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**HEALTH AND SAFETY PLAN**  
Time-Critical Removal  
**TEN MILE DRAIN PCB SITE**  
**St. Clair Shores, Macomb County, Michigan**

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Prepared for:



Terry Stillman  
U.S. EPA  
Region 5  
Emergency Response Branch  
Superfund Division  
Contract No. EP-S4-16-03

Prepared by:



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### 1. REVIEWS AND APPROVALS

Contract No.: EP-S4-16-03  
 Date: August 12, 2020  
 Project Name: St. Clair Shores, Macomb County, Michigan  
 EQM Project No.: 030325.0089

Prepared By:	_____ Signature on File David Arthur EQM Corporate Health and Safety Manager	_____ 08/12/2020 Date
RM Review:	_____ Signature on File Erik Corbin EQM Response Manager (RM)	_____ Date
CIH Review:	_____ Signature on File John Kominsky, CSP, CIH, CHMM EQM Director of Health and Safety	_____ Date
QA Review:	_____ Signature on File Jackie Doan, CMQ/OE, CQA, CHMM, CEAC EQM Director of Quality Control	_____ Date
START Review:	_____ Signature on File Chris Draper START Health and Safety Officer	_____ 08/11/2020 Date
OSC Approval:	_____ Signature on File Terry Stillman U.S. EPA Region 5, OSC	_____ Date



## 2. ACRONYMS & SYMBOLS

§	Section	HMIS	Hazardous Materials Identification System
ACGIH	American Conference of Governmental Industrial Hygienists	HR	human resources
AHA	Activity Hazard Analysis	HZ	Hot Zone
AIHA	American Industrial Hygiene Association	IAW	in accordance with
ANSI	American National Standards Institute	IDLH	immediately dangerous to life and health
APR	air purifying respirator	MCL	Maximum Concentration Level
ATF	Bureau of Alcohol, Tobacco, Firearms and Explosives	mg/m <sup>3</sup>	milligrams per cubic meter
CFR	Code of Federal Regulations	NFPA	National Fire Protection Association
CHMM	Certified Hazardous Materials Manager	NIMS	National Incident Management System
CHSM	Corporate Health and Safety Manager	NIOSH	National Institute for Occupational Safety and Health
CIH	Certified Industrial Hygienist	NRP	National Response Plan
CO	Contracting Officer	OSC	On-Scene Coordinator
CPR	cardiopulmonary resuscitation	OSHA	Occupational Safety and Health Administration
CRZ	Contamination Reduction Zone	OTM	OSHA's Technical Manual
CSP	Certified Safety Professional	PBZ	personal breathing zone
dba	decibels A-weighted	PEL	permissible exposure limit
DEET	diethyltoluamide	PFAS	personal fall-arrest system
DoT	Department of Transportation	PM	Project/Program Manager
ECP	entry/exit control point	POL	corporate policy
EOC	Emergency Operations Center	PPE	personal protective equipment
EPA	Environmental Protection Agency	ppm	parts per million
EQM	Environmental Quality Management, Inc.	REL	recommended exposure level
ERRS	Emergency and Rapid Response Services	RM	Response Manager
EZ	Exclusion Zone	SAR	supplied air respirator
H&S	health and safety	SCBA	self-contained breathing apparatus
HASP	Health and Safety Plan	SDS	Safety Data Sheet(s)
HAZCOM	Hazard Communication	SEG	similar exposure group
HAZWOPER	Hazardous Waste Operations and Emergency Response	SHSO	Site Health and Safety Officer
HEPA	high-efficiency particulate air	SLM	Sound Level Meter
		SOP	Standard Operating Procedure
		START	Superfund Technical Assessment and Response Team
		STEL	short-term exposure limit

SZ	Support Zone	UL	Underwriter Labs
TBD	to be determined	USACE	U.S. Army Corps of Engineers
TLV	Threshold Limit Value	USEPA	U.S. Environmental Protection Agency
TO	Task Order	VOC	volatile organic compound
TSDf	treatment, storage & disposal facility	WBGT	wet bulb globe temperature
TWA	time weighted average	WWT	wastewater treatment



### 3. KEY PERSONNEL AND EMERGENCY CONTACT NUMBERS

This section contains contact information for the personnel and agencies that provide emergency response and general assistance during normal operations. Post this information on worksite bulletin boards and in work-vehicles for emergency reference, as necessary.

#### 3.1 Key Personnel

Table 3-1, *Key Personnel*, presents the list of key personnel for this project.

**Table 3-1, Key Personnel**

NAME	AGENCY	TITLE	PHONE	EMAIL
Terry Stillman	U.S. EPA	OSC	678-576-6440	stilman.terry@epa.gov
Eric Bowman	EQM, Inc.	PM	513-265-8875	ebowman@eqm.com
Erik Corbin	EQM, Inc.	RM/SHSO	513-532-2118	ecorbin@eqm.com
John Kominsky CIH, CSP, CHMM	EQM, Inc.	Director of H&S	513-310-4473	jkominsky@eqm.com
David Arthur	EQM, Inc.	H&S Manager	513-742-7297	darthur@eqm.com
Lori Kozel	Tetra Tech	START Project Manager/ SHSO	586-524-0613	lori.kozel@tetrattech.com
Reeve Rogers	Tetra Tech	START Field Team Leader	248-376-9918	reeve.rogers@tetrattech.com
CHMM – Certified Hazardous Materials Manager    CIH – Certified Industrial Hygienist CSP – Certified Safety Professional                    EQM – Environmental Quality Management H&S – Health and Safety                                    OSC – On Scene Coordinator PM – Program Manager                                      RM – Response Manager H&S – Site Health & Safety Officer                    START – Superfund Technical Assessment & Response Team SRS – Sustainment & Restoration Services           U.S. EPA – U.S. Environmental Protection Agency				

#### 3.2 Emergency Contacts

Table 3-2, *Local Emergency & Non-Emergency Contacts*, provides the necessary local contact information for various emergency and non-emergency support. SOP 310 – *Incident Management*, provides the procedures to follow during an emergency.

**Table 3-2, Local Emergency & Non-Emergency Contacts**

AGENCY	ADDRESS/CONTACT INFO.	PHONE	HOURS
<b>Life-Threatening Emergencies &amp; Immediate Response</b>			
Fire, Police, & Ambulance	By Phone	911	24/7/365
Hospital Emergency Room	Ascension St. John Hospital Emergency Department 22101 Moross Rd, Detroit, MI 48236	313-343-4000	24/7/365
<b>Non-Life-Threatening Emergencies &amp; Routine Medical</b>			
Occupational Clinic	1st Choice Urgent Care - Dearborn 23455 Michigan Ave, Dearborn, MI 48124	734-333-8001	Daily 9:00 am To 9:00 pm
EQM Case Manager	1-Source OHS	855-517-6872	24/7/365
START Medical Services	Work Care (Dr. P. Greaney)	800-455-2114	24/7/365
National Response Center	By Phone	800-424-8802	24/7/365
Centers for Disease Control	By Phone	770-488-7100	24/7/365
ATF (Explosives Hotline)	By Phone	888-283-2662	24/7/365
CHEMTREC	By Phone	800 262 8200	24/7/365
Poison Control Center	By Phone	800-222-1222	24/7/365
<b>Excavation Contacts</b>			
State/Locality Utilities	MISS DIG	811	24/7/365
“Call Before You Dig”	By Phone	811	24/7/365
<b>EQM Emergency Contacts</b>			
EQM Project Office	Erik Corbin	513-532-2118	24/7/365
EQM Emergency Hotline	By Phone	800-500-0575	24/7/365
Corporate H&S Manager	David Arthur By Phone	513-742-7297 513-205-3759	24/7/365
<b>START Emergency Contacts</b>			
START Safety Manager	Chris Draper	615-969-1334	24/7/365
Project Manager	Lori Kozel	586-524-0613	24/7/365
Monitoring Technician	Reeve Rogers	248-376-9918	24/7/265

Appendix F, *Maps*, contains the directions from the site to the hospital emergency room, which is approximately 5.8 miles (13 minutes) in-transit.

**Note:** For this project, there is no permanent office location. Therefore, the address used for mapping purposes is an approximation for the entire site.

## 4. PROJECT DESCRIPTION AND POLICIES

This Health and Safety Plan (HASP) provides guidelines to protect on-site personnel from physical harm and chemical exposure during operations. It reflected the best available information at the time it was prepared, and as new information arises, should be revised to address any new requirements or conditions using the written amendments form in Appendix A, *Health and Safety Plan Amendments*.

### 4.1 Site Description

In July 2001, sediment samples were collected by the Macomb County Public Works Commissioners Office (MCPWCO) as part of a permit application process for a proposed dredging project in the Lange and Revere Street canals. The analytical results were submitted to the U.S. Army Corps of Engineers (USACE) and based on the elevated levels of PCBs in the sediment, USACE notified MDEQ. In December 2001, MDEQ conducted an investigation of the Ten Mile drain storm sewer system and confirmed there was an upstream source of polychlorinated biphenyl (PCB) contamination in the drain. As a result of MDEQ's investigation, the MCPWCO sampled and confirmed the presence of PCBs in both the Lange and Revere Street canals and Ten Mile drain storm sewer drainage system.

The EPA removal program initiated a time-critical removal action in August 2002 and completed work at the site on July 16, 2004. During this time frame, high concentrations of PCB-contaminated sediments were removed from the Ten Mile drain storm system, the Revere canal, and the connecting channel between the Revere and Lange Street canals. All waste was transported for disposal at approved off-site facilities. Specifically, the following activities were completed:

- Developed and implemented a site-specific Health and Safety Plan and an Air Monitoring Plan
- Developed and implemented a Site Security Plan which included guard services, installation of signs on gates and temporary fencing
- Dewatered the Ten Mile Storm Drainage System and removed all sediments via confined space entry and high-pressure Jet-vacuum truck
- Constructed an on-site water treatment system and treated approximately 2.5 million gallons of contaminated water. Water treatment operation included the dewatering of the Wahby Park Pond and sampling of the sediments
- Installed sheet piling to create excavation cells. In addition, replaced any sections of sea walls that failed after dewatering due to removal activities
- Excavated all sediments contaminated with PCBs at levels exceeding 10 ppm, the performance standard for this removal action, from the Revere canal and the connecting channel between the Lange and Revere Street canals. The performance standard goal for this removal action was an average of 1 ppm

- Developed and implemented a confirmation sampling plan during the excavation phase of the project. In the event that the confirmatory sampling demonstrated that the performance standard goal of 1 ppm was not met, additional excavation and confirmatory sampling was required
- Disposed off-site all PCB-contaminated sediments and any other hazardous substances or pollutants or contaminants at a EPA-approved disposal facility in accordance with the EPA Off-Site Rule (40 CFR § 300.440)
- Restored any areas damaged due to EPA's actions

In total, EPA disposed of approximately 5,900 tons of PCB-contaminated materials and 18,000 tons of non-hazardous materials. Post-removal site controls were agreed to by the MCPWCO. In April 2004, MCPWCO completed the re-cleaning of the drain and the outfall area where the sewer lines emptied into the canal.

