Appendix C
Site Safety and Health Plan

Mahoning River, Ohio

Sediment and Bank Sampling, Characterization and Distribution Study

Prepared for:

US Army Corps of Engineers
Pittsburgh District
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TABLE OF CONTENTS

Figures

Tables

1.0 INTRODUCTION

This Site Safety and Health Plan (SSHP) sets forth safety and accident prevention procedures to protect personnel during sample acquisition along Mahoning River, in Trumbull and Mahoning Counties, OH. The sampling is being performed for the Pittsburgh District of the U.S. Army Corps of Engineers (CELRP), and this SSHP is Appendix C of the Project Work Plan (PWP) developed for the project. Figures 1 and 2 in the PWP depict the general location and project vicinity. Compliance with this SSHP is required of all persons entering the immediate vicinity of field sampling activities when they are occurring.

The SSHP identifies the basic tasks required to procure the designated sediment and soil samples and the field personnel and their individual areas of responsibility. It provides an analysis of potential hazards and describes accident prevention measures to be utilized to minimize the potential impacts posed by physical, chemical, and biological hazards that may occur during field sampling. Sampling activities will be conducted at different locations (transects) on the riverbanks and in the river. Figures C-1 to C-5 of this SSHP are Hospital Emergency Route Plans, which include the name, address, and phone number for the nearest hospital in case of an accident or injury. The SSHP is designed to comply with U.S. Army Corps of Engineers (USACE) Safety Manual EM 385-1-1. The content of this SSHP may change or undergo revision if unanticipated conditions arise or a change in the scope of work occurs. Any changes shall be clearly denoted for formal review and acceptance by CELRP.

2.0 PROJECT SUMMARY

The US Army Corps of Engineers Pittsburgh District is conducting a Feasibility Study for an environmental dredging project to remove and remediate contaminated sediment along a 31-mile reach of the Mahoning River in Ohio. The objectives of the dredging project are to restore the aquatic ecosystem and biotic integrity of the Mahoning River within the project area to a level existing on a model reach of the Mahoning River just upstream of the project area and to eliminate an Ohio Department of Health, Human Health Advisory currently in effect.

The project requires sampling and analyses to determine if selected lake sediments are contaminated and to evaluate placement and disposal options. The field sampling consists of the acquisition of core samples along the 31-mile length of the river from 87 transect locations. A total of 9 core borings are

expected to be advanced in each transect location, three from the river and three from each bank. All distinct soil horizons in each core shall be closely examined and characterized from top of boring to refusal or termination in each boring in all the 87 transect locations. At 47 of the 87 transect locations; samples will be collected for chemical and geotechnical laboratory analyses.

In-river samples will be procured from small floating vessels. Two 14-foot and one 16-foot powered Johnboats will be maintained and equipped by Coleman Engineering Company specifically for sediment sampling. All sample locations will be accessed from the river. Soil samples at the 87 transect locations are scheduled to be a maximum of 15 feet deep. The samples will be procured with an 8-foot Lexan® or a 4-foot Macro Core® sampler. An attachment to Appendix B of the SAP includes Rights-of-Entry maps provided by CELRP, which detail 10 areas that may be used for access to the river. Access to the river may also be made at other public access point, such as from the various parks that border portions of the river.

3.0 PROJECT PERSONNEL ROLES AND RESPONSIBILITIES

3.1 Project Manager

The Project Manger for Altech, Michael J. Saffran, has responsibility for all aspects of project planning and implementation, including safe accomplishment of the project scope of work, on time and within budget. As the Project Manager, Mr. Saffran manages the day-to-day activities of the project; makes technical decisions; designates staffing; and serves as the Altech Point of Contact (POC) for this project. The Project Manager participated in development of the SSHP. Although Mr. Saffran shall visit the site during fieldwork, Mr. Saffran is not a member of the designated field sampling team.

3.2 Site Safety and Health Officer

The Site Safety and Health Officer (SSHO), Mr. Mark Cruickshank of Altech, is the responsible person for the safe conduct of all fieldwork for this project, and has ultimate authority to stop work or require the removal of any individual from the work area for health and safety reasons. The SSHO has directed numerous field soil-sampling projects, and has completed the initial 40-hour health and safety training and annual 8-hour refresher classes for conduct of work at hazardous and toxic waste sites in accord with CFR 1910.120. The SSHO combines the necessary training and experience to ensure that

all elements of the Site Safety and Health Plan are implemented at the work site.

