.036 J**	0.02 U	**0.0882**	**0.092**	0.02 U
Isophorone	510	-	2000	-	0.2	-	800	-	0.00465 U	0.023 U	0.6 U	0.00405 U	0.02 U	0.6 U	0.00459 U	0.022 U	0.6 U	0.00464 U	0.022 U	0.6 U
Naphthalene	6	-	17	-	25	-	6000	-	**0.0411**	**0.12 J**	0.04 U	**0.00215 J**	0.022 U	0.04 U	**0.00962 J**	0.024 U	0.04 U	**0.0111**	**0.029 J**	0.04 U
Nitrobenzene	5	-	14	-	0.2	-	80	-	0.00442 U	0.03 U	0.75 U	0.00385 U	0.027 U	0.75 U	0.00436 U	0.029 U	0.75 U	0.00441 U	0.029 U	0.75 U
N-Nitrosodi-n-propylamine	0.2	-	0.3	-	0.2	-	10	-	0.00722 U	0.017 U	0.7 U	0.00629 U	0.015 U	0.7 U	0.00713 U	0.016 U	0.7 U	0.00721 U	0.016 U	0.7 U
N-Nitrosodiphenylamine	99	-	390	-	0.4	-	140	-	0.00298 U	0.017 U	0.64 U	0.0026 U	0.015 U	0.64 U	0.00294 U	0.016 U	0.64 U	0.00297 U	0.016 U	0.64 U
Pentachlorophenol	0.9	-	3	-	0.3	-	6	-	0.0763 U	0.045 U	3.4 U	0.0665 U	0.04 R	3.4 U	0.0753 U	0.044 U	3.4 U	0.0761 U	0.043 U	3.4 U
Phenanthrene	NA	-	300000	-	NA	-	NA	-	**0.545**	**0.44**	**0.84**	**0.00208 J**	0.013 U	0.02 U	**0.0174**	**0.087 J**	0.02 U	**0.198**	**0.26**	0.02 U
Phenol	18000	-	210000	-	8	-	40000	-	0.00403 U	0.024 U	1.9 U	0.00351 U	0.022 R	1.9 U	0.00398 U	0.023 U	1.9 U	0.00402 U	0.023 U	1.9 U
Pyrene	1700	-	18000	-	840	-	140	-	**0.773**	**0.56**	**0.3**	**0.00177 J**	0.016 U	**0.02 J**	**0.0439**	**0.11 J**	**0.04 J**	**0.288**	**0.33**	**0.09 J**
SUM of Semi-Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.07906**	**4.03**	**3.32**	ND	**0.025**	**0.04**	ND	**0.704**	**0.06**	**0.02301**	**2.004**	**0.13**
SUM of Semi-Volatile Organic Compounds (SIM)	NA	-	NA	-	NA	-	NA	-	**5.5667**	-		**0.02125**	-		**0.34969**	-		**1.74672**	-	
EPH (mg/kg)		-		-		-		-												
Total Extractable Petroleum Hydrocarbons	5100	-	54000	-	NA	-	NA	-	**31.3**	-		26.4 U	-		28.7 U	-		29.3 U	-	
Inorganic Compounds (mg/kg) (ug/L)		-		-		-		-												
Aluminum	78000	-	NA	-	6000	73	4000	-	**2580**	**3860**	**589**	**393**	**2180**	**428**	**1220**	**3140**	**620**	**1840**	**3260**	**555**
Antimony	31	-	450	-	6	-	120	-	0.168 U	0.375 U	4.29 U	**0.242 J**	0.339 U	4.29 U	**0.35 J**	0.355 U	4.29 U	**0.447 J**	0.343 U	4.29 U
Arsenic	19	22	19	22	19	22	3	11	**2.15**	**3.2**	1.65 U	**1.67**	**3.13**	1.65 U	**3.06**	**4.26**	1.65 U	**5.53**	**4.94**	1.65 U
Barium	16000	-	59000	-	2100	-	120000	-	**9.08**	**33.2**	**239**	**0.695 J**	**27.9**	**607**	**5.83**	**32.4**	**407**	**5.6**	**33.1**	**476**
Beryllium	16	-	140	-	0.7	34	20	-	**0.171 J**	**0.138 J**	1.07 U	0.096 U	**0.08 J**	1.07 U	**0.116 J**	**0.112 J**	1.07 U	**0.172 J**	**0.126 J**	1.07 U

TABLE H-1
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Ambrose Channel						East of Ambrose					
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	# of Detected Exceedances	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	# of Detected Exceedances	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	# of Detected Exceedances	COMP-S	COMP-S	COMP-S	COMP-T	COMP-T	COMP-T	VC-255	VC-255	VC-255	VC-256	VC-256	VC-256
Sample Name									COMP-S-D0-0-21E	COMP-S-D0-0-21E-A	COMP-S-D0-0-21E-A	COMP-T-D0-22.5E	COMP-T-D0-22.5E-A	COMP-T-D0-22.5E-A	VC-255-D0-7.5E	VC-255-D0-7.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E	VC-256-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Date									10/25/2018	10/31/2018	10/31/2018	10/25/2018	10/31/2018	10/31/2018	10/26/2018	11/02/2018	11/02/2018	10/26/2018	11/02/2018	11/02/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843846-05	L1844937-02	L1844937-02	L1843846-06	L1844937-03	L1844937-03	L1843846-20	L1844937-07	L1844937-07	L1843846-18	L1844937-08	L1844937-08
Sample Depth (bgs)									0 - 21 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Approximate Volume by Sample (cy)									14,050	14,050	14,050	32,450	32,450	32,450	8,179	8,179	8,179	8,611	8,611	8,611
Soil Description									HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL
Cadmium	78	-	78	-	2	2	80	-	**0.054 J**	0.097 U	0.599 U	0.029 U	0.088 U	0.599 U	**0.064 J**	0.092 U	0.599 U	**0.04 J**	0.088 U	0.599 U
Calcium	NA	-	NA	-	NA	-	NA	-	**5980**	**37100**	**324000**	**689**	**33900**	**516000**	**7080**	**36800**	**475000**	**4200**	**39500**	**486000**
Chromium	NA	-	NA	-	NA	-	NA	-	**8.56**	**41.8**	**159**	**3.56**	**41.8**	**308**	**6.96**	**45**	**255**	**8.87**	**48.1**	**152**
Chromium VI (Hexavalent)	NA	-	NA	-	NA	-		-	0.208 U	0.2 U		0.182 U	**17.4**		0.202 U	0.191 U		0.204 U	0.19 U	
Cobalt	1600	-	590	-	90	-	2000	-	**2.1**	**2.76**	1.63 U	**0.308 J**	**1.29 J**	1.63 U	**1.62**	**2.66**	1.63 U	**2.72**	**2.8**	1.63 U
Copper	3100	-	45000	-	11000	-	26000	-	**3.94**	**15**	**24.6**	**0.348 J**	**12.1**	3.84 U	**3.16**	**17.1**	**11.9**	**4.6**	**16.2**	**9.1 J**
Iron	NA	-	NA	-	NA	-	NA	-	**5720**	**6330**	191 U	**2150**	**3480**	191 U	**4220**	**5620**	191 U	**9650**	**7060**	191 U
Lead	400	-	800	-	90	23	100	-	**11**	**13**	3.43 U	**1.06**	**6.94**	3.43 U	**18.6**	**19.2**	**4.39 J**	**19.6**	**18.4**	**4.63 J**
Magnesium	NA	-	NA	-	NA	-	NA	-	**1750**	**2680**	242 U	**456**	**1660**	242 U	**1150**	**2390**	242 U	**1370**	**2380**	242 U
Manganese	11000	-	5900	-	65	111	1000	-	**78.6** [C]	**161** [C]	4.4 U	**16.5**	**123** [C]	4.4 U	**49.9**	**147** [C]	**6.87 J**	**87.3** [C]	**161** [C]	4.4 U
Mercury	23	-	65	-	0.1	42	40	-	**0.087**	**0.142** [C]	0.039 U	0.002 U	0.015 U	0.039 U	**0.051**	**0.067 J**	0.039 U	**0.072**	**0.096**	0.039 U
Nickel	1600	-	23000	-	48	-	2000	-	**5.72**	**15.4**	**32.3**	**0.984 J**	**13.2**	5.56 U	**3.26**	**15.5**	**8.14 J**	**5.96**	**16.9**	**6.06 J**
Potassium	NA	-	NA	-	NA	-	NA	-	**837**	**1080**	**21500**	**580**	**986**	**22800**	**458**	**849**	**20100**	**496**	**861**	**19100**
Selenium	390	-	5700	-	11	-	800	-	0.938 U	0.255 U	17.3 U	0.832 U	0.23 U	17.3 U	0.942 U	0.241 U	17.3 U	0.942 U	0.233 U	17.3 U
Silver	390	-	5700	-	1	26	800	-	**0.123 J**	0.279 U	1.63 U	0.054 U	0.253 U	1.63 U	**0.156 J**	0.264 U	1.63 U	0.061 U	0.255 U	1.63 U
Sodium	NA	-	NA	-	NA	-	NA	-	**3190**	**2910**	**113000**	**2010**	**2070**	**76300**	**2680**	**2400**	**92400**	**2640**	**2480**	**82600**
Thallium	NA	-	NA	-	3	-	10	-	**0.186 J**	0.311 U	1.43 U	**0.204 J**	0.281 U	1.43 U	**0.792**	0.294 U	1.43 U	0.064 U	0.284 U	1.43 U
Vanadium	78	-	1100	-	NA	-	NA	-	**9.26**	**25.3**	15.7 U	**3.27**	**21**	15.7 U	**8.23**	**27.2**	15.7 U	**13.8**	**28.4**	15.7 U
Zinc	23000	-	110000	-	930	-	40000	-	**16.6**	**29.3**	34.1 U	2.86 U	**19.9**	34.1 U	**23.9**	**37.8**	34.1 U	**22.9**	**34.7**	34.1 U
PCBs (mg/kg) (ug/L)		-		-		-		-												
Aroclor-1016 (PCB-1016)	NA	-	NA	-	NA	-	NA	-	0.00117 U	0.00352 U	0.016 U	0.00103 U	0.00328 U	0.016 U	0.00116 U	0.00344 U	0.016 U	0.00116 U	0.00333 U	0.016 U
Aroclor-1221 (PCB-1221)	NA	-	NA	-	NA	-	NA	-	0.00157 U	0.00397 U	0.022 U	0.00138 U	0.0037 U	0.022 U	0.00155 U	0.00388 U	0.022 U	0.00155 U	0.00376 U	0.022 U
Aroclor-1232 (PCB-1232)	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.0084 U	0.046 U	0.00132 U	0.00784 U	0.046 U	0.00148 U	0.00822 U	0.046 U	0.00148 U	0.00795 U	0.046 U
Aroclor-1242 (PCB-1242)	NA	-	NA	-	NA	-	NA	-	0.00108 U	0.00534 U	0.036 U	0.00094 U	0.00498 U	0.036 U	**0.00262 J**	0.00522 U	0.036 U	0.00106 U	0.00505 U	0.036 U
Aroclor-1248 (PCB-1248)	NA	-	NA	-	NA	-	NA	-	0.00135 U	0.00594 U	0.046 U	0.00118 U	0.00555 U	0.046 U	0.00133 U	0.00581 U	0.046 U	0.00133 U	0.00562 U	0.046 U
Aroclor-1254 (PCB-1254)	NA	-	NA	-	NA	-	NA	-	0.00134 U	0.00434 U	0.017 U	0.00118 U	0.00404 U	0.017 U	**0.0043**	0.00424 U	0.017 U	0.00132 U	0.0041 U	0.017 U
Aroclor-1260 (PCB-1260)	NA	-	NA	-	NA	-	NA	-	0.00135 U	0.00732 U	0.034 U	0.00118 U	0.00683 U	0.034 U	**0.00283 J**	0.00716 U	0.034 U	0.00133 U	0.00693 U	0.034 U
Aroclor-1262 (PCB-1262)	NA	-	NA	-	NA	-	NA	-	0.00123 U	0.00503 U	0.033 U	0.00108 U	0.0047 U	0.033 U	0.00121 U	0.00492 U	0.033 U	0.00122 U	0.00476 U	0.033 U
Aroclor-1268 (PCB-1268)	NA	-	NA	-	NA	-	NA	-	0.00106 U	0.0041 U	0.032 U	0.00093 U	0.00383 U	0.032 U	0.00105 U	0.00402 U	0.032 U	0.00105 U	0.00388 U	0.032 U
SUM of PCBs	0.2	20	1	1	0.2	20	NA	-	ND	ND	-	ND	ND	-	**0.00975**	ND	-	ND	ND	-
Other		-		-		-		-												
Moisture (%)	NA	-	NA	-	NA	-	NA	-	**22.9**	**20.2**	**-**	**12**	**11.4**	**-**	**20.9**	**16.3**	**-**	**21.6**	**15.6**	**-**
Total Organic Carbon (TOC) - Rep1 (%)	NA	-	NA	-	NA	-	NA	-	**0.252**	-	-	**0.016**	-	-	**0.075**	-	-	**0.094**	-	-
Total Organic Carbon (TOC) - Rep2 (%)	NA	-	NA	-	NA	-	NA	-	**0.292**	-	-	0.01 U	-	-	**0.067**	-	-	**0.093**	-	-
Total Solids (%)	NA	-	NA	-	NA	-	NA	-	**77.1**	**79.8**	**-**	**88**	**88.6**	**-**	**79.1**	**83.7**	**-**	**78.4**	**84.4**	**-**
Oxidation reduction potential (millivolts)	NA	-	NA	-	NA	-	NA	-	**180**	**23**	**-**	**170**	**19**	**-**	**180**	**20**	**-**	**150**	**19**	**-**
pH (lab) (pH units)	NA	-	NA	-	NA	-	NA	-	**8.2**	**12.5**	**11.8**	**8**	**12.6**	**11.9**	**8.1**	**12.5**	**12.**	**8.2**	**12.1**	**12.1**
Pesticides (mg/kg) (ug/L)		-		-		-		-												
4,4'-DDD	3	-	13	-	4	-	2	-	0.00004 U	0.0007 U	0.005 U	0.00003 U	0.00062 U	0.005 U	0.00004 U	0.00067 U	0.005 U	0.00004 U	0.00064 U	0.005 U
4,4'-DDE	2	-	9	-	18	-	2	-	0.00004 U	0.00046 U	0.004 U	0.00003 U	0.0004 U	0.004 U	**0.00017 P**	0.00043 U	0.004 U	**0.00017 P**	**0.00082 J**	0.004 U
4,4'-DDT	2	-	8	-	11	-	2	-	0.00004 U	0.0016 U	0.004 U	0.00003 U	0.00141 U	0.004 U	0.00004 UI	0.00152 U	0.004 U	0.00004 UI	0.00145 U	0.004 U
Aldrin	0.04	-	0.2	-	0.2	-	0.04	-	0.00004 U	0.0007 U	0.002 U	0.00003 U	0.00061 U	0.002 U	0.00004 U	0.00066 U	0.002 U	0.00004 U	0.00063 U	0.002 U
alpha-BHC	0.1	-	0.5	-	0.002	-	0.1	-	0.00004 U	0.00023 U	0.004 U	0.00003 U	0.0002 U	0.004 U	0.00004 U	0.00022 U	0.004 U	0.00004 U	0.00021 U	0.004 U
alpha-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00069 U	0.007 U	0.00003 U	0.00061 U	0.007 U	0.00004 U	0.00065 U	0.007 U	0.00004 U	0.00062 U	0.007 U
beta-BHC	0.4	-	2	-	0.002	1	0.4	-	0.00004 U	0.00075 U	0.006 U	0.00003 U	0.00066 U	0.006 U	0.00004 U	**0.00188 J**	0.006 U	0.00004 U	0.00068 U	0.006 U
Chlordane	0.2	-	1	-	0.05	-	0.5	-	0.00213 U	0.00659 U	0.046 U	0.00187 U	0.00583 U	0.046 U	0.0021 U	0.00626 U	0.046 U	0.00211 U	0.00598 U	0.046 U
delta-BHC	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00039 U	0.005 U	0.00003 U	0.00034 U	0.005 U	0.00004 U	0.00037 U	0.005 U	0.00004 U	0.00035 U	0.005 U
Dieldrin	0.04	-	0.2	-	0.003	4	0.04	-	0.00004 U	0.00062 U	0.004 U	0.00003 U	0.00055 U	0.004 U	0.00004 UI	0.00059 U	0.004 U	0.00004 UI	0.00056 U	0.004 U
Endosulfan I	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00047 U	0.003 U	0.00003 U	0.00041 U	0.003 U	0.00004 U	0.00044 U	0.003 U	0.00004 U	0.00042 U	0.003 U
Endosulfan II	NA	-	NA	-	NA	-	NA	-	0.00004 U	**0.00121 J**	0.005 U	0.00003 U	0.00058 U	0.005 U	**0.00006 P**	0.00063 U	0.005 U	0.00004 U	0.0006 U	0.005 U
Endosulfan sulfate	470	-	6800	-	2	-	800	-	0.00004 U	0.00039 U	0.005 U	0.00003 U	0.00034 U	0.005 U	0.00004 U	0.00037 U	0.005 U	**0.0001 P**	0.00035 U	0.005 U
Endrin	23	-	340	-	1	-	40	-	0.00004 U	0.00034 U	0.004 U	0.00003 U	0.0003 U	0.004 U	0.00004 U	0.00032 U	0.004 U	0.00004 U	0.0003 U	0.004 U
Endrin aldehyde	NA	-	NA	-	NA	-	NA	-	0.00012 U	0.00087 U	0.008 U	0.00011 U	0.00077 U	0.008 U	0.00012 U	0.00082 U	0.008 U	0.00012 U	0.00078 U	0.008 U
Endrin ketone	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00051 U	0.005 U	0.00003 U	0.00045 U	0.005 U	0.00004 U	0.00048 U	0.005 U	0.00004 U	0.00046 U	0.005 U
gamma-BHC (Lindane)	0.4	-	2	-	0.002	-	0.6	-	0.00004 U	0.00037 U	0.004 U	0.00003 U	0.00032 U	0.004 U	0.00004 U	0.00035 U	0.004 U	0.00004 U	0.00033 U	0.004 U
gamma-Chlordane	NA	-	NA	-	NA	-	NA	-	0.00004 U	0.00065 U	0.006 U	0.00003 U	0.00058 U	0.006 U	**0.00004**	0.00062 U	0.006 U	0.00004 U	0.00059 U	0.006 U
Heptachlor	0.1	-	0.7	-	0.5	-	0.2	-	0.00004 U	0.00044 U	0.003 U	0.00003 U	0.00039 U	0.003 U	0.00004 U	0.00042 U	0.003 U	0.00004 U	**0.00142 P**	0.003 U
Heptachlor epoxide	0.07	-	0.3	-	0.01	3	0.2	-	0.00008 U	0.00112 U	0.004 U	0.00007 U	0.00098 U	0.004 U	0.00008 U	0.00106 U	0.004 U	0.00008 U	0.00101 U	0.004 U
Methoxychlor	390	-	5700	-	160	-	45	-	0.00042 U	0.00116 U	0.007 U	0.00037 U	0.00103 U	0.007 U	0.00041 U	0.0011 U	0.007 U	0.00042 U	0.00105 U	0.007 U
Toxaphene	0.6	-	3	-	0.3	-	2	-	0.00213 U	0.0104 U	0.063 U	0.00187 U	0.00923 U	0.063 U	0.0021 U	0.00992 U	0.063 U	0.00211 U	0.00947 U	0.063 U