In June 2004, MCPWCO initiated quarterly-PCB sampling in the drain. PCBs were present at levels as high as 1,300 micrograms per liter or ug/L (equivalent to 1.3 parts per million or ppm) in the drain water and at the time were believed to be residual contamination based on the sampling results. In July 2004, MCPWCO initiated a Phase I-type assessment of the Harper Avenue and Bon Brae Street area. In September 2004, MCPWCO completed the second round of quarterly PCB sampling and detected PCBs in sediment at the outfall of the drain at 770 ppm. In December 2004, MCPWCO conducted the third round of PCB sampling in the drain and detected PCBs at levels as high as 17,000 ppm in the drain. After this round of sampling, MCPWCO initiated soil boring sampling of the backfill surrounding the drain to attempt to determine if a source of PCBs was re-contaminating the drain. Results indicated that PCBs were present in backfill surrounding the drain at levels as high as 41,000 ppm. In January 2005, MCPWCO collected sediment samples from the drain near the intersection of Harper Avenue and Bon Brae Street and detected PCBs at extremely high levels, up to 200,000 ppm.

In May 2005, EPA and MDEQ installed 64 additional soil borings in the suspected source area to attempt to better define the extent of PCB contamination in this area. PCBs were detected in the sand and gravel backfill surrounding the drain and appeared centered in the area near the intersection of Harper Avenue and Bon Brae Street. The May 2005 investigation also revealed one surface soil area contaminated with PCBs at approximately 800 ppm. In the spring and summer of 2006, EPA conducted another removal action to address this area of contamination. Specifically, the following activities were completed:

- Removal and restoration of shallow surface soils containing low-level PCB concentrations
- Repair of sea walls
- Removal of sediment from a portion of the sewer system
- Installation of monitoring wells and a large trap to collect contaminated sediment in the drain at the outfall
- A portion of the sewers along Bon Brae Street and Harper Avenue were lined with cured-in-place pipe (CIPP) to attempt to impede PCB infiltration into the sewers

In the fall of 2007, MDEQ provided a \$500,000 grant to the City of St. Clair Shores for further investigation and cleanup efforts. The City of St. Clair Shores hired Environmental Consulting & Technology (ECT) as its contractor for this work. Four main tasks were performed under this grant: environmental sampling to monitor the conditions in and around the drain; installation and maintenance of monitoring wells along the drain; cleaning contaminated sediment from portions of the drain; and installation of two weirs within the drain to slow the migration of PCBs to Lake St. Clair. As shown in Figure 2 Attachment 1, weirs are half-circle metal structures approximately two feet high that act like small dams to collect PCB oil and contaminated sediment before the contaminants move into the canals.

In late 2009, inside the CIPP-lined portion of the sewer located at the Bon Brae Street and Harper Avenue intersection, ECT discovered oil that contained more than 80 percent PCBs (more than 800,000 ppm). The City of St. Clair Shores and ECT asked for assistance from EPA in addressing this almost pure chemical waste in the drain. EPA and the City of St. Clair Shores identified immediate concerns and time-critical concerns to eliminate the potential for PCBs to migrate down the storm sewer and threaten the Lange and Revere Street canals. On March 8, 2010, EPA mobilized its WESTON START and Emergency Response and Removal Services (ERRS) contractors to the site to initiate removal action activities, which included the following:

- Dewatering and high-pressure jet-vacuuming of the sewer along Bon Brae Street and down Harper and Jefferson Avenues to remove PCB oil and sediment
- Stabilization, transportation, and disposal of the PCB-contaminated materials
- Installation of temporary weir structures in 15 manhole locations to allow sediment collection points (Figure 3, Attachment 1). The 15 weirs joined the two weirs previously installed in the drain system by the City of St. Clair Shores
- A geophysical survey of the area near the sewer where contamination was present, and advancement of soil borings and collection of soil samples from suspected source areas

EPA proposed the site for the NPL in March 2010 and finalized the site on the NPL in September 2010.

After the removal activities, the City of St. Clair Shores continued to conduct environmental sampling to monitor conditions behind the seventeen weirs in the drain. Sampling results indicated that high levels of PCB contamination continued to infiltrate into the drain and accumulate behind the weirs from an unknown source.

Based on the sampling results, EPA conducted another removal action at the site on February 26, 2011, to remove PCB oil from the drain. Absorbent snares were used to swipe and soak up the oil that had collected behind the weirs. A total of six of the seventeen weir locations required cleanout. Clean snares were then attached to weighted chains and left directly up gradient of selected weirs to allow any new incoming oil to collect on them and to support future sample collection and removal efforts. Clean snares were placed at four locations along Bon Brae Street (see manhole locations on Figure 4 labeled M7179, M4335, M7183, and M4334). One 55-gallon drum of soiled absorbent snares was collected for disposal. Because PCB oil continued to infiltrate the drain, in April 2011 the City of St. Clair Shores, as a part of their environmental monitoring activities, inspected absorbent snares, removed soiled snares and placed clean snares

behind the weirs where needed. MDEQ's grant to fund the City of St. Clair Shores' investigations and cleanup efforts at the Ten-Mile Drain Site expired in September 2011.

## 4.2 Scope

This plan establishes a framework applicable to all affected personnel for safely achieving the tasked performance objectives and alleviate active and potential health risks posed by remnant chemicals, contaminated soils, and/or other hazardous materials onsite in accordance with (IAW) all local, state, and federal guidelines. The plan applies the Occupational Safety and Health Administration (OSHA) Standard 29 CFR §1926.65, *Hazardous Waste Operations and Emergency Response* (HAZWOPER), and the U.S. Army Corps of Engineers' (USACE) EM 385-1-1, *USACE Safety and Health Requirements Manual*, as applicable.

**Note:** Because OSHA Standards §1910.120 and §1926.65 are essentially duplicates of one another, the two standards may be referenced interchangeably.

Although OSHA does not govern the general public, this HASP does address their safety and that of our clients.

Should the OSC direct the Response Manager (RM) to complete other aspects of the project than originally planned, revise this HASP to address any additional hazards workers may encounter.

According to the Task Order (TO), the specific activities contracted for this project are:

- Plan Preparation/Procurement
- Mobilize equipment and personnel
- Remove trees and vegetation
- Excavate contaminated soil
- Backfill excavated soil and restore vegetation
- Transport/dispose of sediment/oil
- Demobilize

## 4.3 EQM Health and Safety Policy

EQM commits to provide a safe and healthful workplace – as is required by the Occupational Safety and Health Act of 1970, 29 U.S.C. §654.5 – and will never knowingly undergo an operation or activity where the exposure risk presents a clear and present danger to employees. EQM is committed to achieving the following goals:

- Zero percent accident and injury rate.
- 100 percent training compliance rate.
- Consistent program monitoring and auditing.
- Strong management commitment toward safety and health compliance.

Our objective is to meet these goals by ensuring all workers understand their responsibilities – regardless of their management or employment level, – to adhere to all documented safety practices, and by ensuring employee personal safety in all projects and workplaces.

To accomplish this objective, EQM will perform the following:

### 4.3.1 Safety Guidance

Table 4-1, *Applicable Policies, SOPs, and WIs*, offers the list of instructions that apply to this project, and are included in Appendix B, *POLs, SOPs, and WIs*. START documents are in Appendix H.

**Table 4-1, Applicable Policies, SOPs, and WIs**

EQM SOP	POL 300	SOP 303	SOP 309	SOP 315	SOP 316	SOP 317	SOP 318	SOP 326	SOP 344	SOP 347	SOP 348
<b>Site-Specific Hazard</b>											
Electrical Lines and/or Equipment				X		X			X		
Elevated Noise Levels			X								
Excavations				X	X			X			
Flammable and Combustible Liquids (fuels)		X									
Lifting Heavy Objects										X	
Slips, Trips, and Falls	X										
Working Around Heavy Equipment					X			X			
Working Around Utilities				X					X		
Working in Adverse Weather							X				X

Table Index:

- POL 300, *Incident Prevention Plan*
- SOP 303, *Flammable Combustible Liquid Transfer*
- SOP 309, *Hearing Conservation Program*
- SOP 315, *Electrical Safety*
- SOP 316, *Excavation and Trenching*
- SOP 317, *Hazardous Energy Control Program, Lockout/Tagout*
- SOP 318, *Cold, Heat Stress*
- SOP 326, *Working Around Heavy Equipment & Machinery Excavators & Loaders*
- SOP 344, *Use of a Live Line Telescoping*
- SOP 347, *Manual Lifting*
- SOP 348, *Adverse Weather/Natural Disaster Response*

### 4.3.2 Daily Safety Meetings

The RM, or designate, will hold daily “tailgate” safety meetings with all onsite personnel at the start of each shift to address the site conditions, operating procedures, personal protective equipment (PPE) corrections, worker health and safety concerns, and to discuss new activities in detail to include reviewing and/or updating the Activity Hazard Analyses (AHAs). All onsite personnel must attend.

### **4.3.3 Health and Safety Inspections**

Generally, the RM will either personally or task onsite workers to conduct and document regular health and safety inspections. The EQM Corporate Health and Safety Manager (CHSM), START safety personnel, U.S. EPA (U.S. EPA), or any other federal, state, or local authority approved by the OSC may also conduct site health and safety audits, as necessary. The RM will document all inspections that take place on the project.

### **4.3.4 Safety Recognition Program**

The Safety Recognition Program increases safety awareness and promotes “all in” participation in safe practices. EQM uses a project-specific safety incentive program involving all onsite workers using the following three-pronged approach:

- Safety Improvement/Awareness to include identifying “Near Miss” incidents;
- Monthly Safety Progress Meetings, in the form of a slightly extended tailgate meeting, to recognize deserving workers; and
- Recognizing field staff who demonstrate outstanding safety compliance and promote the company’s safety culture through good incident reporting, offering suggestions, and performing safety inspections.