The SSHO shall be physically in the work area whenever work is in progress. Prior to allowing site access, the SSHO is responsible for confirming that each field sampling team member has signified their understanding of the SSHP and intent to comply with all of its provisions by signing the field copy of the SSHP. The SSHO will conduct an initial health and safety briefing prior to the start of fieldwork and lead daily morning tailgate safety and coordination meetings.

3.3 Field Sampling Team

The field sampling team is comprised of two on land-bank crews and an in-river crew. Two 2-man crews will conduct riverbank soil coring and one 3- man crew will procure in-river sediment cores. The land crew may also perform in-river sediment coring in shallow water locations and may also switch roles with the in-river crew. Altech has designated a pool of professionals for the field sampling activities, as shown below. Each member of the field sampling team is responsible for reading the SSHP, and signing it to demonstrate their understanding of its contents and to acknowledge their intent to adhere to all of its provisions. Each is required to conform to the safety procedures detailed herein, which includes attendance at the on-site training session, signature on the field copy of the SSHP and wearing the designated personal protective equipment during field sampling activities.

Field Sampling Team Leader/ Geologist	Mark Cruickshank
Project Geologist	Melissa Cruckshank
Staff Engineer (sample coordinator)	Arinze Nwamba
Project Scientist	John Bochenek

Coleman Engineering will provide three boat operators for each of the 3 crews for in-river sampling and one additional sampling technician. The following individuals from Coleman will assist in sampling activities.

Coleman Engineering (Lead)	Scott Strigel
Boat Operator	Ward Mitchell
Boat Operator	Randy Ochs
Boat Operator	Craig Reidner
Sampling Technician	Doug Lantagne

Sampling Technician Casey Chiaverotti

All Altech field-sampling personnel have received the 40-hour initial and 8-hour OSHA refresher training required for handling of hazardous substances. Certificates of training are on file in Altech's Southfield office. Coleman Engineering will be responsible for the health and safety of their personnel.

4.0 HAZARD ANALYSIS

The following discussion attempts to identify all potentially significant hazards associated with the acquisition of sediment samples from Mahoning River. While the discussion addresses a wide range of potential chemical, biological and physical hazards, the physical hazards associated with working from a floating platform/vessel and working on the riverbank are considered the most acute risks.

4.1 Chemical Hazards

The focus of the investigation is to determine the level of concentrations of chemical contaminants in sediments present at the Mahoning River to support ecological restoration of the river. Some portions of the River have a direct contact Human Health Advisory warning by the Ohio Department of Health related to the presence of high concentrations of Polycyclic Aromatic Hydrocarbons (PAHs) in the sediments. PAH compounds are common constituents in oil that are persistent in the environment, and several PAH compounds are particularly toxic. It is considered highly likely that there are measurable concentrations of potentially toxic chemicals present in the sediments to be sampled. Chemical analyses parameters selected for the investigation were based on previous investigation results and include; PAH, total recoverable petroleum hydrocarbon (TRPH), polychlorinated biphenyl (PCB), herbicides, pesticides and target analyte list (TAL) Metals. Although there are no previous records indicating the likely presence of hexavalent chromium or radioisotopes in the sediments, these parameters have been included to improve the comprehensiveness of the investigation and characterization.

Previous investigation records and results indicate that the primary contaminant in the sediments is petroleum. Exposure to petroleum fuel from the sampling vessels is also a possibility. If sampling activities result in formation of an oil slick, booms shall be used to contain the oil and minimize potential contact. Although previous investigations indicate a lack of volatile organic compounds in the sediments, effective air monitoring shall be conducted. The primary personal protection requirement is

splash protection to prevent direct skin contact with contaminated sediments.

4.2 Biological Hazards

There are a variety of biological hazards, including microbial and botanical hazards that may be encountered during sampling. Due to the early springtime period of field sampling activities, typical potential biological hazards such as insect, snakebites and bee stings are possible.

Microbial pathogens, primarily bacteria from combined sewer overflows to Mahoning River, pose the most significant biological hazard to the field sampling team. These may be broken down into three general groups:

1. Bacteria (primarily *e. coli* from sewage effluent).
2. Viruses.
3. Parasites (including fungi, worms and other organisms; e.g. *Giardia*)

Microbial pathogens may enter human hosts through inhalation (droplets and aerosols), ingestion (food, water, fingers), vector organisms (bites) and punctures (open cuts, lesions, scratches and so forth can provide routes of delivery).

