

C.T. MALE ASSOCIATES

Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.

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October 11, 2021

Revised October 20, 2021

Mr. William Bennett, Professional Engineer 1
NYSDEC - Division of Environmental Remediation
625 Broadway

Albany, NY 12533-7014

VIA EMAIL: William.bennett@dec.ny.gov

**RE: Remedial Investigation Work Plan (Sediment/Sludge Modification)
Mobile Media Inc., NYSDEC Site No: C336093
Town of Crawford, Orange County
C.T. Male Project No: 19.9347**

Dear Mr. Bennett:

This letter work plan describes the scope of work proposed to complete the sludge/sediment investigation portion of the Remedial Investigation Work Plan (RIWP) prepared by C.T. Male Associates (C.T. Male) in May 2021 on behalf of the Participant, Mobile Media, Inc., for the NYSDEC Site No. C336093 and approved by the New York State Department of Environmental Conservation (NYSDEC) on July 23, 2021. This sludge/sediment portion of the RIWP has been prepared to address sampling of two (2) suspect underground tanks identified during an underground utility investigation conducted by New York Leak Detection of Jamesville, New York on July 26 & 27, 2021. The investigation will be performed in accordance with the NYSDEC Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10, May 3, 2010). Methodology, quality assurance/quality control, health and safety (including community air monitoring) and citizen participation activities will be implemented in accordance with the C.T. Male Draft RIWP.

Background

The Site is located at 175 Kelly Avenue, Pine Bush, Orange County, New York 12566. The Site consists of one tax parcel which encompasses approximately 0.48 acres of land known on the Orange County Tax Map as S.B.L. 6-8-3. The coordinates for the approximate center of the Site are 41° 36' 23.9034" latitude and -74° 18' 3.33" longitude. The approximate Site boundaries are depicted on Figure 1, Sludge/Sediment Sample Locations.

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This Site features a single structure where Mobile Media Inc. operated a small commercial manufacturing facility, making specialty high density shelving for the retail industry. Mobile Media Inc. has since relocated its operations to a facility in Ellenville, NY. The building is currently used as the Mobile Media Inc. offices and as a warehouse for a tire distributor.

Southwest of and directly across Kelly Avenue from the Site, there is a small parking lot that is also owned by Mobile Media Inc. This parcel, which is not part of the BCP Site, is covered by parking lot and is sparsely wooded with trees and landscaping.

On July 26 and July 27, 2021, C.T. Male mobilized an underground utility subcontractor, New York Leak Detection (NYLD) of Jamesville, New York, to the site to conduct a visual inspection of the subsurface. The inspection was conducted to locate underground utilities and / or structures. NYLD utilized a Noggin ground penetrating radar (GPR) system, a Sonde/Locatable Rodder and a RD8100 cable, pipe and RF locator to identify and mark underground utilities and anomalies in the subsurface. In addition to underground utilities, this investigation identified two (2) tanks: one suspected septic tank and one suspected abandoned storage tank.

This supplement to the RIWP includes details related to our proposed scope of work relative to sampling the contents of the two (2) tanks, sample methodology, quality assurance and quality control plan, health and safety, air monitoring and reporting.

Scope of Work

The scope work is proposed to complete a preliminary underground storage tank investigation. The results of the investigation will be used to inform and adapt or adjust the proposed field investigation.

The following work will be implemented during this phase of the remedial investigation:

- Collection of sediment/sludge samples from the inside of the tanks,
- Laboratory analysis of the samples collected, and
- A brief summary report to the NYSDEC.