### **4.3.5 Site Health and Safety Plan Acceptance/Acknowledgment**

The RM will inform all persons who enter the site of this plan and ensure that anyone tasked to enter the Exclusion Zone (EZ) signs the *HASP Acknowledgment Form* in Appendix G. Persons who sign this form acknowledge the site’s potential hazards and agree to follow the policies and procedures within this HASP.



## **5. HEALTH AND SAFETY ORGANIZATION**

This section outlines the project's management organization and applies to all persons working on the site.

### **5.1 Roles and Responsibilities**

Essentially, there are three main entities working together to conduct this project: EQM, the OSC, and the START. Their responsibilities are outlined as follows.

#### **5.1.1 U.S. EPA On-Scene Coordinator**

The OSC is the federal government's representative, through the U.S. Environmental Protection Agency (U.S. EPA), responsible for overall project administration including monitoring and enforcing applicable federal safety standards for all project contractors and subcontractors. The OSC is the overall Site Health and Safety Officer (SHSO) and is responsible to ensure all site workers operate according to OSHA's standards, IAW 40 CFR §300.150(a) through (c). While the OSC approves this plan, this authority does not detract from each contractor's responsibility under OSHA to protect their own employees' health and safety.

The OSC may designate an alternate individual to act in his/her stead, and within this document, any reference to the OSC will refer to either the OSC or his/her designate.

#### **5.1.2 Response Manager**

The RM is EQM's field representative, OSHA Competent Person, and Emergency and Rapid Response Services' (ERRS) primary cleanup contractor, responsible to fulfill the terms of the U.S. EPA Task Order by overseeing the project and ensuring all technical, regulatory, and safety requirements are satisfied. The RM and OSC will communicate as frequently as directed by the OSC – but no less than daily – to resolve operational concerns and problems. If a dispute arises regarding worker health and safety, the RM will attempt to resolve the situation directly onsite. If an issue cannot be resolved, the RM should elevate it to the OSC or consult off-site health and safety personnel for assistance. During the interim, discontinue the specific task or operation in dispute until the issue is resolved.

#### **5.1.3 Superfund Technical Assessment and Response Team**

The START provides technical, regulatory, and safety assistance to the OSC regarding all project activities relating to hazardous materials and waste sampling to determine treatment, packaging, labeling, compatibility, transport, and disposal. This includes monitoring contractor activities. The START consists of a Project Manager and a Safety Manager. The START Project Manager is responsible to direct START activities, including perimeter air monitoring

and sampling, determining contaminant locations, documenting contaminant levels, and documenting removal activities. The START Safety Manager reviews the Health and Safety Plan and may provide guidance to field personnel on health and safety issues.

**Note:** *The START is not contracted to, nor works for or on behalf of, EQM.* With the OSC's approval, EQM may request sampling data from the START, but may not direct or take responsibility for their operations.

#### **5.1.4 Site Health and Safety Officer**

Site Health and Safety Officers (SHSOs) are functionally responsible to implement the HASP as it applies to onsite personnel. This includes subcontractors subsequently attached to the project. For this project, the RM is the designated SHSO, and the START Site Lead is the START SHSO, unless otherwise noted.

#### **5.1.5 Supervisors**

The direct supervisors are the key to ensure assigned personnel comply with program requirements requisite to their position. Supervisors will enforce compliance with the HASP and communicate operational directions from the RM to their workers.

#### **5.1.6 All Personnel**

All personnel are individually responsible to comply with the HASP as they apply it within their work responsibilities. Regardless of employment level, every employee is expected to comply with the OSC and RM's direction.

**Note:** Failure to follow noted health and safety protocols or EQM's work policies may bring disciplinary action up to and including site expulsion.

### **5.2 Application of OSHA's Multi-Employer Concept**

Unless specifically contracted, EQM assumes no responsibility for the U.S. EPA, START, vendors, visitors, or others entering the site who are not under EQM's direct safety oversight. Subcontractors working under their own company safety supervision, plans, and/or programs are the responsibility of their employer.

## 6. HAZARD ANALYSIS AND MITIGATION

This section details the chemical, physical, biological, and task-specific hazards posed to site personnel during planned project activities.

### 6.1 Assessing Hazards

EQM assess operational hazards through Activity Hazard Analysis (AHA) which address each work element noted in Section 4.2, *Scope*. AHAs identify the specific hazards expected during operations along with related control measures to minimize or eliminate them. Use the AHAs presented in Appendix C, *Activity Hazard Analysis*, to augment the daily safety meetings and heighten safety and hazard awareness.

#### 6.1.1 Chemical Hazards

The chemical hazards onsite essentially have two origins. The first are those brought onsite to support operations, to include:

- Antifreeze
- Diesel fuel
- Gasoline
- Compressed gas cylinders (e.g., acetylene, oxygen, propane, and calibration gasses)
- WD-40 (when used as a cutting lubricant)

The other are the contaminants generated during operations as listed under the U.S. EPA Tasking Order. Manage and communicate these hazards in accordance with the 29 CFR §1910.1200, *Hazard Communication* (HAZCOM), and EQM SOP 301, *Hazard Communication Program*. For the former chemical set, Appendix D, *Safety Data Sheets*, contains basic chemical exposure and avoidance information.

For the contaminated waste, polychlorinated biphenyls (PCBs) are the project contaminants of concern.

PCBs are a group of manufactured organic chemicals containing 209 individual chlorinated chemicals. PCBs are either oily liquids or solids and are colorless to a light-yellow color and have no known smell or taste. There are no known natural sources of PCBs. Some commercial PCB mixtures are known in the United States by their industrial trade name, “Aroclor”.

PCBs were used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment. The manufacture of PCBs stopped in the United States in 1977 because of evidence that they build up in the environment and cause harmful effects. Products containing PCBs include old fluorescent lighting fixtures, electrical appliances, capacitors, microscope oil,

and hydraulic fluids. They were used in dielectric oils and insulators because of their non-conducting properties.

Chronic airborne PCB exposure may result in nose and/or lung irritation. Prolonged physical contact with skin may also cause irritation, to include acne and rashes. It is not known whether PCBs can cause birth defects or reproductive problems, however, the International Agency for Research on Cancer (IARC) considers PCBs to be "probably carcinogenic to humans". This is based on limited evidence of carcinogenicity in humans nor sufficient experimental carcinogenicity evidence in animals.

The OSHA Permissible Exposure Limit - Time-Weighted Average (PEL-TWA) is 0.5 mg/m<sup>3</sup> for exposure to chlorodiphenyl (54% chlorine).

While PCBs are the contaminant of concern, because working conditions often change during operations, personnel should always be alert for the signs and symptoms that may indicate possible exposure, such as:

- Personnel mood changes (e.g., euphoria, irritation, depression, etc.),
- Skin irritation,
- Sleepiness or tiredness,
- Stinging or burning eyes, nose, or throat, and/or
- Unusual smells.

Report any of these symptoms and/or conditions immediately to the RM/SHSO!

### 6.1.2 Physical Hazards

All projects and worksites present some form of physical hazard(s) and the following are noted where there are specific procedures or requirements beyond what is noted in the AHAs, SOPs, and WIs.

- **Utilities** – Michigan's statute, Act 174 of Public Act 2013, requires anyone who engages in, or is responsible for, the planning or performance of any type of excavation (e.g., grading, demolition, cultivating, auguring, blasting, or boring) to provide at least three full business days advance notice to the MISS DIG program to place a Locate Request. There are three convenient ways to make this contact:

Remote Ticket Entry (RTE): This allows authorized contractors and MISS DIG Members to enter Dig Notice requests over the Internet 24/7 at [http://newtin.missdig.org/newtinweb/missdig\\_e-locate.html#divLogIn](http://newtin.missdig.org/newtinweb/missdig_e-locate.html#divLogIn). With basic access, the RM can enter regular 3 business-day tickets, as well as:

- Ticket Search – Print copies of tickets, post responses to your tickets, attach documents to your tickets,
- Positive Response – View the responses to your request posted by members,
- NEAR Ticket – View projects that have tickets near your worksite,
- Ticket Entry at your convenience: 24 hours a day, 7 days a week, and

- Ticket Entry on any computer or laptop, supported with an HTML5 browser.

e-Locate Allows contractors, members, and homeowners to enter dig notice requests through our website 24/7. You can enter locate requests for excavation at a single address if you have a valid email. You will receive a confirmation email from MISS DIG 811 along with general information pertaining to the excavation project.

**Note:** Your e-Locate is not valid until you receive an email confirmation from MISS DIG 811 with a start date and time.

8-1-1 is the nationwide toll-free number for locate services and is staffed 24 hours per day, 365 days per year. You can also dial 1-800-482-7171 before you dig. Only one locate request per phone call is allowed.

You will be required to answer some questions when you contact the MISS DIG System to place a Locate Request, including:

- Your name and phone number.
- The contractor or person doing the work.
- The geographical location (county and city, village, or township) of the work area.
- The address where the work will be done.
- Nearest cross streets to the work site
- The type of work being done (e.g., installing a fence or building a deck).
- Information about the project area that identifies the boundaries for the utility representatives, for example;
  - Locate underground utility lines 100 feet from the north side of the house,
  - Locate underground utility lines in the entire yard, or
  - Locate underground utility lines in the front yard.
- When do you plan to dig?

Do not begin excavation until the legal start date and time assigned. At that point, the ticket remains valid for 21 calendar days after the legal dig start date requested on the MISS DIG 811 ticket. It is, however, the excavator's responsibility to get the marks refreshed when needed. A ticket becomes invalid only if the work continues past 21 calendar days, or the locate marks are missing or need refreshing. In certain situations, MISS DIG 811 may issue a project ticket that will remain valid for 180 calendar days. In addition, if excavation has not commenced on a project within 14 days, a new MISS DIG 811 ticket is required.

In Michigan, the approximate location of an underground utility is a strip of land at least 36 inches wide, but not wider than the width of the marked facility plus 18 inches on either side of the facility marks. There is also a caution zone is the area within 48 inches of either side of the facility marks provided by a facility owner or facility operator. Hand-digging, potholing, and daylighting are required within these zones.

- **Confined Spaces** – This project will involve no confined spaces.