Also, exposure to plants such as poison ivy or briars can cause allergic reactions or small skin punctures or tears. Poison ivy vines are ubiquitous growing up trees along the river banks. Symptoms of an exposure to poison ivy develop 24-48 hours after contact. The first symptom is a severe itching of the skin, a red inflammation and a blistering of the skin occur. In severe cases, oozing sores develop. Although extremely irritating, most cases disappear in a week to 10 days. All first aid boxes will have relief medication for the itching caused by poison ivy. Medical attention will be sought if conditions warrants.

The poison ivy treatment is by washing infected skin as soon as possible with soap and cold water and decontaminates clothing by laundering with soap or detergent when appropriately.

4.3 Physical Hazards

The greatest potential hazard to human health from the planned field activities lies in the drowning

hazards associated with working in and near the water. There are a variety of other significant potential impact, slip, trip and fall type hazards as well as a potential for hand, head and other injury from driving and retrieving sample tubes from sampling activities. Also, the potential for contacting an underground utility such as a natural gas or electric line is a potential hazard.

Sampling with the thin wall sampling equipment to procure sediment samples poses a moderate risk. The most likely means of sampling will be the use of hand pushed and/or driven equipment. If silty sediments are encountered, this method should advance the bottom of the sampler to the designated depth. However, where denser sandy sediments are encountered, it is likely that the sampler will need to be hand driven to the designated location with a slide hammer. Sampling equipment shall be extracted using hand equipment. No mechanical or powered equipment shall be deployed at the site for sampling activities other than the boat motors and truck winches. Collection of soil samples at the 87 transect locations to a depth of 15 feet poses moderate to low risk for injury. The greatest risk of injury using hand sampling equipment is muscle strain.

4.4 Vehicles

The field sampling team members are driving relatively long distances to the site from different locations. Altech crewmembers will drive in one vehicle. Coleman crewmembers will drive in three separate vehicles, pulling two 14-foot and one 16-foot Johnboat. While the risk of an accident occurring is considered low, the consequences could be very serious.

4.5 Weather

Sampling after or during a rainfall presents perhaps the most hazardous environment associated with the proposed sampling. Any amount of precipitation can influence the velocity of the river. Large amounts of rainfall can produce excess velocity that can produce swift currents and unpredictable waves making sampling on the boat far more difficult and dangerous. In addition, inclement weather may pose a serious hazard due to lightning strikes. Superficial tides at the riverbanks can also pose hazards during sampling activities.

The potential for cold stress is considered minimal, but there is a significant potential for heat stress associated with field sampling. Strenuous work, such as driving core samplers into sediment, in hot temperatures can result in heat stress conditions to the body and cardiovascular system. This condition

is worsened by wearing impervious chemical protective clothing because the body's natural cooling mechanism of perspiration may be eliminated or reduced. Signs and symptoms of heat stress illness include:

Heat rash: Symptoms include red skin with bumpy, hive-like rash. It is caused by continuous exposure to heat or humidity. Heat rash is treated by washing the skin, and keeping it cool and dry.

Heat cramps: Symptoms include muscle spasms, pain, or cramping in the abdomen, arms, and legs. It is caused by heavy sweating with insufficient water and electrolyte replenishment. It is treated by resting in a cool area and frequent small drinks of water. Salt tablets are not recommended.

Heat exhaustion: Symptoms include pale, cool skin, fainting, heavy sweating, dizziness, and nausea. It is caused by inadequate blood circulation due to loss of body water or stress on the cardiovascular system. Heat exhaustion is treated by resting in a cool area and frequent small drinks of water.

Heat stroke: Heat stroke is life threatening, and immediate medical attention is required. Symptoms include red, hot, dry skin, little or no perspiration, nausea, fast pulse, dizziness, confusion, unconsciousness, or coma. It is caused by a failure of the body's temperature regulation mechanisms due to excessive heat stress.

Cold bottle water shall be provided during hot working weather. Frequent short breaks will be taken at interval to prevent heat stress.

5.0 SAFE WORK PRACTICES

As outlined in Section 4.0 above, there are a variety of potential hazards associated with the field activities for this investigation. The following is a brief description of the procedures and equipment that shall be employed to minimize the potential for accidental injury or detectable exposure to a toxic substance during those activities. There are two prerequisite requirements for participating in any phase of the field sampling activities. They are:

1) Read this Site Safety and Health Plan, ask the Site Safety and Health Officer any

questions and sign the acceptance form agreeing to abide by the safe work practices described here.