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Collection of sediment/sludge samples from inside of the tanks

Figure 1 shows the approximate location of the tanks and our proposed sampling locations. There do not appear to be access restraints toward sampling the northern most tank. Based on images included in NYLD report, the southernmost tank is apparently constructed of precast concrete. The tank cleanout access, which is situated on the eastern side of the tank, has no cover. As such, soil, rock and other debris has fallen into the eastern side of tank rendering sludge/sediment in that area inaccessible. As such, we intend to collect a sludge/sediment sample from the western portion of the tank. In order to maintain the integrity of the tank's floor, C.T. Male will mobilize a subcontractor to core through the top of the tank utilizing a core drill. C.T. Male will utilize a bailer to collect sludge samples and/or a hand corer to collect sediment samples as detailed in the sampling methodology included in the attachment "SOP: Sediment, sludge and sewage sampling" (refer to sections 5.2 and 5.1.1 respectively). At the conclusion of sampling activities, our subcontractor will patch the core hole with concrete.

Samples will be shipped to a NY ELAP certified laboratory under standard chain-of-custody protocol for the Total Compound List of Volatile Organic Compound (VOC) via US EPA Method 8260D (including 1,4-dioxane) and per-and polyfluoroalkyl substances (PFAS) via US EPA Method 537.1.

Quality Assurance/Quality Control

Sludge/sediment samples will be collected in accordance with the Quality Assurance Project Plan (QAPP) included as Appendix B of the RIWP. The laboratory will report sample results on a standard turn-around time. Based on the preliminary nature of the subject investigation, no Data Usability Summary Report (DUSR) will be prepared.

Health and Safety

All work at the Site will be completed in accordance with the Health and Safety Plan (HASP) included in Appendix C of the RIWP.

Air Monitoring and Daily Reporting

Ground-intrusive sampling activities are not planned, therefore, a Community Air Monitoring Plan (CAMP), will not be required. Daily reports will be sent to the NYSDOH and NYSDEC Project Manager via email. Daily reports will include a Site

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figure depicting Work Zones, activities, representative photos of work performed, and wind direction.

Reporting

The findings of the soil vapor investigation will be presented in a sampling report and submitted to NYSDEC and NYSDOH for approval. We will review the results with NYSDEC and NYSDOH, especially if the findings may alter future remedial investigations.

Please contact me or Jim McIver with any questions, and if further information is needed. You can reach us at: (845) 454-4400 or k.garbarino@ctmale.com or j.mciver@ctmale.com.