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg)
B: Analyte detected in the associated method blank.
I: The lower value for the two columns has been reported due to obvious interference.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
P: The RPD between the results for the two columns exceeds the method-specified criteria.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg)
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L)
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Nearshore													
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**COMP-A**	**COMP-A**	**COMP-A**	**COMP-A**	**VC-208**	**VC-208**	**VC-208**	**VC-211**	**VC-211**	**VC-211**	**VC-214**	**VC-214**	**VC-214**
Sample Name									COMP-A	COMP-A	VC-204	VC-205	VC-208	VC-208	VC-208	VC-211	VC-211	VC-211	VC-214	VC-214	VC-214
Sample Date									COMP-A-D0-15E-A	COMP-A-D0-15E-A	VC-204-D0-14E	VC-205-D0-15E	VC-208-D0-7.5E	VC-208-D0-7.5-A	VC-208-D0-7.5-A	VC-211-D0-7.5E	VC-211-D0-7.5-A	VC-211-D0-7.5-A	VC-214-D0-7.5E	VC-214-D0-7.5E-A	VC-214-D0-7.5E-A
Sample Type									11/21/2018	11/21/2018	11/12/2018	11/13/2018	11/12/2018	11/21/2018	11/21/2018	11/12/2018	11/21/2018	11/21/2018	10/29/2018	11/14/2018	11/14/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1847850-03	L1847850-03	L1846346-03	L1846405-01	L1846346-02	L1847850-02	L1847850-02	L1846346-01	L1847850-01	L1847850-01	L1844234-35	L1846705-09	L1846705-09
									0 - 15 (ft)	0 - 15 (ft)	0 - 14 (ft)	0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
									Amended	SPLP	Raw	Raw	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																					
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.0002 U	0.16 U	0.00018 U	0.0002 U	0.00039 U	0.00025 U	0.16 U	0.00022 U	0.00017 U	0.16 U	0.00032 U	0.00023 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.0002 U	0.17 U	0.00018 U	0.0002 U	0.00038 U	0.00025 U	0.17 U	0.00022 U	0.00017 U	0.17 U	0.00032 U	0.00023 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00032 U	0.14 U	0.00029 U	0.00031 U	0.00062 U	0.0004 U	0.14 U	0.00036 U	0.00028 U	0.14 U	0.00051 U	0.00037 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00017 U	0.21 U	0.00016 U	0.00017 U	0.00034 U	0.00022 U	0.21 U	0.00019 U	0.00015 U	0.21 U	0.00028 U	0.0002 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00028 U	0.17 U	0.00026 U	0.00028 U	0.00055 U	0.00036 U	0.17 U	0.00032 U	0.00025 U	0.17 U	0.00046 U	0.00033 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00038 U	0.23 U	0.00035 U	0.00038 U	0.00075 U	0.00049 U	0.23 U	0.00043 U	0.00033 U	0.23 U	0.00062 U	0.00045 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00032 U	0.22 U	0.0003 U	0.00032 U	0.00063 U	0.00041 U	0.22 U	0.00036 U	0.00028 U	0.22 U	0.00052 U	0.00038 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0012 U	0.35 U	0.0011 U	0.0012 U	0.0023 U	0.0015 U	0.35 U	0.0013 U	0.001 U	0.35 U	0.0019 U	0.0014 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00033 U	0.19 U [D]	0.0003 U	0.00033 U	0.00065 U	0.00042 U	0.19 U [D]	0.00037 U	0.00029 U	0.19 U [D]	0.00053 U	0.00039 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00017 U	0.18 U	0.00016 U	0.00017 U	0.00033 U	0.00022 U	0.18 U	0.00019 U	0.00015 U	0.18 U	0.00028 U	0.0002 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.0003 U	0.13 U	0.00028 U	0.0003 U	0.0006 U	0.00039 U	0.13 U	0.00034 U	0.00027 U	0.13 U	0.00049 U	0.00036 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00015 U	0.14 U	0.00014 U	0.00015 U	0.00029 U	0.00019 U	0.14 U	0.00017 U	0.00013 U	0.14 U	0.00024 U	0.00017 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00018 U	0.19 U	0.00016 U	0.00017 U	0.00034 U	0.00022 U	0.19 U	0.0002 U	0.00015 U	0.19 U	0.00028 U	0.00021 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.0002 U	0.19 U	0.00019 U	0.0002 U	**0.00051 J**	0.00026 U	0.19 U	0.00023 U	0.00018 U	0.19 U	0.00033 U	0.00024 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.042 U	61 U	0.038 U	0.041 U	0.082 U	0.053 U	61 U	0.047 U	0.036 U	61 U	0.067 U	0.049 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	**0.036 J-**	**3.2 J**	**0.0048 J**	0.0026 U	**0.04**	**0.054 J-**	**4.8 J**	0.003 U	**0.023 J-**	1.9 U	**0.022**	**0.15 J-**	**4.4 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	**0.0016 J**	0.52 U	0.0013 U	0.0014 U	0.0027 U	**0.0031 J**	0.52 U	0.0016 U	0.0012 U	0.52 U	0.0022 U	0.0016 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.42 U	0.0014 U	0.0015 U	0.003 U	0.0019 U	0.42 U	0.0017 U	0.0013 U	0.42 U	0.0024 U	0.0018 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.35**	**26**	**0.043**	**0.018**	**0.21**	**0.43**	**34**	**0.024**	**0.24**	**16**	**0.2**	**1.2**	**37**
Benzene	2	-	5	-	0.005	-	4	-	0.0002 U	0.16 U	0.00018 U	0.0002 U	**0.001 J**	0.00025 U	0.16 U	0.00022 U	0.00017 U	0.16 U	**0.0019**	0.00023 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00013 U	0.19 U	0.00012 U	0.00013 U	0.00025 U	0.00016 U	0.19 U	0.00014 U	0.00011 U	0.19 U	0.00021 U	0.00015 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00029 U	0.25 U	0.00027 U	0.00029 U	0.00057 U	0.00037 U	0.25 U	0.00033 U	0.00026 U	0.25 U	0.00047 U	0.00034 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00069 U	0.26 U	0.00063 U	0.00068 U	0.0013 U	0.00088 U	0.26 U	0.00077 U	0.0006 U	0.26 U	0.0011 U	0.00081 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.0054 U	**0.94 J**	0.005 U	**0.0062 J**	0.01 U	**0.022**	**2.8 J**	0.0061 U	0.0047 U	**0.32 J**	0.0087 U	**0.026 J-**	**2.2 J**
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00027 U	0.13 U	0.00025 U	0.00027 U	0.00053 U	0.00035 U	0.13 U	0.00031 U	0.00024 U	0.13 U	0.00044 U	0.00032 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00015 U	0.18 U	0.00014 U	0.00015 U	0.0003 U	0.00019 U	0.18 U	0.00017 U	0.00013 U	0.18 U	0.00024 U	0.00018 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00024 U	0.15 U	0.00022 U	0.00024 U	0.00048 U	0.00031 U	0.15 U	0.00027 U	0.00021 U	0.15 U	0.00039 U	0.00028 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00054 U	0.13 U	0.00049 U	0.00053 U	0.001 U	0.00068 U	0.13 U	0.0006 U	0.00047 U	0.13 U	0.00086 U	0.00063 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00017 U	0.22 U	0.00015 U	0.00016 U	0.00032 U	0.00021 U	0.22 U	0.00019 U	0.00014 U	0.22 U	0.00027 U	0.0002 U	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0011 U	0.2 U	0.001 U	0.0011 U	0.0022 U	0.0014 U	0.2 U	0.0012 U	0.00097 U	0.2 U	0.0018 U	0.0013 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00021 U	0.19 U	0.00019 U	0.00021 U	0.00041 U	0.00026 U	0.19 U	0.00023 U	0.00018 U	0.19 U	0.00033 U	0.00024 U	**0.21 J**
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00019 U	0.14 U	0.00017 U	0.00019 U	0.00037 U	0.00024 U	0.14 U	0.00021 U	0.00016 U	0.14 U	0.0003 U	0.00022 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00064 U	0.27 U	0.00059 U	0.00064 U	0.0013 U	0.00082 U	0.27 U	0.00072 U	0.00056 U	0.27 U	**0.0019 J**	0.00076 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00017 U	0.15 U	0.00015 U	0.00016 U	0.00032 U	0.00021 U	0.15 U	0.00019 U	0.00014 U	0.15 U	0.00027 U	0.0002 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.0011 U	0.24 U	0.001 U	0.0011 U	0.0021 U	0.0014 U	0.24 U	0.0012 U	0.00095 U	0.24 U	0.0018 U	0.0013 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00017 U	0.17 U	0.00015 U	0.00017 U	0.00033 U	0.00021 U	0.17 U	0.00019 U	0.00015 U	0.17 U	**0.00052 J**	**0.0002 J**	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00013 U	0.19 U	0.00012 U	0.00013 U	**0.00052 J**	0.00016 U	0.19 U	0.00014 U	0.00011 U	0.19 U	0.00021 U	0.00015 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0011 U	0.23 U	0.001 U	0.0011 U	0.0022 U	0.0014 U	0.23 U	0.0013 U	0.00098 U	0.23 U	0.0018 U	0.0013 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00072 U	0.4 U	0.00066 U	0.00071 U	**0.0016 J**	0.00091 U	0.4 U	0.0008 U	0.00062 U	0.4 U	**0.0073 J**	0.00084 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00024 U	0.17 U	0.00022 U	0.00024 U	0.00047 U	0.0003 U	0.17 U	0.00027 U	0.00021 U	0.17 U	0.00038 U	0.00028 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0027 U	0.68 U	0.0025 U	0.0027 U	0.0053 U	0.0034 U	0.68 U	0.003 U	0.0024 U	0.68 U	0.0044 U	0.0032 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00023 U	0.36 U	0.00021 U	0.00023 U	0.00046 U	0.0003 U	0.36 U	0.00026 U	0.0002 U	0.36 U	0.00037 U	**0.00036 J**	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00023 U	0.18 U	0.00021 U	0.00023 U	0.00046 U	0.0003 U	0.18 U	0.00026 U	0.0002 U	0.18 U	0.00037 U	0.00027 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.00064 U	0.2 U	0.00059 U	0.00064 U	0.0013 U	0.00082 U	0.2 U	0.00072 U	0.00056 U	0.2 U	0.001 U	0.00076 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00016 U	0.16 U	0.00015 U	0.00016 U	0.00032 U	0.00021 U	0.16 U	0.00018 U	0.00014 U	0.16 U	0.00026 U	0.00019 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00032 U	0.16 U	0.0003 U	0.00032 U	0.00063 U	0.00041 U	0.16 U	0.00036 U	0.00028 U	0.16 U	0.00052 U	0.00038 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00016 U	0.18 U	0.00015 U	0.00016 U	0.00032 U	0.00021 U	0.18 U	0.00018 U	0.00014 U	0.18 U	0.00026 U	**0.00055 J**	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.00082 U	0.16 U	0.00076 U	0.00082 U	0.0016 U	0.001 U	0.16 U	0.00093 U	0.00072 U	0.16 U	0.0013 U	0.00097 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.00082 U	0.15 U	0.00076 U	0.00082 U	0.0016 U	0.001 U	0.15 U	0.00092 U	0.00072 U	0.15 U	0.0013 U	0.00097 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.0004 U	0.07 U	0.00037 U	0.00039 U	0.00078 U	0.0005 U	0.07 U	0.00045 U	0.00035 U	0.07 U	0.00064 U	0.00047 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00034 U	0.33 U	0.00032 U	0.00034 U	**0.00093 J**	0.00044 U	0.33 U	0.00039 U	0.0003 U	0.33 U	**0.0038 J**	0.0004 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.3876**	**30.14**	**0.0478**	**0.0242**	**0.25456**	**0.5091**	**41.6**	**0.024**	**0.263**	**16.32**	**0.23742**	**1.37711**	**43.81**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Nearshore			Nearshore-Raritan								
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**DEP-1**	**DEP-1**	**DEP-1**	**VC-301**	**VC-301**	**VC-301**	**VC-303**	**VC-303**	**VC-303**	**VC-304**	**VC-304**	**VC-304**
Sample Name									DEP-1	DEP-1	DEP-1	VC-301	VC-301	VC-301	VC-303	VC-303	VC-303	VC-304	VC-304	VC-304
Sample Date									DEP-1-D0-7.5E	DEP-1-D0-7.5E-A	DEP-1-D0-7.5E-A	VC-301-REV-D0-7.5E	VC-301-REV-D0-7.5E-A	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E	VC-303-D0-7.5E-A	VC-303-D0-7.5E-A	VC-304-D0-7.5E	VC-304-D0-7.5E-A	VC-304-D0-7.5E-A
Sample Type									10/31/2018	11/15/2018	11/15/2018	10/30/2018	11/15/2018	11/15/2018	10/31/2018	11/15/2018	11/15/2018	10/29/2018	11/14/2018	11/14/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844690-06	L1846902-01	L1846902-01	L1844690-01	L1846902-05	L1846902-05	L1844690-07	L1846902-06	L1846902-06	L1844234-37	L1846705-21	L1846705-21
									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
									UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Volatile Organic Compounds (mg/kg) (ug/L)																				
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00018 U	0.00019 U	0.16 U	0.00023 U	0.00018 U	0.16 U	0.00029 U	0.00029 U	0.16 U	0.00039 U	0.00023 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00018 U	0.00019 U	0.17 U	0.00023 U	0.00018 U	0.17 U	0.00028 U	0.00029 U	0.17 U	0.00039 U	0.00023 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00028 U	0.0003 U	0.14 U	0.00037 U	0.00029 U	0.14 U	0.00046 U	0.00046 U	0.14 U	0.00062 U	0.00037 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00015 U	0.00016 U	0.21 U	0.0002 U	0.00016 U	0.21 U	0.00025 U	0.00025 U	0.21 U	0.00034 U	0.0002 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00025 U	0.00027 U	0.17 U	0.00033 U	0.00026 U	0.17 U	0.00041 U	0.00041 U	0.17 U	0.00056 U	0.00033 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00034 U	0.00036 U	0.23 U	0.00044 U	0.00035 U	0.23 U	0.00055 U	0.00056 U	0.23 U	0.00075 U	0.00044 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00029 U	0.00031 U	0.22 U	0.00038 U	0.00029 U	0.22 U	0.00047 U	0.00047 U	0.22 U	0.00064 U	0.00037 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0011 U	0.0011 U	0.35 U	0.0014 U	0.0011 U	0.35 U	0.0017 U	0.0017 U	0.35 U	0.0023 U	0.0014 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.0003 U	0.00032 U	0.19 U [D]	0.00038 U	0.0003 U	0.19 U [D]	0.00048 U	0.00048 U	0.19 U [D]	0.00065 U	0.00038 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00015 U	0.00016 U	0.18 U	0.0002 U	0.00016 U	0.18 U	0.00025 U	0.00025 U	0.18 U	0.00034 U	0.0002 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00027 U	0.00029 U	0.13 U	0.00035 U	0.00028 U	0.13 U	0.00044 U	0.00045 U	0.13 U	0.0006 U	0.00035 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00013 U	0.00014 U	0.14 U	0.00017 U	0.00014 U	0.14 U	0.00021 U	0.00022 U	0.14 U	0.00029 U	0.00017 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00016 U	0.00017 U	0.19 U	0.0002 U	0.00016 U	0.19 U	0.00025 U	0.00026 U	0.19 U	0.00034 U	0.0002 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00018 U	0.00019 U	0.19 U	0.00024 U	0.00018 U	0.19 U	0.00029 U	0.0003 U	0.19 U	0.0004 U	0.00024 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.037 U	0.04 U	61 U	0.048 U	0.038 U	61 U	0.06 U	0.061 U	61 U	0.082 U	0.048 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0024 U	**0.028 J-**	**3.5 J**	0.0031 U	**0.076 J-**	**3.4 J**	0.0038 U	**0.096 J-**	**3.2 J**	0.0052 U	**0.13**	**4.1 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.0013 U	0.52 U	0.0016 U	**0.0027 J**	**0.52 J**	0.002 U	**0.0033 J**	0.52 U	0.0028 U	0.0016 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0014 U	0.0014 U	0.42 U	0.0018 U	0.0014 U	0.42 U	0.0022 U	0.0022 U	0.42 U	0.003 U	0.0018 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.016**	**0.34 J-**	**35**	**0.019**	**1.6**	**29**	**0.066**	**1.5 J-**	**29**	**0.033**	**2.1**	**38**
Benzene	2	-	5	-	0.005	-	4	-	0.00018 U	0.00019 U	0.16 U	0.00023 U	0.00018 U	0.16 U	0.00028 U	0.00029 U	0.16 U	0.00039 U	**0.00026 J**	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00012 U	0.00012 U	0.19 U	0.00015 U	0.00012 U	0.19 U	0.00019 U	0.00019 U	0.19 U	0.00025 U	0.00015 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00026 U	0.00028 U	0.25 U	0.00034 U	0.00027 U	0.25 U	0.00042 U	0.00043 U	0.25 U	0.00057 U	0.00034 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00062 U	0.00066 U	0.26 U	0.0008 U	0.00063 U	0.26 U	0.001 U	0.001 U	0.26 U	0.0014 U	0.0008 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.0048 U	0.0052 U	**0.39 J**	0.0063 U	0.0049 U	**0.57 J**	0.0078 U	0.0079 U	**0.46 J**	**0.012 J**	**0.0088 J**	**0.88 J**
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00024 U	0.00026 U	0.13 U	0.00032 U	0.00025 U	0.13 U	0.00039 U	0.0004 U	0.13 U	0.00054 U	0.00032 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00013 U	0.00014 U	0.18 U	0.00018 U	0.00014 U	0.18 U	0.00022 U	0.00022 U	0.18 U	0.0003 U	0.00017 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00022 U	0.00023 U	0.15 U	0.00028 U	0.00022 U	0.15 U	0.00035 U	0.00036 U	0.15 U	0.00048 U	0.00028 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00048 U	0.00051 U	0.13 U	0.00062 U	0.00049 U	0.13 U	0.00078 U	0.00079 U	0.13 U	0.001 U	0.00062 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	**0.00018 J**	0.00016 U	0.22 U	**0.00022 J**	0.00015 U	0.22 U	**0.00029 J**	**0.0003 J-**	0.22 U	0.00033 U	**0.00032 J**	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.00099 U	0.001 U	0.2 U	0.0013 U	0.001 U	0.2 U	0.0016 U	0.0016 U	0.2 U	0.0022 U	0.0013 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00018 U	0.0002 U	0.19 U	0.00024 U	**0.00022 J-**	0.19 U	0.0003 U	0.0003 U	0.19 U	0.00041 U	0.00024 U	**0.31 J**
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00017 U	0.00018 U	0.14 U	0.00022 U	0.00017 U	0.14 U	0.00027 U	0.00028 U	0.14 U	0.00037 U	0.00022 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00058 U	0.00062 U	0.27 U	0.00075 U	0.00059 U	0.27 U	0.00093 U	0.00095 U	0.27 U	0.0013 U	0.00075 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00015 U	0.00016 U	0.15 U	0.00019 U	0.00015 U	0.15 U	0.00024 U	0.00024 U	0.15 U	0.00033 U	0.00019 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.00097 U	0.001 U	0.24 U	0.0013 U	0.00099 U	0.24 U	0.0016 U	0.0016 U	0.24 U	0.0021 U	0.0012 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00015 U	0.00016 U	0.17 U	0.00019 U	0.00015 U	0.17 U	0.00024 U	0.00024 U	0.17 U	0.00033 U	0.00019 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00012 U	0.00012 U	0.19 U	0.00015 U	0.00012 U	0.19 U	0.00019 U	0.00019 U	0.19 U	0.00025 U	0.00015 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.001 U	0.0011 U	0.23 U	0.0013 U	0.001 U	0.23 U	0.0016 U	0.0016 U	0.23 U	0.0022 U	0.0013 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00064 U	0.00068 U	0.4 U	0.00083 U	0.00065 U	0.4 U	0.001 U	0.001 U	0.4 U	0.0014 U	0.00083 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00021 U	0.00023 U	0.17 U	0.00028 U	0.00022 U	0.17 U	0.00034 U	0.00035 U	0.17 U	0.00047 U	0.00028 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0024 U	0.0026 U	0.68 U	0.0032 U	0.0025 U	0.68 U	0.0039 U	0.004 U	0.68 U	0.0053 U	**0.0046 J**	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00021 U	0.00022 U	0.36 U	0.00027 U	0.00021 U	0.36 U	0.00034 U	0.00034 U	0.36 U	0.00046 U	0.00027 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00021 U	0.00022 U	0.18 U	0.00027 U	0.00021 U	0.18 U	0.00034 U	0.00034 U	0.18 U	0.00046 U	0.00027 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.00058 U	0.00062 U	0.2 U	0.00075 U	0.00059 U	0.2 U	0.00093 U	0.00094 U	0.2 U	0.0013 U	0.00075 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00014 U	0.00016 U	0.16 U	0.00019 U	0.00015 U	0.16 U	0.00024 U	0.00024 U	0.16 U	0.00032 U	0.00019 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00029 U	0.00031 U	0.16 U	0.00038 U	0.0003 U	0.16 U	0.00047 U	0.00048 U	0.16 U	0.00064 U	0.00038 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00014 U	0.00016 U	0.18 U	0.00019 U	**0.00042 J**	0.18 U	0.00024 U	**0.0005 J**	0.18 U	0.00032 U	**0.00045 J**	**0.75**
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.00074 U	0.00079 U	0.16 U	0.00096 U	0.00075 U	0.16 U	0.0012 U	0.0012 U	0.16 U	0.0016 U	0.00096 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.00074 U	0.00079 U	0.15 U	0.00096 U	0.00075 U	0.15 U	0.0012 U	0.0012 U	0.15 U	0.0016 U	0.00095 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00036 U	0.00038 U	0.07 U	0.00046 U	0.00036 U	0.07 U	0.00058 U	0.00058 U	0.07 U	0.00078 U	0.00046 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00031 U	0.00033 U	0.33 U	0.0004 U	0.00031 U	0.33 U	0.0005 U	0.00051 U	0.33 U	0.00068 U	0.0004 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.01618**	**0.368**	**38.89**	**0.01922**	**0.07934**	**33.49**	**0.06629**	**1.6001**	**32.66**	**0.045**	**2.24443**	**44.04**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Nearshore-Raritan											
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**DEP-3**	**DEP-3**	**DEP-3**	**DEP-4**	**DEP-4**	**DEP-4**	**DEP-5**	**DEP-5**	**DEP-5**	**VC-216**	**VC-216**	**VC-216**
Sample Name									DEP-3	DEP-3	DEP-3	DEP-4	DEP-4	DEP-4	DEP-5	DEP-5	DEP-5	VC-216	VC-216	VC-216
Sample Date									DEP-3-D0-7.5E	DEP-3-D0-7.5E-A	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E	DEP-4-REV-D0-7.5E-A	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E	DEP-5-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E	VC-216-D0-7.5E-A	VC-216-D0-7.5E-A
Sample Type									10/31/2018	11/15/2018	11/15/2018	10/30/2018	11/15/2018	11/15/2018	10/30/2018	11/15/2018	11/15/2018	10/29/2018	11/14/2018	11/14/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844690-05	L1846902-02	L1846902-02	L1844690-02	L1846902-03	L1846902-03	L1844690-03	L1846902-04	L1846902-04	L1844234-33	L1846705-10	L1846705-10
									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
Proposed Disposal Facility									HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																				
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00036 U	0.0002 U	0.16 U	0.0003 U	0.00025 U	0.16 U	0.00034 U	0.00022 U	0.16 U	0.0004 U	0.00025 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00036 U	0.0002 U	0.17 U	0.00029 U	0.00025 U	0.17 U	0.00034 U	0.00022 U	0.17 U	0.0004 U	0.00025 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00058 U	0.00033 U	0.14 U	0.00047 U	0.00041 U	0.14 U	0.00054 U	0.00035 U	0.14 U	0.00064 U	0.0004 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00032 U	0.00018 U	0.21 U	0.00026 U	0.00022 U	0.21 U	0.00029 U	0.00019 U	0.21 U	0.00035 U	0.00022 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00052 U	0.00029 U	0.17 U	0.00042 U	0.00036 U	0.17 U	0.00048 U	0.00031 U	0.17 U	0.00057 U	0.00036 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.0007 U	0.0004 U	0.23 U	0.00057 U	0.00049 U	0.23 U	0.00065 U	0.00042 U	0.23 U	0.00077 U	0.00049 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00059 U	0.00033 U	0.22 U	0.00048 U	0.00041 U	0.22 U	0.00055 U	0.00036 U	0.22 U	0.00065 U	0.00041 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0022 U	0.0012 U	0.35 U	0.0018 U	0.0015 U	0.35 U	0.002 U	0.0013 U	0.35 U	0.0024 U	0.0015 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00061 U	0.00034 U	0.19 U [D]	0.00049 U	0.00042 U	0.19 U [D]	0.00056 U	0.00037 U	0.19 U [D]	0.00067 U	0.00042 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00031 U	0.00018 U	0.18 U	0.00025 U	0.00022 U	0.18 U	0.00029 U	0.00019 U	0.18 U	0.00034 U	0.00022 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00056 U	0.00032 U	0.13 U	0.00045 U	0.00039 U	0.13 U	0.00052 U	0.00034 U	0.13 U	0.00061 U	0.00039 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00027 U	0.00015 U	0.14 U	0.00022 U	0.00019 U	0.14 U	0.00025 U	0.00016 U	0.14 U	0.0003 U	0.00019 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00032 U	0.00018 U	0.19 U	0.00026 U	0.00022 U	0.19 U	0.0003 U	0.0002 U	0.19 U	0.00035 U	0.00022 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00037 U	0.00021 U	0.19 U	0.0003 U	0.00026 U	0.19 U	0.00035 U	0.00022 U	0.19 U	0.00041 U	0.00026 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.076 U	0.043 U	61 U	0.062 U	0.054 U	61 U	0.071 U	0.046 U	61 U	0.084 U	0.053 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0048 U	**0.048 J-**	**4.3 J**	**0.0053 J**	**0.07 J-**	**4.1 J**	0.0045 U	**0.084 J-**	**4.2 J**	0.0053 U	**0.13 J-**	**4.2 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0026 U	0.0014 U	**0.6 J**	0.0021 U	**0.0026 J**	**0.57 J**	0.0024 U	**0.0029 J**	0.52 U	0.0028 U	0.0018 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0028 U	0.0016 U	0.42 U	0.0023 U	0.002 U	0.42 U	0.0026 U	0.0017 U	0.42 U	0.0031 U	0.0019 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.052**	**1.6 J-**	**37**	**0.055**	**1.5 J-**	**36**	**0.04**	**1.9 J-**	**37**	**0.044**	**1.4**	**36**
Benzene	2	-	5	-	0.005	-	4	-	0.00036 U	0.0002 U	0.16 U	0.00029 U	0.00025 U	0.16 U	0.00034 U	0.00022 U	0.16 U	0.0004 U	0.00025 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00024 U	0.00013 U	0.19 U	0.00019 U	0.00017 U	0.19 U	0.00022 U	0.00014 U	0.19 U	0.00026 U	0.00016 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00054 U	0.0003 U	0.25 U	0.00043 U	0.00038 U	0.25 U	0.0005 U	0.00032 U	0.25 U	0.00059 U	0.00037 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.0013 U	0.00071 U	0.26 U	0.001 U	0.00089 U	0.26 U	0.0012 U	0.00077 U	0.26 U	0.0014 U	0.00088 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.0099 U	0.0056 U	**0.84 J**	0.008 U	0.0069 U	**0.59 J**	0.0092 U	0.006 U	**0.66 J**	**0.011 J**	**0.0078 J-**	**0.57 J**
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.0005 U	0.00028 U	0.13 U	0.00041 U	0.00035 U	0.13 U	0.00047 U	0.0003 U	0.13 U	0.00055 U	0.00035 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00028 U	0.00016 U	0.18 U	0.00022 U	0.00019 U	0.18 U	0.00026 U	0.00017 U	0.18 U	0.0003 U	0.00019 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00045 U	0.00025 U	0.15 U	0.00036 U	0.00031 U	0.15 U	0.00042 U	0.00027 U	0.15 U	0.00049 U	0.00031 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00098 U	0.00056 U	0.13 U	0.0008 U	0.00069 U	0.13 U	0.00092 U	0.0006 U	0.13 U	0.0011 U	0.00068 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.0003 U	0.00017 U	0.22 U	**0.00027 J**	0.00021 U	0.22 U	**0.00032 J**	**0.00019 J-**	0.22 U	0.00033 U	0.00021 U	**0.23 J**
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.002 U	0.0011 U	0.2 U	0.0016 U	0.0014 U	0.2 U	0.0019 U	0.0012 U	0.2 U	0.0022 U	0.0014 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00038 U	0.00021 U	0.19 U	0.00031 U	0.00027 U	0.19 U	0.00035 U	0.00023 U	0.19 U	0.00042 U	0.00026 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00034 U	0.00019 U	0.14 U	0.00028 U	0.00024 U	0.14 U	0.00032 U	0.00021 U	0.14 U	0.00038 U	0.00024 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.00067 U	0.27 U	0.00096 U	0.00083 U	0.27 U	0.0011 U	0.00072 U	0.27 U	0.0013 U	0.00082 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.0003 U	0.00017 U	0.15 U	0.00025 U	0.00021 U	0.15 U	0.00028 U	0.00018 U	0.15 U	0.00033 U	0.00021 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.002 U	0.0011 U	0.24 U	0.0016 U	0.0014 U	0.24 U	0.0018 U	0.0012 U	0.24 U	0.0022 U	0.0014 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00031 U	0.00017 U	0.17 U	0.00025 U	0.00022 U	0.17 U	0.00028 U	0.00019 U	0.17 U	0.00034 U	0.00021 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00024 U	0.00013 U	0.19 U	0.00019 U	0.00017 U	0.19 U	0.00022 U	0.00014 U	0.19 U	0.00026 U	0.00016 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0021 U	0.0012 U	0.23 U	0.0017 U	0.0014 U	0.23 U	0.0019 U	0.0012 U	0.23 U	0.0023 U	0.0014 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0013 U	0.00074 U	0.4 U	0.0011 U	0.00092 U	0.4 U	0.0012 U	0.0008 U	0.4 U	0.0014 U	0.00091 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00044 U	0.00025 U	0.17 U	0.00036 U	0.00031 U	0.17 U	0.00041 U	0.00026 U	0.17 U	0.00048 U	0.0003 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.005 U	0.0028 U	0.68 U	0.004 U	0.0035 U	0.68 U	0.0046 U	0.003 U	0.68 U	0.0055 U	0.0035 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00043 U	0.00024 U	0.36 U	0.00035 U	0.0003 U	0.36 U	0.0004 U	0.00026 U	0.36 U	0.00047 U	0.0003 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00043 U	0.00024 U	0.18 U	0.00035 U	0.0003 U	0.18 U	0.0004 U	0.00026 U	0.18 U	0.00047 U	0.0003 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.0012 U	0.00067 U	0.2 U	0.00096 U	0.00083 U	0.2 U	0.0011 U	0.00072 U	0.2 U	0.0013 U	0.00082 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.0003 U	0.00017 U	0.16 U	0.00024 U	0.00021 U	0.16 U	0.00028 U	0.00018 U	0.16 U	0.00033 U	0.00021 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.0006 U	0.00034 U	0.16 U	0.00048 U	0.00042 U	0.16 U	0.00055 U	0.00036 U	0.16 U	0.00065 U	0.00041 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.0003 U	0.00017 U	0.18 U	0.00024 U	**0.00044 J**	0.18 U	0.00028 U	**0.00053 J**	0.18 U	0.00033 U	**0.00049 J**	**0.31 J**
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0015 U	0.00085 U	0.16 U	0.0012 U	0.0011 U	0.16 U	0.0014 U	0.00092 U	0.16 U	0.0017 U	0.001 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.00085 U	0.15 U	0.0012 U	0.001 U	0.15 U	0.0014 U	0.00092 U	0.15 U	0.0016 U	0.001 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00073 U	0.00041 U	0.07 U	0.00059 U	0.00051 U	0.07 U	0.00068 U	0.00044 U	0.07 U	0.0008 U	0.00051 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00063 U	0.00036 U	0.33 U	0.00051 U	0.00044 U	**0.35 J**	0.00059 U	0.00038 U	0.33 U	0.0007 U	0.00044 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.052**	**1.648**	**42.74**	**0.06057**	**1.57304**	**41.61**	**0.04032**	**1.98762**	**41.86**	**0.055**	**1.53829**	**41.31**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Nearshore-Raritan											
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**VC-217**	**VC-217**	**VC-217**	**VC-218**	**VC-218**	**VC-218**	**COMP-G**	**COMP-G**	**COMP-G**	**COMP-G**	**VC-222**	**VC-222**	**VC-222**
Sample Name									VC-217	VC-217	VC-217	VC-218	VC-218	VC-218	COMP-G	COMP-G	VC-219	VC-220	VC-221	VC-222	VC-222	VC-222
Sample Date									VC-217-D0-7.5E	VC-217-D0-7.5E-A	VC-217-D0-7.5E-A	VC-218-D0-7.5E	VC-218-D0-7.5E-A	VC-218-D0-7.5E-A	COMP-G-D0-7.5E-A	COMP-G-D0-7.5E-A	VC-219-D0-7.5E	VC-220-D0-7.5E	VC-221-D0-7.5E	VC-222-D0-7.5E	VC-222-D0-7.5E-A	VC-222-D0-7.5E-A
Sample Type									10/29/2018	11/14/2018	11/14/2018	10/29/2018	11/09/2018	11/09/2018	11/08/2018	11/08/2018	10/28/2018	10/28/2018	10/28/2018	10/28/2018	11/08/2018	11/08/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844234-32	L1846705-11	L1846705-11	L1844234-30	L1846705-12	L1846705-12	L1846705-01	L1846705-01	L1844234-27	L1844234-26	L1844234-25	L1844234-24	L1846705-13	L1846705-13
									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
									Raw	Raw	SPLP	Raw	Raw	SPLP	Amended	SPLP	Raw	Raw	Raw	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L
									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																						
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.0004 U	0.00027 U	0.16 U	0.00044 U	0.00025 U	0.16 U	0.00028 U	0.16 U	0.00042 U	0.00033 U	0.00037 U	0.00041 U	0.00022 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.0004 U	0.00027 U	0.17 U	0.00043 U	0.00025 U	0.17 U	0.00028 U	0.17 U	0.00042 U	0.00033 U	0.00037 U	0.0004 U	0.00022 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00064 U	0.00043 U	0.14 U	0.0007 U	0.0004 U	0.14 U	0.00044 U	0.14 U	0.00067 U	0.00053 U	0.00059 U	0.00065 U	0.00036 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00035 U	0.00023 U	0.21 U	0.00038 U	0.00022 U	0.21 U	0.00024 U	0.21 U	0.00036 U	0.00029 U	0.00032 U	0.00035 U	0.00019 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00057 U	0.00038 U	0.17 U	0.00062 U	0.00036 U	0.17 U	0.00039 U	0.17 U	0.0006 U	0.00047 U	0.00052 U	0.00058 U	0.00032 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00077 U	0.00052 U	0.23 U	0.00084 U	0.00049 U	0.23 U	0.00053 U	0.23 U	0.00081 U	0.00064 U	0.00071 U	0.00078 U	0.00043 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00065 U	0.00044 U	0.22 U	0.00071 U	0.00041 U	0.22 U	0.00045 U	0.22 U	0.00069 U	0.00054 U	0.0006 U	0.00066 U	0.00036 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0024 U	0.0016 U	0.35 U	0.0026 U	0.0015 U	0.35 U	0.0016 U	0.35 U	0.0025 U	0.002 U	0.0022 U	0.0024 U	0.0013 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00067 U	0.00045 U	0.19 U [D]	0.00073 U	0.00042 U	0.19 U [D]	0.00046 U	0.19 U [D]	0.0007 U	0.00055 U	0.00062 U	0.00068 U	0.00037 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00034 U	0.00023 U	0.18 U	0.00038 U	0.00022 U	0.18 U	0.00024 U	0.18 U	0.00036 U	0.00028 U	0.00032 U	0.00035 U	0.00019 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00061 U	0.00041 U	0.13 U	0.00067 U	0.00039 U	0.13 U	0.00043 U	0.13 U	0.00065 U	0.00051 U	0.00057 U	0.00063 U	0.00034 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.0003 U	0.0002 U	0.14 U	0.00032 U	0.00019 U	0.14 U	0.00021 U	0.14 U	0.00032 U	0.00025 U	0.00028 U	0.0003 U	0.00017 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00035 U	0.00024 U	0.19 U	0.00038 U	0.00022 U	0.19 U	0.00024 U	0.19 U	0.00037 U	0.00029 U	0.00033 U	0.00036 U	0.0002 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00041 U	0.00027 U	0.19 U	0.00044 U	0.00026 U	0.19 U	0.00028 U	0.19 U	0.00043 U	0.00034 U	0.00038 U	0.00042 U	0.00023 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.084 U	0.056 U	61 U	0.092 U	0.053 U	61 U	0.058 U	61 U	0.088 U	0.069 U	0.077 U	0.086 U	0.047 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0053 U	**0.12 J-**	**3.2 J**	**0.017 J**	**0.13**	**5.2**	**0.13 J-**	**4.8 J**	**0.016 J**	0.0044 U	**0.008 J**	**0.013 J**	**0.087**	**5.4**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0028 U	0.0019 U	0.52 U	0.0031 U	0.0018 U	0.52 U	0.002 U	0.52 U	0.003 U	0.0023 U	0.0026 U	0.0029 U	**0.0032 J**	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.003 U	0.002 U	0.42 U	0.0033 U	0.0019 U	0.42 U	0.0021 U	0.42 U	0.0032 U	0.0025 U	0.0028 U	0.0031 U	0.0017 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.034**	**1.2 J**	**29**	**0.083**	**1.7 J-**	**44**	**1.1 J**	**38**	**0.093**	**0.038**	**0.054**	**0.073**	**2**	**44**
Benzene	2	-	5	-	0.005	-	4	-	0.0004 U	0.00027 U	0.16 U	0.00043 U	0.00025 U	0.16 U	0.00028 U	0.16 U	0.00042 U	0.00033 U	0.00037 U	0.0004 U	0.00022 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00026 U	0.00018 U	0.19 U	0.00028 U	0.00016 U	0.19 U	0.00018 U	0.19 U	0.00028 U	0.00022 U	0.00024 U	0.00026 U	0.00014 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00059 U	0.0004 U	0.25 U	0.00064 U	0.00037 U	0.25 U	0.00041 U	0.25 U	0.00062 U	0.00048 U	0.00054 U	0.0006 U	0.00033 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.0014 U	0.00093 U	0.26 U	0.0015 U	0.00088 U	0.26 U	0.00096 U	0.26 U	0.0015 U	0.0011 U	0.0013 U	0.0014 U	0.00078 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	**0.012 J**	**0.0095 J-**	**0.92 J**	0.012 U	**0.013 J**	**1.2 J**	**0.017 J-**	**1.9 J**	**0.017 J**	0.009 U	0.01 U	**0.013 J**	0.0061 U	**1.2 J**
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00055 U	0.00037 U	0.13 U	0.0006 U	0.00035 U	0.13 U	0.00038 U	0.13 U	0.00058 U	0.00045 U	0.00051 U	0.00056 U	0.00031 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.0003 U	0.0002 U	0.18 U	0.00033 U	0.00019 U	0.18 U	0.00021 U	0.18 U	0.00032 U	0.00025 U	0.00028 U	0.00031 U	0.00017 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00049 U	0.00033 U	0.15 U	0.00053 U	0.00031 U	0.15 U	0.00034 U	0.15 U	0.00052 U	0.0004 U	0.00045 U	0.0005 U	0.00027 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.0011 U	0.00073 U	0.13 U	0.0012 U	0.00068 U	0.13 U	0.00075 U	0.13 U	0.0011 U	0.00089 U	0.001 U	0.0011 U	0.0006 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00033 U	**0.00022 J-**	0.22 U	0.00036 U	0.00021 U	0.22 U	**0.00027 J-**	0.22 U	0.00035 U	0.00028 U	0.00031 U	0.00034 U	**0.00024 J**	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0022 U	0.0015 U	0.2 U	0.0024 U	0.0014 U	0.2 U	0.0015 U	0.2 U	0.0024 U	0.0018 U	0.002 U	0.0023 U	0.0012 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00042 U	**0.00033 J-**	0.19 U	0.00046 U	0.00026 U	0.19 U	**0.0012 J-**	0.19 U	0.00044 U	0.00034 U	0.00039 U	0.00043 U	0.00023 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00038 U	0.00025 U	0.14 U	0.00041 U	0.00024 U	0.14 U	0.00026 U	0.14 U	0.0004 U	0.00031 U	0.00035 U	0.00038 U	0.00021 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0013 U	0.00087 U	0.27 U	0.0014 U	0.00082 U	0.27 U	0.0009 U	0.27 U	0.0014 U	0.0011 U	0.0012 U	0.0013 U	0.00073 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00033 U	0.00022 U	0.15 U	0.00036 U	0.00021 U	0.15 U	0.00023 U	0.15 U	0.00035 U	0.00028 U	0.00031 U	0.00034 U	0.00019 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.0022 U	0.0015 U	0.24 U	0.0024 U	0.0014 U	0.24 U	0.0015 U	0.24 U	0.0023 U	0.0018 U	0.002 U	0.0022 U	0.0012 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00034 U	0.00023 U	0.17 U	0.00037 U	0.00021 U	0.17 U	0.00023 U	0.17 U	0.00036 U	0.00028 U	0.00031 U	0.00034 U	0.00019 U	**0.41 J**
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00026 U	0.00018 U	0.19 U	0.00028 U	0.00016 U	0.19 U	0.00018 U	0.19 U	0.00028 U	0.00022 U	0.00024 U	0.00026 U	0.00014 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0023 U	0.0015 U	0.23 U	0.0025 U	**2.2 J-**	0.23 U	0.0016 U	0.23 U	0.0024 U	0.0019 U	0.0021 U	0.0023 U	0.0013 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0014 U	0.00097 U	0.4 U	0.0016 U	0.00091 U	0.4 U	0.001 U	0.4 U	0.0015 U	0.0012 U	0.0013 U	0.0015 U	0.0008 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00048 U	0.00032 U	0.17 U	0.00052 U	0.0003 U	0.17 U	0.00033 U	0.17 U	0.00051 U	0.0004 U	0.00044 U	0.00049 U	0.00027 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0055 U	0.0037 U	0.68 U	0.006 U	0.0035 U	0.68 U	0.0038 U	0.68 U	0.0058 U	0.0045 U	0.005 U	0.0056 U	0.003 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00047 U	0.00031 U	0.36 U	0.00051 U	0.0003 U	0.36 U	0.00032 U	0.36 U	0.00049 U	0.00039 U	0.00043 U	0.00048 U	0.00026 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00047 U	0.00031 U	0.18 U	0.00051 U	0.0003 U	0.18 U	0.00032 U	0.18 U	0.00049 U	0.00039 U	0.00043 U	0.00048 U	0.00026 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.0013 U	0.00087 U	0.2 U	0.0014 U	0.00082 U	0.2 U	0.0009 U	0.2 U	0.0014 U	0.0011 U	0.0012 U	0.0013 U	0.00072 U	**1.1**
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00033 U	0.00022 U	0.16 U	0.00036 U	0.00021 U	0.16 U	0.00023 U	0.16 U	0.00034 U	0.00027 U	0.0003 U	0.00033 U	0.00018 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00065 U	0.00044 U	0.16 U	0.00071 U	0.00041 U	0.16 U	0.00045 U	0.16 U	0.00069 U	0.00054 U	0.0006 U	0.00066 U	0.00036 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00033 U	**0.00064 J**	**0.2 J**	0.00036 U	**0.00038 J**	0.18 U	**0.0015**	0.18 U	0.00034 U	0.00027 U	0.0003 U	0.00033 U	**0.0002 J**	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0016 U	0.0011 U	0.16 U	0.0018 U	0.001 U	0.16 U	0.0012 U	0.16 U	0.0018 U	0.0014 U	0.0015 U	0.0017 U	0.00093 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0016 U	0.0011 U	0.15 U	0.0018 U	0.001 U	0.15 U	0.0011 U	0.15 U	0.0017 U	0.0014 U	0.0015 U	0.0017 U	0.00092 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.0008 U	0.00054 U	0.07 U	0.00087 U	0.00051 U	0.07 U	0.00056 U	0.07 U	0.00084 U	0.00066 U	0.00074 U	0.00082 U	0.00045 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00069 U	0.00047 U	0.33 U	0.00076 U	0.00044 U	0.33 U	0.00048 U	0.33 U	0.00073 U	0.00057 U	0.00064 U	0.00071 U	0.00039 U	**3.6**
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.046**	**1.33069**	**33.32**	**0.1**	**4.04338**	**50.4**	**1.24997**	**44.7**	**0.126**	**0.038**	**0.062**	**0.099**	**2.09064**	**55.71**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Nearshore-Raritan											
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**VC-223**	**VC-223**	**VC-223**	**COMP-I**	**COMP-I**	**COMP-I**	**COMP-I**	**COMP-I**	**COMP-J**	**COMP-J**	**COMP-J**	**COMP-J**
Sample Name									VC-223	VC-223	VC-223	COMP-I	COMP-I	VC-307	VC-308	VC-309	COMP-J	COMP-J	DEP-2	VC-310
Sample Date									VC-223-D0-7.5E	VC-223-D0-7.5E-A	VC-223-D0-7.5E-A	COMP-I-D0-7.5E-A	COMP-I-D0-7.5E-A	VC-307-D0-7.5E	VC-308-D0-7.5E	VC-309-D0-7.5E	COMP-J-D0-7.5E-A	COMP-J-D0-7.5E-A	DEP-2-D0-7.5E	VC-310-D0-7.5E
Sample Type									10/28/2018	11/08/2018	11/08/2018	11/09/2018	11/09/2018	10/28/2018	10/28/2018	10/28/2018	11/09/2018	11/09/2018	10/28/2018	10/28/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844234-23	L1846705-14	L1846705-14	L1846705-02	L1846705-02	L1844234-19	L1844234-18	L1844234-17	L1846705-04	L1846705-04	L1844234-16	L1844234-15
									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
									Raw	Amended	SPLP	Amended	SPLP	Raw	Raw	Raw	Amended	SPLP	Raw	Raw
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg
									UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Volatile Organic Compounds (mg/kg) (ug/L)																				
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00036 U	0.00025 U	0.16 U	0.00029 U	0.16 U	0.00036 U	0.00038 U	0.00039 U	0.00023 U	0.16 U	0.0003 U	0.00029 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00036 U	0.00025 U	0.17 U	0.00029 U	0.17 U	0.00035 U	0.00038 U	0.00039 U	0.00022 U	0.17 U	0.0003 U	0.00029 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00057 U	0.0004 U	0.14 U	0.00047 U	0.14 U	0.00057 U	0.00061 U	0.00063 U	0.00036 U	0.14 U	0.00048 U	0.00047 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00031 U	0.00022 U	0.21 U	0.00026 U	0.21 U	0.00031 U	0.00033 U	0.00034 U	0.0002 U	0.21 U	0.00026 U	0.00025 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00051 U	0.00036 U	0.17 U	0.00042 U	0.17 U	0.00051 U	0.00054 U	0.00056 U	0.00032 U	0.17 U	0.00043 U	0.00042 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00069 U	0.00048 U	0.23 U	0.00057 U	0.23 U	0.00068 U	0.00074 U	0.00076 U	0.00044 U	0.23 U	0.00058 U	0.00056 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00058 U	0.00041 U	0.22 U	0.00048 U	0.22 U	0.00058 U	0.00062 U	0.00064 U	0.00037 U	0.22 U	0.00049 U	0.00048 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0021 U	0.0015 U	0.35 U	0.0018 U	0.35 U	0.0021 U	0.0023 U	0.0023 U	0.0014 U	0.35 U	0.0018 U	0.0018 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.0006 U	0.00042 U	0.19 U [D]	0.00049 U	0.19 U [D]	0.00059 U	0.00064 U	0.00066 U	0.00038 U	0.19 U [D]	0.0005 U	0.00049 U
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00031 U	0.00022 U	0.18 U	0.00025 U	0.18 U	0.00031 U	0.00033 U	0.00034 U	0.0002 U	0.18 U	0.00026 U	0.00025 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00055 U	0.00039 U	0.13 U	0.00045 U	0.13 U	0.00055 U	0.00059 U	0.0006 U	0.00035 U	0.13 U	0.00046 U	0.00045 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00027 U	0.00019 U	0.14 U	0.00022 U	0.14 U	0.00027 U	0.00028 U	0.00029 U	0.00017 U	0.14 U	0.00022 U	0.00022 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00032 U	0.00022 U	0.19 U	0.00026 U	0.19 U	0.00032 U	0.00034 U	0.00035 U	0.0002 U	0.19 U	0.00026 U	0.00026 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00037 U	0.00026 U	0.19 U	0.0003 U	0.19 U	0.00036 U	0.00039 U	0.0004 U	0.00023 U	0.19 U	0.00031 U	0.0003 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.075 U	0.053 U	61 U	0.062 U	61 U	0.075 U	0.08 U	0.083 U	0.048 U	61 U	0.063 U	0.062 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0048 U	**0.1**	**5.4**	**0.087**	**2.8 J**	0.0047 U	0.0051 U	0.0052 U	**0.1 J-**	**3.2 J**	0.004 U	0.0039 U
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0025 U	0.0018 U	0.52 U	0.0021 U	0.52 U	0.0025 U	0.0027 U	0.0028 U	0.0016 U	0.52 U	0.0021 U	0.0021 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0028 U	0.0019 U	0.42 U	0.0022 U	0.42 U	0.0027 U	0.0029 U	0.003 U	0.0017 U	0.42 U	0.0023 U	0.0022 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.06**	-	**47**	**1.3**	**28**	**0.038**	**0.017 J**	**0.022 J**	**1.3**	**34**	**0.019**	**0.024**
Benzene	2	-	5	-	0.005	-	4	-	0.00036 U	0.00025 U	0.16 U	0.00029 U	0.16 U	0.00035 U	0.00038 U	0.00039 U	0.00022 U	0.16 U	0.0003 U	0.00029 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00023 U	0.00016 U	0.19 U	0.00019 U	0.19 U	0.00023 U	0.00025 U	0.00026 U	0.00015 U	0.19 U	0.0002 U	0.00019 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00053 U	0.00037 U	0.25 U	0.00043 U	0.25 U	0.00052 U	0.00056 U	0.00058 U	0.00033 U	0.25 U	0.00044 U	0.00043 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.0012 U	0.00087 U	0.26 U	0.001 U	0.26 U	0.0012 U	0.0013 U	0.0014 U	0.00079 U	0.26 U	0.001 U	0.001 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.0098 U	0.0068 U	**0.94 J**	0.008 U	**1 J**	0.0097 U	0.01 U	0.011 U	0.0062 U	**0.54 J**	0.0081 U	0.008 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00049 U	0.00035 U	0.13 U	0.0004 U	0.13 U	0.00049 U	0.00052 U	0.00054 U	0.00031 U	0.13 U	0.00041 U	0.0004 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00027 U	0.00019 U	0.18 U	0.00022 U	0.18 U	0.00027 U	0.00029 U	0.0003 U	0.00017 U	0.18 U	0.00023 U	0.00022 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00044 U	0.00031 U	0.15 U	0.00036 U	0.15 U	0.00044 U	0.00047 U	0.00048 U	0.00028 U	0.15 U	0.00037 U	0.00036 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00097 U	0.00068 U	0.13 U	0.0008 U	0.13 U	0.00096 U	0.001 U	0.0011 U	0.00061 U	0.13 U	0.00081 U	0.00079 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.0003 U	**0.00032 J**	0.22 U	0.00025 U	0.22 U	0.0003 U	0.00032 U	0.00033 U	0.00019 U	0.22 U	0.00025 U	0.00024 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.002 U	0.0014 U	0.2 U	0.0016 U	0.2 U	0.002 U	0.0021 U	0.0022 U	0.0013 U	0.2 U	0.0017 U	0.0016 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00038 U	**0.00059 J**	0.19 U	0.00031 U	0.19 U	0.00037 U	0.0004 U	0.00041 U	0.00024 U	0.19 U	0.00031 U	0.00031 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00034 U	0.00024 U	0.14 U	0.00028 U	0.14 U	0.00034 U	0.00036 U	0.00037 U	0.00021 U	0.14 U	0.00028 U	0.00028 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.00082 U	0.27 U	0.00096 U	0.27 U	0.0012 U	0.0012 U	0.0013 U	0.00074 U	0.27 U	0.00097 U	0.00095 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.0003 U	0.00021 U	0.15 U	0.00025 U	0.15 U	0.0003 U	0.00032 U	0.00033 U	0.00019 U	0.15 U	0.00025 U	0.00024 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.002 U	0.0014 U	0.24 U	0.0016 U	0.24 U	0.0019 U	0.0021 U	0.0022 U	0.0012 U	0.24 U	0.0016 U	0.0016 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.0003 U	0.00021 U	0.17 U	0.00025 U	0.17 U	0.0003 U	0.00032 U	0.00033 U	0.00019 U	0.17 U	0.00025 U	0.00025 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00023 U	0.00016 U	0.19 U	0.00019 U	0.19 U	0.00023 U	0.00025 U	0.00026 U	0.00015 U	0.19 U	0.0002 U	0.00019 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.002 U	0.0014 U	0.23 U	0.0017 U	0.23 U	0.002 U	0.0022 U	0.0022 U	0.0013 U	0.23 U	0.0017 U	0.0017 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0013 U	0.00091 U	0.4 U	0.0011 U	0.4 U	0.0013 U	0.0014 U	0.0014 U	0.00082 U	0.4 U	0.0011 U	0.001 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00043 U	0.0003 U	0.17 U	0.00035 U	0.17 U	0.00043 U	0.00046 U	0.00047 U	0.00027 U	0.17 U	0.00036 U	0.00035 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0049 U	0.0034 U	0.68 U	0.004 U	0.68 U	0.0049 U	0.0052 U	0.0054 U	0.0031 U	0.68 U	0.0041 U	0.004 U
Styrene	90	-	260	-	3	-	2000	-	0.00042 U	**0.0011 J**	0.36 U	0.00034 U	0.36 U	0.00042 U	0.00045 U	0.00046 U	0.00027 U	0.36 U	0.00035 U	0.00034 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00042 U	0.0003 U	0.18 U	0.00034 U	0.18 U	0.00042 U	0.00045 U	0.00046 U	0.00027 U	0.18 U	0.00035 U	0.00034 U
Toluene	6300	-	91000	-	7	-	12000	-	0.0012 U	0.00082 U	0.2 U	0.00096 U	0.2 U	0.0012 U	0.0012 U	0.0013 U	0.00074 U	0.2 U	0.00097 U	0.00095 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00029 U	0.00021 U	0.16 U	0.00024 U	0.16 U	0.00029 U	0.00031 U	0.00032 U	0.00018 U	0.16 U	0.00024 U	0.00024 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00059 U	0.00041 U	0.16 U	0.00048 U	0.16 U	0.00058 U	0.00062 U	0.00064 U	0.00037 U	0.16 U	0.00049 U	0.00048 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00029 U	**0.0008**	0.18 U	0.00024 U	0.18 U	0.00029 U	0.00031 U	0.00032 U	0.00018 U	0.18 U	0.00024 U	0.00024 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0015 U	0.001 U	0.16 U	0.0012 U	0.16 U	0.0015 U	0.0016 U	0.0016 U	0.00094 U	0.16 U	0.0012 U	0.0012 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.001 U	0.15 U	0.0012 U	0.15 U	0.0015 U	0.0016 U	0.0016 U	0.00094 U	0.15 U	0.0012 U	0.0012 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00072 U	0.0005 U	0.07 U	0.00059 U	0.07 U	0.00071 U	0.00076 U	0.00079 U	0.00045 U	0.07 U	0.0006 U	0.00059 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00062 U	0.00044 U	0.33 U	0.00051 U	0.33 U	0.00062 U	0.00066 U	0.00068 U	0.0004 U	0.33 U	0.00052 U	0.00051 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.06**	**0.10281**	**53.34**	**1.387**	**31.8**	**0.038**	**0.017**	**0.022**	**1.4**	**37.74**	**0.019**	**0.024**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Nearshore-Raritan								Raritan Bay				
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**VC-311**	**VC-311**	**VC-311**	**COMP-K**	**COMP-K**	**COMP-K**	**COMP-K**	**COMP-K**	**COMP-L**	**COMP-L**	**COMP-L**	**COMP-L**	**COMP-L**
Sample Name									VC-311	VC-311	VC-311	COMP-K	COMP-K	VC-312	VC-313	VC-314	COMP-L	COMP-L	VC-225	VC-227	VC-228
Sample Date									VC-311-D0-7.5E	VC-311-D0-7.5E-A	VC-311-D0-7.5E-A	COMP-K-D0-7.5E-A	COMP-K-D0-7.5E-A	VC-312-D0-7.5E	VC-313-D0-7.5E	VC-314-D0-7.5E	COMP-L-D0-20.5E-A	COMP-L-D0-20.5E-A	VC-225-D0-7.5E	VC-227-D0-14E	VC-228-D0-20.5E
Sample Type									10/28/2018	11/09/2018	11/09/2018	11/09/2018	11/09/2018	10/28/2018	10/28/2018	10/28/2018	10/26/2018	10/26/2018	10/20/2018	10/20/2018	10/20/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844234-14	L1846705-03	L1846705-03	L1846705-05	L1846705-05	L1844234-13	L1844234-12	L1844234-11	L1844053-01	L1844053-01	L1843139-01	L1843139-02	L1843139-03
									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 20.5 (ft)	0 - 20.5 (ft)	0 - 7.5 (ft)	0 - 14 (ft)	0 - 20.5 (ft)
									Raw	Amended	SPLP	Amended	SPLP	Raw	Raw	Raw	Amended	SPLP	Raw	Raw	Raw
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg
									HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																					
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00017 U	0.00018 U	0.16 U	0.00012 U	0.16 U	0.00016 U	0.00015 U	0.00012 U	0.00027 U	0.16 U	0.00037 U	0.00012 U	0.00012 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00017 U	0.00018 U	0.17 U	0.00012 U	0.17 U	0.00016 U	0.00014 U	0.00012 U	0.00027 U	0.17 U	0.00036 U	0.00012 U	0.00012 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00027 U	0.00029 U	0.14 U	0.00019 U	0.14 U	0.00026 U	0.00023 U	0.00019 U	0.00044 U	0.14 U	0.00059 U	0.00019 U	0.00019 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00015 U	0.00016 U	0.21 U	0.0001 U	0.21 U	0.00014 U	0.00013 U	0.0001 U	0.00024 U	0.21 U	0.00032 U	0.0001 U	0.0001 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00024 U	0.00026 U	0.17 U	0.00017 U	0.17 U	0.00023 U	0.00021 U	0.00017 U	0.00039 U	0.17 U	0.00052 U	0.00017 U	0.00017 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00032 U	0.00034 U	0.23 U	0.00023 U	0.23 U	0.00031 U	0.00028 U	0.00023 U	0.00053 U	0.23 U	0.00071 U	0.00023 U	0.00022 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00027 U	0.00029 U	0.22 U	0.00019 U	0.22 U	0.00026 U	0.00024 U	0.00019 U	0.00044 U	0.22 U	0.0006 U	0.0002 U	0.00019 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.001 U	0.0011 U	0.35 U	0.00071 U	0.35 U	0.00096 U	0.00087 U	0.00071 U	0.0016 U	0.35 U	0.0022 U	0.00072 U	0.0007 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00028 U	0.0003 U	0.19 U [D]	0.0002 U	0.19 U [D]	0.00027 U	0.00024 U	0.0002 U	0.00046 U	0.19 U [D]	0.00061 U	0.0002 U	0.00019 U
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00014 U	0.00015 U	0.18 U	0.0001 U	0.18 U	0.00014 U	0.00013 U	0.0001 U	0.00024 U	0.18 U	0.00032 U	0.0001 U	0.0001 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00026 U	0.00028 U	0.13 U	0.00018 U	0.13 U	0.00025 U	0.00022 U	0.00018 U	0.00042 U	0.13 U	0.00056 U	0.00018 U	0.00018 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00012 U	0.00013 U	0.14 U	0.00008 U	0.14 U	0.00012 U	0.00011 U	0.00008 U	0.0002 U	0.14 U	0.00028 U	0.00009 U	0.00008 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00015 U	0.00016 U	0.19 U	0.0001 U	0.19 U	0.00014 U	0.00013 U	0.0001 U	0.00024 U	0.19 U	0.00032 U	0.00011 U	0.0001 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00017 U	0.00018 U	0.19 U	0.00012 U	0.19 U	0.00016 U	0.00015 U	0.00012 U	0.00028 U	0.19 U	0.00038 U	0.00012 U	0.00012 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.035 U	0.038 U	61 U	0.025 U	61 U	0.034 U	0.031 U	0.025 U	0.058 U	61 U	0.077 U	0.025 U	0.024 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0022 U	**0.008 J-**	1.9 U	**0.0071 J-**	1.9 U	0.0021 U	0.0019 U	0.0016 U	**0.094**	**4.6 J**	**0.008 J**	**0.0042 J**	**0.0032 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.0013 U	0.52 U	0.00084 U	0.52 U	0.0011 U	0.001 U	0.00084 U	0.0019 U	0.52 U	0.0026 U	0.00085 U	0.00082 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0013 U	0.0014 U	0.42 U	0.00091 U	0.42 U	0.0012 U	0.0011 U	0.00091 U	0.0021 U	0.42 U	0.0028 U	0.00092 U	0.00089 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.016**	**0.14 J-**	**7.2**	**0.085 J-**	**5**	**0.0067 J**	**0.0068 J**	**0.0068 J**	**1.3**	**34**	**0.089**	**0.04**	**0.027**
Benzene	2	-	5	-	0.005	-	4	-	0.00017 U	0.00018 U	0.16 U	0.00012 U	0.16 U	0.00016 U	0.00014 U	0.00012 U	0.00027 U	0.16 U	0.00036 U	0.00012 U	0.00012 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00011 U	0.00012 U	0.19 U	0.00007 U	0.19 U	0.0001 U	0.00009 U	0.00007 U	0.00018 U	0.19 U	0.00024 U	0.00007 U	0.00007 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00025 U	0.00026 U	0.25 U	0.00018 U	0.25 U	0.00024 U	0.00022 U	0.00017 U	0.0004 U	0.25 U	0.00054 U	0.00018 U	0.00017 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00058 U	0.00062 U	0.26 U	0.00041 U	0.26 U	0.00056 U	0.00051 U	0.00041 U	0.00095 U	0.26 U	0.0013 U	0.00042 U	0.00041 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.0046 U	0.0049 U	0.3 U	0.0032 U	0.3 U	**0.0045 J**	0.004 U	0.0032 U	0.0074 U	**1.2 J**	**0.023**	**0.03**	**0.0094**
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00023 U	0.00025 U	0.13 U	0.00016 U	0.13 U	0.00022 U	0.0002 U	0.00016 U	0.00038 U	0.13 U	0.00051 U	0.00016 U	0.00016 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00013 U	0.00014 U	0.18 U	0.00009 U	0.18 U	0.00012 U	0.00011 U	0.00009 U	0.00021 U	0.18 U	0.00028 U	0.00009 U	0.00008 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00021 U	0.00022 U	0.15 U	0.00015 U	0.15 U	0.0002 U	0.00018 U	0.00014 U	0.00034 U	0.15 U	0.00045 U	0.00015 U	0.00014 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00046 U	0.00048 U	0.13 U	0.00032 U	0.13 U	0.00043 U	0.0004 U	0.00032 U	0.00074 U	0.13 U	0.00099 U	0.00032 U	0.00032 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00014 U	0.00015 U	0.22 U	0.0001 U	0.22 U	0.00013 U	0.00012 U	0.00009 U	0.00023 U	0.22 U	0.00031 U	0.0001 U	0.00009 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.00094 U	0.001 U	0.2 U	0.00066 U	0.2 U	0.00089 U	0.00082 U	0.00066 U	0.0015 U	0.2 U	0.002 U	0.00067 U	0.00065 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00018 U	0.00019 U	0.19 U	0.00012 U	0.19 U	0.00017 U	0.00015 U	0.00012 U	0.00029 U	0.19 U	0.00038 U	0.00012 U	0.00012 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00016 U	0.00017 U	0.14 U	0.00011 U	0.14 U	0.00015 U	0.00014 U	0.00011 U	0.00026 U	0.14 U	0.00035 U	0.00011 U	0.00011 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00055 U	0.00058 U	0.27 U	0.00039 U	0.27 U	0.00052 U	0.00048 U	0.00038 U	0.00089 U	0.27 U	0.0012 U	0.00039 U	0.00038 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00014 U	0.00015 U	0.15 U	0.0001 U	0.15 U	0.00013 U	0.00012 U	0.00009 U	0.00023 U	0.15 U	0.00031 U	0.0001 U	0.00009 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.00092 U	0.00098 U	0.24 U	0.00065 U	0.24 U	0.00088 U	0.0008 U	0.00065 U	0.0015 U	0.24 U	0.002 U	0.00066 U	0.00064 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00014 U	0.00015 U	0.17 U	0.0001 U	0.17 U	0.00014 U	0.00012 U	0.0001 U	0.00023 U	0.17 U	0.00031 U	0.0001 U	0.00009 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00011 U	0.00012 U	0.19 U	0.00007 U	0.19 U	0.0001 U	0.00009 U	0.00007 U	0.00018 U	0.19 U	0.00024 U	0.00007 U	0.00007 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.00096 U	0.001 U	0.23 U	0.00068 U	0.23 U	0.00091 U	0.00083 U	0.00067 U	0.0016 U	0.23 U	0.0021 U	0.00068 U	0.00066 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00061 U	0.00065 U	0.4 U	0.00043 U	0.4 U	0.00058 U	0.00053 U	0.00043 U	0.00099 U	0.4 U	0.0013 U	0.00043 U	0.00042 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.0002 U	0.00022 U	0.17 U	0.00014 U	0.17 U	0.00019 U	0.00018 U	0.00014 U	0.00033 U	0.17 U	0.00044 U	0.00014 U	0.00014 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0023 U	0.0024 U	0.68 U	0.0016 U	0.68 U	0.0022 U	0.002 U	0.0016 U	**0.044** [C]	**14**	0.005 U	0.0016 U	0.0016 U
Styrene	90	-	260	-	3	-	2000	-	0.0002 U	0.00021 U	0.36 U	0.00014 U	0.36 U	0.00019 U	0.00017 U	0.00014 U	0.00032 U	0.36 U	0.00043 U	0.00014 U	0.00014 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.0002 U	0.00021 U	**0.34 J**	0.00014 U	0.18 U	0.00019 U	0.00017 U	0.00014 U	0.00032 U	0.18 U	0.00043 U	0.00014 U	0.00014 U
Toluene	6300	-	91000	-	7	-	12000	-	0.00055 U	0.00058 U	0.2 U	0.00039 U	0.2 U	0.00052 U	0.00048 U	0.00038 U	0.00089 U	0.2 U	0.0012 U	0.00039 U	0.00038 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00014 U	0.00015 U	0.16 U	0.00009 U	0.16 U	0.00013 U	0.00012 U	0.00009 U	0.00022 U	0.16 U	0.0003 U	0.00009 U	0.00009 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00027 U	0.00029 U	0.16 U	0.00019 U	0.16 U	0.00026 U	0.00024 U	0.00019 U	0.00045 U	0.16 U	0.0006 U	0.0002 U	0.00019 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00014 U	0.00015 U	0.18 U	0.00009 U	0.18 U	0.00013 U	0.00012 U	0.00009 U	0.00022 U	0.18 U	0.0003 U	0.00009 U	0.00009 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0007 U	0.00074 U	0.16 U	0.0005 U	0.16 U	0.00067 U	0.00061 U	0.00049 U	0.0011 U	0.16 U	0.0015 U	**0.00056 J**	0.00048 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0007 U	0.00074 U	0.15 U	0.00049 U	0.15 U	0.00066 U	0.00061 U	0.00049 U	0.0011 U	0.15 U	0.0015 U	0.0005 U	0.00048 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00034 U	0.00036 U	0.07 U	0.00024 U	0.07 U	0.00032 U	0.00029 U	0.00024 U	0.00055 U	0.07 U	0.00074 U	0.00024 U	0.00023 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00029 U	0.00031 U	0.33 U	0.00021 U	0.33 U	0.00028 U	0.00025 U	0.00021 U	0.00048 U	0.33 U	0.00064 U	0.00021 U	0.0002 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.016**	**0.148**	**7.54**	**0.0921**	**5**	**0.0112**	**0.0068**	**0.0068**	**1.438**	**53.8**	**0.12**	**0.07476**	**0.0396**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Raritan Bay													
Location Name	Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)	# of Detected Exceedances	Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)	# of Detected Exceedances	Impact to Groundwater Soil Screening Level 2013 (mg/kg)	# of Detected Exceedances	Default Leachate Criteria for Class II Groundwater 2013 (ug/L)	# of Detected Exceedances	VC-229	VC-229	VC-229	COMP-M	COMP-M	COMP-M	COMP-M	COMP-M	DEP-6	DEP-6	DEP-6	DEP-6	DEP-6	DEP-6
Sample Name									VC-229	VC-229-D0-28E-A	VC-229-D0-28E-A	COMP-M	COMP-M-D0-27E-A	COMP-M-D0-27E-A	VC-230-D0-27E	VC-230A-D0-27E	VC-230B-D0-27E	DEP-6-D0-13.5E	DEP-6-D0-13.5E-A	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E	DEP-6-D13.5-27E-A	DEP-6-D13.5-27E-A
Sample Date									10/20/2018	10/28/2018	10/28/2018	10/26/2018	10/26/2018	10/26/2018	10/20/2018	10/20/2018	10/20/2018	10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/27/2018	10/27/2018
Sample Type									Primary	Primary	Primary	Primary	Amended	SPLP	Raw	Raw	Raw	Raw	Amended	SPLP	Raw	Amended	SPLP
Lab Sample ID									L1843139-09	L1844053-03	L1844053-03	L1844053-02	L1844053-02	L1844053-02	L1843139-06	L1843139-05	L1843139-07	L1843140-13	L1844053-10	L1844053-10	L1843140-14	L1844053-11	L1844053-11
Sample Depth (bgs)									0 - 28 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 14 (ft)	0 - 14 (ft)	0 - 14 (ft)	14 - 27 (ft)	14 - 27 (ft)	14 - 27 (ft)
Proposed Disposal Facility									Raw	Amended	SPLP	Amended	SPLP	SPLP	Raw	Raw	Raw	Raw	Amended	SPLP	Raw	Amended	SPLP
									mg/kg	mg/kg	ug/L	mg/kg	ug/L	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																							
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00033 U	0.00019 U	0.16 U	0.00021 U	0.16 U	0.00059 U	0.00038 U	0.0004 U	0.0005 U	0.00028 U	0.16 U	0.0003 U	0.00026 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00033 U	0.00019 U	0.17 U	0.00021 U	0.17 U	0.00058 U	0.00037 U	0.0004 U	0.00049 U	0.00027 U	0.17 U	0.0003 U	0.00026 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00052 U	0.0003 U	0.14 U	0.00034 U	0.14 U	0.00094 U	0.0006 U	0.00064 U	0.0008 U	0.00044 U	0.14 U	0.00048 U	0.00041 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00028 U	0.00016 U	0.21 U	0.00018 U	0.21 U	0.00051 U	0.00033 U	0.00034 U	0.00043 U	0.00024 U	0.21 U	0.00026 U	0.00022 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00047 U	0.00027 U	0.17 U	0.0003 U	0.17 U	0.00084 U	0.00054 U	0.00057 U	0.00071 U	0.00039 U	0.17 U	0.00043 U	0.00037 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00063 U	0.00037 U	0.23 U	0.00041 U	0.23 U	0.0011 U	0.00072 U	0.00077 U	0.00096 U	0.00053 U	0.23 U	0.00058 U	0.0005 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00054 U	0.00031 U	0.22 U	0.00035 U	0.22 U	0.00096 U	0.00061 U	0.00065 U	0.00081 U	0.00045 U	0.22 U	0.00049 U	0.00042 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.002 U	0.0011 U	0.35 U	0.0013 U	0.35 U	0.0035 U	0.0022 U	0.0024 U	0.003 U	0.0016 U	0.35 U	0.0018 U	0.0015 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00055 U	0.00032 U	0.19 U [D]	0.00036 U	0.19 U [D]	0.00098 U	0.00063 U	0.00066 U	0.00083 U	0.00046 U	0.19 U [D]	0.0005 U	0.00043 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00028 U	0.00016 U	0.18 U	0.00018 U	0.18 U	0.00051 U	0.00032 U	0.00034 U	0.00043 U	0.00024 U	0.18 U	0.00026 U	0.00022 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.0005 U	0.00029 U	0.13 U	0.00033 U	0.13 U	0.0009 U	0.00058 U	0.00061 U	0.00076 U	0.00042 U	0.13 U	0.00046 U	0.0004 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00025 U	0.00014 U	0.14 U	0.00016 U	0.14 U	0.00044 U	0.00028 U	0.0003 U	0.00037 U	0.00021 U	0.14 U	0.00023 U	0.00019 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00029 U	0.00017 U	0.19 U	0.00019 U	0.19 U	0.00052 U	0.00033 U	0.00035 U	0.00044 U	0.00024 U	0.19 U	0.00027 U	0.00023 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00034 U	0.00019 U	0.19 U	0.00022 U	0.19 U	0.0006 U	0.00038 U	0.00041 U	0.00051 U	0.00028 U	0.19 U	0.00031 U	0.00026 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.069 U	0.04 U	61 U	0.045 U	61 U	0.12 U	0.079 U	0.084 U	0.1 U	0.058 U	61 U	0.063 U	0.054 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	**0.0058 J**	**0.068**	**2.6 J**	**0.098**	**3.8 J**	**0.02 J**	**0.014 J**	**0.012 J**	**0.035**	**0.26**	**7**	**0.0075 J**	**0.11**	**3 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0023 U	0.0013 U	0.52 U	0.0015 U	0.52 U	0.0041 U	0.0026 U	0.0028 U	0.0035 U	0.0019 U	0.52 U	0.0021 U	0.0018 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0025 U	0.0014 U	0.42 U	0.0016 U	0.42 U	0.0045 U	0.0029 U	0.003 U	0.0038 U	0.0021 U	0.42 U	0.0023 U	0.002 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.063**	**0.86 J**	**24**	**1**	**28**	**0.18**	**0.11**	**0.18**	**0.2**	**2.5**	**53**	**0.046**	**0.85 J**	**23**
Benzene	2	-	5	-	0.005	-	4	-	0.00033 U	0.00019 U	0.16 U	0.00021 U	0.16 U	0.00058 U	0.00037 U	0.0004 U	0.00049 U	0.00027 U	0.16 U	0.0003 U	0.00026 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00021 U	0.00012 U	0.19 U	0.00014 U	0.19 U	0.00038 U	0.00024 U	0.00026 U	0.00032 U	0.00018 U	0.19 U	0.0002 U	0.00017 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00048 U	0.00028 U	0.25 U	0.00031 U	0.25 U	0.00086 U	0.00055 U	0.00058 U	0.00073 U	0.0004 U	0.25 U	0.00044 U	0.00038 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.0011 U	0.00066 U	0.26 U	0.00074 U	0.26 U	0.002 U	0.0013 U	0.0014 U	0.0017 U	0.00096 U	0.26 U	0.001 U	0.0009 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.009 U	0.0052 U	**1 J**	**0.006 J**	**1.3 J**	**0.024 J**	**0.021 J**	**0.021 J**	0.014 U	**0.018**	**0.92 J**	0.0082 U	0.0071 U	**0.92 J**
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00045 U	0.00026 U	0.13 U	0.00029 U	0.13 U	0.00081 U	0.00052 U	0.00055 U	0.00068 U	0.00038 U	0.13 U	0.00042 U	0.00036 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00025 U	0.00014 U	0.18 U	0.00016 U	0.18 U	0.00045 U	0.00028 U	0.0003 U	0.00038 U	0.00021 U	0.18 U	0.00023 U	0.0002 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.0004 U	0.00023 U	0.15 U	0.00026 U	0.15 U	0.00072 U	0.00046 U	0.00049 U	0.00061 U	0.00034 U	0.15 U	0.00037 U	0.00032 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00089 U	0.00052 U	0.13 U	0.00058 U	0.13 U	0.0016 U	0.001 U	0.0011 U	0.0013 U	0.00074 U	0.13 U	0.00082 U	0.0007 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00028 U	0.00016 U	0.22 U	0.00018 U	0.22 U	0.00049 U	0.00032 U	0.00033 U	0.00042 U	0.00023 U	0.22 U	0.00025 U	0.00022 U	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0018 U	0.0011 U	0.2 U	0.0012 U	0.2 U	0.0033 U	0.0021 U	0.0022 U	0.0028 U	0.0015 U	0.2 U	0.0017 U	0.0014 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00034 U	0.0002 U	0.19 U	0.00022 U	0.19 U	0.00062 U	0.00039 U	0.00042 U	0.00052 U	0.00029 U	0.19 U	0.00032 U	0.00027 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00031 U	0.00018 U	0.14 U	0.0002 U	0.14 U	0.00056 U	0.00036 U	0.00038 U	0.00047 U	0.00026 U	0.14 U	0.00028 U	0.00024 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0011 U	0.00062 U	0.27 U	0.0007 U	0.27 U	0.0019 U	0.0012 U	0.0013 U	0.0016 U	0.0009 U	0.27 U	0.00098 U	0.00084 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00028 U	0.00016 U	0.15 U	0.00018 U	0.15 U	0.00049 U	0.00032 U	0.00033 U	0.00042 U	0.00023 U	0.15 U	0.00025 U	0.00022 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.0018 U	0.001 U	0.24 U	0.0012 U	0.24 U	0.0032 U	0.002 U	0.0022 U	0.0027 U	0.0015 U	0.24 U	0.0016 U	0.0014 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00028 U	0.00016 U	0.17 U	0.00018 U	0.17 U	0.0005 U	0.00032 U	0.00034 U	0.00042 U	0.00023 U	0.17 U	0.00026 U	0.00022 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00021 U	0.00012 U	0.19 U	0.00014 U	0.19 U	0.00038 U	0.00024 U	0.00026 U	**0.001 J**	0.00018 U	0.19 U	0.0002 U	0.00017 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0019 U	0.0011 U	0.23 U	0.0012 U	0.23 U	0.0033 U	0.0021 U	0.0023 U	0.0028 U	0.0016 U	0.23 U	0.0017 U	0.0015 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.00069 U	0.4 U	0.00077 U	0.4 U	0.0021 U	0.0014 U	0.0014 U	0.0018 U	0.00099 U	0.4 U	0.0011 U	0.00094 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.0004 U	0.00023 U	0.17 U	0.00026 U	0.17 U	0.00071 U	0.00045 U	0.00048 U	0.0006 U	0.00033 U	0.17 U	0.00036 U	0.00031 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0045 U	**0.014** [C]	0.68 U	**0.0089**	0.68 U	0.008 U	0.0052 U	0.0054 U	0.0068 U	0.0038 U	0.68 U	0.0041 U	0.0036 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00038 U	0.00022 U	0.36 U	0.00025 U	0.36 U	0.00069 U	0.00044 U	0.00047 U	0.00058 U	0.00032 U	0.36 U	0.00035 U	0.0003 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00038 U	0.00022 U	**0.28 JB**	0.00025 U	0.18 U	0.00069 U	0.00044 U	0.00047 U	0.00058 U	0.00032 U	0.18 U	0.00035 U	0.0003 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.0011 U	**0.00064 J**	0.2 U	**0.0007 J**	0.2 U	0.0019 U	0.0012 U	0.0013 U	0.0016 U	0.0009 U	0.2 U	0.00098 U	0.00084 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00027 U	0.00016 U	0.16 U	0.00018 U	0.16 U	0.00048 U	0.00031 U	0.00033 U	0.00041 U	0.00023 U	0.16 U	0.00025 U	0.00021 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00054 U	0.00031 U	0.16 U	0.00035 U	0.16 U	0.00096 U	0.00061 U	0.00065 U	0.00081 U	0.00045 U	0.16 U	0.00049 U	0.00042 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00027 U	0.00016 U	0.18 U	0.00018 U	0.18 U	0.00048 U	0.00031 U	0.00033 U	0.00041 U	0.00023 U	0.18 U	0.00025 U	0.00021 U	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0014 U	0.00079 U	0.16 U	0.00089 U	0.16 U	0.0024 U	0.0016 U	0.0016 U	0.0021 U	0.0011 U	0.16 U	0.0012 U	0.0011 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0014 U	0.00079 U	0.15 U	0.00089 U	0.15 U	0.0024 U	0.0016 U	0.0016 U	0.0021 U	0.0011 U	0.15 U	0.0012 U	0.0011 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00066 U	0.00038 U	0.07 U	0.00043 U	0.07 U	0.0012 U	0.00075 U	0.0008 U	0.001 U	0.00055 U	0.07 U	0.0006 U	0.00052 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00057 U	0.00033 U	0.33 U	0.00037 U	0.33 U	0.001 U	0.00066 U	0.00069 U	0.00087 U	0.00048 U	0.33 U	0.00053 U	0.00045 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.0688**	**0.94264**	**27.88**	**1.1136**	**33.1**	**0.224**	**0.145**	**0.213**	**0.236**	**2.778**	**60.92**	**0.0535**	**0.96**	**26.92**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Raritan Bay									
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**COMP-N**	**COMP-N**	**COMP-N**	**COMP-N**	**COMP-N**	**COMP-N**	**COMP-N**	**COMP-N**	**COMP-N**	**COMP-N**
Sample Name									COMP-N	COMP-N	VC-232	VC-232A	VC-232B	COMP-N	COMP-N	VC-232	VC-232A	VC-232B
Sample Date									COMP-N-D0-4E-A	COMP-N-D0-4E-A	VC-232-D0-6E	VC-232A-D0-4E	VC-232B-D0-4E	COMP-N-D4-22.5E-A	COMP-N-D4-22.5E-A	VC-232-D6-22.5E	VC-232A-D4-22.5E	VC-232B-D4-22.5E
Sample Type									10/26/2018	10/26/2018	10/22/2018	10/22/2018	10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/22/2018	10/22/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844053-04	L1844053-04	L1843140-03	L1843140-05	L1843140-01	L1844053-05	L1844053-05	L1843140-04	L1843140-06	L1843140-02
									0 - 4 (ft)	0 - 4 (ft)	0 - 6.6 (ft)	0 - 4.1 (ft)	0 - 4.8 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)	6.6 - 22.5 (ft)	4.1 - 22.5 (ft)	4.8 - 22.5 (ft)
									Amended	SPLP	Raw	Raw	Raw	Amended	SPLP	Raw	Raw	Raw
Proposed Disposal Facility									mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg
									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																		
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.0003 U	0.16 U	0.00034 U	0.001 U	0.00041 U	0.00018 U	0.16 U	0.00036 U	0.00028 U	0.00037 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.0003 U	0.17 U	0.00034 U	0.00099 U	0.00041 U	0.00018 U	0.17 U	0.00036 U	0.00027 U	0.00037 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00048 U	0.14 U	0.00055 U	0.0016 U	0.00066 U	0.00029 U	0.14 U	0.00058 U	0.00044 U	0.00059 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00026 U	0.21 U	0.0003 U	0.00087 U	0.00036 U	0.00016 U	0.21 U	0.00031 U	0.00024 U	0.00032 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00043 U	0.17 U	0.00049 U	0.0014 U	0.00058 U	0.00026 U	0.17 U	0.00052 U	0.00039 U	0.00052 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00058 U	0.23 U	0.00066 U	0.0019 U	0.00079 U	0.00034 U	0.23 U	0.0007 U	0.00053 U	0.00071 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00049 U	0.22 U	0.00056 U	0.0016 U	0.00067 U	0.00029 U	0.22 U	0.00059 U	0.00045 U	0.0006 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0018 U	0.35 U	0.002 U	0.006 U [C]	0.0024 U	0.0011 U	0.35 U	0.0022 U	0.0016 U	0.0022 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.0005 U	0.19 U [D]	0.00057 U	0.0017 U	0.00069 U	0.0003 U	0.19 U [D]	0.0006 U	0.00046 U	0.00062 U
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00026 U	0.18 U	0.00029 U	0.00086 U	0.00035 U	0.00015 U	0.18 U	0.00031 U	0.00024 U	0.00032 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00046 U	0.13 U	0.00052 U	0.0015 U	0.00063 U	0.00028 U	0.13 U	0.00056 U	0.00042 U	0.00057 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00022 U	0.14 U	0.00026 U	0.00075 U	0.00031 U	0.00013 U	0.14 U	0.00027 U	0.0002 U	0.00028 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00027 U	0.19 U	0.0003 U	0.00088 U	0.00036 U	0.00016 U	0.19 U	0.00032 U	0.00024 U	0.00033 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00031 U	0.19 U	0.00035 U	0.001 U	0.00042 U	0.00018 U	0.19 U	0.00037 U	0.00028 U	0.00038 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.063 U	61 U	0.072 U	0.21 U	0.086 U	0.038 U	61 U	0.076 U	0.058 U	0.078 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	**0.14**	**7.4**	**0.014 J**	**0.039 J**	**0.022 J**	**0.089**	**3.2 J**	**0.01 J**	**0.0064 J**	**0.0074 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0021 U	0.52 U	0.0024 U	0.007 U	0.0029 U	0.0013 U	0.52 U	0.0026 U	0.0019 U	0.0026 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	**0.0028 J**	0.42 U	0.0026 U	0.0076 U	0.0032 U	0.0014 U	0.42 U	0.0028 U	0.0021 U	0.0028 U
Acetone	70000	-	NA	-	19	-	120000	-	**2.1**	**47**	**0.071**	**0.26**	**0.14**	**0.88 J**	**26**	**0.076**	**0.039**	**0.049**
Benzene	2	-	5	-	0.005	-	4	-	0.0003 U	0.16 U	0.00034 U	0.00099 U	0.00041 U	0.00018 U	0.16 U	0.00036 U	0.00027 U	0.00037 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.0002 U	0.19 U	0.00022 U	0.00065 U	0.00027 U	0.00012 U	0.19 U	0.00024 U	0.00018 U	0.00024 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00044 U	0.25 U	0.0005 U	0.0015 U	0.0006 U	0.00026 U	0.25 U	0.00053 U	0.0004 U	0.00054 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.001 U	0.26 U	0.0012 U	0.0035 U	0.0014 U	0.00062 U	0.26 U	0.0012 U	0.00096 U	0.0013 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	**0.017 J**	**1.4 J**	0.0093 U	0.027 U	0.011 U	**0.0052 J**	**1.3 J**	**0.012 J**	0.0075 U	0.01 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00041 U	0.13 U	0.00047 U	0.0014 U	0.00057 U	0.00025 U	0.13 U	0.0005 U	0.00038 U	0.00051 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00023 U	0.18 U	0.00026 U	0.00076 U	0.00031 U	0.00014 U	0.18 U	0.00027 U	0.00021 U	0.00028 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00037 U	0.15 U	0.00042 U	0.0012 U	0.0005 U	0.00022 U	0.15 U	0.00044 U	0.00034 U	0.00045 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00082 U	0.13 U	0.00092 U	0.0027 U	0.0011 U	0.00048 U	0.13 U	0.00098 U	0.00074 U	0.001 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	**0.00034 J**	0.22 U	0.00029 U	0.00084 U	0.00034 U	0.00015 U	0.22 U	0.0003 U	0.00023 U	0.00031 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0017 U	0.2 U	0.0019 U	0.0056 U	0.0023 U	0.001 U	0.2 U	0.002 U	0.0015 U	0.002 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00032 U	0.19 U	0.00036 U	0.001 U	0.00043 U	0.00019 U	0.19 U	0.00038 U	0.00029 U	0.00039 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00028 U	0.14 U	0.00032 U	0.00094 U	0.00039 U	0.00017 U	0.14 U	0.00034 U	0.00026 U	0.00035 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00098 U	0.27 U	0.0011 U	0.0032 U	0.0013 U	0.00058 U	0.27 U	0.0012 U	0.0009 U	0.0012 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00025 U	0.15 U	0.00029 U	0.00084 U	0.00034 U	0.00015 U	0.15 U	0.0003 U	0.00023 U	0.00031 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.0016 U	0.24 U	0.0019 U	0.0055 U	0.0022 U	0.00098 U	0.24 U	0.002 U	0.0015 U	0.002 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00025 U	0.17 U	0.00029 U	0.00084 U	0.00035 U	0.00015 U	0.17 U	0.0003 U	0.00023 U	0.00031 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.0002 U	0.19 U	0.00022 U	0.00065 U	0.00027 U	0.00012 U	0.19 U	0.00024 U	0.00018 U	0.00024 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0017 U	0.23 U	0.0019 U	0.0057 U	0.0023 U	0.001 U	0.23 U	0.002 U	0.0016 U	0.0021 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0011 U	0.4 U	0.0012 U	0.0036 U	0.0015 U	0.00065 U	0.4 U	0.0013 U	0.00099 U	0.0013 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00036 U	0.17 U	0.00041 U	0.0012 U	0.00049 U	0.00022 U	0.17 U	0.00044 U	0.00033 U	0.00044 U
Methylene chloride	46	-	230	-	0.01	5	60	-	**0.014** [C]	0.68 U	0.0047 U	0.014 U [C]	0.0056 U	**0.0099**	0.68 U	0.005 U	0.0038 U	0.005 U
Styrene	90	-	260	-	3	-	2000	-	0.00035 U	0.36 U	0.0004 U	0.0012 U	0.00048 U	0.00021 U	0.36 U	0.00042 U	0.00032 U	0.00043 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00035 U	0.18 U	0.0004 U	0.0012 U	0.00048 U	0.00021 U	0.18 U	0.00042 U	0.00032 U	0.00043 U
Toluene	6300	-	91000	-	7	-	12000	-	**0.0012 J**	0.2 U	0.0011 U	0.0032 U	0.0013 U	0.00058 U	0.2 U	0.0012 U	0.00089 U	0.0012 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00025 U	0.16 U	0.00028 U	0.00082 U	0.00034 U	0.00015 U	0.16 U	0.0003 U	0.00022 U	0.0003 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00049 U	0.16 U	0.00056 U	0.0016 U	0.00067 U	0.00029 U	0.16 U	0.00059 U	0.00045 U	0.0006 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00025 U	0.18 U	0.00028 U	0.00082 U	0.00034 U	0.00015 U	0.18 U	0.0003 U	0.00022 U	0.0003 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0012 U	0.16 U	0.0014 U	0.0042 U	0.0017 U	0.00074 U	0.16 U	0.0015 U	0.0011 U	0.0015 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.15 U	0.0014 U	0.0041 U	0.0017 U	0.00074 U	0.15 U	0.0015 U	0.0011 U	0.0015 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.0006 U	0.07 U	0.00068 U	0.002 U	0.00082 U	0.00036 U	0.07 U	0.00072 U	0.00055 U	0.00074 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00052 U	0.33 U	0.0006 U	0.0017 U	0.00072 U	0.00031 U	0.33 U	0.00063 U	0.00048 U	0.00064 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**2.27534**	**55.8**	**0.085**	**0.299**	**0.162**	**0.9841**	**30.5**	**0.098**	**0.0454**	**0.0564**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Raritan Bay													
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**DEP-7**	**DEP-7**	**DEP-7**	**DEP-7**	**DEP-7**	**DEP-7**	**VC-235**	**VC-235**	**VC-235**	**VC-235**	**VC-235**	**VC-235**	**VC-235**	
Sample Name									DEP-7	DEP-7	DEP-7	DEP-7	DEP-7	DEP-7	VC-235	VC-235	VC-235	VC-235	VC-235	VC-235	VC-235	
Sample Date									DEP-7-D0-15E	DEP-7-D0-15E-A	DEP-7-D0-15E-A	DEP-7-D15-20E	DEP-7-D15-20E-A	DEP-7-D15-20E-A	VC-235-D0-13.7E	VC-235-D0-13.7E-A	VC-235-D0-13.7E-A	VC-235-D13.7-24E	VC-235-D13.7-24E-A	VC-235-D13.7-24E-A	VC-235-D13.7-24E-A	
Sample Type									10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/28/2018	10/28/2018	10/22/2018	10/28/2018	10/28/2018	10/22/2018	10/28/2018	10/28/2018	10/28/2018	
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	
Sample Depth (bgs)									L1843140-11	L1844053-08	L1844053-08	L1843140-12	L1844053-09	L1844053-09	L1843140-09	L1844053-06	L1844053-06	L1843140-10	L1844053-07	L1844053-07	L1844053-07	
									0 - 15 (ft)	0 - 15 (ft)	0 - 15 (ft)	15 - 20 (ft)	15 - 20 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	0 - 15.3 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)	
									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP		
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L		
									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL		
Volatile Organic Compounds (mg/kg) (ug/L)																						
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00037 U	0.00024 U	0.16 U	0.00028 U	0.0003 U	0.16 U	0.00037 U	0.0003 U	0.16 U	0.00031 U	0.00019 U	0.16 U		
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00037 U	0.00024 U	0.17 U	0.00028 U	0.0003 U	0.17 U	0.00036 U	0.0003 U	0.17 U	0.00031 U	0.00019 U	0.17 U		
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00059 U	0.00038 U	0.14 U	0.00044 U	0.00048 U	0.14 U	0.00059 U	0.00048 U	0.14 U	0.00049 U	0.00031 U	0.14 U		
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00032 U	0.00021 U	0.21 U	0.00024 U	0.00026 U	0.21 U	0.00032 U	0.00026 U	0.21 U	0.00027 U	0.00017 U	0.21 U		
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00053 U	0.00034 U	0.17 U	0.0004 U	0.00043 U	0.17 U	0.00052 U	0.00043 U	0.17 U	0.00044 U	0.00028 U	0.17 U		
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00072 U	0.00046 U	0.23 U	0.00054 U	0.00058 U	0.23 U	0.00071 U	0.00058 U	0.23 U	0.0006 U	0.00037 U	0.23 U		
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.0006 U	0.00039 U	0.22 U	0.00045 U	0.00049 U	0.22 U	0.0006 U	0.00049 U	0.22 U	0.0005 U	0.00031 U	0.22 U		
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0022 U	0.0014 U	0.35 U	0.0017 U	0.0018 U	0.35 U	0.0022 U	0.0018 U	0.35 U	0.0018 U	0.0012 U	0.35 U		
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00062 U	0.0004 U	0.19 U [D]	0.00046 U	0.0005 U	0.19 U [D]	0.00061 U	0.0005 U	0.19 U [D]	0.00052 U	0.00032 U	0.19 U [D]		
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00032 U	0.0002 U	0.18 U	0.00024 U	0.00026 U	0.18 U	0.00032 U	0.00026 U	0.18 U	0.00027 U	0.00017 U	0.18 U		
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00057 U	0.00037 U	0.13 U	0.00043 U	0.00046 U	0.13 U	0.00056 U	0.00046 U	0.13 U	0.00048 U	0.0003 U	0.13 U		
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00028 U	0.00018 U	0.14 U	0.00021 U	0.00022 U	0.14 U	0.00027 U	0.00022 U	0.14 U	0.00023 U	0.00014 U	0.14 U		
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00033 U	0.00021 U	0.19 U	0.00025 U	0.00026 U	0.19 U	0.00032 U	0.00026 U	0.19 U	0.00027 U	0.00017 U	0.19 U		
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00038 U	0.00024 U	0.19 U	0.00028 U	0.00031 U	0.19 U	0.00038 U	0.00031 U	0.19 U	0.00032 U	0.0002 U	0.19 U		
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.078 U	0.05 U	61 U	0.058 U	0.063 U	61 U	0.077 U	0.063 U	61 U	0.065 U	0.04 U	61 U		
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	**0.024**	**0.22**	**5.8**	**0.0083 J**	**0.072**	**2 J**	**0.03**	**0.23**	**6.1**	**0.0071 J**	**0.069**	**2.7 J**		
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0026 U	0.0017 U	0.52 U	0.002 U	0.0021 U	0.52 U	0.0026 U	0.0021 U	0.52 U	0.0022 U	0.0014 U	0.52 U		
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0028 U	0.0018 U	0.42 U	0.0021 U	0.0023 U	0.42 U	0.0028 U	0.0023 U	0.42 U	0.0024 U	0.0015 U	0.42 U		
Acetone	70000	-	NA	-	19	-	120000	-	**0.13**	**1.9**	**42**	**0.058**	**0.61 J**	**18**	**0.16**	**2.6**	**47**	**0.047**	**0.77 J**	**22**		
Benzene	2	-	5	-	0.005	-	4	-	0.00037 U	0.00024 U	0.16 U	0.00028 U	0.0003 U	0.16 U	0.00036 U	0.0003 U	0.16 U	0.00031 U	0.00019 U	0.16 U		
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00024 U	0.00016 U	0.19 U	0.00018 U	0.0002 U	0.19 U	0.00024 U	0.0002 U	0.19 U	0.0002 U	0.00013 U	0.19 U		
Bromoform	81	-	280	-	0.03	-	80	-	0.00055 U	0.00035 U	0.25 U	0.00041 U	0.00044 U	0.25 U	0.00054 U	0.00044 U	0.25 U	0.00046 U	0.00028 U	0.25 U		
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.0013 U	0.00083 U	0.26 U	0.00097 U	0.001 U	0.26 U	0.0013 U	0.001 U	0.26 U	0.0011 U	0.00067 U	0.26 U		
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.01 U	**0.013 J**	**1.4 J**	0.0076 U	0.0082 U	**1 J**	**0.017 J**	**0.02**	**1.4 J**	0.0084 U	0.0053 U	**1.1 J**		
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00051 U	0.00033 U	0.13 U	0.00038 U	0.00041 U	0.13 U	0.0005 U	0.00041 U	0.13 U	0.00042 U	0.00026 U	0.13 U		
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00028 U	0.00018 U	0.18 U	0.00021 U	0.00023 U	0.18 U	0.00028 U	0.00023 U	0.18 U	0.00024 U	0.00015 U	0.18 U		
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00046 U	0.00029 U	0.15 U	0.00034 U	0.00037 U	0.15 U	0.00045 U	0.00037 U	0.15 U	0.00038 U	0.00024 U	0.15 U		
Chloroethane	220	-	1100	-	NA	-	NA	-	0.001 U	0.00064 U	0.13 U	0.00075 U	0.00081 U	0.13 U	0.00099 U	0.00081 U	0.13 U	0.00084 U	0.00052 U	0.13 U		
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00031 U	0.0002 U	0.22 U	0.00023 U	0.00025 U	0.22 U	0.00031 U	0.00025 U	0.22 U	0.00026 U	0.00016 U	0.22 U		
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0021 U	0.0013 U	0.2 U	0.0016 U	0.0017 U	0.2 U	0.002 U	0.0017 U	0.2 U	0.0017 U	0.0011 U	0.2 U		
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00039 U	0.00025 U	0.19 U	0.00029 U	0.00031 U	0.19 U	0.00038 U	0.00031 U	0.19 U	0.00032 U	0.0002 U	0.19 U		
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00035 U	0.00022 U	0.14 U	0.00026 U	0.00028 U	0.14 U	0.00035 U	0.00028 U	0.14 U	0.00029 U	0.00018 U	0.14 U		
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.00078 U	0.27 U	0.0009 U	0.00098 U	0.27 U	0.0012 U	0.00097 U	0.27 U	0.001 U	0.00063 U	0.27 U		
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00031 U	0.0002 U	0.15 U	0.00023 U	0.00025 U	0.15 U	0.00031 U	0.00025 U	0.15 U	0.00026 U	0.00016 U	0.15 U		
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.002 U	0.0013 U	0.24 U	0.0015 U	0.0016 U	0.24 U	0.002 U	0.0016 U	0.24 U	0.0017 U	0.001 U	0.24 U		
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00031 U	0.0002 U	0.17 U	0.00023 U	0.00025 U	0.17 U	0.00031 U	0.00025 U	0.17 U	0.00026 U	0.00016 U	0.17 U		
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00024 U	0.00016 U	0.19 U	0.00018 U	0.0002 U	0.19 U	0.00024 U	0.0002 U	0.19 U	0.0002 U	0.00013 U	0.19 U		
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0021 U	0.0014 U	0.23 U	0.0016 U	0.0017 U	0.23 U	0.0021 U	0.0017 U	0.23 U	0.0018 U	0.0011 U	0.23 U		
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0013 U	0.00086 U	0.4 U	0.001 U	0.0011 U	0.4 U	0.0013 U	0.0011 U	0.4 U	0.0011 U	0.0007 U	0.4 U		
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00045 U	0.00029 U	0.17 U	0.00033 U	0.00036 U	0.17 U	0.00044 U	0.00036 U	0.17 U	0.00037 U	0.00023 U	0.17 U		
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0051 U	**0.042** [C]	0.68 U	0.0038 U	**0.0066 J**	0.68 U	0.005 U	**0.039** [C]	0.68 U	0.0042 U	**0.0071**	0.68 U		
Styrene	90	-	260	-	3	-	2000	-	0.00044 U	0.00028 U	0.36 U	0.00033 U	0.00035 U	0.36 U	0.00043 U	0.00035 U	0.36 U	0.00036 U	0.00023 U	0.36 U		
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00044 U	0.00028 U	0.18 U	0.00033 U	0.00035 U	0.18 U	0.00043 U	0.00035 U	0.18 U	0.00036 U	0.00023 U	0.18 U		
Toluene	6300	-	91000	-	7	-	12000	-	0.0012 U	0.00077 U	**0.36 J**	0.0009 U	0.00098 U	0.2 U	0.0012 U	0.00097 U	0.2 U	0.001 U	**0.00068 J**	0.2 U		
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.0003 U	0.0002 U	0.16 U	0.00023 U	0.00025 U	0.16 U	0.0003 U	0.00024 U	0.16 U	0.00025 U	0.00016 U	0.16 U		
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00061 U	0.00039 U	0.16 U	0.00045 U	0.00049 U	0.16 U	0.0006 U	0.00049 U	0.16 U	0.0005 U	0.00032 U	0.16 U		
Trichloroethene	3	-	10	-	0.01	-	20	-	0.0003 U	0.0002 U	0.18 U	0.00023 U	0.00025 U	0.18 U	0.0003 U	0.00024 U	0.18 U	0.00025 U	0.00016 U	0.18 U		
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0015 U	0.00099 U	0.16 U	0.0012 U	0.0012 U	0.16 U	0.0015 U	0.0012 U	0.16 U	0.0013 U	0.0008 U	0.16 U		
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.00099 U	0.15 U	0.0012 U	0.0012 U	0.15 U	0.0015 U	0.0012 U	0.15 U	0.0013 U	0.0008 U	0.15 U		
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00074 U	0.00048 U	0.07 U	0.00056 U	0.0006 U	0.07 U	0.00074 U	0.0006 U	0.07 U	0.00062 U	0.00039 U	0.07 U		
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00065 U	0.00042 U	**0.64 J**	0.00048 U	0.00052 U	0.33 U	0.00064 U	0.00052 U	0.33 U	0.00054 U	0.00034 U	0.33 U		
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.154**	**2.175**	**50.2**	**0.0663**	**0.6886**	**21**	**0.207**	**2.889**	**54.5**	**0.0541**	**0.84678**	**25.8**		