2) Participate in a daily safety briefings conducted by the Site Safety and Health Officer prior to beginning the day and prior to each significant new element of fieldwork.

The Site Safety and Health Officer, in concert with the Field Sampling Team Leader and anyone else to be in the work zone shall discuss the sampling procedures and equipment to be used prior to beginning each significant work element. The potential hazards and the methods of safely conducting the work and preventing accidents shall be discussed in detail. Several unique hazards exist related to working on floating plants. The following table shows an activity hazard analysis summary of the most likely potential hazards and the safe practices to be followed while conducting activities on floating vessel.

Table 1

Summary of Safe Practices for Boat Work
(Source EM 385-1-1, Section 19)

Activity / Object	Safe Practice
Cables / Lines	Marking lines to improve visibility.
Fire Watch	One person or fire alarm system on guard at all times.
Fuel Accumulation	Provisions to prevent accumulation of fuel, oil and grease on floors, and deck.
Swimming	Prohibited. Person in water is considered overboard.
Barriers / Handles	Must be clearly marked.
Deck Loading	Must be within safe capacity of vessel. The Vessels 2-14 ft. John boat will accommodate 4 crewmembers and the 1-16ft Johnboat will accommodate 5 crewmembers.
Tripping Hazards	Must be identified.
Deck Cargo	Carried on fuel barges shall be placed at sufficient distance away from the motor.
Anchor Points	Shall be clearly identified and inspected prior to placing tension. Visual checks and “all clear” warnings shall be made prior to

	tensioning cables.

5.1 Air Monitoring

This site air-monitoring program is developed in compliance with and as part of the SHSP. In accordance with 29 CFR Part 1910 and 1926, and 40 CFR Part 129, monitoring will be performed to:

- Determine exposure levels of employees to hazardous substances/physical hazards
- Assure proper selection of engineering controls, work practice, and PPE.
- Determine whether conditions which are immediately dangerous to life and health (IDLH) exist

All air monitoring information and results will be documented and recorded in the appropriate forms. A photoionization detector (PID) will be used to conduct air monitoring. The PID will be calibrated according to the recommended manufacture's standard. A known concentration calibration gas (Isobutylene-100 ppm) will be utilized for calibration of the PID. Initial monitoring (background) of work area will be conducted prior to the start-up of any site tasks. Monitoring will consist of real time monitoring for background areas, work areas at the breathing zone. Monitoring will be done utilizing real-time instrument for the following possibilities:

- Organic contaminants

Periodic monitoring will be conducted daily during field activities. Air monitoring will be performed intermittently at all sites during sampling activities. Air monitoring results will be documented in field notes. If, at any time, a sustained PID reading exceeds 10 ppm of total VOCs above background level, within the breathing zone, work will cease and administrative control, such passive venting will be implemented. The breathing zone will be monitored with PID until sustained readings fall below 10 ppm, work will resume, if sustained readings are above 10 ppm, an upgrade of PPE to respiratory protection may be required, as shown in Table C-2.

Table 2
Air Monitoring Action Level

Instrument	Function	Measurement	Action
Photoionization Detector (PID)	Measure organic vapors	0-9 ppm	Modified Level D required
		>10 ppm above background	Stop work. Contact Site Health and Safety Officer for guidance regarding up grade of PPE and or engineering control.

5.2 Personal Protective Equipment.

All members of the field sampling team are required to wear appropriate equipment for field sampling activities. Personal floatation devices will be available to all personnel at all times while on the vessel and whenever in or adjacent to Mahoning River. Equipment at a minimum shall include:

- Personal Floatation Device (available at all times)
- Steel-toed work boots.
- Rubber outer boots.
- Hardhat.
- Approved safety glasses.
- Chemical protective gloves.
- Tyvek™ / Saranex™ coveralls or other suitable splash protection.
- Fluorescent vest, when vehicular traffic is on or adjacent to site.

Personnel are expected to maintain the minimum acceptable level of protection, modified Level D. The scope of work for this project does not involve conducting sampling activities in any level of PPE beyond modified Level D. If there is reason for PPE upgrade the SSHO will consult with the project manager for appropriate decision.

Table 3 Personal Protective Equipment	
Level	**Requirement**

Modified Level D	· Steel-toed work boots. · Hardhat. · Rubber outer boots · Approved safety glasses. · Inner vinyl/latex gloves and outer Nitrile chemical protective gloves. · Tyvek ™ / Saranex™ coveralls

5.3 Floating Vessel Minimum Safety Equipment and Safe Practices

All individuals must wear a personal floatation device at all time while on board the vessel. The floating plant operator from Coleman Engineering will be responsible for providing the following safety equipment that shall be kept onboard the plant.