- **Excavation** – Heavy equipment operation presents hazards to other personnel as well as the operator. Only trained and qualified operators are authorized to operate heavy equipment. Operators are responsible to perform daily equipment inspections to identify and take out of service or correct any equipment defects that would render equipment unsafe. The following equipment must be in working condition prior to operating equipment:
  - Seat Belts
  - Safety Glass (enclosed cab)
  - Braking System
  - Backup Alarms
  - Portable Fire Extinguisher
  - Horn
  - Tires
  - Steering and Hydraulic Systems.

Operators are required to wear seat belts when operating equipment and are responsible for the location of ground personnel in their work area. All operators working in conjunction with ground personnel will maintain “line of sight” with these individuals at all times. Ground personnel will adhere to the “twice the maximum boom length” rule at all times.

There may be the need to excavate trenches to three (3) to five (5) feet deep. If such excavation exceeds five (5) feet, use shoring, sheeting, or benching to preclude potential cave-in. Follow the provisions of SOP 316, *Excavation and Trenching*.

- **Housekeeping** – Poor housekeeping can produce congestion, disorder, dirt, waste, trash, and other obstacles that may lead to slips, trips, and falls. Such accidents can, and do, result in strains, sprains, fractures, contusions, and sometimes even fatalities. For this reason, it is imperative to do the following:
  - Keep work areas as clean and orderly as practical so that work can proceed in an efficient and safe manner.
  - Work areas must have adequate light, ventilation, physical protection, and accessibility as appropriate to the work activities.
  - Arrange or store machinery and equipment promote safety, efficiency, and allow cleaning.
  - Store tools and accessories in cabinets, racks, or other suitable devices out of high traffic areas.
  - Provide waste containers and receptacles in appropriate locations and empty them regularly.
  - Keep work areas, aiseways, and floors free of material, debris, obstructions, foreign materials, or slippery substances such as oil, water, and grease.
  - Store, label, and secure flammables and combustibles in approved containers/cabinets.
  - Properly discard refuse and broken equipment in a timely manner to keep them from piling up.

- Store waste rags in metal containers with lids and in ventilated storage rooms or areas to preclude spontaneous combustion.
- **Elevated Noise Levels** – Operating heavy equipment (e.g., backhoes, compressors, powered hand tools, pumps, or generators) create noise levels that may exceed the OSHA PEL. Exposing workers to excessive noise levels may lead to temporary or permanent hearing loss. The OSHA PEL is 90 decibels (dBA) (100 % dose); 85 dBA (50% equivalent dose) initiates the requirement for a Hearing Conservation Program.
- **Materials Handling** – Even handling everyday materials can lead to cuts, bruises, splinters, crushed appendages, fractures, and a variety of strains and sprains from lifting, moving, and/or dropping loads. This is a concern when using lifting devices, so make sure they're in good repair. Even the banding wraps used to secure loads could snap, leading to crushing, lacerations, and puncture wounds.

Lifting oversized or heavier objects can cause back sprains and strains. To avoid being injured, workers are advised to:

- Inspect all rigging and lifting equipment carefully prior to using them to ensure they are in good repair and are being used properly.
  - Never allow workers to lift more than that which they are capable. (*Note:* As a rule, never lift more than 70 pounds without assistance.)
  - Wear gloves and other PPE if there is a potential for splinters, sharp edges, or other physical deficiencies in the item's surface.
- **Manways and Other Openings** – Certain tasks could expose workers to hazardous constituents in tanks, explosive atmospheres from leaking containers, falls from different levels, and potentially being trapped in a confined space. To ensure these and other hazards remain at bay, workers must do the following:
    - Conduct air monitoring before opening vats, containers, or tanks when high contaminant levels and/or oxygen-deficient atmospheres are possible.
    - Open hatchways and doors carefully to keep from impacting persons on the other side.
    - Replace covers, lids, hatches, doors, and other safeguards at the earliest possible time after access.
    - Use rope, warning tape, cones, and barricades as necessary to protect open manways and to prevent people or vehicles from inadvertently dropping into them.
  - **Stairs and Ladders** – Housekeeping is critical because stairwells provide essential egress routes. If cluttered or blocked, they may become impassible during an emergency. Storing materials in stairwells can also create a fire hazard.

Ladders are dangerous for workers who are not properly trained on their use and limitations. Placing ladders in passageways, doorways, or anywhere there is possible displacement may cause fall hazards. To protect from these situations:

- Store loose materials in appropriate areas instead of stairwells.

- Place flammable materials in approved cabinets and/or storage containers and out of stairwells.
- Store ladders where there is controlled access and ensure personnel who use them are appropriately trained on their use.
- **Illumination** – Temporary work lighting is noted in 29 CFR §1910.120(m) - *Illumination*. Essentially the Standard requires five (5) foot-candles minimum illumination for all general site areas. First-aid stations and offices must maintain thirty (30) foot-candles. To achieve these levels:
  - Install temporary lighting systems in fixed structures when possible.
  - Use “light-all” carts to provide area lighting in outdoor applications.
  - Carry flashlights when other illumination means are not possible or practical.
  - Make sure the illumination source doesn’t conflict with the work environment (e.g.; Using a kerosene lantern in a flammable or explosive environment).

### 6.1.3 Biological Hazards

There are two aspects of biological hazard; the first being the potential for workers to pass infectious diseases between one another, and the other involves the natural hazards workers will encounter from working within a given environment.

#### 6.1.3.1. Infectious Disease

The greatest biological hazard currently is the SARS-CoV-2 virus and subsequent COVID-19 pandemic. This is applicable to all affected personnel to alleviate active and potential health risks posed by potential contact with the SARS-CoV-2 virus onsite and in accordance with (IAW) all local, state, and federal guidelines. This information was taken from the OSHA Publication 3990-03 2020, *Guidance on Preparing Workplaces for COVID-19*, the Center for Disease Control and Prevention Publications (CDC) website: <https://www.cdc.gov/coronavirus/2019-ncov/publications.html>, and from the World Health Organization (WHO) website <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.

It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes, but this is not thought to be the main way the virus spreads. What is currently known about the virus is that it spreads from person-to-person most frequently among close contacts (persons within approximately six (6) feet). This type of transmission occurs via respiratory droplets.

However, there is still the strong recommendation to clean visibly dirty and suspected contaminated surfaces followed by disinfection as a best practice measure for prevention of SAR-CoV-2 and other viral respiratory illnesses in community settings.

The best means of protection is to avoid contacting infected persons. Workers should limit their travel to only that which is necessary to conduct project business. Also, workers should avoid gathering in public locations, such as bars, restaurants, shopping malls, etc. While staying in hotels, it is best to remain in the room and not venture into pool, spa, exercise, or other public



areas where groups of people are likely to gather. For meals, when possible, use a delivery service or drive-through to limit the amount of personal interaction.

Another beneficial means to avoid transmission is to clean hands often, especially after removing PPE or contacting potentially infectious surfaces, with soap and water for a minimum of 20 seconds. If soap and water are not available and hands are not visibly dirty, use an alcohol-based hand sanitizer that contains 60%-95% alcohol. However, if hands are visibly dirty, always wash with soap and water. Ensure workers wash their hands:

- After blowing one's nose, coughing, or sneezing
- After using the restroom
- Before eating or preparing food
- After contact with animals
- Before and after providing routine care for another person who needs assistance (e.g., a co-worker)

Some localities may also have public restrictions or practices (e.g., required facial coverings while in public, self-quarantine after travel, etc.) in place, and the RM should brief personnel on these restrictions/practices.

When setting up the site, use the following engineering controls and work practices to limit or eliminate potential exposures:

- Maintain a stock of N95 filtering facepieces or other facial covering, as per the site's locality and local restrictions.
- Place picnic tables, benches, and other outdoor furniture so personnel may remain outdoors as much as possible, weather permitting.
- Create covered break areas and, when weather permits, have personnel take their breaks and lunches outside and at least six (6) feet from any entrance or personnel access point.
- If workers must break/lunch inside of an office trailer or other facility;
  - Reduce the time as much as possible, and
  - Remind personnel to stay at least six (6) feet from one another.
- Place disinfectant/anti-microbial spray nearby to decontaminate any surfaces used during the breaks/lunch.
- Ensure that hand washing stations also have hand sanitizer available.
- Post signs to identify the limited number of personnel within enclosed offices or other spaces to only those persons with direct need to conduct business within.
- To protect against potential cross-contamination from supplies and equipment, perform the following prior to bringing packages into facilities:
  - Have the item(s) delivered outside of office trailers,
  - If possible, spray the package's exterior with a disinfectant/anti-microbial spray,
  - With properly gloved hands (latex or nitrile) carefully open the outer packaging and remove any interior packages and/or items,
  - If possible, spray the exterior of each package/item with a disinfectant/anti-microbial spray,

- If there is/are (an) interior package(s), and if possible, without damaging the item(s), spray the exterior of each item with a disinfectant/anti-microbial spray, and then
- Once complete, the item(s) may then be taken into the facility and/or storage.

During operations, before using vehicles and/or heavy equipment, spray all interior surfaces with a disinfectant/anti-microbial spray to disinfect touchable surfaces. When exiting the equipment/vehicle after use, spray again to ensure it is prepared for the next occupant.

When working with potentially infectious materials, treat all waste in the same manner as medical waste, enclosing in bags, boxes, drums, or other closable containers, then disinfecting the exterior of the outer packaging.

Evaluate the site's infectious disease potential in much the same manner as any other hazard analysis. This means assessing the distances between workers performing their function to allow a six (6) foot proximity to other workers. Physical barriers (e.g., enclosed equipment cabs, walls, plexiglass screens, etc.) also allow workers additional protection from potential infection.

During the morning tailgate safety meeting, ensure to brief the following:

- Updated information on operational changes and practices,
- Current information regarding the disease's spread,
- Government closures, bans, and restrictions, and
- Restate the standard precautions for avoiding potential infection.

To further protect workers from infection, use the following procedures:

- The RM should ensure the site is restricted to only those personnel, subcontractors, and vendors who are involved in the work process, restricting or eliminating visitors to the greatest degree possible.
- Use low-contact greetings, opting to not shake hands whenever possible.
- Enforce social distancing, being aware of where workers are sitting or standing, advising them to remain at least six feet away.
  - This includes standing in office doors to discuss business instead of entering offices unless it is necessary to speak in private.
  - Maintain distance in the common areas (e.g., kitchens, restrooms, etc.).
- When transiting the site, make sure to avoid stopping and standing within six (6) feet of other personnel and do not enter buildings, vehicles, or other structures unless performing official business.
- When conducting meetings, sit at least six feet apart, if possible, and when it is not possible, sit as far from one another as able. Interact by phone in place of face-to-face interaction when possible.
- Ensure hand sanitizer dispensers are available near office exits and in the break rooms and encourage workers to use them liberally.
- Avoid inviting others from outside the project to the site, opting for teleconferencing instead of attending/holding face-to-face meetings.