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Raritan Bay										
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**COMP-O**	**COMP-O**	**COMP-O**	**COMP-O**	**COMP-O**	**COMP-O**	**COMP-O**	**COMP-O**	**COMP-O**	**VC-238**	**VC-238**	**VC-238**
Sample Name									COMP-O	COMP-O	VC-237	VC-237A	VC-237B	COMP-O	COMP-O	VC-237	VC-237A	VC-237B	VC-238	VC-238	VC-238
Sample Date									COMP-O-D0-2E-A	COMP-O-D0-2E-A	VC-237-D0-3E	VC-237A-D0-4E	VC-237B-D0-2E	COMP-O-D2-25E-A	COMP-O-D2-25E-A	VC-237-D3-25E	VC-237A-D4-25E	VC-237B-D2-25E	VC-238-D0-28E	VC-238-D0-28E-A	VC-238-D0-28E-A
Sample Type									10/27/2018	10/27/2018	10/22/2018	10/22/2018	10/22/2018	10/27/2018	10/27/2018	10/22/2018	10/22/2018	10/22/2018	10/23/2018	10/27/2018	10/27/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844053-12	L1844053-12	L1843140-17	L1843140-21	L1843140-19	L1844053-13	L1844053-13	L1843140-18	L1843140-22	L1843140-20	L1843140-28	L1844053-19	L1844053-19
									0 - 3 (ft)	0 - 3 (ft)	0 - 3 (ft)	0 - 4.3 (ft)	0 - 2 (ft)	3 - 25 (ft)	3 - 25 (ft)	3 - 25 (ft)	4.3 - 25 (ft)	2 - 25 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 28 (ft)
									Amended	SPLP	Raw	Raw	Raw	Amended	SPLP	Raw	Raw	Raw	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L
									UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																					
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00041 U	0.16 U	0.00034 U	0.00048 U	0.00042 U	0.00019 U	0.16 U	0.00034 U	0.0003 U	0.00039 U	0.00035 U	0.00017 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00041 U	0.17 U	0.00034 U	0.00047 U	0.00042 U	0.00019 U	0.17 U	0.00034 U	0.0003 U	0.00039 U	0.00035 U	0.00017 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00066 U	0.14 U	0.00055 U	0.00076 U	0.00068 U	0.00031 U	0.14 U	0.00055 U	0.00048 U	0.00063 U	0.00056 U	0.00028 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00036 U	0.21 U	0.0003 U	0.00041 U	0.00037 U	0.00017 U	0.21 U	0.0003 U	0.00026 U	0.00034 U	0.0003 U	0.00015 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00059 U	0.17 U	0.00049 U	0.00068 U	0.0006 U	0.00028 U	0.17 U	0.00049 U	0.00043 U	0.00056 U	0.0005 U	0.00025 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.0008 U	0.23 U	0.00066 U	0.00092 U	0.00082 U	0.00038 U	0.23 U	0.00066 U	0.00058 U	0.00076 U	0.00068 U	0.00033 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00067 U	0.22 U	0.00056 U	0.00078 U	0.00069 U	0.00032 U	0.22 U	0.00056 U	0.00049 U	0.00064 U	0.00057 U	0.00028 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0025 U	0.35 U	0.0021 U	0.0028 U	0.0025 U	0.0012 U	0.35 U	0.0021 U	0.0018 U	0.0023 U	0.0021 U	0.001 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00069 U	0.19 U [D]	0.00058 U	0.0008 U	0.00071 U	0.00032 U	0.19 U [D]	0.00058 U	0.00051 U	0.00066 U	0.00059 U	0.00029 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00036 U	0.18 U	0.0003 U	0.00041 U	0.00036 U	0.00017 U	0.18 U	0.0003 U	0.00026 U	0.00034 U	0.0003 U	0.00015 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00064 U	0.13 U	0.00053 U	0.00073 U	0.00065 U	0.0003 U	0.13 U	0.00053 U	0.00047 U	0.0006 U	0.00054 U	0.00027 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00031 U	0.14 U	0.00026 U	0.00036 U	0.00032 U	0.00014 U	0.14 U	0.00026 U	0.00023 U	0.00029 U	0.00026 U	0.00013 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00037 U	0.19 U	0.0003 U	0.00042 U	0.00037 U	0.00017 U	0.19 U	0.0003 U	0.00027 U	0.00035 U	0.00031 U	0.00015 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00042 U	0.19 U	0.00035 U	0.00049 U	0.00043 U	0.0002 U	0.19 U	0.00035 U	0.00031 U	0.0004 U	0.00036 U	0.00018 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.087 U	61 U	0.072 U	0.1 U	0.089 U	0.041 U	61 U	0.072 U	0.064 U	0.083 U	0.074 U	0.036 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	**0.31**	**5.6**	**0.011 J**	**0.0096 J**	0.0056 U	**0.091**	**3 J**	0.0046 U	0.004 U	0.0052 U	0.0047 U	**0.038**	**2.4 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0029 U	0.52 U	0.0024 U	0.0034 U	0.003 U	0.0014 U	0.52 U	0.0024 U	0.0021 U	0.0028 U	0.0025 U	0.0012 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0032 U	0.42 U	0.0026 U	0.0036 U	0.0032 U	0.0015 U	0.42 U	0.0026 U	0.0023 U	0.003 U	0.0027 U	0.0013 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**2.8**	**44**	**0.095**	**0.082**	**0.041**	**0.87 J**	**24**	**0.052**	**0.03**	**0.054**	**0.042**	**0.85 J**	**20**
Benzene	2	-	5	-	0.005	-	4	-	0.00041 U	0.16 U	0.00034 U	0.00047 U	0.00042 U	0.00019 U	0.16 U	0.00034 U	0.0003 U	0.00039 U	0.00035 U	0.00017 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00027 U	0.19 U	0.00022 U	0.00031 U	0.00028 U	0.00013 U	0.19 U	0.00022 U	0.0002 U	0.00026 U	0.00023 U	0.00011 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00061 U	0.25 U	0.00051 U	0.0007 U	0.00062 U	0.00029 U	0.25 U	0.00051 U	0.00045 U	0.00058 U	0.00052 U	0.00026 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.0014 U	0.26 U	0.0012 U	0.0016 U	0.0015 U	0.00068 U	0.26 U	0.0012 U	0.001 U	0.0014 U	0.0012 U	0.0006 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	**0.015 J**	**0.51 J**	**0.027**	**0.014 J**	0.012 U	0.0053 U	**1.2 J**	**0.013 J**	0.0083 U	**0.014 J**	**0.015 J**	**0.0058 J**	**1.1 J**
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00057 U	0.13 U	0.00048 U	0.00066 U	0.00058 U	0.00027 U	0.13 U	0.00048 U	0.00042 U	0.00054 U	0.00048 U	0.00024 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00031 U	0.18 U	0.00026 U	0.00036 U	0.00032 U	0.00015 U	0.18 U	0.00026 U	0.00023 U	0.0003 U	0.00027 U	0.00013 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00051 U	0.15 U	0.00042 U	0.00058 U	0.00052 U	0.00024 U	0.15 U	0.00042 U	0.00037 U	0.00048 U	0.00043 U	0.00021 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.0011 U	0.13 U	0.00093 U	0.0013 U	0.0011 U	0.00053 U	0.13 U	0.00093 U	0.00082 U	0.0011 U	0.00095 U	0.00047 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00035 U	0.22 U	0.00029 U	0.0004 U	0.00035 U	0.00016 U	0.22 U	0.00029 U	0.00025 U	0.00033 U	0.00029 U	**0.00021 J**	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0023 U	0.2 U	0.0019 U	0.0027 U	0.0024 U	0.0011 U	0.2 U	0.0019 U	0.0017 U	0.0022 U	0.002 U	0.00097 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00043 U	0.19 U	0.00036 U	0.0005 U	0.00044 U	0.0002 U	0.19 U	0.00036 U	0.00032 U	0.00041 U	0.00037 U	0.00018 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00039 U	0.14 U	0.00033 U	0.00045 U	0.0004 U	0.00018 U	0.14 U	0.00033 U	0.00029 U	0.00037 U	0.00033 U	0.00016 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0013 U	0.27 U	0.0011 U	0.0016 U	0.0014 U	0.00063 U	0.27 U	0.0011 U	0.00099 U	0.0013 U	0.0011 U	0.00056 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00035 U	0.15 U	0.00029 U	0.0004 U	0.00035 U	0.00016 U	0.15 U	0.00029 U	0.00025 U	0.00033 U	0.00029 U	0.00014 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.0023 U	0.24 U	0.0019 U	0.0026 U	0.0023 U	0.0011 U	0.24 U	0.0019 U	0.0017 U	0.0022 U	0.0019 U	0.00095 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00035 U	0.17 U	0.00029 U	0.0004 U	0.00036 U	0.00016 U	0.17 U	0.00029 U	0.00026 U	0.00033 U	0.0003 U	0.00015 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00027 U	0.19 U	0.00022 U	0.00031 U	0.00028 U	0.00013 U	0.19 U	0.00022 U	0.0002 U	0.00026 U	0.00023 U	0.00011 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0024 U	0.23 U	0.002 U	0.0027 U	0.0024 U	0.0011 U	0.23 U	0.002 U	0.0017 U	0.0022 U	0.002 U	0.00099 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.4 U	0.0012 U	0.0017 U	0.0015 U	0.0007 U	0.4 U	0.0012 U	0.0011 U	0.0014 U	0.0013 U	0.00062 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.0005 U	0.17 U	0.00042 U	0.00057 U	0.00051 U	0.00023 U	0.17 U	0.00042 U	0.00036 U	0.00047 U	0.00042 U	0.00021 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0057 U	0.68 U	0.0047 U	0.0065 U	0.0058 U	0.0027 U	0.68 U	0.0047 U	0.0042 U	0.0054 U	0.0048 U	0.0024 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00048 U	0.36 U	0.0004 U	0.00056 U	0.0005 U	0.00023 U	0.36 U	0.0004 U	0.00036 U	0.00046 U	0.00041 U	0.0002 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00048 U	0.18 U	0.0004 U	0.00056 U	0.0005 U	0.00023 U	0.18 U	0.0004 U	0.00036 U	0.00046 U	0.00041 U	0.0002 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.0013 U	0.2 U	0.0011 U	0.0016 U	0.0014 U	0.00063 U	0.2 U	0.0011 U	0.00099 U	0.0013 U	0.0011 U	0.00056 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00034 U	0.16 U	0.00028 U	0.00039 U	0.00035 U	0.00016 U	0.16 U	0.00028 U	0.00025 U	0.00032 U	0.00029 U	0.00014 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00068 U	0.16 U	0.00056 U	0.00078 U	0.00069 U	0.00032 U	0.16 U	0.00056 U	0.0005 U	0.00064 U	0.00057 U	0.00028 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00034 U	0.18 U	0.00028 U	0.00039 U	0.00035 U	0.00016 U	0.18 U	0.00028 U	0.00025 U	0.00032 U	0.00029 U	0.00014 U	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0017 U	0.16 U	0.0014 U	0.002 U	0.0018 U	0.00081 U	0.16 U	0.0014 U	0.0013 U	0.0016 U	0.0015 U	0.00072 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0017 U	0.15 U	0.0014 U	0.002 U	0.0018 U	0.00081 U	0.15 U	0.0014 U	0.0013 U	0.0016 U	0.0014 U	0.00072 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00083 U	0.07 U	0.00069 U	0.00096 U	0.00085 U	0.00039 U	0.07 U	0.00069 U	0.00061 U	0.00079 U	0.0007 U	0.00035 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00072 U	0.33 U	0.0006 U	0.00083 U	0.00074 U	0.00034 U	0.33 U	0.0006 U	0.00053 U	0.00068 U	0.00061 U	0.0003 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**3.125**	**50.11**	**0.133**	**0.1056**	**0.041**	**0.961**	**28.2**	**0.065**	**0.03**	**0.068**	**0.057**	**0.89401**	**23.5**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Raritan Bay					Raritan-Chapel							
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**COMP-P**	**COMP-P**	**COMP-P**	**COMP-P**	**COMP-P**	**COMP-Q**	**COMP-Q**	**COMP-Q**	**COMP-Q**	**COMP-Q**	**VC-244**	**VC-244**	**VC-244**
Sample Name									COMP-P	COMP-P	VC-239	VC-240	VC-242	COMP-Q	COMP-Q	VC-315	VC-316	VC-317	VC-244	VC-244	VC-244
Sample Date									COMP-P-D0-23E-A	COMP-P-D0-23E-A	VC-239-D0-23E	VC-240-D0-16E	VC-242-D0-9E	COMP-Q-D0-10.5E-A	COMP-Q-D0-10.5E-A	VC-315-D0-10.5E	VC-316-D0-10.5E	VC-317-D0-10.5E	VC-244-D0-4E	VC-244-D0-4E-A	VC-244-D0-4E-A
Sample Type									10/27/2018	10/27/2018	10/23/2018	10/23/2018	10/23/2018	11/14/2018	11/14/2018	10/29/2018	10/29/2018	10/29/2018	10/26/2018	11/07/2018	11/07/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844053-18	L1844053-18	L1843140-26	L1843140-25	L1843140-24	L1846705-06	L1846705-06	L1844234-38	L1844234-39	L1844234-40	L1844234-08	L1846705-15	L1846705-15
									0 - 23 (ft)	0 - 23 (ft)	0 - 23 (ft)	0 - 16 (ft)	0 - 9 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 5 (ft)	0 - 5 (ft)
									Amended	SPLP	Raw	Raw	Raw	Amended	SPLP	Raw	Raw	Raw	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L
									UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																					
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00022 U	0.16 U	0.00027 U	0.00032 U	0.00033 U	0.00017 U	0.16 U	0.00017 U	0.00017 U	0.00018 U	0.00017 U	0.00014 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00022 U	0.17 U	0.00027 U	0.00032 U	0.00033 U	0.00017 U	0.17 U	0.00017 U	0.00017 U	0.00018 U	0.00017 U	0.00014 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00035 U	0.14 U	0.00043 U	0.00052 U	0.00053 U	0.00027 U	0.14 U	0.00027 U	0.00028 U	0.00029 U	0.00028 U	0.00023 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00019 U	0.21 U	0.00023 U	0.00028 U	0.00029 U	0.00015 U	0.21 U	0.00015 U	0.00015 U	0.00016 U	0.00015 U	0.00013 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00031 U	0.17 U	0.00038 U	0.00046 U	0.00048 U	0.00024 U	0.17 U	0.00024 U	0.00025 U	0.00026 U	0.00024 U	0.00021 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00043 U	0.23 U	0.00052 U	0.00062 U	0.00064 U	0.00033 U	0.23 U	0.00033 U	0.00033 U	0.00034 U	0.00033 U	0.00028 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00036 U	0.22 U	0.00044 U	0.00053 U	0.00054 U	0.00028 U	0.22 U	0.00028 U	0.00028 U	0.00029 U	0.00028 U	0.00024 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0013 U	0.35 U	0.0016 U	0.0019 U	0.002 U	0.001 U	0.35 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.00087 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00037 U	0.19 U [D]	0.00045 U	0.00054 U	0.00056 U	0.00028 U	0.19 U [D]	0.00028 U	0.00029 U	0.0003 U	0.00029 U	0.00024 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00019 U	0.18 U	0.00023 U	0.00028 U	0.00029 U	0.00014 U	0.18 U	0.00014 U	0.00015 U	0.00015 U	0.00015 U	0.00012 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00034 U	0.13 U	0.00041 U	0.0005 U	0.00051 U	0.00026 U	0.13 U	0.00026 U	0.00027 U	0.00028 U	0.00026 U	0.00022 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00016 U	0.14 U	0.0002 U	0.00024 U	0.00025 U	0.00013 U	0.14 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00011 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.0002 U	0.19 U	0.00024 U	0.00029 U	0.0003 U	0.00015 U	0.19 U	0.00015 U	0.00015 U	0.00016 U	0.00015 U	0.00013 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00023 U	0.19 U	0.00027 U	0.00033 U	0.00034 U	0.00017 U	0.19 U	0.00017 U	0.00018 U	0.00018 U	0.00018 U	0.00015 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.046 U	61 U	0.056 U	0.068 U	0.07 U	0.036 U	61 U	0.036 U	0.036 U	0.038 U	0.036 U	0.03 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	**0.14**	**3.3 J**	**0.0038 J**	**0.0097 J**	0.0044 U	**0.013 J-**	1.9 U	0.0022 U	0.0023 U	0.0024 U	0.0023 U	**0.061**	**3.8 J**
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0016 U	0.52 U	0.0019 U	0.0023 U	0.0024 U	0.0012 U	0.52 U	0.0012 U	0.0012 U	0.0013 U	0.0012 U	0.001 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	**0.0048 J**	0.42 U	0.002 U	0.0025 U	0.0026 U	0.0013 U	0.42 U	0.0013 U	0.0013 U	0.0014 U	0.0013 U	0.0011 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.82 J**	**28**	**0.045**	**0.068**	**0.035**	**0.17 J-**	**11**	**0.016**	**0.014**	**0.02**	**0.017**	**1.2**	**37**
Benzene	2	-	5	-	0.005	-	4	-	0.00022 U	0.16 U	0.00027 U	0.00032 U	0.00033 U	0.00017 U	0.16 U	0.00017 U	0.00017 U	0.00018 U	0.00017 U	0.00014 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00014 U	0.19 U	0.00017 U	0.00021 U	0.00022 U	0.00011 U	0.19 U	0.00011 U	0.00011 U	0.00012 U	0.00011 U	0.00009 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00032 U	0.25 U	0.00039 U	0.00048 U	0.00049 U	0.00025 U	0.25 U	0.00025 U	0.00026 U	0.00026 U	0.00025 U	0.00021 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00077 U	0.26 U	0.00093 U	0.0011 U	0.0012 U	0.00059 U	0.26 U	0.00059 U	0.0006 U	0.00062 U	0.0006 U	0.0005 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	**0.007 J**	**1.1 J**	**0.0092 J**	**0.012 J**	0.0091 U	0.0046 U	0.3 U	0.0046 U	0.0047 U	**0.0051 J**	0.0047 U	0.004 U	0.3 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.0003 U	0.13 U	0.00037 U	0.00045 U	0.00046 U	0.00023 U	0.13 U	0.00023 U	0.00024 U	0.00025 U	0.00024 U	0.0002 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00017 U	0.18 U	0.0002 U	0.00025 U	0.00025 U	0.00013 U	0.18 U	0.00013 U	0.00013 U	0.00014 U	0.00013 U	0.00011 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00027 U	0.15 U	0.00033 U	0.0004 U	0.00041 U	0.00021 U	0.15 U	0.00021 U	0.00021 U	0.00022 U	0.00021 U	0.00018 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.0006 U	0.13 U	0.00072 U	0.00088 U	0.0009 U	0.00046 U	0.13 U	0.00046 U	0.00047 U	0.00048 U	0.00046 U	0.00039 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00018 U	0.22 U	0.00022 U	0.00027 U	0.00028 U	0.00014 U	0.22 U	0.00014 U	0.00014 U	0.00015 U	0.00014 U	**0.00015 J**	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0012 U	0.2 U	0.0015 U	0.0018 U	0.0019 U	0.00094 U	0.2 U	0.00094 U	0.00097 U	0.001 U	0.00096 U	0.00081 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00023 U	0.19 U	0.00028 U	0.00034 U	0.00035 U	0.00018 U	**0.24 J**	0.00018 U	0.00018 U	0.00019 U	0.00018 U	0.00015 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00021 U	0.14 U	0.00025 U	0.00031 U	0.00032 U	0.00016 U	0.14 U	0.00016 U	0.00016 U	0.00017 U	0.00016 U	0.00014 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00072 U	0.27 U	0.00087 U	0.001 U	0.0011 U	0.00055 U	0.27 U	0.00055 U	0.00056 U	0.00058 U	0.00056 U	0.00047 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00018 U	0.15 U	0.00022 U	0.00027 U	0.00028 U	0.00014 U	0.15 U	0.00014 U	0.00014 U	0.00015 U	0.00014 U	0.00012 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.0012 U	0.24 U	0.0015 U	0.0018 U	0.0018 U	0.00093 U	0.24 U	0.00093 U	0.00095 U	0.00098 U	0.00094 U	0.0008 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00019 U	0.17 U	0.00023 U	0.00027 U	0.00028 U	0.00014 U	0.17 U	0.00014 U	0.00015 U	0.00015 U	0.00014 U	0.00012 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00014 U	0.19 U	0.00017 U	0.00021 U	0.00022 U	0.00011 U	0.19 U	0.00011 U	0.00011 U	0.00012 U	0.00011 U	0.00009 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0012 U	0.23 U	0.0015 U	0.0018 U	0.0019 U	0.00096 U	0.23 U	0.00096 U	0.00098 U	0.001 U	0.00098 U	0.00083 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.0008 U	0.4 U	0.00097 U	0.0012 U	0.0012 U	0.00061 U	0.4 U	0.00061 U	0.00062 U	0.00065 U	0.00062 U	0.00052 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00026 U	0.17 U	0.00032 U	0.00039 U	0.0004 U	0.0002 U	0.17 U	0.0002 U	0.00021 U	0.00022 U	0.00021 U	0.00018 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.003 U	0.68 U	0.0037 U	0.0044 U	0.0046 U	0.0023 U	0.68 U	0.0023 U	0.0024 U	0.0024 U	0.0024 U	0.002 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00026 U	0.36 U	0.00031 U	0.00038 U	0.00039 U	0.0002 U	0.36 U	0.0002 U	0.0002 U	0.00021 U	0.0002 U	0.00017 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00026 U	0.18 U	0.00031 U	0.00038 U	0.00039 U	0.0002 U	0.18 U	0.0002 U	0.0002 U	0.00021 U	0.0002 U	0.00017 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	**0.0011 J**	0.2 U	0.00087 U	0.001 U	0.0011 U	0.00055 U	0.2 U	0.00055 U	0.00056 U	0.00058 U	0.00056 U	0.00047 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00018 U	0.16 U	0.00022 U	0.00026 U	0.00027 U	0.00014 U	0.16 U	0.00014 U	0.00014 U	0.00015 U	0.00014 U	0.00012 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00036 U	0.16 U	0.00044 U	0.00053 U	0.00054 U	0.00028 U	0.16 U	0.00028 U	0.00028 U	0.00029 U	0.00028 U	0.00024 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00018 U	0.18 U	0.00022 U	0.00026 U	0.00027 U	**0.00014 J**	**0.57**	0.00014 U	0.00014 U	0.00015 U	0.00014 U	**0.00016 J**	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.00092 U	0.16 U	0.0011 U	0.0013 U	0.0014 U	0.0007 U	0.16 U	0.0007 U	0.00072 U	0.00074 U	0.00072 U	0.0006 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.00092 U	0.15 U	0.0011 U	0.0013 U	0.0014 U	0.0007 U	0.15 U	0.0007 U	0.00072 U	0.00074 U	0.00071 U	0.0006 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00044 U	0.07 U	0.00054 U	0.00065 U	0.00067 U	0.00034 U	0.07 U	0.00034 U	0.00035 U	0.00036 U	0.00034 U	0.00029 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00038 U	0.33 U	0.00047 U	0.00056 U	0.00058 U	0.00029 U	0.33 U	0.00029 U	0.0003 U	0.00031 U	0.0003 U	0.00025 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.9729**	**32.4**	**0.058**	**0.0897**	**0.035**	**0.18314**	**11.81**	**0.016**	**0.014**	**0.0251**	**0.017**	**1.26131**	**40.8**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
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Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
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- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