- Cellular Phone
- Life Jackets and Flotation Cushions
- Throw Ring
- Fire Extinguisher
- First Aid Kit(s)
- Oars
- Distress Horns

5.4 Decontamination Procedure

Operations conducted at this site have the potential to contaminate field equipment and PPE. To prevent the transfer of contamination to vehicle, hotels, and personnel, the procedures presented in Table 4 must be followed.

Table 4
Decontamination Procedures

Item	Examples	Procedures
Field Equipment	Hand tools, miscellaneous sampling equipment	· Decontaminate with Alconox ™ and use a brush to remove particulate matter or surface film; rinse with river water. · Protect from exposure by covering with disposable covers such as plastic to minimize required decontamination activities.
Disposable PPE	Tyvek™ / Saranex™ coveralls, inner latex gloves, respirators	· Proper disposal as IDW prior to exiting work zone.
Nondisposable PPE	Rubber outer boots, Chest waders	Decontaminate with Alconox ™ and use a brush to remove particulate matter or surface film; rinse with river water.

5.5 Work Area and Equipment Maintenance

A variety of physical, chemical and biological hazards have been identified and associated with the planned sampling. Below is a table that summarizes the potentially hazardous activities associated with the scheduled sediment sampling. The table is followed by a general list of practical common sense measures that shall be implemented to prevent accidents and maintain worker safety.

Table 5

Safety/Health Hazards and Recommended Controls for Thin Wall Samplers

Principal Steps	Potential Safety/ Health Hazards	Recommended Controls
1. Deployment of sampler unit.	Trip/Fall or Ensnarement.	Buddy System. Visual awareness.
2. Manually Drive sampler	Pinch Points & head injury	Buddy System. Visual awareness. Protective headgear.
3. Retrieval of unit with sediment load.	Pinch Points.	Visual awareness. Steel-toe boots.
4. Removal of sediment.	Chemical exposure. Moving mechanisms.	PPE (protective suit, gloves and eye shield). Visual awareness. Watch extremities.
5. Re-Setting unit.	Moving mechanisms.	Visual awareness. Keep extremities from moving parts.

Below are the general measures that shall be implemented to prevent accidents by maintaining control of the work area and applying good housekeeping practices:

- Inspect the sampling vessel, operating systems and safety equipment, such as personal floatation devices, ropes, cables, fire extinguisher, first aid kit, etc. for safe and proper function.
- Inspect all sampling equipment prior to beginning sampling for any potential defects, including but not limited to sampling tubes, rods and hammers, floating craft operating systems, safety devices and high-power winch and cables.
- Inspect all personal protective equipment for fit and condition, including but not limited to personal flotation devices, hard hats, sampling gloves, safety shoes and glasses and Tyvek™ / Saranex™ protective coveralls.

- Inspect the first aid kit supplies for content and condition.
- Inspect all personnel prior to access to the work area for required personal protective equipment and require that any loose hanging jewelry or articles of clothing that could become entangled with drilling rods or cables be removed.
- Store all materials and debris in designated areas and/or appropriate containers.
- Locate tools, materials, hoses, and debris so as not to pose a tripping hazard.
- Tools, materials, and equipment subject to displacement or falling shall be adequately secured in designated racks or cabinets.
- Note surface condition for wet or muddy areas, wear boots with good treads, be alert of where walking to decrease the chance of slipping, and mop or clean up as necessary to remove especially slippery areas.
- Eating, drinking, smoking, applying cosmetics, chewing gum or tobacco, taking medication or any other activity that results in hand to mouth contact will not be prohibited within the work zone.
- Ensure at least two (2) team members per work group.
- No open flames in the work area.
- No personnel under the influence of alcohol or controlled substances.
- Discard and replace damaged or heavily soiled protective clothing.
- Notify the SSHO of any defective monitoring, emergency, or other safety equipment.
- Maintain potable water, rest area, and sufficient lighting.
- Don't work when ill, or when taking prescription medication without SSHO prior approval.
- At the first sign of lightning in the area, all work shall be stopped and personnel shall seek the nearest shelter.

5.6 Communications

The field team will be equipped with a cellular telephone to aid rapid dissemination of appropriate information. The "buddy system" will be enforced during any work within the work area. Each person will observe their partner for symptoms of chemical overexposure and provide emergency assistance when warranted. The following emergency signals shall be used:

• Thumbs up	Okay, understand.
• Thumbs down	No, negative.
• Grasping buddy's wrist	Leave site now.