- For those who use common hand tools and equipment, either wear protective gloves (e.g., nitrile, neoprene, or another impermeable material) use spray disinfectant on the touchable surfaces after use.
- Advise personnel that if they feel a sneeze or cough coming on, sneeze/cough into the inside of their elbow or the back of their forearm, and when done, clean their arm with soap and water, hand sanitizer, or a disinfectant wipe.
- Travel only if necessary, such as getting to the site or using driver-through or delivery services for food and other necessities.
- Encourage personnel to wash their hands often and for at least 20 seconds at a time. The virus is easily destroyed by simple soap and water.
- When using a company vehicle, limit the occupants to the driver only when possible.
  - When it is not possible for only a single occupant, passengers should sit as far as possible from other passengers.
  - Sanitize the touchable surfaces (e.g., steering wheel, door handles, etc.) upon return so it is ready for the next person to use.
  - The RM should keep vehicles stocked with sanitizer and towels.
- Encourage workers to watch out for one another and think about everyone's health and safety. If a worker exhibits symptoms, let them know...from at least six feet away...that they really need to talk to their supervisor/manager and self-quarantine for at least 14 days.

#### 6.1.3.2. Natural Hazards

Biological hazards are common when working outdoors or in and around abandoned structures. Contact with bodies of water, animals, insects, and plants can cause injury and illness to personnel. For these hazards, avoidance is always the best plan of action. Examples include:

- **Water** – Stagnant water may contain toxic microorganisms which, at a minimum, could cause dermatitis, infection (i.e., through cuts or lacerations), digestive distress, and other diseases.
- **Animals** – Animals not only can bite and scratch, but some carry transmittable diseases (e.g., rabies). Even domesticated animals can be dangerous, either by size, temperament, or disease. If bitten, scratched, or trampled, workers should notify a supervisor immediately and seek medical attention. Dead animal carcasses generally carry increased disease and infection due to necrotic decomposition.
- **Insects** – Insects can cause injury through direct contact or through the diseases they carry. When entering a potential insect habitat (e.g., tall grass, brush, or woods), wear light-colored clothing, long pants, and a long-sleeve shirt and apply insect repellent that contains diethyltoluamide (DEET) to exposed skin and clothing, following the manufacturer's instructions. If a worker is bitten, observe them closely and seek immediate medical attention if symptoms appear or there is any question of allergic reaction.
- **Plants** – Plants such as nettles, poison ivy, and poison oak often cause rashes on exposed skin. Workers should be careful where walking, wear long pants and a long-sleeve shirt,

and minimize touching exposed skin after walking through thickly vegetated areas until after thoroughly washing exposed skin with soap and water.

**Note:** Biological hazards are not just in rural or isolated environments. Urban, industrial, or even residential areas can also contain the hazards listed above.

The following are the biological hazards concerning this project:

- Mosquitoes
- Poison Hemlock
- Poison Ivy
- Poisonous Spiders (e.g., black widow and brown recluse)
- Stinging Nettles
- Ticks
- Venomous Snakes (copperhead, cottonmouth, and timber rattlesnake)
- Wild Parsnip

Many natural hazards manifest during specific seasons (e.g., insects are dormant during the winter) and it is important to take the local weather patterns into consideration when determining protection from them.

#### **6.1.4 Adverse Weather**

Weather can also pose a significant hazard, depending on the site location and time of year. SOP 348, *Adverse Weather/Natural Disaster Response*, discusses these potential hazards. For this project, the following weather issues may arise:

- Fog
- High Heat
- Severe Thunderstorms
- Tornados
- High Winds

## **6.2 Personnel Monitoring**

Depending on the contaminants, begin air sampling within the worker's personal breathing zone (PBZ) as noted in Table 6-1, *Detailed Air Sampling Summary*. Ensure all monitoring is accurate and represents the potential exposures using calibrated and applicable monitoring equipment. Also, make sure the instrument(s) is/are designed for the conditions (e.g., temperature, humidity, etc.) where used.

Conduct monitoring more frequently, or continuously, when conditions are more hazardous and likely to change. Monitor those employees who with higher exposure potential first, expanding the program as necessary to avoid over-exposure.

**Note:** Do not use the START area monitoring data in-place of PBA sampling data. The two metrics are not necessarily used for similar purposes.

### 6.2.1 Detailed Air Monitoring

29 CFR §1910.120(h)(1)(ii), requires air sampling within the worker’s PBZ to identify and quantify airborne hazardous substance levels. Use Table 6-1 to determine the necessary PPE, how long to work within the area, when workers must withdraw in emergencies, and for medical surveillance and exposure data.

**Table 6-1, Detailed Air Sampling Summary**

Contaminant	Instrument	Frequency	Action Level/Comment
PCB ( <i>aka Aroclor</i> )	Gas Chromatographic/ Multi-Detector (GC/MD)	Monitor when working in areas with heavy contaminant concentrations.	PCBs with 42% Cl: • > 1.0 mg/m <sup>3</sup> – No action is necessary • ≥ 1.0 mg/m <sup>3</sup> – Level C APR with organic vapor cartridges PCBs with 54% Cl: • > 0.5 mg/m <sup>3</sup> – No action is necessary • ≥ 0.5 mg/m <sup>3</sup> – Level C APR with organic vapor cartridges affixed

While personnel will initially work in Level D PPE, conduct sampling for the first 3 full shifts to assess exposure and perform sample analysis on a same-day or 24-hr turnaround time to ensure expected levels remain below the action level. Ensure all monitoring is collected within the subject’s personal breathing zone (PBZ).

#### 6.2.1.1. Methodology

Use validated NIOSH or OSHA sampling and analytical methods when air sampling. Collect all samples with approved pumps that are calibrated both before and after collection and use the average flow rates to calculate the air volume. Perform calibration with the same type of filter or sampling media used during live monitoring.

The laboratory analyzing the samples must participate in the American Industrial Hygiene Association (AIHA) Industrial Hygiene Proficiency Analytical Testing (IHPAT) program to ensure the results are within OSHA’s quality assurance limits or as per other noted standards. See SOP 332, *Respiratory Program*, for additional details.

### 6.2.2 Medical Surveillance

Remedial work generally requires some form of medical surveillance to ensure that those working with hazardous or toxic substances do not receive exposures that would place them at risk of occupational disease. There are also two typical concerns that surface during nearly every

remedial project: excessive noise, and heat/cold stress. SOP 338, *Medical Surveillance*, provides the basis for EQM's medical surveillance program.

Workers intermittently exposed to PCBs should have a baseline skin examination and liver function tests. Follow-up examination can be limited to symptomatic persons and workers exposed by accidental contamination. For persons with signs and symptoms consistent with high exposures to PCBs (e.g., chloracne, elevated AST and ALT), obtain a serum PCB level to confirm exposure.

Ensure to calibrate all direct-reading instruments (e.g., noise sound level meters,) that are used onsite at the beginning and end of each work shift in accordance with the manufacturer's recommendations. If equipment cannot be pre-calibrated to the proper specifications, postpone or temporarily cease site operations that require exposure monitoring until this requirement is completed.

### **6.3 COVID-19 Monitoring**

In all workplaces where exposure to the SAR-CoV-2 may occur, prompt identification and isolation of potentially infectious individuals is a critical first step in protecting workers, visitors, and others at the worksite.

#### **6.3.1 Symptoms Monitoring**

Currently, there is no form of personnel monitoring beyond watching for physical symptoms in the workforce. If the following warning signs develop, get the worker medical attention immediately. The warning signs include:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea
- Persistent pain or pressure in the chest
- New confusion or inability to arouse
- Bluish lips or face

**Note:** The list of symptoms may, and likely will, change over time and if there are further questions, consult EQM's Medical Case Manager for any other symptoms that are severe or concerning.

The RM must take the temperature of each worker as they arrive at the site to ensure that they are not symptomatic. If an individual exhibits a temperature above 100.4° F, consider them to have a fever and isolate them accordingly.

### 6.3.2 Health Status Surveillance

Because the concern involves an active virus where symptoms may not manifest for five to fourteen-days after infection, persons may be infected but asymptomatic (without any physical signs or symptoms). Therefore, supervisors and field managers at all levels must remain vigilant to monitor their workers for the signs and symptoms of potential infection.

Health status surveillance involves assessing each worker daily. Before leaving to the site, all workers must take a quick self-assessment by asking themselves the following questions:

- Do I have any flu-like symptoms, i.e. fever (100.4° F or greater), sore throat, headache, runny nose, cough, difficulty breathing, etc.?
- Have I been in contact with someone who is suspected or confirmed as having COVID-19 in the last 14 days?
- Have I, or any of my close contacts, traveled from outside the contiguous United States in the past 14 days?
- Specifically, have I or any of my close contacts, traveled to or from any of the following countries in the past 14 days: China, Taiwan, Hong Kong, Singapore, South Korea, Japan, Thailand, Italy, Iran, or any hot spots with concentrated Coronavirus in the US?

If the answer is “Yes” to any of these questions, do not come to the worksite. Stay in lodging and contact your supervisor to advise them of the situation. They, in turn, will advise the RM that someone is (or suspected of being) infected. The RM will then notify the Director of QA and/or CHSM that someone onsite is affected by the virus.

The disease does not require confirmation before acting. Begin the case management process for those even suspected of being infected, and workers are advised to self-identify at the earliest possible time.

If there is suspicion a worker may be infected, isolate them immediately! For example, move potentially infectious people to a vacant room or vehicle and close the doors. In other worksites, move potentially infectious people to a location away from other workers, clients, vendors, and other visitors. Once isolated, contact EQM’s Medical Case Manager for direction on addressing the quarantined worker.

**Note:** Workers who suspect they have been exposed to the virus are to self-quarantine in either their home, motel room, vehicle, or other personal space where they are isolated from other workers. They must inform their supervisor of the suspected exposure.

Take steps to limit spread of the person’s infectious respiratory secretions, including providing them a facemask and asking them to wear it, if they can tolerate doing so.

Restrict the number of personnel entering isolation areas and protect workers in close contact with the sick person by using additional engineering and administrative controls, safe work practices, and PPE. The CDC defines "close contact" as being approximately six (6) feet from an infected person for a prolonged period while not wearing the recommended PPE. Close contact also includes instances where there is direct contact with infectious secretions while not wearing recommended PPE. Close contact generally does not include brief interactions, such as walking past a person.