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WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Raritan-Chapel										
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**VC-245**	**VC-245**	**VC-245**	**VC-246**	**VC-246**	**VC-246**	**COMP-R**	**COMP-R**	**COMP-R**	**COMP-R**	**COMP-R**
Sample Name									VC-245	VC-245	VC-245	VC-246	VC-246	VC-246	COMP-R	COMP-R	VC-244	VC-245	VC-246
Sample Date									VC-245-D0-4E	VC-245-D0-4E-A	VC-245-D0-4E-A	VC-246-D0-4E	VC-246-D0-4E-A	VC-246-D0-4E-A	COMP-R-D4-10.5E-A	COMP-R-D4-10.5E-A	VC-244-D4-10.5E	VC-245-D4-10.5E	VC-246-D4-10.5E
Sample Type									10/26/2018	11/07/2018	11/07/2018	10/26/2018	11/07/2018	11/07/2018	11/07/2018	11/07/2018	10/26/2018	10/26/2018	10/26/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844234-06	L1846705-16	L1846705-16	L1844234-04	L1846705-17	L1846705-17	L1846705-07	L1846705-07	L1844234-09	L1844234-07	L1844234-05
									0 - 4.9 (ft)	0 - 4.9 (ft)	0 - 4.9 (ft)	0 - 4.8 (ft)	0 - 4.8 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	4.9 - 10.5 (ft)	5 - 10.5 (ft)	4.9 - 10.5 (ft)	4.8 - 10.5 (ft)
									Raw	Amended	SPLP	Raw	Amended	SPLP	Amended	SPLP	Raw	Raw	Raw
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	ug/L	mg/kg	mg/kg	mg/kg
									UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS
Volatile Organic Compounds (mg/kg) (ug/L)																			
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00018 U	0.00016 U	0.16 U	0.00028 U	0.00021 U	0.16 U	0.00013 U	**0.9**	0.00011 U	0.00016 U	0.00015 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00018 U	0.00016 U	0.17 U	0.00028 U	0.00021 U	0.17 U	0.00013 U	0.17 U	0.00011 U	0.00016 U	0.00015 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00028 U	0.00026 U	0.14 U	0.00045 U	0.00034 U	0.14 U	0.00021 U	0.14 U	0.00018 U	0.00026 U	0.00024 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00015 U	0.00014 U	0.21 U	0.00024 U	0.00018 U	0.21 U	0.00011 U	0.21 U	0.00009 U	0.00014 U	0.00013 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00025 U	0.00023 U	0.17 U	0.0004 U	0.0003 U	0.17 U	0.00018 U	0.17 U	0.00016 U	0.00023 U	0.00022 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00034 U	0.00031 U	0.23 U	0.00054 U	0.00041 U	0.23 U	0.00025 U	0.23 U	0.00022 U	0.00032 U	0.00029 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00029 U	0.00026 U	0.22 U	0.00046 U	0.00035 U	0.22 U	0.00021 U	0.22 U	0.00018 U	0.00027 U	0.00025 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.001 U	0.00098 U	0.35 U	0.0017 U	0.0013 U	0.35 U	0.00078 U	0.35 U	0.00068 U	0.00098 U	0.00091 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.0003 U	0.00027 U	0.19 U [D]	0.00047 U	0.00036 U	0.19 U [D]	0.00022 U	0.19 U [D]	0.00019 U	0.00027 U	0.00025 U
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00015 U	0.00014 U	**0.41 J**	0.00024 U	0.00018 U	0.18 U	0.00011 U	0.18 U	0.00009 U	0.00014 U	0.00013 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00027 U	0.00025 U	0.13 U	0.00043 U	0.00033 U	0.13 U	0.0002 U	0.13 U	0.00017 U	0.00025 U	0.00023 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00013 U	0.00012 U	0.14 U	0.00021 U	0.00016 U	0.14 U	0.00009 U	0.14 U	0.00008 U	0.00012 U	0.00011 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00016 U	0.00014 U	0.19 U	0.00025 U	0.00019 U	0.19 U	0.00012 U	0.19 U	0.0001 U	0.00014 U	0.00014 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00018 U	0.00017 U	0.19 U	0.00029 U	0.00022 U	0.19 U	0.00013 U	0.19 U	0.00012 U	0.00017 U	0.00016 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.037 U	0.034 U	61 U	0.059 U	0.045 U	61 U	0.027 U	61 U	0.024 U	0.034 U	0.032 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0024 U	**0.085**	**4.6 J**	0.0038 U	**0.11**	**5.4**	**0.021 J-**	1.9 U	0.0015 U	0.0022 U	0.002 U
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0012 U	0.0012 U	0.52 U	0.002 U	0.0015 U	0.52 U	0.00092 U	0.52 U	0.0008 U	0.0012 U	0.0011 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0014 U	0.0012 U	0.42 U	0.0022 U	0.0016 U	0.42 U	0.001 U	0.42 U	0.00087 U	0.0012 U	0.0012 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.019**	**1.5**	**41**	**0.034**	**1.6**	**47**	**0.21 J-**	**8.8**	**0.0094**	**0.0049 J**	**0.012**
Benzene	2	-	5	-	0.005	-	4	-	0.00018 U	0.00016 U	0.16 U	0.00028 U	0.00021 U	0.16 U	0.00013 U	0.16 U	0.00011 U	0.00016 U	0.00015 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00012 U	0.00011 U	0.19 U	0.00018 U	0.00014 U	0.19 U	0.00008 U	0.19 U	0.00007 U	0.00011 U	0.00009 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00026 U	0.00024 U	0.25 U	0.00042 U	0.00031 U	0.25 U	0.00019 U	0.25 U	0.00017 U	0.00024 U	0.00022 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00062 U	0.00057 U	0.26 U	0.00098 U	0.00074 U	0.26 U	0.00045 U	0.26 U	0.00039 U	0.00057 U	0.00053 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.0048 U	0.0044 U	**0.32 J**	**0.008 J**	0.0058 U	**0.53 J**	0.0035 U	0.3 U	0.0031 U	0.0045 U	0.0042 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00024 U	0.00022 U	0.13 U	0.00039 U	0.00029 U	0.13 U	0.00018 U	0.13 U	0.00016 U	0.00022 U	0.00021 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00013 U	0.00012 U	0.18 U	0.00021 U	0.00016 U	0.18 U	0.00009 U	0.18 U	0.00008 U	0.00012 U	0.00012 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00022 U	0.0002 U	0.15 U	0.00035 U	0.00026 U	0.15 U	0.00016 U	0.15 U	0.00014 U	0.0002 U	0.00019 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00048 U	0.00044 U	0.13 U	0.00076 U	0.00058 U	0.13 U	0.00035 U	0.13 U	0.00031 U	0.00044 U	0.00041 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00015 U	**0.00018 J**	0.22 U	0.00024 U	**0.00028 J**	0.22 U	0.00011 U	0.22 U	0.00009 U	0.00014 U	0.00013 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.00099 U	0.00091 U	0.2 U	0.0016 U	0.0012 U	0.2 U	0.00073 U	0.2 U	0.00063 U	0.00092 U	0.00085 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00018 U	0.00017 U	0.19 U	0.0003 U	0.00022 U	0.19 U	0.00014 U	0.19 U	0.00012 U	0.00017 U	0.00016 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00017 U	0.00015 U	0.14 U	0.00027 U	0.0002 U	0.14 U	0.00012 U	0.14 U	0.00011 U	0.00016 U	0.00014 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00058 U	0.00053 U	0.27 U	0.00092 U	0.00069 U	0.27 U	0.00042 U	0.27 U	0.00037 U	0.00053 U	0.0005 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00015 U	0.00014 U	0.15 U	0.00024 U	0.00018 U	0.15 U	0.00011 U	0.15 U	0.00009 U	0.00014 U	0.00013 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.00097 U	0.00089 U	0.24 U	0.0015 U	0.0012 U	0.24 U	0.00071 U	0.24 U	0.00062 U	0.0009 U	0.00083 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00015 U	0.00014 U	0.17 U	0.00024 U	0.00018 U	0.17 U	0.00011 U	0.17 U	0.00009 U	0.00014 U	0.00013 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00012 U	0.00011 U	0.19 U	0.00018 U	0.00014 U	0.19 U	0.00008 U	0.19 U	0.00007 U	0.00011 U	0.00009 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.001 U	0.00093 U	0.23 U	0.0016 U	0.0012 U	0.23 U	0.00074 U	0.23 U	0.00064 U	0.00093 U	0.00087 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00064 U	0.00059 U	0.4 U	0.001 U	0.00077 U	0.4 U	0.00047 U	0.4 U	0.00041 U	0.00059 U	0.00055 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00021 U	0.0002 U	0.17 U	0.00034 U	0.00026 U	0.17 U	0.00016 U	0.17 U	0.00014 U	0.0002 U	0.00018 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0024 U	0.0022 U	0.68 U	0.0039 U	0.0029 U	0.68 U	0.0018 U	0.68 U	0.0016 U	0.0022 U	0.0021 U
Styrene	90	-	260	-	3	-	2000	-	0.00021 U	**0.00073 J**	0.36 U	0.00033 U	0.00025 U	0.36 U	0.00015 U	0.36 U	0.00013 U	0.00019 U	0.00018 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00021 U	0.00019 U	0.18 U	0.00033 U	0.00025 U	0.18 U	0.00015 U	0.18 U	0.00013 U	0.00019 U	0.00018 U
Toluene	6300	-	91000	-	7	-	12000	-	0.00058 U	0.00053 U	0.2 U	0.00092 U	0.00069 U	0.2 U	0.00042 U	0.2 U	0.00037 U	0.00053 U	0.0005 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00014 U	0.00013 U	0.16 U	0.00023 U	0.00017 U	0.16 U	0.00011 U	0.16 U	0.00009 U	0.00013 U	0.00012 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00029 U	0.00027 U	0.16 U	0.00046 U	0.00035 U	0.16 U	0.00021 U	0.16 U	0.00018 U	0.00027 U	0.00025 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00014 U	**0.00021 J**	**0.44 J**	0.00023 U	**0.00032 J**	**0.55**	0.00011 U	**2.4**	0.00009 U	0.00013 U	0.00012 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.00074 U	0.00068 U	0.16 U	0.0012 U	0.00089 U	0.16 U	0.00054 U	0.16 U	0.00047 U	0.00068 U	0.00063 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.00074 U	0.00068 U	0.15 U	0.0012 U	0.00088 U	0.15 U	0.00054 U	0.15 U	0.00047 U	0.00068 U	0.00063 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00036 U	0.00033 U	0.07 U	0.00057 U	0.00043 U	0.07 U	0.00026 U	0.07 U	0.00023 U	0.00033 U	0.0003 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00031 U	0.00028 U	0.33 U	0.00049 U	0.00037 U	0.33 U	0.00023 U	0.33 U	0.0002 U	0.00028 U	0.00026 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.019**	**1.58612**	**46.77**	**0.042**	**1.7106**	**53.48**	**0.231**	**12.1**	**0.0094**	**0.0049**	**0.012**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Raritan-Chapel						Chapel Hill					
Composite Group	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**VC-247**	**VC-247**	**VC-247**	**VC-247**	**VC-247**	**VC-247**	**VC-318**	**VC-318**	**VC-318**	**VC-318**	**VC-318**	**VC-318**
Location Name									VC-247	VC-247	VC-247	VC-247	VC-247	VC-247	VC-318	VC-318	VC-318	VC-318	VC-318	VC-318
Sample Name									VC-247-D0-4E	VC-247-D0-4E-A	VC-247-D0-4E-A	VC-247-D4-21.5E	VC-247-D4-21.5E-A	VC-247-D4-21.5E-A	VC-318-D0-3.5E	VC-318-D0-3.5E-A	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E	VC-318-D3.5-21.5E-A	VC-318-D3.5-21.5E-A
Sample Date									10/23/2018	10/31/2018	10/31/2018	10/23/2018	10/31/2018	10/31/2018	10/23/2018	10/31/2018	10/31/2018	10/23/2018	11/01/2018	11/01/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1843846-08	L1844937-04	L1844937-04	L1843846-09	L1844937-05	L1844937-05	L1843846-10	L1844937-09	L1844937-09	L1843846-11	L1844937-10	L1844937-10
Sample Depth (bgs)									0 - 4.7 (ft)	0 - 4.7 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	4.7 - 21.5 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	0 - 3.7 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	3.7 - 21.5 (ft)	3.7 - 21.5 (ft)
									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg UPL	mg/kg UPL	ug/L UPL	mg/kg HARS	mg/kg HARS	ug/L HARS	mg/kg HARS	mg/kg HARS	ug/L HARS	mg/kg HARS	mg/kg HARS	ug/L HARS
Volatile Organic Compounds (mg/kg) (ug/L)																				
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00022 U	0.0002 U	0.16 U	0.0002 U	0.00016 U	0.16 U	0.0003 U	0.00026 U	0.16 U	0.00012 U	0.00016 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00022 U	0.0002 U	0.17 U	0.0002 U	0.00015 U	0.17 U	0.0003 U	0.00025 U	0.17 U	0.00012 U	0.00016 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00035 U	0.00032 U	0.14 U	0.00033 U	0.00025 U	0.14 U	0.00048 U	0.00041 U	0.14 U	0.0002 U	0.00025 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00019 U	0.00017 U	0.21 U	0.00018 U	0.00013 U	0.21 U	0.00026 U	0.00022 U	0.21 U	0.00011 U	0.00014 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00031 U	0.00028 U	0.17 U	0.00029 U	0.00022 U	0.17 U	0.00043 U	0.00036 U	0.17 U	0.00018 U	0.00022 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00042 U	0.00039 U	0.23 U	0.00039 U	0.0003 U	0.23 U	0.00058 U	0.00049 U	0.23 U	0.00024 U	0.0003 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00035 U	0.00033 U	0.22 U	0.00033 U	0.00025 U	0.22 U	0.00049 U	0.00042 U	0.22 U	0.0002 U	0.00026 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.0013 U	0.0012 U	0.35 U	0.0012 U	0.00093 U	0.35 U	0.0018 U	0.0015 U	0.35 U	0.00074 U	0.00094 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00036 U	0.00033 U	0.19 U [D]	0.00034 U	0.00026 U	0.19 U [D]	0.0005 U	0.00043 U	0.19 U [D]	0.00021 U	0.00026 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00019 U	0.00017 U	0.18 U	0.00018 U	0.00013 U	0.18 U	0.00026 U	0.00022 U	0.18 U	0.00011 U	0.00014 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00033 U	0.00031 U	0.13 U	0.00031 U	0.00024 U	0.13 U	0.00046 U	0.00039 U	0.13 U	0.00019 U	0.00024 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00016 U	0.00015 U	0.14 U	0.00015 U	0.00012 U	0.14 U	0.00023 U	0.00019 U	0.14 U	0.00009 U	0.00012 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00019 U	0.00018 U	0.19 U	0.00018 U	0.00014 U	0.19 U	0.00027 U	0.00023 U	0.19 U	0.00011 U	0.00014 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00022 U	0.0002 U	0.19 U	0.00021 U	0.00016 U	0.19 U	0.00031 U	0.00026 U	0.19 U	0.00013 U	0.00016 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.046 U	0.042 U	61 U	0.043 U	0.033 U	61 U	0.064 U	0.054 U	61 U	0.026 U	0.033 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0029 U	**0.051**	**3.8 J**	0.0027 U	**0.026**	1.9 U	0.004 U	**0.12**	**6.7**	0.0016 U	**0.0025 J**	1.9 U
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.0015 U	0.0014 U	0.52 U	0.0014 U	0.0011 U	0.52 U	0.0021 U	0.0018 U	**0.98 J**	0.00088 U	0.0011 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0017 U	0.0015 U	0.42 U	0.0016 U	0.0012 U	0.42 U	0.0023 U	0.002 U	0.42 U	0.00095 U	0.0012 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.04**	0.44 U	**32**	0.0059 U	**0.23**	**8.6**	**0.048**	**1.2**	**50**	**0.013**	**0.15**	1.5 U
Benzene	2	-	5	-	0.005	-	4	-	0.00022 U	0.0002 U	0.16 U	0.0002 U	0.00015 U	0.16 U	0.0003 U	0.00025 U	0.16 U	0.00012 U	0.00016 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00014 U	0.00013 U	0.19 U	0.00013 U	0.0001 U	0.19 U	0.0002 U	0.00017 U	0.19 U	0.00008 U	0.0001 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00032 U	0.0003 U	0.25 U	0.0003 U	0.00023 U	0.25 U	0.00044 U	0.00038 U	0.25 U	0.00018 U	0.00023 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00076 U	0.0007 U	0.26 U	0.00071 U	0.00054 U	0.26 U	0.001 U	0.00089 U	0.26 U	0.00043 U	0.00055 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	**0.0074 J**	0.0055 U	**0.77 J**	0.0056 U	0.0042 U	0.3 U	**0.016 J**	0.007 U	**1.1 J**	0.0034 U	0.0043 U	0.3 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.0003 U	0.00028 U	0.13 U	0.00028 U	0.00021 U	0.13 U	0.00042 U	0.00035 U	0.13 U	0.00017 U	0.00022 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00016 U	0.00015 U	0.18 U	0.00016 U	0.00012 U	0.18 U	0.00023 U	0.00019 U	0.18 U	0.00009 U	0.00012 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00027 U	0.00025 U	0.15 U	0.00025 U	0.00019 U	0.15 U	0.00037 U	0.00031 U	0.15 U	0.00015 U	0.00019 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00059 U	0.00054 U	0.13 U	0.00055 U	0.00042 U	0.13 U	0.00082 U	0.00069 U	0.13 U	0.00034 U	0.00043 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00018 U	**0.00033 J**	0.22 U	0.00017 U	**0.00014 J**	0.22 U	0.00025 U	**0.00048 J**	0.22 U	0.0001 U	0.00013 U	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.0012 U	0.0011 U	0.2 U	0.0011 U	0.00087 U	0.2 U	0.0017 U	0.0014 U	0.2 U	0.00069 U	0.00088 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00023 U	0.00021 U	0.19 U	0.00021 U	0.00016 U	0.19 U	0.00032 U	0.00027 U	0.19 U	0.00013 U	0.00016 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.0002 U	0.00019 U	0.14 U	0.00019 U	0.00015 U	0.14 U	0.00029 U	0.00024 U	0.14 U	0.00012 U	0.00015 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00071 U	0.00065 U	0.27 U	0.00066 U	0.0005 U	0.27 U	0.00098 U	0.00083 U	0.27 U	0.0004 U	0.00051 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00018 U	0.00017 U	0.15 U	0.00017 U	0.00013 U	0.15 U	0.00025 U	0.00021 U	0.15 U	0.0001 U	0.00013 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.0012 U	0.0011 U	0.24 U	0.0011 U	0.00085 U	0.24 U	0.0016 U	0.0014 U	0.24 U	0.00068 U	0.00086 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00018 U	0.00017 U	0.17 U	0.00017 U	0.00013 U	**0.18 J**	0.00026 U	0.00022 U	**0.19 J**	0.0001 U	0.00013 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00014 U	0.00013 U	**0.28 J**	0.00013 U	0.0001 U	0.19 U	0.0002 U	0.00017 U	0.19 U	0.00008 U	0.0001 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.0012 U	0.0011 U	0.23 U	0.0012 U	0.00088 U	0.23 U	0.0017 U	0.0014 U	0.23 U	0.0007 U	0.0009 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00078 U	0.00072 U	0.4 U	0.00074 U	0.00056 U	0.4 U	0.0011 U	0.00092 U	0.4 U	0.00045 U	0.00057 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00026 U	0.00024 U	0.17 U	0.00024 U	0.00019 U	0.17 U	0.00036 U	0.00031 U	0.17 U	0.00015 U	0.00019 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.003 U	0.0027 U	0.68 U	0.0028 U	0.0021 U	0.68 U	0.0041 U	0.0035 U	0.68 U	0.0017 U	0.0022 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00025 U	0.00024 U	0.36 U	0.00024 U	0.00018 U	0.36 U	0.00035 U	0.0003 U	0.36 U	0.00014 U	0.00018 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00025 U	0.00024 U	0.18 U	0.00024 U	0.00018 U	0.18 U	0.00035 U	0.0003 U	0.18 U	0.00014 U	0.00018 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.0007 U	0.00065 U	0.2 U	0.00066 U	0.0005 U	0.2 U	0.00098 U	0.00083 U	**0.33 J**	0.0004 U	0.00051 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00018 U	0.00016 U	0.16 U	0.00017 U	0.00013 U	0.16 U	0.00025 U	0.00021 U	0.16 U	0.0001 U	0.00013 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00035 U	0.00033 U	0.16 U	0.00033 U	0.00025 U	0.16 U	0.00049 U	0.00042 U	0.16 U	0.0002 U	0.00026 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00018 U	0.00016 U	0.18 U	0.00017 U	0.00013 U	0.18 U	0.00025 U	0.00021 U	0.18 U	0.0001 U	0.00013 U	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.0009 U	0.00083 U	0.16 U	0.00085 U	0.00065 U	0.16 U	0.0012 U	0.0011 U	0.16 U	0.00052 U	0.00066 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.0009 U	0.00083 U	0.15 U	0.00085 U	0.00064 U	0.15 U	0.0012 U	0.001 U	0.15 U	0.00051 U	0.00065 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00044 U	0.0004 U	0.07 U	0.00041 U	0.00031 U	0.07 U	0.00061 U	0.00051 U	0.07 U	0.00025 U	0.00032 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00038 U	0.00035 U	**0.4 J**	0.00036 U	0.00027 U	**0.36 J**	0.00053 U	0.00044 U	**0.73 J**	0.00022 U	0.00027 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.0474**	**0.05133**	**37.25**	ND	**0.25614**	**9.14**	**0.064**	**1.32048**	**60.03**	**0.013**	**0.1525**	-