Sincerely,

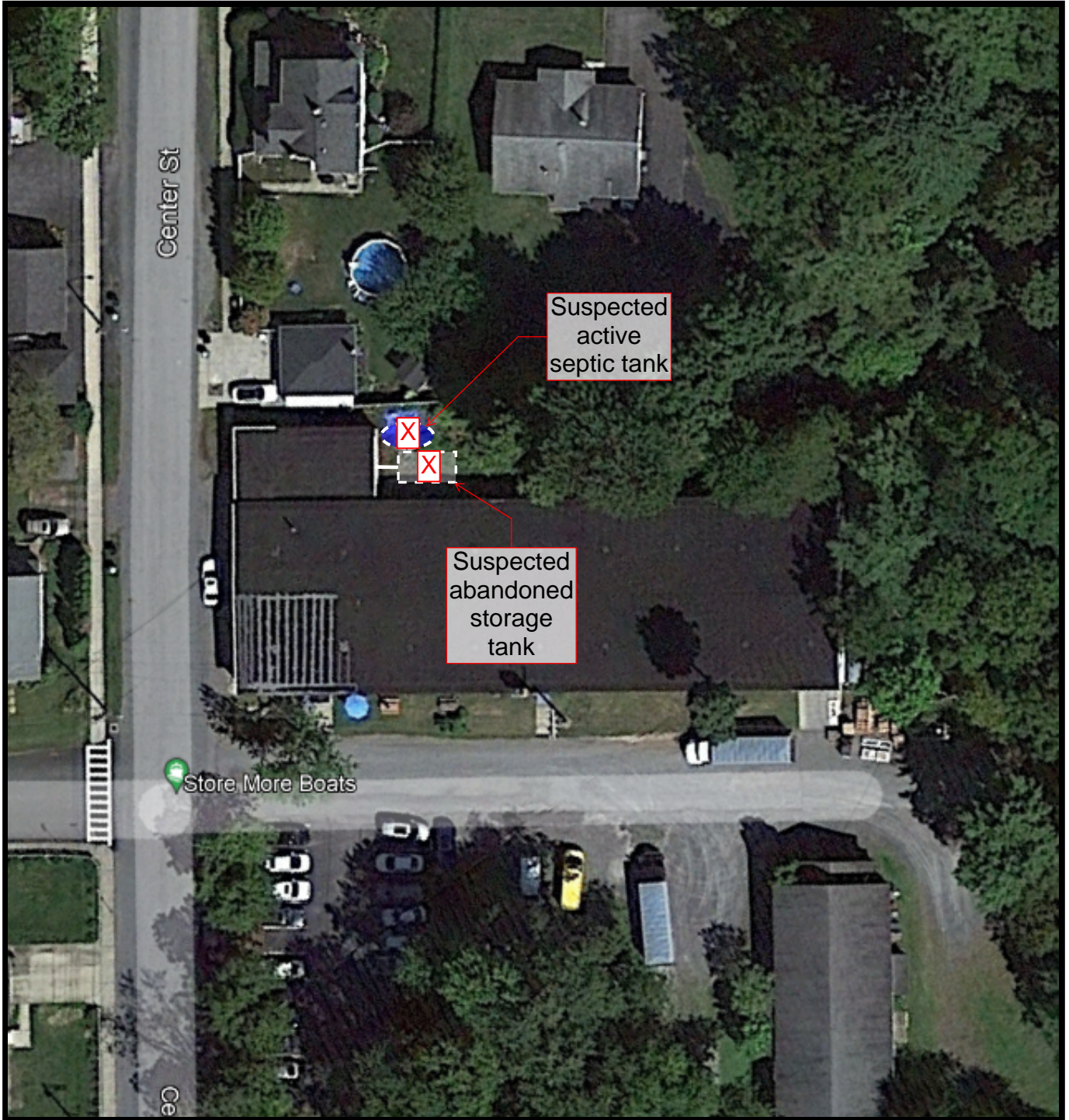
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A handwritten signature in black ink, appearing to read 'K. Garbarino', written over a horizontal line.

Kristine Garbarino, P.G.
Managing Geologist

Attachments: Figure 1: Sediment/sludge Sample Locations
 SOP: Sediment, sludge and sewage sampling


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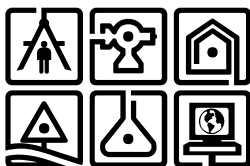


MAP REFERENCE

Google Earth, Accessed on-line October 8, 2021

LEGEND

 - Proposed sampling location



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50 CENTURY HILL DRIVE
LATHAM, NY 12110

FIGURE 1 - PROPOSED SAMPLING LOCATION MAP

HAMLET OF PINE BUSH

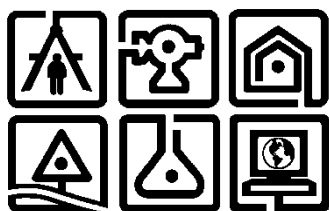
ORANGE COUNTY, NY

SCALE: NOT TO SCALE

DRAFTER: ML

PROJECT No.: 19.9347

The locations and features depicted on this map are approximate and do not represent an actual survey.



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 LANDSCAPE ARCHITECTURE &
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STANDARD OPERATING PROCEDURE

SEDIMENT, SLUDGE, and SEWAGE SAMPLING

March 6, 2020

Print Technical Reviewer Signature Date

Print QA Manager Signature Date

Review of the SOP has been preformed and the SOP still reflects the current practice			
Initials		Date	
Initials		Date	

SOP: SEDIMENT, SLUDGE and SEWAGE SAMPLING

1.0 PURPOSE

This standard operating procedure (SOP) provides technical guidance and methods that will be used to sample sediments, sludge and sewage. This SOP applies to the collection of sediment samples in surface water bodies such as streams, rivers, ditches, lakes, ponds, lagoons, and wetlands. For sludge and sewage samples it applies to samples from water treatment systems, waste water treatment samples, interceptor pits, public sewer system manholes, and catch basins.