Once the suspected infected worker is removed from the worksite, perform a cleanup and sanitation of all areas used in isolating the worker, to include break rooms and other gathering points used prior to the time the worker was identified.

### 6.3.3 COVID-19 Infection Records

Due to the highly infectious nature of this virus, workers who test positive for COVID-19, as per a test administered by a licensed healthcare provider, are to quarantine for up to two weeks (14 days). After that point, they must see a doctor for a release prior to returning to work, to preclude the potential for further spreading infection. Keep one copy of the doctor's return to work notice, forwarding a copy to the CHSM for inclusion in the worker's medical files.

COVID-19 exposure is considered the same as any other form of occupational exposure. OSHA regulation 29 CFR §1926.1101(n)(2)(iii) requires the employer maintain this record for at least thirty (30) years, in accordance with 29 CFR §1910.20. Perform an episodic examination if there is reason to believe an individual was exposed to the virus, targeting the examination to cover the specific CDC recommendations at the time of the exam.

For further guidance, consult WI 312A, *SARS-CoV-2 Infection Response Protocols*.

### 6.4 Monitoring Records

Retain copies of the monitoring records IAW the instructions within SOP 338, *Medical Surveillance*. OSHA regulation 29 CFR 1926.1101(n)(2)(iii) requires the employer maintain this record for at least thirty (30) years, in accordance with 29 CFR 1910.20. Perform an episodic examination if there is reason to believe an individual was over-exposed to a chemical, biological, radiological agent, or to a physical stressor, targeting the examination to cover the specific contaminants, stressor, and associated organs or physiological system involved. The exam's parameters are left to the discretion and judgment of EQM's consulting occupational physician in conjunction with EQM's corporate health and safety management.

### 6.5 Personal Protective Equipment (PPE) Selection

For this project, Level D is the primary anticipated PPE. PCBs have a high vapor pressure (mm Hg @ 25 EC can range between  $4 \times 10^{-4}$  to  $6.7 \times 10^{-3}$ ), making them poor candidates for creating



high respirable vapor concentrations. However, if PCB concentrations elevate to the action level or there are identifiable liquid concentrations, upgrade to either Level D – Modified (if only respiratory protection is necessary) or to Level C. It is always advisable to wear chemical protective gloves (e.g., nitrile or neoprene) in conjunction with the Level D ensemble when working with PCB contaminated soil or other materials.

Always consider each worker's personal physiology prior to making work assignments or issuing protective gear. The various protection levels are discussed in SOP 311, *Personal Protective Equipment*.

The following is the minimum PPE requirement for entering an EQM worksite:

- Hard hat;
- Safety glasses with permanent side shield or goggles;
- Appropriate work clothing such as a shirt with sleeves and durable long pants (e.g., blue jeans);
- Gloves, appropriate to the materials handled; and
- Boots or shoes with a protected toe.

Upgrade or downgrade the PPE selection at any time based on any of the following conditions:

- Commencing a new work activity not previously identified,
- Job task changes during a work phase,
- Weather changes,
- New contaminants are discovered other than those originally identified,
- Ambient or measured contaminant level changes, and/or
- Any change that affects the degree of chemical contact.

## **6.6 Decontamination Procedures**

In general, everything, including personnel, that enters the EZ must either be decontaminated or properly discarded upon exiting the zone, and the material generated by the decontamination process must be stored in a designated area until there are arrangements for its disposal. Perform all decontamination procedures according to SOP 307 – *Decontamination*.

Personal decontamination is not required during emergencies while in Level D (including Level D Modified) beyond hand and possibly face washing using a personal hygiene station. Only conduct emergency decontamination for Level C and above, and only if the event is not life-threatening. In the event of a life-threatening situation, such as a heart attack or major injury, decontamination is secondary to performing Cardiopulmonary Resuscitation (CPR) or another life-saving aid. Regardless, remove the injured worker from the EZ prior to removing PPE and commencing life-saving measures.

Dispose of all decontamination materials (i.e., rinsate, tubs, brushes, etc.) in accordance with federal, state, and local laws and regulations. Unless otherwise noted, containerize spent disposable PPE and contaminated materials and/or include them with the removed materials.

## 7. EMERGENCIES, ACCIDENTS, AND INJURIES

It is essential to prepare site personnel for emergencies, which can take many forms including:

- Illnesses or injuries
- Chemical exposure
- Fires and explosions
- Harmful contaminant spills, leaks, and releases
- Sudden and/or violent weather changes.

The following sections are in addition to SOP 310, *Incident Management*, which contains the general procedures to follow in case of an emergency. Post relevant emergency procedural information, as well as the hospital and occupational clinic route maps from Appendix F, *Maps*, in the EQM Field Office and in site work trucks and transport vehicles, as applicable.

Section 3, *Key Personnel and Emergency Contact Numbers*, contains all essential emergency contact information. The RM/SHSO will provide this information during Tailgate Meetings, as necessary, to ensure that all personnel are aware of whom to contact during an emergency.

### 7.1 Emergency Response Responsibilities

The RM has primary responsibility to respond appropriately to protect personnel, first taking appropriate measures to control the emergency, then to assist the OSC as necessary in responding to and mitigating the emergency.

**Note:** EQM is not considered to be a “first responder,” and only will respond to on-site emergencies where EQM is engaged in active operations and/or tasked by the OSC.

### 7.2 Specific Response Procedures

Beyond typical response actions applicable to all emergencies, the following actions address emergencies relating to this project.

#### 7.2.1 COVID-19 Infection Response

If a worker demonstrates symptoms of or reports a potential exposure to COVID-19 or any infectious disease, immediately isolate them from the other workers and call the Medical Case Manager (e.g., 1-SourceOHS). Then, follow the provisions within WI 312A, *SARS-CoV-2 Infection Response Protocols*.

### 7.2.2 Medical Emergencies

There are no extra concerns or considerations during a medical emergency for this project, except for an actual or suspected COVID-19 response, as noted above.

### 7.2.3 Fire or Explosion

PCBs are not flammable or combustible under ordinary conditions, nor do they create a flammable or explosive atmosphere due to their high vapor pressure and lack of flammability.

Personnel not specifically trained to use fire extinguishers or other fire-fighting equipment must evacuate to a safe distance and await further instructions. EQM personnel and subcontractors are not expected to suppress fires unless they have been specifically trained and tasked to do so.

### 7.2.4 Spills, Leaks, or Releases

In case of a spill or leak, contaminants must be contained to keep them from spreading off site or into public sewers or waterways. If such a spread occurs, personnel trained in remediation/emergency response will:

- Locate the source of the spill and stop its flow if it can be done safely.
- Begin containment and recovery actions to keep the spilled materials from migrating out of the EZ or interacting with other sensitive materials.

### 7.2.5 Adverse Weather

Adverse weather can take many forms, such as flash floods, high winds, hurricanes, severe thunderstorms, tornadoes, tropical storms, extreme heat, drought conditions, and winter conditions (e.g., snow, freezing rain, sleet, etc.). This site has the potential for the conditions listed in Paragraph 6.1.4, *Adverse Weather*, which may require the RM to cease operations and have personnel seek shelter appropriate to the weather condition at hand.

Consult SOP 348, *Adverse Weather-Natural Disaster Response*, for additional information.

## 7.3 Evacuation Routes and Resources

Prior to beginning each day's operations, the RM/SHSO will designate evacuation routes and exit points for the site's work areas. Inform workers of these routes and exit points during the daily tailgate meeting. In case of an emergency, evacuate immediately, without regard for equipment, and by the following procedures:

- If making the notification, give three blasts on an air or vehicle horn or communicate with the RM/SHSO and other site personnel via cell phone;
- Escape the immediate spill area and keep upwind of smoke and/or vapors;

- If full site evacuation is necessary, evacuate to the EQM Field Office and await further instructions; and
- The RM/SHSO will conduct a head count to ensure all personnel have been evacuated safely.

**Note:** If immediate escape is necessary to prevent exposure or injury, it may be necessary to evacuate by the shortest route, regardless of ECP designation or decontamination. The latter may be addressed after evacuating to a safe location.

The RM/SHSO will establish a secondary gathering point as a precaution should the EQM Field Office be contaminated or compromised during an emergency. Inform all personnel of this secondary assembly point at the tailgate meetings.

#### **7.4 Emergency Equipment Available Onsite**

Each workplace should maintain a first-aid kit, inspecting it weekly, documenting the inspector's name, the date inspected, and any discrepancies noted for correction. The site may also need eyewash and hand-wash stations, depending on the project type and size.

Unless specifically noted, fire protection involves strategically locating Class-C portable fire extinguishers, inspected monthly, to include documenting the inspector's name, the date inspected, and any discrepancies noted for correction.

In the event of spills or leaks, keep an appropriate number of absorbent booms/pads and amount of dry absorbent to abate any minor chemical emergencies.

Maintain the following onsite communication equipment:

Onsite communication is critical, and each worksite should maintain the following equipment:

- Cell phones for management and supervisory personnel
- Emergency alarms/horns, as necessary

If there is additional emergency equipment on Site, post its type, location, and inspection requirements on the office bulletin board.

#### **7.5 Accident Reporting and Investigation**

The RM/SHSO, with assistance from EQM's CHSM, will investigate any incident that results in an injury or property damage, or that involves vehicles. For events where there are no injuries or damage, but where there was potential for serious injury or property damage, the RM/SHSO will report these events using EQM's *Near Miss Reporting Form*. Consult SOP 310, *Incident Management*, for specific response and reporting instructions.

Because this is a remedial action under the U.S. EPA's control, the RM/SHSO will inform the EPA OSC regarding incident details and the investigation's progress, if conducted. The EPA OSC will determine if the incident is serious enough to warrant modifying or terminating field activities based on the results of the investigation. EQM agrees to participate in all inquiries made by the OSC or any other federal, state, or local government representative into such accidents.

## 8. SITE CONTROL

### 8.1 General Field Safety Rules

All visitors and workers must adhere to the following general field safety rules while on site:

- All personnel, including visitors, must report to the EQM field office upon initial entry to the site.
- All site operations are administered through operational SOPs and WIs.
- Eating, drinking, and smoking are only permitted in designated areas.
- The EZ is restricted to essential personnel only.
- All workers exiting the EZ must process through decontamination.
- Personnel must use all PPE and monitoring equipment as appropriate and described in this HASP during work activities.
- Employees may not interfere or tamper with air monitoring equipment.
- Use the “Buddy System” (at least two trained/experienced personnel working as a team and maintaining audible and/or visual contact) when working in the EZ, remote areas, or when conditions present a personnel risk.
- Do not engage in horseplay!