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Chapel Hill									Chapel-Ambrose		
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**VC-320**	**VC-320**	**VC-320**	**VC-321**	**VC-321**	**VC-321**	**VC-323**	**VC-323**	**VC-323**	**VC-251**	**VC-251**	**VC-251**
Sample Name									VC-320	VC-320	VC-320	VC-321	VC-321	VC-321	VC-323	VC-323	VC-323	VC-251	VC-251	VC-251
Sample Date									VC-320-D0-19E	VC-320-D0-19E-A	VC-320-D0-19E-A	VC-321-D0-20.5E	VC-321-D0-20.5E-A	VC-321-D0-20.5E-A	VC-323-D0-22E	VC-323-D0-22E-A	VC-323-D0-22E-A	VC-251-D0-7.5E	VC-251-D0-7.5E-A	VC-251-D0-7.5E-A
Sample Type									10/23/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018	10/23/2018	11/01/2018	11/01/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1843846-12	L1844937-11	L1844937-11	L1843846-13	L1844937-12	L1844937-12	L1843846-14	L1844937-13	L1844937-13	L1843846-15	L1844937-06	L1844937-06
									0 - 19 (ft)	0 - 19 (ft)	0 - 19 (ft)	0 - 20.5 (ft)	0 - 20.5 (ft)	0 - 20.5 (ft)	0 - 22 (ft)	0 - 22 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
									Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
									HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																				
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00013 U	0.00019 U	0.16 U	0.00018 U	0.00016 U	0.16 U	0.00016 U	0.00019 U	0.16 U	0.00012 U	0.00017 U	**2.9**
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00013 U	0.00019 U	0.17 U	0.00018 U	0.00016 U	0.17 U	0.00016 U	0.00019 U	0.17 U	0.00012 U	0.00017 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00021 U	0.00031 U	0.14 U	0.00028 U	0.00026 U	0.14 U	0.00025 U	0.0003 U	0.14 U	0.00019 U	0.00027 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00011 U	0.00017 U	0.21 U	0.00015 U	0.00014 U	0.21 U	0.00014 U	0.00016 U	0.21 U	0.0001 U	0.00015 U	**1.6**
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00019 U	0.00028 U	0.17 U	0.00025 U	0.00023 U	0.17 U	0.00023 U	0.00027 U	0.17 U	0.00017 U	0.00024 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00025 U	0.00037 U	0.23 U	0.00034 U	0.00031 U	0.23 U	0.00031 U	0.00036 U	0.23 U	0.00023 U	0.00033 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00021 U	0.00032 U	0.22 U	0.00029 U	0.00026 U	0.22 U	0.00026 U	0.00031 U	0.22 U	0.00019 U	0.00028 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.00079 U	0.0012 U	0.35 U	0.0011 U	0.00097 U	0.35 U	0.00095 U	0.0011 U	0.35 U	0.00071 U	0.001 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00022 U	0.00032 U	0.19 U [D]	0.0003 U	0.00027 U	0.19 U [D]	0.00026 U	0.00031 U	0.19 U [D]	0.0002 U	0.00028 U	0.19 U [D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00011 U	0.00017 U	0.18 U	0.00015 U	0.00014 U	0.18 U	0.00014 U	0.00016 U	0.18 U	0.0001 U	0.00014 U	**0.34 J**
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.0002 U	0.0003 U	0.13 U	0.00027 U	0.00025 U	0.13 U	0.00024 U	0.00029 U	0.13 U	0.00018 U	0.00026 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00009 U	0.00014 U	0.14 U	0.00013 U	0.00012 U	0.14 U	0.00012 U	0.00014 U	0.14 U	0.00008 U	0.00013 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00012 U	0.00017 U	0.19 U	0.00016 U	0.00014 U	0.19 U	0.00014 U	0.00017 U	0.19 U	0.0001 U	0.00015 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00013 U	0.0002 U	0.19 U	0.00018 U	0.00017 U	0.19 U	0.00016 U	0.00019 U	0.19 U	0.00012 U	0.00017 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.028 U	0.041 U	61 U	0.037 U	0.034 U	61 U	0.033 U	0.039 U	61 U	0.025 U	0.036 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.0018 U	**0.042**	1.9 U	0.0024 U	**0.021**	1.9 U	0.0021 U	**0.02**	1.9 U	0.0016 U	**0.016**	1.9 U
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.00093 U	0.0014 U	0.52 U	0.0012 U	0.0012 U	0.52 U	0.0011 U	0.0013 U	0.52 U	0.00084 U	0.0012 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.001 U	0.0015 U	0.42 U	0.0014 U	0.0012 U	0.42 U	0.0012 U	0.0014 U	0.42 U	0.00091 U	0.0013 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.004 J**	0.34 U	**18**	**0.024**	**0.2**	**8.2**	**0.0091 J**	**0.19**	**8.1**	**0.017**	**0.15**	**15**
Benzene	2	-	5	-	0.005	-	4	-	0.00013 U	0.00019 U	0.16 U	0.00018 U	0.00016 U	0.16 U	0.00016 U	0.00019 U	0.16 U	0.00012 U	0.00017 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00008 U	0.00013 U	0.19 U	0.00012 U	0.00011 U	0.19 U	0.0001 U	0.00012 U	0.19 U	0.00007 U	0.00011 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00019 U	0.00028 U	0.25 U	0.00026 U	0.00024 U	0.25 U	0.00023 U	0.00028 U	0.25 U	0.00018 U	0.00025 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00046 U	0.00067 U	0.26 U	0.00062 U	0.00057 U	0.26 U	0.00055 U	0.00065 U	0.26 U	0.00041 U	0.00059 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	**0.0038 J**	0.0053 U	**0.53 J**	**0.0048 J**	0.0044 U	0.3 U	0.0043 U	0.0051 U	0.3 U	**0.007 J**	0.0046 U	0.3 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.00018 U	0.00027 U	0.13 U	0.00024 U	0.00022 U	0.13 U	0.00022 U	0.00026 U	0.13 U	0.00016 U	0.00023 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.0001 U	0.00015 U	0.18 U	0.00014 U	0.00012 U	0.18 U	0.00012 U	0.00014 U	0.18 U	0.00009 U	0.00013 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00016 U	0.00024 U	0.15 U	0.00022 U	0.0002 U	0.15 U	0.00019 U	0.00023 U	0.15 U	0.00015 U	0.00021 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.00036 U	0.00052 U	0.13 U	0.00048 U	0.00044 U	0.13 U	0.00043 U	0.00051 U	0.13 U	0.00032 U	0.00046 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00011 U	0.00016 U	0.22 U	0.00015 U	0.00014 U	0.22 U	0.00013 U	0.00016 U	0.22 U	0.0001 U	**0.0002 J**	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.00073 U	0.0011 U	0.2 U	0.00099 U	0.00091 U	0.2 U	0.00089 U	0.001 U	0.2 U	0.00066 U	0.00094 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00014 U	0.0002 U	0.19 U	0.00019 U	0.00017 U	0.19 U	0.00017 U	0.0002 U	0.19 U	0.00012 U	0.00018 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00012 U	0.00018 U	0.14 U	0.00017 U	0.00015 U	0.14 U	0.00015 U	0.00018 U	0.14 U	0.00011 U	0.00016 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00043 U	0.00063 U	0.27 U	0.00058 U	0.00053 U	0.27 U	0.00052 U	0.00061 U	0.27 U	0.00039 U	0.00055 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00011 U	0.00016 U	0.15 U	0.00015 U	0.00014 U	0.15 U	0.00013 U	0.00016 U	0.15 U	0.0001 U	0.00014 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.00072 U	0.0011 U	0.24 U	0.00097 U	0.00089 U	0.24 U	0.00087 U	0.001 U	0.24 U	0.00065 U	0.00093 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00011 U	0.00016 U	0.17 U	0.00015 U	0.00014 U	**0.64**	0.00013 U	0.00016 U	0.17 U	0.0001 U	0.00014 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00008 U	0.00013 U	**0.32 J**	0.00012 U	0.00011 U	**0.42 J**	0.0001 U	0.00012 U	0.19 U	0.00007 U	0.00011 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.00075 U	0.0011 U	0.23 U	0.001 U	0.00093 U	0.23 U	0.0009 U	0.0011 U	0.23 U	0.00068 U	0.00096 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00048 U	0.0007 U	0.4 U	0.00064 U	0.00059 U	0.4 U	0.00057 U	0.00068 U	0.4 U	0.00043 U	0.00061 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00016 U	0.00023 U	0.17 U	0.00021 U	0.0002 U	0.17 U	0.00019 U	0.00023 U	0.17 U	0.00014 U	0.0002 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.0018 U	0.0026 U	0.68 U	0.0024 U	0.0022 U	0.68 U	0.0022 U	0.0026 U	0.68 U	0.0016 U	0.0023 U	**0.99 J**
Styrene	90	-	260	-	3	-	2000	-	0.00015 U	0.00023 U	0.36 U	0.00021 U	0.00019 U	0.36 U	0.00019 U	0.00022 U	0.36 U	0.00014 U	0.0002 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00015 U	0.00023 U	0.18 U	0.00021 U	0.00019 U	0.18 U	0.00019 U	0.00022 U	0.18 U	0.00014 U	0.0002 U	**0.47 J**
Toluene	6300	-	91000	-	7	-	12000	-	0.00043 U	0.00063 U	0.2 U	0.00058 U	0.00053 U	0.2 U	0.00052 U	0.00061 U	0.2 U	0.00039 U	0.00055 U	**0.36 J**
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00011 U	0.00016 U	0.16 U	0.00014 U	0.00013 U	0.16 U	0.00013 U	0.00015 U	0.16 U	0.00009 U	0.00014 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00022 U	0.00032 U	0.16 U	0.00029 U	0.00027 U	0.16 U	0.00026 U	0.00031 U	0.16 U	0.00019 U	0.00028 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00011 U	0.00016 U	0.18 U	0.00014 U	0.00013 U	0.18 U	0.00013 U	0.00015 U	0.18 U	0.00009 U	0.00014 U	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.00055 U	0.0008 U	0.16 U	0.00074 U	0.00068 U	0.16 U	0.00066 U	0.00078 U	0.16 U	0.0005 U	0.0007 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.00055 U	0.0008 U	0.15 U	0.00074 U	0.00068 U	0.15 U	0.00066 U	0.00078 U	0.15 U	0.00049 U	0.0007 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.00026 U	0.00039 U	0.07 U	0.00036 U	0.00033 U	0.07 U	0.00032 U	0.00038 U	0.07 U	0.00024 U	0.00034 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00023 U	0.00034 U	0.33 U	0.00031 U	0.00028 U	**5.3**	0.00028 U	0.00033 U	0.33 U	0.00021 U	0.00029 U	**0.34 J**
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.0078**	**0.042**	**18.85**	**0.0288**	**0.221**	**14.56**	**0.0091**	**0.21**	**8.1**	**0.024**	**0.1662**	**22**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