- Hands on top of head Need assistance.

5.7 Site Specific Health and Safety Training

All site workers and visitors will be required to read the SSHP and be briefed on site history and emergency procedures. They will sign the acceptance sheet at the end of the field copy of the SSHP to document this has occurred. An onsite orientation session will be required for onsite personnel before starting work and will include the following:

- Personal protective equipment (necessity, use, care, fitting, effectiveness, and limitations).
- Decontamination procedures.
- Work Practices.
- Emergency procedures, contacts, equipment, and area layout.

Health and safety briefings will be conducted at the beginning of each day by the SSHO. Health and safety considerations for the day's activities will be discussed, and the protective equipment necessary will be outlined. Problems relating to personal protection equipment, inclement weather, or the interpretation of newly available environmental monitoring data will be topics typically covered during these briefings. Meetings will be documented in the daily field log.

5.8 Record Keeping, Logs, and Reports

At least one copy of this SSHP will be maintained at the job work site, and each individual accessing the work zone will be required to sign the acceptance sheet prior to site access. Daily field logs completed by onsite staff shall contain sufficient detail to document the work performed, any unusual or significant circumstances, any unanticipated/unplanned actions due to unexpected field conditions, or other site-specific conditions affecting safe accomplishment of the work.

Accidents will be reported to the US Army Corps of Engineers POC within 24 hours of occurrence. Notification will be the responsibility of the Project Manager. Accidents and incidents that require reporting include fatalities, lost time injuries, admission to the hospital, spill or exposure to hazardous materials, and property damage. The following format will be used to transmit the report:

- Name, organization, telephone number, and location of contractor.

- Name and title of person or persons reporting.
- Date, time, and location of accident or incident.
- Brief summary of accident or incident giving pertinent details, including type of operation ongoing at the time of the accident or incident.
- Cause of accident or incident if known.
- Casualties, if any.
- Details of existing chemical hazard or contamination.
- Action taken to ensure safety and security.
- Estimated property damages (if applicable).
- Nature of damage; affect on contract schedule.
- Other damage or injuries sustained (public or private).

6.0 MEDICAL AND EMERGENCY RESPONSE

During site activities, first aid kits will be readily available for use in case of accident or injury. It is the responsibility of the SSHO to inspect the first aid kit prior to commencing site work to ensure that expended items have been replaced.

6.1 Emergency Response Procedures

In the event of an emergency the following procedures will be followed:

- Response to an emergency situation will be initiated by the first person recognizing the emergency.
- The SSHO will be immediately summoned to assess the situation and initiate emergency response procedures.
- Once the nature of the emergency is known, the SSHO will contact one or more of the appropriate agencies listed in Section 6.2.
- Resources will be maintained in the work area so that employees will be able to immediately wash any affected skin area or the eyes if they come into contact with potentially contaminated materials.
- If an injury/illness is the result of a suspected chemical exposure, steps will be taken to identify the chemical, and this information will be given to the attending physician.
- Accidents must be documented and reported as outlined above.

6.2 Emergency Contacts

Access Location	Contact	Phone
1 through 9	Corporate Care	(330) 306-5030
	St Joseph Community Care Center	(330) 841-4643
10 through 16	St Elizabeth Health Center	(330) 746-7211
	Emergency	911
	US Coast Guard	(800) 438 8724
	Corps of Engineers Project Manager, Carmen Rozzi	(412) 395-7227
	Altech's Project Manager, Mike Saffran	Office (502) 585-9500 Cell (502) 295-2417

6.3 Route to Hospital

The nearest medical facility to the project areas depends on the access location to sampling areas. Three hospitals are located approximately 2.5 miles within the sampling locations. The shortest route to the hospital closest from a sampling location will be utilized. The direct routes from the access locations to the hospitals are depicted in Figures C-1 to C-5.

6.4 Medical Emergency Response

Person(s) who becomes ill or injured during work activities must notify the SSHO immediately regardless of the severity of illness or injury. The victim's vital signs and severity of the exposure will be assessed.