All personnel must comply with EQM’s policies, programs, SOPs, WIs, and other guidance unless specifically exempted within this HASP.

### 8.2 Stop Work Authority

According to PRG 300, *Corporate Health and Safety Program*, anyone, regardless of whether they are an EQM employee, subcontractor, client, government official, or private citizen may initiate a “Safety Work Stop” if they believe hazardous conditions are present. This means all work activities must cease, and the work environment assessed to determine if, indeed, hazardous conditions are either present or are building toward them. If such conditions are found, the site manager must attend to them immediately, only returning to work once the hazardous conditions clear.

Work may only resume after abating and documenting all noted hazards or documenting no such hazards existed.

### 8.3 Established Zones

The RM, on direction of the OSC, will establish work zones and traffic controls to ensure that workers, visitors, and/or bystanders are not exposed to on-site hazards and to minimize potential traffic issues. Use caution tape, barricades, or temporary fencing across sidewalks, driveways,

and other public walkways to prevent pedestrians from entering the work area. If an excavation must remain open overnight, place construction fencing around the entire excavation and maintain it until it can be backfilled. The RM/SHSO is responsible for preventing all site visitors from entering the EZ during active work activities.

Establish work zones to keep contamination from migrating into clean areas and prevent unauthorized persons from accessing or being exposed to hazardous materials and/or situations. The RM/SHSO will divide the work and support areas into specific zones and delineate the activities that occur in each. To restrict access, clearly mark each zone to identify its location, boundaries, and Entry/Exit Control Points (ECP) from the Support Zone (SZ) into the Contamination Reduction Zone (CRZ), and from the CRZ into the EZ.

### **8.3.1 Exclusion Zone**

Establish the EZ by the building footprint (for buildings) or contaminated area (for soil contamination). The EZ – also called the “hot zone” or “work zone” – is where the removal activities take place. Enter and exit this zone only through the designated ECP. Post appropriate warning signs (e.g., "Danger Authorized Personnel Only") and caution tape to clearly identify the EZ and decontaminate personnel and equipment exiting the zone as described in Section 6.6, *Decontamination Procedures*.

### **8.3.2 Contamination Reduction Zone**

The CRZ – or “warm zone” – provides a buffer from the EZ and for the decontamination process. All personnel and equipment must enter and exit the EZ via the CRZ. The CRZ provides a transition between contaminated and clean areas and is generally identified by caution tape and/or barricades.

### **8.3.3 Support Zone**

The SZ involves the uncontaminated area – or “cold zone” – is within the site’s geographic perimeters and outside of the CRZ. This area is used for staging materials, parking vehicles, office and sanitation facilities, and receiving deliveries. All personnel arriving in the SZ will report to the command-post upon arrival and sign the site entry/exit log. The RM and/or OSC establish the SZ location prior to site activity and no later than the start of mobilization.

## **8.4 Communication Procedures**

Use cell phones or radios for on-site communications so that work crews can maintain contact while working on-site. However, these devices are only for work-use. Do not use these devices for personal communications while working.

In an emergency, three blasts on an air or vehicle horn is the site evacuation signal.



## **8.5 Traffic Control**

This project will require site access from public streets and alleys. This means that trucks and other equipment may partially block public trafficways during loading. Use signage, traffic cones, and flaggers (as appropriate), or other methods to inform and control traffic along public streets during work hours. Inform police and fire officials, as required, when partially blocking streets for extended time periods.

### **8.5.1 Methods for Handling Material at the Site**

To minimize truck loading on main streets and thoroughfares and avoid disrupting local traffic patterns, utilize on-site haul roads and staging area whenever possible. If trucks must be loaded on main streets, use flagmen or barriers to stop or avert traffic while vehicles are being loaded and as they pull out into the main traffic. Use signage to inform local commuters about traffic activities and notify police and fire departments when appropriate. Even when public streets and thoroughfares are not an issue, develop haul roads to organize on-site traffic flow and separate the different types of site vehicles from one another (e.g., separating dump-truck traffic from a visitor/delivery entrance).

### **8.5.2 General Haul Route**

There may be temporary restrictions within the overall site location because it will commence in a residential area. This is particularly important if there are load or hazard restrictions for local roadways or neighborhoods. Discuss any route changes with the OSC and brief them during the daily tailgate meetings. When using more than one landfill or TSDF, list all of them along with the specific materials permitted for each and ensure all personnel and transporters are aware of any restrictions and/or special requirements.

### **8.5.3 Weight Restrictions**

Make sure to consider the project's location and highway weight restrictions for the expected haul route(s), including bridge and frost laws or weight restrictions. Check truck weights daily by using the load tickets from the TSDF, and then adjust loads as needed to stay within federal, state, or local laws.

### **8.5.4 Traffic Control Signage and Layout for This Site**

If the project interferes with local traffic, use signage stating, "Trucks Entering/Exiting," and consult SOP 325, *Traffic Control*, for placing signs and flag crews. For more complex projects, the RM/SHSO may need to consult the Manual of Uniform Traffic Control Devices.

## **9. HAZARD COMMUNICATION AND TRAINING**

### **9.1 Hazard Communication**

Generally, OSHA's HAZCOM standard (29 CFR §1910.1200) relates to the chemicals used in fixed industrial or construction projects. Remediation presents a hazard profile that is somewhat outside of what the HAZCOM standard was designed to address, however, there still is a need to address them. The following outlines how EQM will apply HAZCOM to the project.

#### **9.1.1 Hazardous Chemicals List and Safety Data Sheets (SDS)**

EQM and attached subcontractors will maintain separate hazardous chemical lists and SDS for all hazardous chemicals used during field activities. Collect and combine them in Appendix D, *Safety Data Sheets*. All SDS must remain onsite during normal operations.

#### **9.1.2 Container Marking and Labeling**

Ensure all incoming chemical containers are marked and/or labeled IAW SOP 301, *Hazard Communication Program*. The RM/SHSO, or the subcontractor using the material, will inspect the containers to ensure the accuracy of the product marking/labeling, and must not remove or deface any existing markings/labels if they are accurate to the container's contents. This requirement also includes secondary containers if there is any potential for using the container then leaving it unattended by the original user for any length of time.

### **9.2 Training**

One of the key components of maintaining adequate safety and health is to ensure that the personnel working on the project are adequately trained. At a minimum, this training includes the specifications in OSHA Standards 29 CFR §1910.120, *HAZWOPER*, §1910.1030, *Bloodborne Pathogens*, §1910.1200, HAZCOM, and the National Incident Management System (NIMS). The project may also require additional training and it is essential to determine these requirements prior to starting operations. See SOP 308, *Safety Training*, and WI 308A, *HAZWOPER Training*, for additional information.

#### **9.2.1 Pre-Project Training**

Before they are permitted to enter the CZ or EZ, all employees and subcontractors who work on site must successfully complete a formal training program that includes, at a minimum, the following topics:

- **Basic Safety Training** – Basic fundamentals such as the cause and prevention of slip, trip, and fall hazards; safe lifting techniques; and heat/cold stress illnesses and prevention.
- **Hazard Protection** – Identification, recognition, and safe work procedures for dealing with hazardous materials, and the use and limitations of protective clothing and decontamination procedures.
- **First Aid and Cardiopulmonary Resuscitation (CPR)** – A portion of employees, including all health and safety staff members, must complete the standard Red Cross First-Aid and CPR courses that must include the procedures to follow if a worker is exposed to blood or other body fluids.
- **Health Hazard Awareness** – Hazardous materials exposure routes, adverse health effects, PPE, medical surveillance, and specific work conditions where exposure to hazardous materials could occur.
- **Risk Assessment** – Work practices and engineering controls used to minimize risk.
- **Emergency Response Training** – Emergency procedures to follow during incidents and/or emergencies.
- **Hearing Conservation** – How to protect workers from noise exposure.
- **Respirator Training** – Use, limitation, and inspection of air-purifying respirators and SCBAs, and fit testing requirements.

In addition, the RM/SHSO must perform 3-days of worker observation before the worker is certified to work onsite. Supervisors must complete an additional eight (8) hours of specialized training, and PMs must also complete the OSHA 10-hour Construction Outreach training. Each of these courses also have refreshers – except for the OSHA 10-hour – where an actual and documented hazardous or toxic waste incident (or near-miss) can substitute for the refreshers.

### 9.2.2 Additional Training

Additional training may include:

- Unique physical hazards relating to excavation (e.g., shoring, sheeting, and/or benching for trenches),
- Proper respirator fitting and use,
- Specialized site operations,
- Specialized emergency response procedures; and
- Unique reporting and documentation requirements.

Make sure to document these training needs in the AHAs.

### 9.2.3 NIMS Training

EQM and subcontractor personnel must also complete the NIMS training noted in Table 9-1, *NIMS Training Requirements*.

**Table 9-1, NIMS Training Requirements**

<b>RESPONSE ROLE</b>	<b>REQUIRED TRAINING</b>	<b>PRIMARY ROLE</b>
Entry-level first responders and disaster workers	FEMA IS-700: NIMS, an Introduction  Incident Command System (ICS)-100: Introduction to ICS or equivalent  ICS-200: Basic ICS or equivalent  FEMA IS-800: National Response Plan (NRP)	All Field Workers  Technical Specialists (e.g., Field Chemists)  Technical Specialists (e.g., Field Chemists)
First line supervisors, single resource leaders, field supervisors, and other emergency management and response personnel	FEMA IS-700-800: NIMS, an Introduction and NRP  ICS-100: Introduction to ICS or equivalent  ICS-200: Basic ICS or equivalent  ICS-300: Intermediate ICS or equivalent	Foreman Field Cost Accountants
Middle Management, including strike team leaders, unit leaders, division/group supervisors, branch directors and multi-agency coordination system/EOC staff	FEMA IS-700-800: NIMS, an Introduction, and NRP  ICS-100: Introduction to ICS or equivalent  ICS-200: Basic ICS or equivalent  ICS-300: Intermediate ICS or equivalent  ICS-400: Advanced ICS or equivalent	Response Managers Senior Foreman Transportation & Disposal Coordinator Program Managers
	ICS-339: Division and Group Supervisors Training	Response Managers Program Managers

**9.2.4 Training Records**

Document and keep all on-site training using the appropriate forms. Retain these forms on site in the employee's job file, and forward copies to the CHSM. This requirement includes

subcontractors trained while working on the project, and the RM/SHSO will forward the training documentation to their respective employer(s).