2.0 SCOPE

This SOP applies to all C.T. Male, sub consultants and subcontractors engaged in sediment and sludge sampling activities. Other applicable project SOPs, including the following:

- SOP: Note Taking and Field Logs.
- SOP: Organic Vapor Monitoring and Air Monitoring.
- SOP: Equipment Decontamination Procedures.
- SOP: Collection of Quality Control Samples.
- SOP: Documentation on a Chain-of-Custody.
- SOP: Domestic Transport of Samples to Laboratories in USA.

3.0 GENERAL

This procedure applies to the collection of sediment samples only in surface water bodies such as streams, rivers, ditches, lakes, ponds, lagoons, and wetlands. The procedure also applies to samples collected from water treatment systems, waste water treatment samples, interceptor pits, public sewer system manholes, and catch basins.

Sediment and sludge samples will only be collected as discrete samples. Actual sampling locations will be confirmed in the field prior to initiation of the sampling program. Samplers should anticipate accommodating in-field adjustment.

When surface water, sediment or sludge samples are collected from the same location, water samples will be collected first because disturbing the sediment may influence the analytical results of the surface water samples and cause cross contamination. If

sampling both surface water and sediment, or just sediment, sample from the most downstream point first and proceed upstream.

When collecting sediment, sludge or sewage samples to be analyzed for PFAS or volatile organic compounds do not pool or homogenize the sample. Slowly decant off any liquid phase and then fill the specified container(s) with the solid, ensuring no headspace. Samples for nonvolatile organic and inorganic analyses can be placed in an appropriate collection pan or bowl and homogenized before they are placed in sample containers.

If the person collecting the sediment sample needs to enter the water to collect the sample, this should be done downstream of the actual sample location, and care must be taken not to disturb the sediment in the location to be sampled. In practice, such factors as safe access and handling, and bad weather will influence sample acquisition. Sampling for sludge or sewage samples will not include the entering of confined or permit confined spaces to collect sludge sample. If entry into a confined or permit confined space is need, only appropriate training personnel can enter and a work permit following CT Male and client procedures will be completed.

Wear appropriate personal protective equipment (PPE) as prescribed by the site specific health and safety plan.

4.0 RESPONSIBILITIES

4.1 Project Manager

The Project Manager verifies that monitoring well and piezometer installation procedures comply with this SOP and the requirements of the enforcing agencies. Alternate installation requirements and procedures required by local agencies or other modifications must be documented and approved by the Project Manager.

4.2 Health & Safety Officer

The Health & Safety Officer oversees site-specific health, safety, and environment (HS&E) protocols and overall compliance with project HS&E requirements. The Health and Safety Officer conducts personal protective equipment (PPE) evaluations, selects the appropriate PPE, lists the requirements in the Project-specific Health and Safety Plan (HASP), coordinates with the Project Manager and Field Manager to certify the

PPE, and conducts project health and safety audits to evaluate the effectiveness of the HS&E program.

4.3 Site Safety and Health Officer

The role of Site Safety and Health Officer is delegated to the Field Team Leader by the Project Manager to assist in implementing the project HASP. The Project Manager and/or Health & Safety Officer assists the Field Team Leader with the health and safety program, implements the PPE requirements described in the project HASP and receives input from project staff that the assigned PPE requirements and on-going HS&E procedures are effective.

4.4 Field Team Leader

The Project Manager will develop or direct the development of a sampling plan that includes the sampling location, materials and procedures to be used. The Field Team Leader should maintain adequate documentation of the sampling locations and field notes.