									Chapel-Ambrose						Ambrose Channel			
Composite Group	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**VC-252**	**VC-252**	**VC-252**	**VC-253**	**VC-253**	**VC-253**	**COMP-S**	**COMP-S**	**COMP-S**	**COMP-S**
Location Name									VC-252	VC-252	VC-252	VC-253	VC-253	VC-253	COMP-S	COMP-S	VC-326	VC-327
Sample Name									VC-252-D0-7.5E	VC-252-D0-7.5E-A	VC-252-D0-7.5E-A	VC-253-D0-7.5E	VC-253-D0-7.5E-A	VC-253-D0-7.5E-A	COMP-S-D0-0-21E-A	COMP-S-D0-0-21E-A	VC-326-D0-21E	VC-327-D0.0-21.0E
Sample Date									10/26/2018	11/08/2018	11/08/2018	10/26/2018	11/07/2018	11/07/2018	10/31/2018	10/31/2018	10/25/2018	10/25/2018
Sample Type									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Sample ID									L1844234-03	L1846705-18	L1846705-18	L1844234-01	L1846705-20	L1846705-20	L1844937-02	L1844937-02	L1843846-02	L1843846-01
Sample Depth (bgs)									0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 21 (ft)
									Raw	Amended	SPLP	Raw	Amended	SPLP	Amended	SPLP	Raw	Raw
Proposed Disposal Facility									mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L	mg/kg	ug/L	mg/kg	mg/kg
									UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS
Volatile Organic Compounds (mg/kg) (ug/L)																		
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00015 U	0.00019 U	0.16 U	0.00018 U	0.00018 U	0.16 U	0.0002 U	0.16 U	0.00015 U	0.00016 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00015 U	0.00019 U	0.17 U	0.00018 U	0.00018 U	0.17 U	0.0002 U	0.17 U	0.00015 U	0.00016 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00024 U	0.00031 U	0.14 U	0.0003 U	0.00029 U	0.14 U	0.00032 U	0.14 U	0.00024 U	0.00025 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00013 U	0.00017 U	0.21 U	0.00016 U	0.00016 U	0.21 U	0.00018 U	0.21 U	0.00013 U	0.00014 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00021 U	0.00028 U	0.17 U	0.00026 U	0.00026 U	0.17 U	0.00029 U	0.17 U	0.00022 U	0.00022 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00028 U	0.00037 U	0.23 U	0.00036 U	0.00035 U	0.23 U	0.00039 U	0.23 U	0.00029 U	0.0003 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00024 U	0.00032 U	0.22 U	0.0003 U	0.00029 U	0.22 U	0.00033 U	0.22 U	0.00025 U	0.00026 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.00088 U	0.0012 U	0.35 U	0.0011 U	0.0011 U	0.35 U	0.0012 U	0.35 U	0.0009 U	0.00094 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00025 U	0.00032 U	0.19 U [D]	0.00031 U	0.0003 U	0.19 U [D]	0.00034 U	0.19 U [D]	0.00025 U	0.00026 U
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00013 U	0.00017 U	0.18 U	0.00016 U	0.00016 U	0.18 U	0.00017 U	0.18 U	0.00013 U	0.00014 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00023 U	0.0003 U	0.13 U	0.00028 U	0.00028 U	0.13 U	0.00031 U	0.13 U	0.00023 U	0.00024 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00011 U	0.00014 U	0.14 U	0.00014 U	0.00014 U	0.14 U	0.00015 U	0.14 U	0.00011 U	0.00012 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00013 U	0.00017 U	0.19 U	0.00016 U	0.00016 U	0.19 U	0.00018 U	0.19 U	0.00013 U	0.00014 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00015 U	0.0002 U	0.19 U	0.00019 U	0.00018 U	0.19 U	0.00021 U	0.19 U	0.00015 U	0.00016 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.031 U	0.041 U	61 U	0.039 U	0.038 U	61 U	0.042 U	61 U	0.032 U	0.033 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.002 U	**0.012**	1.9 U	0.0025 U	**0.0054 J**	1.9 U	**0.043**	1.9 U	0.002 U	0.0021 U
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.001 U	0.0014 U	0.52 U	0.0013 U	0.0013 U	0.52 U	0.0014 U	0.52 U	0.0011 U	0.0011 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0011 U	0.0015 U	0.42 U	0.0014 U	0.0014 U	0.42 U	0.0015 U	0.42 U	0.0012 U	0.0012 U
Acetone	70000	-	NA	-	19	-	120000	-	0.0042 U	**0.14**	**6.7**	**0.0058 J**	**0.063**	**4.4 J**	0.36 U	**14**	**0.029**	**0.012**
Benzene	2	-	5	-	0.005	-	4	-	0.00015 U	0.00019 U	0.16 U	0.00018 U	0.00018 U	0.16 U	0.0002 U	0.16 U	0.00015 U	0.00016 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00009 U	0.00013 U	0.19 U	0.00012 U	0.00012 U	0.19 U	0.00013 U	0.19 U	0.00009 U	0.0001 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00022 U	0.00028 U	0.25 U	0.00027 U	0.00027 U	0.25 U	0.0003 U	0.25 U	0.00022 U	0.00023 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	**0.051** [C]	0.00067 U	0.26 U	0.00064 U	0.00063 U	0.26 U	0.0007 U	0.26 U	0.00052 U	0.00054 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.004 U	0.0053 U	0.3 U	0.005 U	0.0049 U	0.3 U	0.0055 U	**0.47 J**	0.0041 U	0.0043 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.0002 U	0.00027 U	0.13 U	0.00026 U	0.00025 U	0.13 U	0.00028 U	0.13 U	0.00021 U	0.00022 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	**0.00049**	0.00015 U	0.18 U	0.00014 U	0.00014 U	0.18 U	0.00015 U	0.18 U	0.00011 U	0.00012 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00018 U	0.00024 U	0.15 U	0.00023 U	0.00022 U	0.15 U	0.00025 U	0.15 U	0.00018 U	0.00019 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.0004 U	0.00052 U	0.13 U	0.0005 U	0.00049 U	0.13 U	0.00055 U	0.13 U	0.00041 U	0.00042 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	**0.00057 J**	**0.00016 J**	0.22 U	0.00016 U	**0.00017 J**	0.22 U	**0.00026 J**	0.22 U	0.00013 U	0.00013 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	**0.016**	0.0011 U	0.2 U	0.001 U	0.001 U	0.2 U	0.0011 U	0.2 U	0.00084 U	0.00088 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00015 U	0.0002 U	0.19 U	0.00019 U	0.00019 U	0.19 U	0.00021 U	0.19 U	0.00016 U	0.00016 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00014 U	0.00018 U	0.14 U	0.00018 U	0.00017 U	0.14 U	0.00019 U	0.14 U	0.00014 U	0.00015 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00048 U	0.00063 U	0.27 U	0.0006 U	0.00059 U	0.27 U	0.00066 U	0.27 U	0.00049 U	0.00051 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00012 U	0.00016 U	0.15 U	0.00016 U	0.00015 U	0.15 U	0.00017 U	0.15 U	0.00013 U	0.00013 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.00081 U	0.001 U	0.24 U	0.001 U	0.00099 U	0.24 U	0.0011 U	0.24 U	0.00083 U	0.00086 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	**0.00077 J**	0.00016 U	0.17 U	0.00016 U	0.00015 U	0.17 U	0.00017 U	0.17 U	0.00013 U	0.00013 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00009 U	0.00013 U	0.19 U	0.00012 U	0.00012 U	0.19 U	0.00013 U	0.19 U	0.00009 U	0.0001 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.00084 U	0.0011 U	0.23 U	0.001 U	0.001 U	0.23 U	0.0011 U	0.23 U	0.00086 U	0.00089 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00053 U	0.0007 U	0.4 U	0.00067 U	0.00065 U	0.4 U	0.00073 U	0.4 U	0.00054 U	0.00057 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	**0.0013 J**	0.00023 U	0.17 U	0.00022 U	0.00022 U	0.17 U	0.00024 U	0.17 U	0.00018 U	0.00019 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.002 U	0.0026 U	0.68 U	0.0025 U	0.0025 U	0.68 U	0.0028 U	0.68 U	0.0021 U	0.0022 U
Styrene	90	-	260	-	3	-	2000	-	0.00017 U	0.00023 U	0.36 U	0.00022 U	0.00021 U	0.36 U	0.00024 U	0.36 U	0.00018 U	0.00018 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00017 U	0.00023 U	**0.4 J**	0.00022 U	0.00021 U	0.18 U	0.00024 U	0.18 U	0.00018 U	0.00018 U
Toluene	6300	-	91000	-	7	-	12000	-	**0.0019**	0.00063 U	0.2 U	0.0006 U	0.00059 U	0.2 U	0.00066 U	0.2 U	0.00049 U	0.00051 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00012 U	0.00016 U	0.16 U	0.00015 U	0.00015 U	0.16 U	0.00016 U	0.16 U	0.00012 U	0.00013 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00024 U	0.00032 U	0.16 U	0.0003 U	0.0003 U	0.16 U	0.00033 U	0.16 U	0.00025 U	0.00026 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00012 U	0.00016 U	0.18 U	0.00015 U	0.00015 U	**0.39 J**	0.00016 U	0.18 U	0.00012 U	0.00013 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.00062 U	0.0008 U	0.16 U	0.00077 U	0.00075 U	0.16 U	0.00084 U	0.16 U	0.00063 U	0.00065 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.00061 U	0.0008 U	0.15 U	0.00077 U	0.00075 U	0.15 U	0.00084 U	0.15 U	0.00063 U	0.00065 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.0003 U	0.00039 U	0.07 U	0.00037 U	0.00036 U	0.07 U	0.0004 U	0.07 U	0.0003 U	0.00031 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	**0.0049**	0.00034 U	0.33 U	0.00032 U	0.00032 U	0.33 U	0.00035 U	0.33 U	0.00026 U	0.00027 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.07693**	**0.15216**	**7.1**	**0.0058**	**0.06857**	**4.79**	**0.04326**	**14.47**	**0.029**	**0.012**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-2
SUMMARY OF RAW AND AMENDED SEDIMENT QUALITY DATA - VOCs
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ

Composite Group									Ambrose Channel				East of Ambrose					
Location Name	**Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Non-Residential Direct Contact Soil Remediation Standard 2017 (mg/kg)**	**# of Detected Exceedances**	**Impact to Groundwater Soil Screening Level 2013 (mg/kg)**	**# of Detected Exceedances**	**Default Leachate Criteria for Class II Groundwater 2013 (ug/L)**	**# of Detected Exceedances**	**COMP-T**	**COMP-T**	**COMP-T**	**COMP-T**	**VC-255**	**VC-255**	**VC-255**	**VC-256**	**VC-256**	**VC-256**
Sample Name									COMP-T	COMP-T	VC-328	VC-329	VC-255	VC-255	VC-255	VC-256	VC-256	VC-256
Sample Date									COMP-T-D0-22.5E-A	COMP-T-D0-22.5E-A	VC-328-D0-22.5E	VC-329-D0-20.9E	VC-255-D0-7.5E	VC-255-D0-7.5E-A	VC-255-D0-7.5E-A	VC-256-D0-7.5E	VC-256-D0-7.5E-A	VC-256-D0-7.5E-A
Sample Type									10/31/2018	10/31/2018	10/25/2018	10/25/2018	10/26/2018	11/02/2018	11/02/2018	10/26/2018	11/02/2018	11/02/2018
Lab Sample ID									Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Depth (bgs)									L1844937-03	L1844937-03	L1843846-04	L1843846-03	L1843846-20	L1844937-07	L1844937-07	L1843846-18	L1844937-08	L1844937-08
									0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 20.9 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
									Amended	SPLP	Raw	Raw	Raw	Amended	SPLP	Raw	Amended	SPLP
Proposed Disposal Facility									mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	ug/L
									HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg) (ug/L)																		
1,1,1-Trichloroethane	160000	-	NA	-	0.3	-	600	-	0.00015 U	0.16 U	0.00015 U	0.00016 U	0.00017 U	0.00019 U	0.16 U	0.00018 U	0.00019 U	0.16 U
1,1,2,2-Tetrachloroethane	1	-	3	-	0.007	-	20	-	0.00015 U	0.17 U	0.00015 U	0.00016 U	0.00017 U	0.00019 U	0.17 U	0.00017 U	0.00019 U	0.17 U
1,1,2-Trichloroethane	2	-	6	-	0.02	-	60	-	0.00024 U	0.14 U	0.00024 U	0.00026 U	0.00027 U	0.0003 U	0.14 U	0.00028 U	0.0003 U	0.14 U
1,1-Dichloroethane	8	-	24	-	0.2	-	1000	-	0.00013 U	0.21 U	0.00013 U	0.00014 U	0.00014 U	0.00016 U	0.21 U	0.00015 U	0.00016 U	0.21 U
1,1-Dichloroethene	11	-	150	-	0.008	-	20	-	0.00021 U	0.17 U	0.00021 U	0.00024 U	0.00024 U	0.00027 U	0.17 U	0.00025 U	0.00027 U	0.17 U
1,2,3-Trichlorobenzene	NA	-	NA	-	NA	-	NA	-	0.00028 U	0.23 U	0.00029 U	0.00032 U	0.00032 U	0.00037 U	0.23 U	0.00034 U	0.00036 U	0.23 U
1,2,4-Trichlorobenzene	73	-	820	-	0.7	-	180	-	0.00024 U	0.22 U	0.00024 U	0.00027 U	0.00027 U	0.00031 U	0.22 U	0.00028 U	0.0003 U	0.22 U
1,2-Dibromo-3-chloropropane (DBCP)	0.08	-	0.2	-	0.005	-	0.4	-	0.00088 U	0.35 U	0.00089 U	0.00099 U	0.001 U	0.0011 U	0.35 U	0.001 U	0.0011 U	0.35 U
1,2-Dibromoethane (Ethylene Dibromide)	0.008	-	0.04	-	0.005	-	0.03	-	0.00025 U	0.19 U[D]	0.00025 U	0.00028 U	0.00028 U	0.00032 U	0.19 U[D]	0.00029 U	0.00031 U	0.19 U[D]
1,2-Dichlorobenzene	5300	-	59000	-	17	-	12000	-	0.00013 U	0.18 U	0.00013 U	0.00014 U	0.00014 U	0.00016 U	0.18 U	0.00015 U	0.00016 U	0.18 U
1,2-Dichloroethane	0.9	-	3	-	0.005	-	6	-	0.00023 U	0.13 U	0.00023 U	0.00026 U	0.00026 U	0.00029 U	0.13 U	0.00027 U	0.00029 U	0.13 U
1,2-Dichloropropane	2	-	5	-	0.005	-	10	-	0.00011 U	0.14 U	0.00011 U	0.00012 U	0.00012 U	0.00014 U	0.14 U	0.00013 U	0.00014 U	0.14 U
1,3-Dichlorobenzene	5300	-	59000	-	19	-	12000	-	0.00013 U	0.19 U	0.00013 U	0.00015 U	0.00015 U	0.00017 U	0.19 U	0.00016 U	0.00017 U	0.19 U
1,4-Dichlorobenzene	5	-	13	-	2	-	1500	-	0.00015 U	0.19 U	0.00015 U	0.00017 U	0.00017 U	0.0002 U	0.19 U	0.00018 U	0.00019 U	0.19 U
1,4-Dioxane	NA	-	NA	-	NA	-	NA	-	0.031 U	61 U	0.031 U	0.035 U	0.035 U	0.04 U	61 U	0.037 U	0.039 U	61 U
2-Butanone (Methyl Ethyl Ketone)	3100	-	44000	-	0.9	-	6000	-	0.002 U	1.9 U	0.002 U	0.0022 U	0.0022 U	**0.0068 J**	1.9 U	0.0023 U	**0.012**	1.9 U
2-Hexanone	NA	-	NA	-	NA	-	NA	-	0.001 U	0.52 U	0.001 U	0.0012 U	0.0012 U	0.0014 U	0.52 U	0.0012 U	0.0013 U	0.52 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	-	NA	-	NA	-	NA	-	0.0011 U	0.42 U	0.0011 U	0.0013 U	0.0013 U	0.0015 U	0.42 U	0.0013 U	0.0014 U	0.42 U
Acetone	70000	-	NA	-	19	-	120000	-	**0.017**	1.5 U	**0.019**	**0.0084 J**	**0.011**	**0.072**	**5.8**	0.005 U	**0.11**	**4.8 J**
Benzene	2	-	5	-	0.005	-	4	-	0.00015 U	0.16 U	0.00015 U	0.00016 U	0.00017 U	0.00019 U	0.16 U	0.00017 U	0.00019 U	0.16 U
Bromodichloromethane	1	-	3	-	0.005	-	12	-	0.00009 U	0.19 U	0.00009 U	0.00011 U	0.00011 U	0.00012 U	0.19 U	0.00011 U	0.00012 U	0.19 U
Bromoform	81	-	280	-	0.03	-	80	-	0.00022 U	0.25 U	0.00022 U	0.00024 U	0.00025 U	0.00028 U	0.25 U	0.00026 U	0.00028 U	0.25 U
Bromomethane (Methyl Bromide)	25	-	59	-	0.04	1	200	-	0.00051 U	0.26 U	0.00052 U	0.00058 U	0.00058 U	0.00066 U	0.26 U	0.00061 U	0.00065 U	0.26 U
Carbon disulfide	7800	-	110000	-	6	-	14000	-	0.004 U	0.3 U	0.0041 U	0.0045 U	**0.006 J**	0.0052 U	0.3 U	0.0048 U	0.0051 U	0.3 U
Carbon tetrachloride	2	-	4	-	0.005	-	8	-	0.0002 U	0.13 U	0.00021 U	0.00023 U	0.00023 U	0.00026 U	0.13 U	0.00024 U	0.00026 U	0.13 U
Chlorobenzene	510	-	7400	-	0.6	-	1000	-	0.00011 U	0.18 U	0.00011 U	0.00013 U	0.00013 U	0.00014 U	0.18 U	0.00013 U	0.00014 U	0.18 U
Chlorobromomethane	NA	-	NA	-	NA	-	NA	-	0.00018 U	0.15 U	0.00018 U	0.0002 U	0.0002 U	0.00023 U	0.15 U	0.00022 U	0.00023 U	0.15 U
Chloroethane	220	-	1100	-	NA	-	NA	-	0.0004 U	0.13 U	0.0004 U	0.00045 U	0.00045 U	0.00052 U	0.13 U	0.00047 U	0.00051 U	0.13 U
Chloroform (Trichloromethane)	0.6	-	2	-	0.4	-	1400	-	0.00012 U	0.22 U	0.00012 U	0.00014 U	0.00014 U	0.00016 U	0.22 U	0.00015 U	**0.00017 J**	0.22 U
Chloromethane (Methyl Chloride)	4	-	12	-	NA	-	NA	-	0.00082 U	0.2 U	0.00084 U	0.00092 U	0.00093 U	0.0011 U	0.2 U	0.00098 U	0.001 U	0.2 U
cis-1,2-Dichloroethene	230	-	560	-	0.3	-	1400	-	0.00016 U	0.19 U	0.00016 U	0.00017 U	0.00018 U	0.0002 U	0.19 U	0.00018 U	0.0002 U	0.19 U
cis-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00014 U	0.14 U	0.00014 U	0.00016 U	0.00016 U	0.00018 U	0.14 U	0.00017 U	0.00018 U	0.14 U
Cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00048 U	0.27 U	0.00049 U	0.00054 U	0.00054 U	0.00062 U	0.27 U	0.00057 U	0.00061 U	0.27 U
Dibromochloromethane	3	-	8	-	0.005	-	8	-	0.00012 U	0.15 U	0.00012 U	0.00014 U	0.00014 U	0.00016 U	0.15 U	0.00015 U	0.00016 U	0.15 U
Dichlorodifluoromethane (CFC-12)	490	-	230000	-	39	-	20000	-	0.00081 U	0.24 U	0.00082 U	0.00091 U	0.00092 U	0.001 U	0.24 U	0.00096 U	0.001 U	0.24 U
Ethylbenzene	7800	-	110000	-	13	-	14000	-	0.00012 U	**0.86**	0.00013 U	0.00014 U	0.00014 U	0.00016 U	0.17 U	0.00015 U	0.00016 U	0.17 U
Isopropylbenzene (Cumene)	NA	-	NA	-	NA	-	NA	-	0.00009 U	**0.41 J**	0.00009 U	0.00011 U	0.00011 U	0.00012 U	0.19 U	0.00011 U	0.00012 U	0.19 U
Methyl acetate	78000	-	NA	-	22	-	140000	-	0.00084 U	0.23 U	0.00085 U	0.00094 U	0.00095 U	0.0011 U	0.23 U	0.001 U	0.0011 U	0.23 U
Methyl cyclohexane	NA	-	NA	-	NA	-	NA	-	0.00053 U	0.4 U	0.00054 U	0.0006 U	0.0006 U	0.00069 U	0.4 U	0.00063 U	0.00068 U	0.4 U
Methyl Tert Butyl Ether	110	-	320	-	0.2	-	1400	-	0.00018 U	0.17 U	0.00018 U	0.0002 U	0.0002 U	0.00023 U	0.17 U	0.00021 U	0.00022 U	0.17 U
Methylene chloride	46	-	230	-	0.01	5	60	-	0.002 U	0.68 U	0.002 U	0.0023 U	0.0023 U	0.0026 U	0.68 U	0.0024 U	0.0026 U	0.68 U
Styrene	90	-	260	-	3	-	2000	-	0.00017 U	0.36 U	0.00018 U	0.00019 U	0.0002 U	0.00022 U	0.36 U	0.0002 U	0.00022 U	0.36 U
Tetrachloroethene	43	-	1500	-	0.005	-	8	-	0.00017 U	0.18 U	0.00018 U	0.00019 U	0.0002 U	0.00022 U	0.18 U	0.0002 U	0.00022 U	0.18 U
Toluene	6300	-	91000	-	7	-	12000	-	0.00048 U	0.2 U	0.00049 U	0.00054 U	0.00054 U	0.00062 U	0.2 U	0.00057 U	0.00061 U	0.2 U
trans-1,2-Dichloroethene	300	-	720	-	0.6	-	2000	-	0.00012 U	0.16 U	0.00012 U	0.00014 U	0.00014 U	0.00016 U	0.16 U	0.00014 U	0.00015 U	0.16 U
trans-1,3-Dichloropropene	NA	-	NA	-	NA	-	NA	-	0.00024 U	0.16 U	0.00024 U	0.00027 U	0.00027 U	0.00031 U	0.16 U	0.00029 U	0.00031 U	0.16 U
Trichloroethene	3	-	10	-	0.01	-	20	-	0.00012 U	0.18 U	0.00012 U	0.00014 U	0.00014 U	0.00016 U	0.18 U	0.00014 U	0.00015 U	0.18 U
Trichlorofluoromethane (CFC-11)	23000	-	340000	-	34	-	40000	-	0.00062 U	0.16 U	0.00062 U	0.00069 U	0.0007 U	0.0008 U	0.16 U	0.00073 U	0.00078 U	0.16 U
Trifluorotrichloroethane (Freon 113)	NA	-	NA	-	NA	-	NA	-	0.00061 U	0.15 U	0.00062 U	0.00069 U	0.00069 U	0.00079 U	0.15 U	0.00073 U	0.00078 U	0.15 U
Vinyl chloride	0.7	-	2	-	0.005	-	2	-	0.0003 U	0.07 U	0.0003 U	0.00033 U	0.00034 U	0.00038 U	0.07 U	0.00035 U	0.00038 U	0.07 U
Xylene (total)	12000	-	170000	-	19	-	20000	-	0.00026 U	**5.9**	0.00026 U	0.00029 U	0.00029 U	0.00033 U	0.33 U	0.0003 U	0.00033 U	0.33 U
SUM of Volatile Organic Compounds	NA	-	NA	-	NA	-	NA	-	**0.017**	**7.17**	**0.019**	**0.0084**	**0.017**	**0.0788**	**5.8**	ND	**0.12217**	**4.8**

NOTES & ABBREVIATIONS:

Amended: Samples that were amended with approximately 8% Portland cement (units are in mg/kg).
B: Analyte detected in the associated method blank.
J: Result is less than the reporting limit but greater than the method detection limit.
J-: Value is estimated with a potential low bias.
mg/Kg: milligram per killogram.
R: Value is rejected.
Raw: Bulk sediment samples (units are in mg/kg).
SPLP: Synthetic Precipitation Leaching Procedure (units are in ug/L).
U: Not detected; number is the method detection limit.
ug/L: microgram per liter.

- Detected values are bold.
- Shaded values exceed the listed New Jersey criteria.
[A] - Residential Direct Contact Soil Remediation Standard
[B] - Non-Residential Direct Contact Soil Remediation Standard
[C] - Impact to Groundwater Soil Screening Level
[D] - Default Leachate Criteria for Class II Groundwater

TABLE H-3
SUMMARY OF SEDIMENT QUALITY DATA
- DIOXINS AND FURANS
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

				Nearshore										Raritan Bay					
Analyte	CAS	C or N	TEF	COMP-A	VC-208	VC-211	VC-214	DEP-1	COMP-M	DEP-6	DEP-6								
				COMP-A-D0-15E	VC-208-D0-7.5E	VC-211-D0-7.5E	VC-214-D0-7.5E	DEP-1-D0-7.5E	COMP-M-D0-27E	DEP-6-D0-13.5E	DEP-6-D13.5-27E								
				11/13/2018	11/12/2018	11/12/2018	10/29/2018	10/31/2018	10/20/2018	10/22/2018	10/22/2018								
				14273001	14268002	14268001	14217001	14227001	14165001	14169007	14169008								
				Raw	Raw	Raw	Raw	Raw	Raw	Raw	Raw								
				0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 27 (ft)	0 - 14 (ft)	14 - 27 (ft)								
Dioxins and Furans (pg/g)				Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ
2,3,7,8-TCDD	1746-01-6	c	1	0.993 U	0.50	4.83	4.8	0.993 U	0.50	5.51	5.5	0.981 U	0.49	0.999 U	0.50	4.51	4.5	1 U	0.50
1,2,3,7,8-PeCDD	40321-76-4	--	0.5	4.96 U	1.2	4.98 U	1.2	4.96 U	1.2	4.94 U	1.2	4.91 U	1.2	5 U	1.3	4.99 U	1.2	5 U	1.3
1,2,3,4,7,8-HxCDD	39227-28-6	--	0.1	4.96 U	0.25	4.98 U	0.25	4.96 U	0.25	4.94 U	0.25	4.91 U	0.25	5 U	0.25	4.99 U	0.25	5 U	0.25
1,2,3,6,7,8-HxCDD	57653-85-7	--	0.1	4.96 U	0.25	27.2	2.7	4.96 U	0.25	22.1	2.2	4.91 U	0.25	5 U	0.25	11.2	1.1	5 U	0.25
1,2,3,7,8,9-HxCDD	19408-74-3	--	0.1	4.96 U	0.25	14.3	1.4	4.96 U	0.25	9.94	0.99	4.91 U	0.25	5 U	0.25	4.99 U	0.25	5 U	0.25
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	0.01	8.47	0.085	105	1.1	4.96 U	0.025	83.3	0.83	4.91 U	0.025	33	0.33	96.8	0.97	5 U	0.025
OCDD	3268-87-9	--	0.001	238	0.24	1,640	1.6	75.7	0.08	1,200	1.2	72.6	0.073	755	0.76	916	0.92	104	0.10
2,3,7,8-TCDF	51207-31-9	--	0.1	0.993 U	0.050	9.62	0.96	0.993 U	0.050	8.59	0.86	0.981 U	0.049	0.999 U	0.050	6.85	0.69	1 U	0.050
1,2,3,7,8-PeCDF	57117-41-6	--	0.05	4.96 U	0.12	4.98 U	0.12	4.96 U	0.12	4.94 U	0.12	4.91 U	0.12	5 U	0.13	4.99 U	0.12	5 U	0.13
2,3,4,7,8-PeCDF	57117-31-4	--	0.5	4.96 U	1.2	5.46	2.7	4.96 U	1.2	4.94 U	1.2	4.91 U	1.2	5 U	1.3	4.99 U	1.2	5 U	1.3
1,2,3,4,7,8-HxCDF	70648-26-9	--	0.1	4.96 U	0.25	9.36	0.94	4.96 U	0.25	7.19	0.72	4.91 U	0.25	5 U	0.25	5.03	0.50	5 U	0.25
1,2,3,6,7,8-HxCDF	57117-44-9	--	0.1	4.96 U	0.25	4.98 U	0.25	4.96 U	0.25	4.94 U	0.25	4.91 U	0.25	5 U	0.25	4.99 U	0.25	5 U	0.25
1,2,3,7,8,9-HxCDF	72918-21-9	--	0.1	4.96 U	0.25	4.98 U	0.25	4.96 U	0.25	4.94 U	0.25	4.91 U	0.25	5 U	0.25	4.99 U	0.25	5 U	0.25
2,3,4,6,7,8-HxCDF	60851-34-5	--	0.1	4.96 U	0.25	4.98 U	0.25	4.96 U	0.25	4.94 U	0.25	4.91 U	0.25	5 U	0.25	4.99 U	0.25	5 U	0.25
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	0.01	4.96 U	0.025	44.9	0.45	4.96 U	0.025	38	0.38	4.91 U	0.025	5 U	0.025	34.7	0.35	5 U	0.025
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	0.01	4.96 U	0.025	4.98 U	0.025	4.96 U	0.025	4.94 U	0.025	4.91 U	0.025	5 U	0.025	4.99 U	0.025	5 U	0.025
OCDF	39001-02-0	--	0.001	9.93 U	0.0050	59.9	0.060	9.93 U	0.0050	50.1	0.050	9.81 U	0.0049	9.99 U	0.0050	48.1	0.048	10 U	0.0050
TEQ (ND=0.5):					5.3		19.2		5.0		16.4		5.0		6.1		13.0		5.1

2,3,7,8 TCDD Soil Screening Levels Residential Direct Contact Soil Remediation Standard - 2017	pg/g **50**

NOTES & ABBREVIATIONS:

Dioxins / Furans contribution to toxicity equivalence (TEQ) concentrations calculated for 2,3,7,8-TCDD using Toxic Equivalency Factors (TEF) provided in Attachment F of the New Jersey Administrative Code 7:7

For non-detects (<MDL), a value of half the MDL has been used in the contribution to TEQ calculations

C or N: Carcinogen/NonCarcinogen taken from Oakridge National Laboratory under an Interagency Agreement with EPA.

pg/g: picogram per gram

Raw: Bulk sediment samples

U: Indicates the analyte was analyzed for but not detected. Value is the reporting limit (# U)