For minor injuries, routine first-aid procedures will be administered by the SSHO. If required, the accident victim will be transported to the hospital. Appropriate personal protective equipment shall be worn when treating the victim(s). For major injuries, an ambulance will be called immediately by the SSHO. Onsite personnel will administer first aid, attempt to stabilize the victim, and perform decontamination to the extent possible. Injured personnel will be decontaminated only to the extent that

injuries permit. If complete decontamination procedures are not possible, the receiving medical facility will be notified. The responding agencies will be supplied with information about the accident and/or chemical exposure. If the medical emergency is severe enough, a cessation of work will be ordered.

Figures Emergency Route to Hospital

Figure C-1 From Access Locations 1, 2 and 3 to Corporate Care

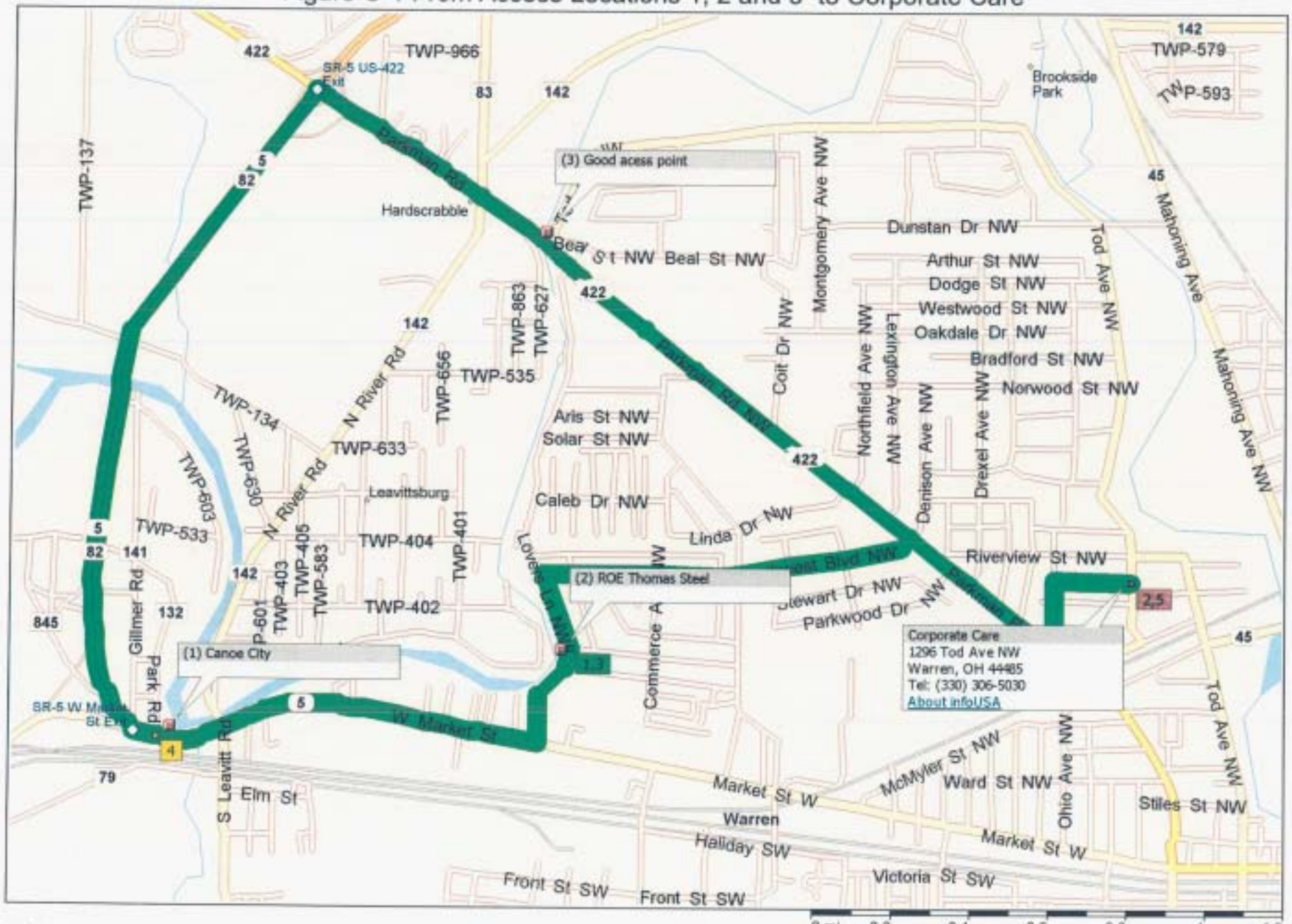

Figure C-2 From Access Locations 4, 5 and 6 to Corporate Care

Figure C-3 From Access Locations 7, 8 and 9 to Corporate Care

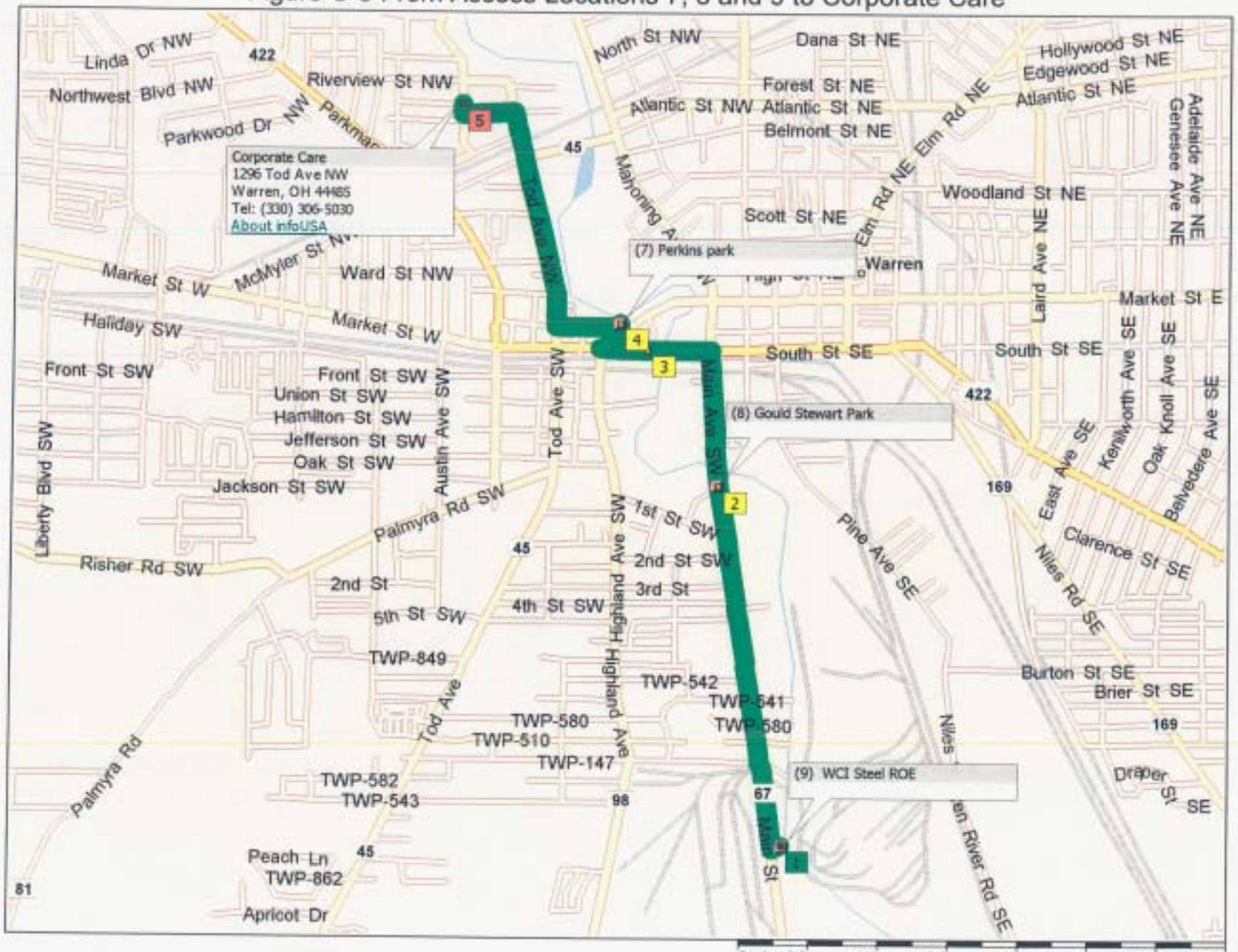

Figure C-4 From Access Locations 10, 11 and 12 to St Elizabeth Health Center

Figure C-5 From Access Locations 13, 14, 15 and 16 to St. Elizabeth Health Center

SITE SAFETY AND HEALTH PLAN ACCEPTANCE

PROJECT: Sediment and Soil Sampling – Mahoning River, Mahoning/Trumbull County, OH

I have read the Site Safety and Health Plan for the above referenced project and understand the requirements. My signature signifies my agreement to abide by these requirements.

NAME	DATE	SIGNATURE	TITLE