5.0 SEDIMENT, SLUDGE and SEWAGE SAMPLING PROCEDURES

The water content of the sediment and sludge to be sampled may vary greatly. Likewise, the sediments or sludge themselves may range from very soft to dense. It may be necessary to use a variety of equipment to obtain the required samples, even at a single site. If the preferred equipment identified in the following procedures is unable to collect a sediment sample (that is, too rocky), a shovel or hand auger may be used.

5.1 Sediment Sampling Methods

The following is a general guideline for collecting sediment samples:

- On arrival at the site, set up and organize sampling equipment near the first (farthest downstream) sample location.
- Arrange sample containers, sampling equipment, and decontaminated equipment.
- Wear PPE in accordance with the site-specific HASP.
- PPE gloves will be changed between sample locations.
- Collect co-located surface water sample, if required.

- Collect sediment sample. The preferred methods of collecting sediment samples will be by hand corer or polyvinyl chloride (PVC) pipe method (if pre-approved).
- For all samples, mark the sampling location on a site map. Locations will also be documented using a GPS unit. Photograph (optional but recommended) and describe each location, and place a numbered stake above the visible high water mark on the bank closest to the sampling location. The photographs and description must be adequate to allow the sampling station to be relocated at a future date.

5.1.1 Hand Corer Method

The hand corer method is intended to collect firm sediment samples. Use the following procedures for hand corer method sample collection:

- Label each sample container properly, cover the label with clear tape, fill out appropriate chain-of-custody information, wipe outside of the container with paper towel or Kim wipe, and place in iced cooler.
- Ensure that the corers and (optional) liners are properly decontaminated prior to initiation of sampling and between each sample location.
- Gently push the corer into the sediment with a smooth continuous motion to a depth of approximately 9 inches (or other pre-specified depth).
- Twist the corer to detach the sample, and then withdraw the corer in a single smooth motion.
- Remove the top of the corer and slowly decant excess water.
- Remove the nosepiece and deposit the sample onto a stainless-steel, HDPE lined tray or bowl.
- Decant, if appropriate and necessary.
- Transfer the sample into sample containers (volatile analysis first then PFAS) using a disposable sample scoop or stainless-steel laboratory spoon (or equivalent device). The transfer equipment may be disposable to avoid the risk of cross contamination. If specific data quality objectives mandate (except for volatile analysis samples), the sediment sample will be homogenized in a bowl using a sampling spoon prior to placement into sample containers.

- Decontaminate equipment for the next sample location or at the conclusion of all sampling.

5.1.2 Polyvinyl Chloride Pipe Method

The PVC pipe method is intended to collect sediment samples that are soft. The use of polyvinyl chloride piping needs prior approval to start of work by the project manager. Use the following procedures for PVC pipe method sample collection:

- Label each sample container properly, cover the label with clear tape, fill out appropriate chain-of-custody information, wipe outside of the container with paper towel or Kim wipe, and place in iced cooler.
- Gently push pipe into sediment with a smooth continuous motion to a depth of approximately 9 inches (or other pre-specified depth).
- Cap the pipe, forming an airtight seal, to create a vacuum as it is withdrawn from the sediment.
- Slowly decant excess water.
- Deposit the sample onto a stainless-steel or HDPE tray or bowl.
- Decant if appropriate and necessary.
- Transfer the sample into sample containers (PFAS then volatile analysis first) using a stainless-steel laboratory spoon (or equivalent device). The transfer equipment may be disposable to avoid decontamination costs and the risk of cross contamination. If specific data quality objectives mandate (except for volatile analysis samples), the sample will be homogenized in a bowl using a sampling spoon prior to placement into sample containers.
- Decontaminate equipment.