## 10. REFERENCES

The following references were used to develop this HASP or to supplement the information herein.

The following OSHA Standards:

- 29 CFR §1904, *Recording and Reporting Occupational Injuries and Illness*
- 29 CFR §1910 Subpart I, *Personal Protective Equipment*
- 29 CFR §1910.120, *Hazardous Waste Operations and Emergency Response*
- 29 CFR §1910.1200, *Hazard Communication*
- 29 CFR §1926, *Construction Standards*
- 49 CFR §171.8, *Hazardous Materials Definitions*

*NIOSH Pocket Guide to Chemical Hazards*. National Institute for Occupational Safety and Health, Online at <https://www.cdc.gov/niosh/npg/default.html>

*Chemical And Physical Information (PCB)*, Center for Disease Control and Prevention, Online at <https://www.atsdr.cdc.gov/toxprofiles/tp17-c4.pdf>

**APPENDIX A:  
Health and Safety Plan Amendments**







HEALTH AND SAFETY PLAN AMENDMENT FORM		
AMENDMENT NUMBER:	AMENDMENT DATE:	PROJECT NUMBER: 030325.0089
SITE NAME: 10 Mile Drain PCB Site		
AMENDMENT TYPE:		
REASON FOR AMENDMENT:		
ALTERNATE SAFEGUARD PROCEDURES:		
REQUIRED PPE CHANGES:		
EQM RESPONSE MANAGER:	DATE:	
EQM CORPORATE HEALTH AND SAFETY MANAGER: David J. Arthur	DATE:	
EPA ON-SCENE COORDINATOR:	DATE:	

**APPENDIX B:  
POLs, SOPs, and WIs**

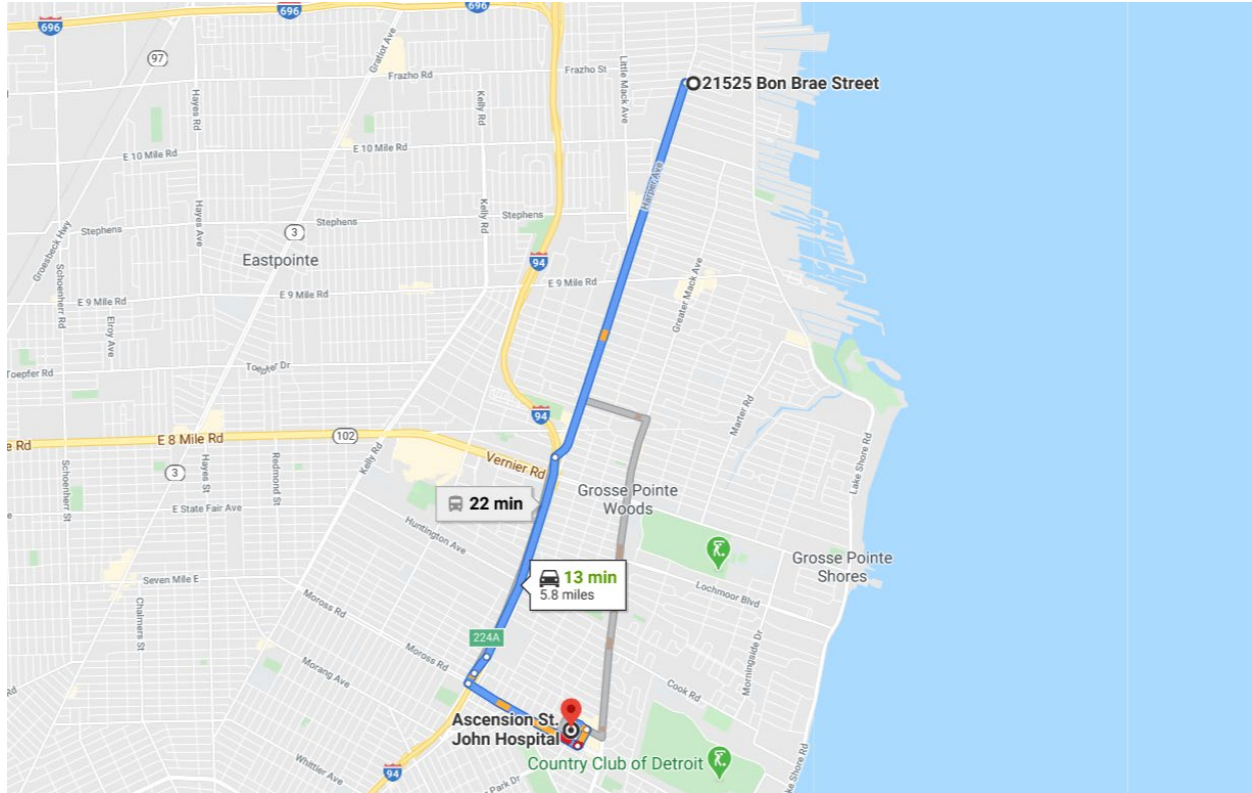
**APPENDIX C:  
Activity Hazard Analyses (AHA)**

**APPENDIX D:  
Safety Data Sheets (SDS)**

**APPENDIX E:  
Chemical Hazard Information**

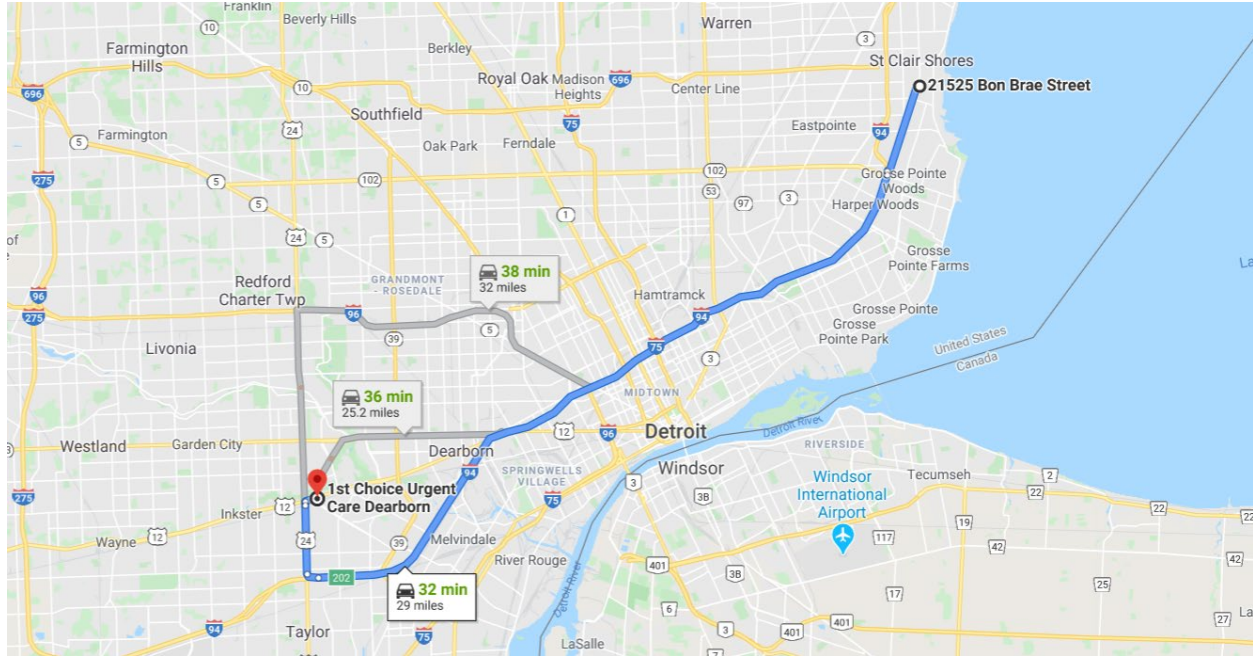
**APPENDIX F:  
Maps**

## EMERGENCY MEDICAL ROUTE



### **Ascension St. John Hospital Emergency Department 22101 Moross Rd, Detroit, MI 48236**

- Head west on Bon Brae St toward Bon Brae Ct and travel for 279 feet,
- Turn left onto Harper Ave, pass by Dairy Queen (on the right), and travel for 2.8 miles,
- Use the left lane to take the ramp onto I-94 W and travel for 1.5 miles,
- Take exit 224A toward Moross Rd and travel for 0.2 of a mile,
- Merge onto E Edsel Ford Service Dr and travel for 446 feet,
- Turn left onto Moross Rd and travel for 0.9 of a mile,
- Turn left onto Kingsville Ave and travel for 0.1 of a mile,
- Turn left and the destination will be on the right in 177 feet.

**DIRECTIONS TO THE OCCUPATIONAL HEALTH CLINIC****1st Choice Urgent Care - Dearborn**  
**23455 Michigan Ave,**  
**Dearborn, MI 48124**

- Head west on Bon Brae St toward Bon Brae Ct and travel for 279 feet,
- Turn left onto Harper Ave and pass by Dairy Queen (on the right) and travel for 2.8 miles,
- Use the left lane to take the ramp onto I-94 W
- Follow I-94 W to US-24 N/Telegraph Rd in Taylor. Take exit 202 from I-94 W after traveling 23.4 miles,
- Merge onto I-94 W and travel for 23.0 miles,
- Use the right lane to take exit 202 to merge onto US-24 N/Telegraph Rd and travel for 0.4 miles,
- Continue on US-24 N/Telegraph Rd. Drive to US-12 E/Michigan Ave in Dearborn and travel for 2.6 miles,
- Merge onto US-24 N/Telegraph Rd and pass by Papa John's Pizza (on the right in 0.9 of a mile) and travel for 2.1 miles,
- Use the right lane to take the US-12 E/Michigan Ave ramp and turn right onto US-12 E/Michigan Ave and travel for 0.4 of a mile,
- The destination will be on the right.



**APPENDIX G:  
Health and Safety Plan Acknowledgment**





### HEALTH AND SAFETY PLAN ACKNOWLEDGMENT

I have been informed and understand and will abide by the procedures set forth in the Site Health and Safety Plan and respective Amendments, if any, for the project.

NAME	COMPANY	SIGNATURE	DATE

**APPENDIX H:  
START-Specific Information**