TABLE H-3
SUMMARY OF SEDIMENT QUALITY DATA
- DIOXINS AND FURANS
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

				Raritan Bay																Ambrose Channel			
Analyte	CAS	C or N	TEF	COMP-N		COMP-N		DEP-7		DEP-7		VC-235		VC-235		COMP-O		COMP-O		COMP-S			
				COMP-N-D0-4E		COMP-N-D4-22.5E		DEP-7-D0-15E		DEP-7-D15-20E		VC-235-D0-13.7E		VC-235-D13.7-24E		COMP-O-D0-2E		COMP-O-D2-25E		COMP-S-D0-0-21E			
				10/22/2018		10/22/2018		10/22/2018		10/22/2018		10/22/2018		10/22/2018		10/22/2018		10/22/2018		10/25/2018			
				14169001		14169002		14169005		14169006		14169003		14169004		14169009		14169010		14196001			
				Raw		Raw		Raw		Raw		Raw		Raw		Raw		Raw		Raw			
				0 - 4 (ft)		4 - 22.5 (ft)		0 - 15.1 (ft)		15.1 - 20 (ft)		0 - 15.3 (ft)		15.3 - 24 (ft)		0 - 3 (ft)		3 - 25 (ft)		0 - 21 (ft)			
Dioxins and Furans (pg/g)				Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ	Lab Result	Portion of TEQ		
2,3,7,8-TCDD	1746-01-6	c	1	1.83	**1.8**	0.997 U	**0.50**	0.999 U	**0.50**	0.999 U	**0.50**	5.76	**5.8**	0.989 U	**0.49**	2.8	**2.8**	0.998 U	**0.50**	0.996 U	**0.50**		
1,2,3,7,8-PeCDD	40321-76-4	--	0.5	4.97 U	**1.2**	4.99 U	**1.2**	4.99 U	**1.2**	5 U	**1.3**	4.98 U	**1.2**	4.94 U	**1.2**	5 U	**1.3**	4.99 U	**1.2**	4.98 U	**1.2**		
1,2,3,4,7,8-HxCDD	39227-28-6	--	0.1	4.97 U	**0.25**	4.99 U	**0.25**	4.99 U	**0.25**	5 U	**0.25**	4.98 U	**0.25**	4.94 U	**0.25**	5 U	**0.25**	4.99 U	**0.25**	4.98 U	**0.25**		
1,2,3,6,7,8-HxCDD	57653-85-7	--	0.1	4.97 U	**0.25**	4.99 U	**0.25**	8.66	**0.87**	5 U	**0.25**	13.7	**1.4**	4.94 U	**0.25**	5.15	**0.52**	4.99 U	**0.25**	4.98 U	**0.25**		
1,2,3,7,8,9-HxCDD	19408-74-3	--	0.1	4.97 U	**0.25**	4.99 U	**0.25**	4.99 U	**0.25**	5 U	**0.25**	7.75	**0.78**	4.94 U	**0.25**	5 U	**0.25**	4.99 U	**0.25**	4.98 U	**0.25**		
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	0.01	35.6	**0.36**	4.99 U	**0.025**	68.7	**0.69**	6.92	**0.069**	136	**1.4**	21.9	**0.22**	89.2	**0.89**	19.1	**0.19**	4.98 U	**0.025**		
OCDD	3268-87-9	--	0.001	394	**0.39**	369	**0.37**	766	**0.77**	215	**0.22**	1,440	**1.4**	598	**0.60**	1,240	**1.2**	523	**0.52**	79.2	**0.079**		
2,3,7,8-TCDF	51207-31-9	--	0.1	2.32	**0.23**	0.997 U	**0.050**	4.23	**0.42**	0.999 U	**0.050**	10	**1.0**	0.989 U	**0.049**	7.25	**0.73**	0.998 U	**0.050**	0.996 U	**0.050**		
1,2,3,7,8-PeCDF	57117-41-6	--	0.05	4.97 U	**0.12**	4.99 U	**0.12**	4.99 U	**0.12**	5 U	**0.13**	4.98 U	**0.12**	4.94 U	**0.12**	5 U	**0.13**	4.99 U	**0.12**	4.98 U	**0.12**		
2,3,4,7,8-PeCDF	57117-31-4	--	0.5	4.97 U	**1.2**	4.99 U	**1.2**	4.99 U	**1.2**	5 U	**1.3**	5.6	**2.8**	4.94 U	**1.2**	5 U	**1.3**	4.99 U	**1.2**	4.98 U	**1.2**		
1,2,3,4,7,8-HxCDF	70648-26-9	--	0.1	4.97 U	**0.25**	4.99 U	**0.25**	4.99 U	**0.25**	5 U	**0.25**	6.75	**0.68**	4.94 U	**0.25**	5 U	**0.25**	4.99 U	**0.25**	4.98 U	**0.25**		
1,2,3,6,7,8-HxCDF	57117-44-9	--	0.1	4.97 U	**0.25**	4.99 U	**0.25**	4.99 U	**0.25**	5 U	**0.25**	4.98 U	**0.25**	4.94 U	**0.25**	5 U	**0.25**	4.99 U	**0.25**	4.98 U	**0.25**		
1,2,3,7,8,9-HxCDF	72918-21-9	--	0.1	4.97 U	**0.25**	4.99 U	**0.25**	4.99 U	**0.25**	5 U	**0.25**	4.98 U	**0.25**	4.94 U	**0.25**	5 U	**0.25**	4.99 U	**0.25**	4.98 U	**0.25**		
2,3,4,6,7,8-HxCDF	60851-34-5	--	0.1	4.97 U	**0.25**	4.99 U	**0.25**	4.99 U	**0.25**	5 U	**0.25**	4.98 U	**0.25**	4.94 U	**0.25**	5 U	**0.25**	4.99 U	**0.25**	4.98 U	**0.25**		
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	0.01	14.5	**0.15**	4.99 U	**0.025**	24.9	**0.25**	5 U	**0.025**	47.5	**0.48**	4.94 U	**0.025**	31.7	**0.32**	4.99 U	**0.025**	4.98 U	**0.025**		
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	0.01	4.97 U	**0.025**	4.99 U	**0.025**	4.99 U	**0.025**	5 U	**0.025**	4.98 U	**0.025**	4.94 U	**0.025**	5 U	**0.025**	4.99 U	**0.025**	4.98 U	**0.025**		
OCDF	39001-02-0	--	0.001	15.9	**0.016**	9.97 U	**0.0050**	34.8	**0.035**	9.99 U	**0.0050**	67	**0.067**	9.89 U	**0.0049**	39.4	**0.039**	9.98 U	**0.0050**	9.96 U	**0.0050**		
TEQ (ND=0.5):					**7.3**		**5.4**		**7.7**		**5.3**		**18.1**		**5.7**		**10.7**		**5.7**		**5.1**		

2,3,7,8 TCDD Soil Screening Levels Residential Direct Contact Soil Remediation Standard - 2017	pg/g **50**

NOTES & ABBREVIATIONS:

Dioxins / Furans contribution to toxicity equivalence (TEQ) concentrations calculated for 2,3,7,8-TCDD using Toxic Equivalency Factors (TEF) provided in Attachment F of the New Jersey Administrative Code 7:7

For non-detects (<MDL), a value of half the MDL has been used in the contribution to TEQ calculations

C or N: Carcinogen/NonCarcinogen taken from Oakridge National Laboratory under an Interagency Agreement with EPA.

pg/g: picogram per gram

Raw: Bulk sediment samples

U: Indicates the analyte was analyzed for but not detected. Value is the reporting limit (# U)

TABLE H-4
SUMMARY OF SEDIMENT AND AMENDED SEDIMENT QUALITY DATA
- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Nearshore												Nearshore-Raritan					
Composite Group	COMP-A	COMP-A	COMP-A	COMP-A	VC-208	VC-208	VC-211	VC-211	VC-214	VC-214	DEP-1	DEP-1	VC-301	VC-301	VC-303	VC-303	VC-304	VC-304
Location Name	COMP-A	COMP-A	VC-204	VC-205	VC-208	VC-208	VC-211	VC-211	VC-214	VC-214	DEP-1	DEP-1	VC-301	VC-301	VC-303	VC-303	VC-304	VC-304
Sample Name	COMP-A-D0-15E	COMP-A-D0-15E-A	VC-204-D0-14E	VC-205-D0-15E	VC-208-D0-7.5E	VC-208-D0-7.5E-A	VC-211-D0-7.5E	VC-211-D0-7.5E-A	VC-214-D0-7.5E	VC-214-D0-7.5E-A	DEP-1-D0-7.5E	DEP-1-D0-7.5E-A	VC-301-REV-D0-7.5E	VC-301-REV-D0-7.5E-A	VC-303-D0-7.5E	VC-303-D0-7.5E-A	VC-304-D0-7.5E	VC-304-D0-7.5E-A
Sample Date	11/13/2018	11/21/2018	11/12/2018	11/13/2018	11/12/2018	11/21/2018	11/12/2018	11/21/2018	10/29/2018	11/14/2018	10/31/2018	11/15/2018	10/30/2018	11/15/2018	10/31/2018	11/15/2018	10/29/2018	11/14/2018
Lab Sample ID	L1846405-02	L1847850-03	L1846346-03	L1846405-01	L1846346-02	L1847850-02	L1846346-01	L1847850-01	L1844234-35	L1846705-09	L1844690-06	L1846902-01	L1844690-01	L1846902-05	L1844690-07	L1846902-06	L1844234-37	L1846705-21
Sample Depth (bgs)	0 - 15 (ft)	0 - 15 (ft)	0 - 14 (ft)	0 - 15 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type	Raw	Amended	Raw	Raw	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended
Proposed Disposal Site	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS
Volatile Organic Compounds (mg/kg)																		
Total TICs	-	0.003 J	0.004 J	NR	0.029 J	0.01 J	0.007 J	0.003 J	0.77 J	4.18 J	0.009 J	NR	0.01 J	0.004 J	0.008 J	0.005 J	0.018 J	0.443 J
Semi-Volatile Organic Compounds (mg/kg)																		
Total TICs	9.18 J	6.2 J	-	-	5.13 J	14.8 J	5.72 J	4.68 J	23.8 J	39.6 J	6.06 J	14.6 J	15.8 J	19.8 J	12.7 J	20.2 J	2.9 J	53.3 J

ABBREVIATIONS:
-: Not Analyzed.
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J: Result is less than the reporting limit but greater than the method detection limit.
mg/Kg: milligram per killogram.
N: Presumptively present.
NR: No TICs reported.
Raw: Bulk sediment samples (units are in mg/kg)

TABLE H-4
SUMMARY OF SEDIMENT AND AMENDED SEDIMENT QUALITY DAT/
- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Nearshore-Raritan																		
Composite Group	DEP-3	DEP-3	DEP-4	DEP-4	DEP-5	DEP-5	VC-216	VC-216	VC-217	VC-217	VC-218	VC-218	COMP-G	COMP-G	COMP-G	COMP-G	COMP-G	VC-222	VC-222
Location Name	DEP-3	DEP-3	DEP-4	DEP-4	DEP-5	DEP-5	VC-216	VC-216	VC-217	VC-217	VC-218	VC-218	COMP-G	COMP-G	VC-219	VC-220	VC-221	VC-222	VC-222
Sample Name	DEP-3-D0-7.5E	DEP-3-D0-7.5E-A	DEP-4-REV-D0-7.5E	DEP-4-REV-D0-7.5E-A	DEP-5-REV-D0-7.5E	DEP-5-REV-D0-7.5E-A	VC-216-D0-7.5E	VC-216-D0-7.5E-A	VC-217-D0-7.5E	VC-217-D0-7.5E-A	VC-218-D0-7.5E	VC-218-D0-7.5E-A	COMP-G-D0-7.5E	COMP-G-D0-7.5E-A	VC-219-D0-7.5E	VC-220-D0-7.5E	VC-221-D0-7.5E	VC-222-D0-7.5E	VC-222-D0-7.5E-A
Sample Date	10/31/2018	11/15/2018	10/30/2018	11/15/2018	10/30/2018	11/15/2018	10/29/2018	11/14/2018	10/29/2018	11/14/2018	10/29/2018	11/09/2018	10/28/2018	11/08/2018	10/28/2018	10/28/2018	10/28/2018	10/28/2018	11/08/2018
Lab Sample ID	L1844690-05	L1846902-02	L1844690-02	L1846902-03	L1844690-03	L1846902-04	L1844234-33	L1846705-10	L1844234-32	L1846705-11	L1844234-30	L1846705-12	L1844234-28	L1846705-01	L1844234-27	L1844234-26	L1844234-25	L1844234-24	L1846705-13
Sample Depth (bgs)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Raw	Amended
Proposed Disposal Site	HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg)																			
Total TICs	0.005 J	0.007 J	0.024 J	0.008 J	0.006 J	0.006 J	0.005 J	1.12 J	0.007 J	1.14 J	0.045 J	1.35 J	NR	1.47 J	0.006 J	0.009 J	0.006 J	NR	0.835 J
Semi-Volatile Organic Compounds (mg/kg)																			
Total TICs	12.4 J	23.7 J	13.6 J	23.7 J	10.3 J	32.8 J	3.05 J	33.6 J	2.84 J	26.6 J	6.22 J	26.8 J	4.15 J	29.2 J	-	-	-	8.02 J	28.2 J

ABBREVIATIONS:
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mg/Kg: milligram per killogram.
N: Presumptively present.
NR: No TICs reported.
Raw: Bulk sediment samples (units are in mg/kg)

TABLE H-4
SUMMARY OF SEDIMENT AND AMENDED SEDIMENT QUALITY DATA
- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Nearshore-Raritan																Raritan Bay		
Composite Group	VC-223	VC-223	COMP-I	COMP-I	COMP-I	COMP-I	COMP-I	COMP-J	COMP-J	VC-311	VC-311	COMP-K	COMP-K	COMP-K	COMP-K	COMP-K	COMP-K	COMP-L	COMP-L	COMP-L
Location Name	VC-223	VC-223	COMP-I	COMP-I	VC-307	VC-308	VC-309	COMP-J	COMP-J	VC-311	VC-311	COMP-K	COMP-K	COMP-K	VC-312	VC-313	VC-314	COMP-L	COMP-L	VC-225
Sample Name	VC-223-D0-7.5E	VC-223-D0-7.5E-A	COMP-I-D0-7.5E	COMP-I-D0-7.5E-A	VC-307-D0-7.5E	VC-308-D0-7.5E	VC-309-D0-7.5E	COMP-J-D0-7.5E	COMP-J-D0-7.5E-A	VC-311-D0-7.5E	VC-311-D0-7.5E-A	COMP-K-D0-7.5E	COMP-K-D0-7.5E-A	VC-312-D0-7.5E	VC-313-D0-7.5E	VC-314-D0-7.5E	COMP-L-D0-20.5E	COMP-L-D0-20.5E-A	VC-225-D0-7.5E
Sample Date	10/28/2018	11/08/2018	10/28/2018	11/09/2018	10/28/2018	10/28/2018	10/28/2018	10/28/2018	11/09/2018	10/28/2018	11/09/2018	10/28/2018	11/09/2018	10/28/2018	10/28/2018	10/28/2018	10/20/2018	10/26/2018	10/20/2018
Lab Sample ID	L1844234-23	L1846705-14	L1844234-22	L1846705-02	L1844234-19	L1844234-18	L1844234-17	L1844234-21	L1846705-04	L1844234-14	L1846705-03	L1844234-20	L1846705-05	L1844234-13	L1844234-12	L1844234-11	L1843139-04	L1844053-01	L1843139-01
Sample Depth (bgs)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 7.5 to 20.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Raw	Amended	Raw
Proposed Disposal Site	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg)																			
Total TICs	NR	0.422 J	NR	NR	0.005 J	0.008 J	NR	NR	0.5 J	NR	0.01 J	NR	0.002 J	0.003 J	NR	NR	NR	2.73 J	0.006 J
Semi-Volatile Organic Compounds (mg/kg)																			
Total TICs	6.53 J	19.4 J	3.91 J	27.4 J	-	-	-	0.672 J	27.6 J	NR	3.97 J	NR	4.78 J	-	-	-	1.39 J	23.3 J	-

ABBREVIATIONS:
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Raw: Bulk sediment samples (units are in mg/kg)

TABLE H-4
SUMMARY OF SEDIMENT AND AMENDED SEDIMENT QUALITY DATA
- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Raritan Bay																
Composite Group	COMP-L	COMP-L	VC-229	VC-229	COMP-M	COMP-M	COMP-M	COMP-M	COMP-M	DEP-6	DEP-6	DEP-6	DEP-6	COMP-N	COMP-N	COMP-N	COMP-N
Location Name	VC-227	VC-228	VC-229	VC-229	COMP-M	COMP-M	VC-230	VC-230A	VC-230B	DEP-6	DEP-6	DEP-6	DEP-6	COMP-N	COMP-N	COMP-N	COMP-N
Sample Name	VC-227-D0-14E	VC-228-D0-20.5E	VC-229-D0-28E	VC-229-D0-28E-A	COMP-M-D0-27E	COMP-M-D0-27E-A	VC-230-D0-27E	VC-230A-D0-27E	VC-230B-D0-27E	DEP-6-D0-13.5E	DEP-6-D0-13.5E-A	DEP-6-D13.5-27E	DEP-6-D13.5-27E-A	COMP-N-D0-4E	COMP-N-D0-4E-A	COMP-N-D4-22.5E	COMP-N-D4-22.5E-A
Sample Date	10/20/2018	10/20/2018	10/20/2018	10/28/2018	10/20/2018	10/26/2018	10/20/2018	10/20/2018	10/20/2018	10/22/2018	10/27/2018	10/22/2018	10/27/2018	10/22/2018	10/26/2018	10/22/2018	10/27/2018
Lab Sample ID	L1843139-02	L1843139-03	L1843139-09	L1844053-03	L1843139-08	L1844053-02	L1843139-06	L1843139-05	L1843139-07	L1843140-13	L1844053-10	L1843140-14	L1844053-11	L1843140-07	L1844053-04	L1843140-08	L1844053-05
Sample Depth (bgs)	0 - 14 (ft)	0 - 20.5 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 27 (ft)	0 - 14 (ft)	0 - 14 (ft)	14 - 27 (ft)	14 - 27 (ft)	0 - 4 (ft)	0 - 4 (ft)	4 - 22.5 (ft)	4 - 22.5 (ft)
Sediment Sample Type	Raw	Raw	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended
Proposed Disposal Site	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg)																	
Total TICs	0.007 J	0.002 J	NR	1.41 J	NR	1.96 J	0.026 J	0.006 J	0.006 J	0.027 J	9.67 J	0.004 J	2.73 J	NR	5.3 J	NR	0.885 J
Semi-Volatile Organic Compounds (mg/kg)																	
Total TICs	-	-	1.35 J	23.4 J	1.15 J	13.5 J	-	-	-	4.79 J	29.1 J	5.97 J	15.3 J	16.5 J	32 J	1.05 J	18.2 J

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mg/Kg: milligram per killogram.
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NR: No TICs reported.
Raw: Bulk sediment samples (units are in mg/kg)

TABLE H-4
SUMMARY OF SEDIMENT AND AMENDED SEDIMENT QUALITY DAT/
- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Raritan Bay																	
Composite Group	COMP-N	COMP-N	COMP-N	DEP-7	DEP-7	DEP-7	DEP-7	VC-235	VC-235	VC-235	VC-235	COMP-O	COMP-O	COMP-O	COMP-O	COMP-O	COMP-O	COMP-O
Location Name	VC-232	VC-232A	VC-232B	DEP-7	DEP-7	DEP-7	DEP-7	VC-235	VC-235	VC-235	VC-235	COMP-O	COMP-O	VC-237	VC-237A	VC-237B	COMP-O	COMP-O
Sample Name	VC-232-D0-6E	VC-232A-D0-4E	VC-232B-D0-4E	DEP-7-D0-15E	DEP-7-D0-15E-A	DEP-7-D15-20E	DEP-7-D15-20E-A	VC-235-D0-13.7E	VC-235-D0-13.7E-A	VC-235-D13.7-24E	VC-235-D13.7-24E-A	COMP-O-D0-2E	COMP-O-D0-2E-A	VC-237-D0-3E	VC-237A-D0-4E	VC-237B-D0-2E	COMP-O-D2-25E	COMP-O-D2-25E-A
Sample Date	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/27/2018	10/22/2018	10/28/2018	10/22/2018	10/28/2018	10/22/2018	10/28/2018	10/22/2018	10/27/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/27/2018
Lab Sample ID	L1843140-03	L1843140-05	L1843140-01	L1843140-11	L1844053-08	L1843140-12	L1844053-09	L1843140-09	L1844053-06	L1843140-10	L1844053-07	L1843140-15	L1844053-12	L1843140-17	L1843140-21	L1843140-19	L1843140-16	L1844053-13
Sample Depth (bgs)	0 - 6.6 (ft)	0 - 4.1 (ft)	0 - 4.8 (ft)	0 - 15 (ft)	0 - 15 (ft)	15 - 20 (ft)	15 - 20 (ft)	0 - 15.3 (ft)	0 - 15.3 (ft)	15.3 - 24 (ft)	15.3 - 24 (ft)	0 - 3 (ft)	0 - 3 (ft)	0 - 3 (ft)	0 - 4.3 (ft)	0 - 2 (ft)	3 - 25 (ft)	3 - 25 (ft)
Sediment Sample Type	Raw	Raw	Raw	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Raw	Amended
Proposed Disposal Site	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg)																		
Total TICs	0.019 J	0.029 J	0.013 J	0.034 J	7.63 J	NR	0.796 J	0.006 J	9.04 J	NR	1.37 J	NR	0.24 J	0.004 J	0.006 J	NR	NR	1.95 J
Semi-Volatile Organic Compounds (mg/kg)																		
Total TICs	-	-	-	3.04 J	44.6 J	1.17 J	18.9 J	4.77 J	52.8 J	0.822 J	20 J	4.12 J	50.3 J	-	-	-	7.93 J	19.6 J

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N: Presumptively present.
NR: No TICs reported.
Raw: Bulk sediment samples (units are in mg/kg)

TABLE H-4
SUMMARY OF SEDIMENT AND AMENDED SEDIMENT QUALITY DATA
- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Raritan Bay										Raritan-Chapel								
Composite Group	COMP-O	COMP-O	COMP-O	VC-238	VC-238	COMP-P	COMP-P	COMP-P	COMP-P	COMP-P	COMP-Q	COMP-Q	COMP-Q	COMP-Q	COMP-Q	VC-244	VC-244	VC-245	VC-245
Location Name	VC-237	VC-237A	VC-237B	VC-238	VC-238	COMP-P	COMP-P	VC-239	VC-240	VC-242	COMP-Q	COMP-Q	VC-315	VC-316	VC-317	VC-244	VC-244	VC-245	VC-245
Sample Name	VC-237-D3-25E	VC-237A-D4-25E	VC-237B-D2-25E	VC-238-D0-28E	VC-238-D0-28E-A	COMP-P-D0-23E	COMP-P-D0-23E-A	VC-239-D0-23E	VC-240-D0-16E	VC-242-D0-9E	COMP-Q-D0-10.5E	COMP-Q-D0-10.5E-A	VC-315-D0-10.5E	VC-316-D0-10.5E	VC-317-D0-10.5E	VC-244-D0-4E	VC-244-D0-4E-A	VC-245-D0-4E	VC-245-D0-4E-A
Sample Date	10/22/2018	10/22/2018	10/22/2018	10/23/2018	10/27/2018	10/23/2018	10/27/2018	10/23/2018	10/23/2018	10/23/2018	10/29/2018	11/14/2018	10/29/2018	10/29/2018	10/29/2018	10/26/2018	11/07/2018	10/26/2018	11/07/2018
Lab Sample ID	L1843140-18	L1843140-22	L1843140-20	L1843140-28	L1844053-19	L1843140-27	L1844053-18	L1843140-26	L1843140-25	L1843140-24	L1844234-41	L1846705-06	L1844234-38	L1844234-39	L1844234-40	L1844234-08	L1846705-15	L1844234-06	L1846705-16
Sample Depth (bgs)	3 - 25 (ft)	4.3 - 25 (ft)	2 - 25 (ft)	0 - 28 (ft)	0 - 28 (ft)	0 - 9 to 23 (ft)	0 - 9 to 23 (ft)	0 - 23 (ft)	0 - 16 (ft)	0 - 9 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 10.5 (ft)	0 - 5 (ft)	0 - 5 (ft)	0 - 4.9 (ft)	0 - 4.9 (ft)
Sediment Sample Type	Raw	Raw	Raw	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Raw	Amended	Raw	Raw	Raw	Raw	Amended	Raw	Amended
Proposed Disposal Site	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg)																			
Total TICs	0.005 J	NR	NR	0.006 J	0.47 J	-	6.93 J	NR	0.004 J	NR	-	0.004 J	0.007 J	0.002 J	0.004 J	0.007 J	0.094 J	-	0.161 J
Semi-Volatile Organic Compounds (mg/kg)																			
Total TICs	-	-	-	7.19 J	20 J	4.44 J	18.2 J	-	-	-	NR	11.2 J	-	-	-	1.85 J	18.3 J	3.6 J	43.9 J

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Raw: Bulk sediment samples (units are in mg/kg)

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- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Raritan-Chapel											Chapel Hill							
Composite Group	VC-246	VC-246	COMP-R	COMP-R	VC-244	VC-245	VC-246	VC-247	VC-247	VC-247	VC-247	VC-318	VC-318	VC-318	VC-318	VC-320	VC-320	VC-321	VC-321
Location Name	VC-246	VC-246	COMP-R	COMP-R	VC-244	VC-245	VC-246	VC-247	VC-247	VC-247	VC-247	VC-318	VC-318	VC-318	VC-318	VC-320	VC-320	VC-321	VC-321
Sample Name	VC-246-D0-4E	VC-246-D0-4E-A	COMP-R-D4-10.5EE	COMP-R-D4-10.5E-A	VC-244-D4-10.5E	VC-245-D4-10.5E	VC-246-D4-10.5E	VC-247-D0-4E	VC-247-D0-4E-A	VC-247-D4-21.5E	VC-247-D4-21.5E-A	VC-318-D0-3.5E	VC-318-D0-3.5E-A	VC-318-D3.5-21.5E	VC-318-D3.5-21.5E-A	VC-320-D0-19E	VC-320-D0-19E-A	VC-321-D0-20.5E	VC-321-D0-20.5E-A
Sample Date	10/26/2018	11/07/2018	10/26/2018	11/07/2018	10/26/2018	10/26/2018	10/26/2018	10/23/2018	10/31/2018	10/31/2018	10/31/2018	10/23/2018	10/31/2018	10/23/2018	11/01/2018	10/23/2018	11/01/2018	10/23/2018	11/01/2018
Lab Sample ID	L1844234-04	L1846705-17	L1844234-10	L1846705-07	L1844234-09	L1844234-07	L1844234-05	L1843846-08	L1844937-04	L1843846-09	L1844937-05	L1843846-10	L1844937-09	L1843846-11	L1844937-10	L1843846-12	L1844937-11	L1843846-13	L1844937-12
Sample Depth (bgs)	0 - 4.8 (ft)	0 - 4.8 (ft)	4.9 - 10.5 (ft)	4.9 - 10.5 (ft)	5 - 10.5 (ft)	4.9 - 10.5 (ft)	4.8 - 10.5 (ft)	0 - 4.7 (ft)	0 - 4.7 (ft)	4.7 - 21.5 (ft)	4.7 - 21.5 (ft)	0 - 3.7 (ft)	0 - 3.7 (ft)	3.7 - 21.5 (ft)	3.7 - 21.5 (ft)	0 - 19 (ft)	0 - 19 (ft)	0 - 20.5 (ft)	0 - 20.5 (ft)
Sediment Sample Type	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended
Proposed Disposal Site	UPL	UPL	HARS	HARS	HARS	HARS	HARS	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Volatile Organic Compounds (mg/kg)																			
Total TICs	0.004 J	0.301 J	-	0.007 J	NR	NR	0.003 J	NR	1.36 J	NR	0.034 J	0.088 J	2.09 J	0.003 J	0.047 J	NR	0.875 J	0.003 J	0.019 J
Semi-Volatile Organic Compounds (mg/kg)																			
Total TICs	5.11 J	39.2 J	NR	4.86 J	-	-	-	6.9 J	9.26 J	NR	3.65 J	3.32 J	23.2 J	NR	3.04 J	4.01 J	10 J	1.06 J	5.01 J

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NR: No TICs reported.
Raw: Bulk sediment samples (units are in mg/kg)

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- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	Chapel Hill		Chapel-Ambrose						Ambrose Channel							
Composite Group	VC-323	VC-323	VC-251	VC-251	VC-252	VC-252	VC-253	VC-253	COMP-S	COMP-S	COMP-S	COMP-S	COMP-T	COMP-T	COMP-T	COMP-T
Location Name	VC-323	VC-323	VC-251	VC-251	VC-252	VC-252	VC-253	VC-253	COMP-S	COMP-S	VC-326	VC-327	COMP-T	COMP-T	VC-328	VC-329
Sample Name	VC-323-D0-22E	VC-323-D0-22E-A	VC-251-D0-7.5E	VC-251-D0-7.5E-A	VC-252-D0-7.5E	VC-252-D0-7.5E-A	VC-253-D0-7.5E	VC-253-D0-7.5E-A	COMP-S-D0-0-21E	COMP-S-D0-0-21E-A	VC-326-D0-21E	VC-327-D0.0-21.0E	COMP-T-D0-22.5E	COMP-T-D0-22.5E-A	VC-328-D0-22.5E	VC-329-D0-20.9E
Sample Date	10/23/2018	11/01/2018	10/23/2018	11/01/2018	10/26/2018	11/08/2018	10/26/2018	11/07/2018	10/25/2018	10/31/2018	10/25/2018	10/25/2018	10/25/2018	10/31/2018	10/25/2018	10/25/2018
Lab Sample ID	L1843846-14	L1844937-13	L1843846-15	L1844937-06	L1844234-03	L1846705-18	L1844234-01	L1846705-20	L1843846-05	L1844937-02	L1843846-02	L1843846-01	L1843846-06	L1844937-03	L1843846-04	L1843846-03
Sample Depth (bgs)	0 - 22 (ft)	0 - 22 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 21 (ft)	0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 22.5 (ft)	0 - 20.9 (ft)
Sediment Sample Type	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Amended	Raw	Raw	Raw	Amended	Raw	Raw
Proposed Disposal Site	HARS	HARS	UPL	UPL	UPL	UPL	UPL	UPL	HARS	HARS	HARS	HARS	HARS	HARS	HARS	HARS
Volatile Organic Compounds (mg/kg)																
Total TICs	NR	0.022 J	NR	0.012 J	0.038 J	NR	0.003 J	0.003 J	-	1.68 J	0.003 J	0.005 J	-	0.018 J	0.003 J	0.003 J
Semi-Volatile Organic Compounds (mg/kg)																
Total TICs	NR	12.5 J	0.294 J	5.64 J	NR	7.19 J	NR	6.58 J	1.8 J	4.67 J	-	-	NR	3.43 J	-	-

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N: Presumptively present.
NR: No TICs reported.
Raw: Bulk sediment samples (units are in mg/kg)

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- TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
WILLIAMS NE SUPPLY ENHANCEMENT PROJECT
OFFSHORE NY/NJ
FILE NO. 132614

Location Group	East of Ambrose			
Composite Group	VC-255	VC-255	VC-256	VC-256
Location Name	VC-255	VC-255	VC-256	VC-256
Sample Name	VC-255-D0-7.5E	VC-255-D0-7.5E-A	VC-256-D0-7.5E	VC-256-D0-7.5E-A
Sample Date	10/26/2018	11/02/2018	10/26/2018	11/02/2018
Lab Sample ID	L1843846-20	L1844937-07	L1843846-18	L1844937-08
Sample Depth (bgs)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)	0 - 7.5 (ft)
Sediment Sample Type	Raw	Amended	Amended	Amended
Proposed Disposal Site	UPL	UPL	UPL	UPL
Volatile Organic Compounds (mg/kg)				
Total TICs	0.007 J	0.037 J	NR	0.032 J
Semi-Volatile Organic Compounds (mg/kg)				
Total TICs	NR	2.8 J	NR	3.56 J

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