5.1.3 Scoop, Trowel, Spoon, or Ladle Method

This method is intended to collect sediment samples that are very soft. Use the following procedures for very soft sediment sample collection:

- Label each sample container properly, cover the label with clear tape, fill out appropriate chain-of-custody information, wipe outside of the container with paper towel or Kim wipe, and place in iced cooler.
- Insert the sampling device into the sediment at the selected sampling point and slowly remove the sample.
- Slowly decant excess water.
- Deposit the sample into a stainless-steel or HDPE tray or bowl.
- Transfer the sample into sample containers (volatile analysis first then PFAS) using a stainless-steel laboratory spoon (or equivalent device). The transfer equipment may be disposable to avoid decontamination costs and the risk of cross contamination. If specific data quality objectives mandate (except for volatile analysis samples), the sample will be homogenized in a bowl using a sampling spoon prior to placement into sample containers.
- Decontaminate equipment prior to collecting sample from next location.

5.1.4 Ponar Dredge Method

A Ponar dredge is a heavyweight sediment sampling device with weighted jaws that are lever or spring activated. It is used to collect consolidated fine to coarse textured sediment. The following procedure will be used for collecting sediment with a Ponar dredge:

- Attach a sturdy PFAS free rope or steel cable to the ring provided on top of the dredge.
- Arrange the Ponar dredge with the jaws in the open position, setting the trip bar so the sampler remains open when lifted from the top. If the dredge is so equipped, place the spring loaded pin into the aligned holes in the trip bar.

- Slowly lower the sampler to a point approximately two inches above the sediment.
- Drop the sampler to the sediment. Slack on the line will release the trip bar or spring loaded pin; pull up sharply on the line closing the dredge.
- Raise the dredge to the surface and slowly decant any free liquid through the screens on top of the dredge. Care should be taken to retain the fine sediment fraction during this operation.
- Open the dredge and transfer the sediment to a stainless steel, plastic or other appropriate composition container. Ensure that non-dedicated containers have been adequately decontaminated. If necessary, continue to collect additional sediment until sufficient material has been secured to fulfill analytical requirements. Thoroughly homogenize the sediment and then transfer sediment to sample containers appropriate for the analyses requested. Samples for volatile organic analysis must be collected directly from the bucket before homogenization to minimize volatilization of contaminants.

5.1.5 Gravity Core Method

Gravity corers are appropriate for recovering up to 3 m long cores from soft, fine-grained sediments. Models include stabilizing fins on the upper part of the corer to promote vertical penetration into the sediment, and weights that can be mounted externally to enhance penetration. A variety of liner materials are available including stainless steel. If a liner is used it will need to be PFAS free.

The speed of descent of coring devices should be controlled, especially during the initial penetration of the sediment, to avoid disturbance of the surface and to minimize compression due to frictional drag from the sides of the core liner. In deep waters, winches should be used where necessary to minimize twisting and tilting and to control the rate of both descent and ascent. With the exception of piston corers, that are equipped with their own mechanical impact features, for other corers, only the weight or piston mechanism of the sampler should be used to force it into the sediment. The sampler should be raised to the surface at a steady rate, similar to that described for Ponar dredge sampling. Where core caps are required, it is essential to quickly and securely cap the core samples when the samples are retrieved. The liner from the core sampler should be carefully removed and kept in a stable position until the samples are collected. If there is little to no overlying water

in the tube and the sediments are relatively consolidated, it is not necessary to keep the core sample tubes vertical. Core sample tubes should be quickly capped and taped to secure the sample. The depth horizon(s) sampled will depend on the site specific objectives as well as the nature of the substrate. The horizons to be sampled will be outlined in the Site specific work plan and the Site specific QAPP.

5.1.6 Piston Tube Method

Piston corers are generally used in areas with soft sediment, and the seal at the bottom of the device will retain the sediment sample during retrieval. The addition of the internal piston allows the soft sediment to be captured without significant compression or disturbance. Use the following procedures for Piston Tube method sample collection:

- Prior to sampling obtain piston corer with tube assembly.
- Measure depth to top of sediment, if not known, record the measurement.
- Prior to placing piston tube into the water body, fill the tube with water from the water body to the top of the tube.
- Once the tube is filled with water, place the top of the piston core assembly on the tube.
- Lower piston tub into the water body, allow tube to fill completely with water. Coring device may bubble as air is escaping from tube as water is filling the tube.
- Slowly lower the piston coring device into the water to the depth of the top of the sediment.
- At the top of the sediment, secure the rope that is attached to the piston head so the rope will no longer be allowed to descend with the core.
- Gently push the core into sediment with a smooth continuous motion to a depth of approximately 9 inches (or other pre-specified depth).
- Release the rope holding the piston head and pull the core out of the sediment and the water column.

- Prior to the coring device breaking the water surface, place the cap on the end of the coring tube.
- Pull tube from water column, stand upright.
- Slowly decant or siphon off excess water.
- Place the coring tube onto a HDPE tray or bowl, or rolled out sheet.
- Collect the sample(s) from the sediment core at pre-designated levels. Transfer the sample into sample containers (PFAS then volatile analysis first) using a stainless-steel laboratory spoon (or equivalent device). The transfer equipment may be disposable to avoid decontamination costs and the risk of cross contamination. If specific data quality objectives mandate (except for volatile analysis samples), the sample will be homogenized in a bowl using a sampling spoon prior to placement into sample containers.
- Label each sample container properly, fill out appropriate chain-of-custody information, wipe outside of the container with Kim wipe (as needed), and place in iced cooler.
- Decontaminate equipment as needed.

5.2 Sludge and Sewage Sampling Methods

The following is a general guideline for collecting sludge or sewage samples:

- On arrival at the site, set up and organize sampling equipment near the first sample location.
- Arrange sample containers, sampling equipment, and decontaminated equipment.
- Wear PPE and bring needed monitoring equipment in accordance with the site specific HASP.
- Collect co-located surface water sample, if required.
- Collect sludge sample. The preferred methods of collecting sludge samples will be by bailer or polyvinyl chloride (PVC) pipe method (if pre-approved).

- For all samples, mark the sampling location on a site map. Photograph (optional but recommended) and describe each location. The photographs and description must be adequate to allow the sampling location to be relocated at a future date.

5.2.2 Polyvinyl Chloride Pipe Method

The use of the Polyvinyl Chloride Pipe Method will follow the same steps as outlined in the sediment sampling section 5.1.2 above.

5.2.3 Scoop, Trowel, Spoon, or Ladle Method

The method described in section 5.1.3, for sediment sampling, will be the same steps to follow for collecting sludge samples.

5.3 Equipment

The following equipment is required for sediment, sludge or sewage, and co-located surface water samples:

- Stainless-steel, HDPE-lined sampling tray or bowl
- Stainless-steel or HDPE dip sampler, scoops, trowels, spoons, and ladles
- PVC pipe, 2-inch diameter
- Bailer, PFAS free
- Sand core sediment sampler, liners (optional), and extensions
- Jaw-type sampler
- Sample bottles
- Sample cooler with ice
- Rubber boots/waders
- PPE (as required in the HSP)
- Decontamination equipment and materials, as appropriate
- Plastic bucket (for rinse water/solvents, decant, and/or spoils)

5.4 Quality Assurance/Quality Control Procedures and Samples

Quality assurance (QA)/quality control (QC) samples should be collected during sediment and sludge sampling in accordance with the site specific work plan and QAPP.

QA/QC samples should be assigned unique sample identification, and handled and submitted to the laboratory in the same manner as field samples.

5.5 Equipment Decontamination

All sampling devices will be decontaminated. Procedures presented in SOP Decontamination of Sampling Equipment, will be followed prior to sampling, between sampling locations, and at the end of the day for decontamination of reusable field equipment and for personnel decontamination.

6.0 RECORDS

All sampling materials and procedures used during the sampling of sediments and sludge will be documented in the Field Logs in accordance with SOP Field Note taking and Field Logs.