HEALTH AND SAFETY PLAN

Time Critical Removal
Rock-Tenn Site
Otsego, Allegan County, Michigan

Prepared for:

Paul Ruesch
USEPA
Region 5
Emergency Response Branch
Superfund Division
Contract # EP-S4-16-03

Prepared by:

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APPENDICES

TABLES

1. REVIEWS AND APPROVAL

Contract No.: EP-S4-16-03

Date: April 1, 2019

Project Name: Rock-Tenn Site, Otsego, Allegan County, Michigan

EQM Project No.: 030325.0096

Prepared By:	Signature on File David Arthur EQM Health and Safety Manager	April 2, 2019 Date
RM Review:	Signature on File Gary Butcher EQM Response Manager (RM)	 Date
CIH Review:	Signature on File John Kominsky, CSP, CIH, CHMM EQM Director of Health and Safety	April 2, 2019 Date
QA Review:	Signature on File Jackie Doan, CMQ/OE, CQA, CHMM, CEAC EQM Director of Quality Control	 Date
OSC Approval:	Signature on File Paul Ruesch USEPA Region 5, On-Scene Commander (OSC)	 Date

2. ACRONYMS & SYMBOLS

§	Section
µm	micrometers
ACGIH	American Conference of Governmental Industrial Hygienists
ACM	asbestos containing material
AHA	Activity Hazard Analysis
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
APR	air purifying respirator
CFR	Code of Federal Regulations
CHMM	Certified Hazardous Materials Manager
CIH	Certified Industrial Hygienist
CPR	cardiopulmonary resuscitation
CRZ	Contamination Reduction Zone
CSP	Certified Safety Professional
dBA	decibels A-weighted
DEET	diethyltoluamide
DoT	Department of Transportation
ECP	entry/exit control point
EQM	Environmental Quality Management, Inc.
ERRS	Emergency and Rapid Response Services
EZ	Exclusion Zone
H&S	health and safety
HASP	Health and Safety Plan
HAZCOM	Hazard Communication
HAZWOPER	Hazardous Waste Operations and Emergency Response
HR	Human Resources
HZ	Hot Zone
IAW	in accordance with
ICS	Incident Command System
IHPAT	Industrial Hygiene Proficiency Analytical Testing
mg/m^3	milligrams per cubic meter
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
PACM	presumed asbestos containing material
PEL	Permissible Exposure Limit
PM	Project/Program Manager
POL	Corporate Policy
PPE	personal protective equipment
REL	Recommended Exposure Level
RM	Response Manager or Site Superintendent
SCBA	self-contained breathing apparatus
SDS	Safety Data Sheet(s)
SHSO	Site Health and Safety Officer
SOP	Standard Operating Procedure
START	Superfund Technical Assistance and Response Team
SZ	Support Zone
TBD	to be determined
TLV	Threshold Limit Value
TSDF	Treatment, Storage & Disposal Facility
TSI	thermal systems insulation
TWA	time weighted average
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
WBGT	Wet Bulb Globe Temperature

3. KEY PERSONNEL AND EMERGENCY CONTACT NUMBERS

The following sections contain contact information for those personnel and agencies affiliated with both general and contingency operations. This information should be posted in vehicles and on bulletin boards as necessary for emergency reference.

3.1. Key Personnel

Table 3-1, Key Personnel List

NAME	CO./AGENCY	TITLE	PHONE #	EMAIL
Paul Ruesch	USEPA	OSC	312-919-4382	ruesch.paul@epa.gov
Eric Bowman	EQM, Inc.	PM	513-265-8875	ebowman@eqm.com
Gary Butcher	EQM, Inc.	RM/SHSO	513-532-2120	gbutcher@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
Emily Koryto	SRS	START Field Team Leader	312-805-2850	ekoryto@srsllc.com

U.S. Environmental Protection Agency (USEPA) — On Scene Coordinator (OSC)
Program Manager (PM) — Response Manager (RM)
Site Health and Safety Officer (SHSO) — Health and Safety (H&S)
Sustainment and Restoration Services (SRS — Superfund Technical Assistance and Response Team (START)

3.2. Emergency Contacts

The incident and emergency procedural steps are contained in Section 8, *Emergencies, Accidents, and Injuries*.

3.2.1. Life-Threatening Emergencies

- Fire, Police/Sheriff, and Ambulance 911
- Hospital ER: Ascension Borgess-Pipp Hospital 269-685-0700
  411 Naomi St,
  Plainwell, MI 49080

3.2.2. Non-Life-Threatening Emergencies and Routine Medical

- EQM Case Manager – 1Source OHS 855-517-6872

- Occupational Clinic: Hometown Urgent Care 269-903-2835
  1634 Gull Road
  Kalamazoo, MI 49048
- START Medical Services – Work Care *(Dr. P. Greaney)* 800-455-2114

Directions from the EQM Field Office to the hospital are provided in Appendix F – *Maps*. The hospital is approximately 3.3 miles (8 minutes) from this work location.

Note: Maps and directions to the hospital will be posted in the Command Post Office and in site vehicles.

3.2.3. Additional Emergency Numbers:

- National Response Center (24-hr): 800-424-8802
- Centers for Disease Control (24-hr): 770 488 7100
- ATF (Explosives Hotline) (24-hr): 888 283 2662
- CHEMTREC (24-hr): 800 262 8200
- Poison Control Center (24-hr): 800-222-1222

3.2.4. Excavation Numbers and Contacts

- National "Call Before You Dig" 811

3.2.5. Environmental Quality Management, Inc. Contacts

- EQM Project Office 513-532-2120
- EQM Hotline (24-hr) 800-500-0575

3.2.6. START Contacts

- START Monitoring Technician & Safety Manger – Emily Koryto 312-805-2850

4. INTRODUCTION AND SITE ENTRY REQUIREMENTS

4.1. Introduction

This Health and Safety Plan (HASP) describes the health and safety (H&S) guidelines developed to protect on-site personnel from physical harm and exposure to hazardous substances or wastes. The procedures and guidelines contained herein are based on the best available information at the time the plan was prepared. As new information arises, the HASP will be revised accordingly using the written amendments form in Appendix A – *Health and Safety Plan Amendments*.

4.2. Site Location & History

The Rock-Tenn Site is located at 431 Helen Avenue in Otsego, Allegan County, Michigan. The Site occupies an area of 17 acres and consists of over 40 buildings and structures within a fenced area. The building of interest for the removal assessment is the Power House building located in the east central portion of the property. The Site is bounded to the north by West River Street, to the south by the Kalamazoo River, to the west by vacant land, and to the east by John Street and North North Street. Nearby land uses include industrial, commercial, residential, and agricultural.

The Site was formerly utilized as a paper mill from 1906 until 2004. The property sat vacant for several years and was taken over by the county in 2011. In April 2018, there was a removal assessment that found asbestos containing material (ACM), which was confirmed by sample analytical results inside the Power House building.

The Site is still currently vacant with evidence of trespassing documented during removal assessment activities.

In 2011, Allegan County and the State of Michigan referred the Rock-Tenn Site to the USEPA Region 5 Superfund Division to conduct a removal assessment to determine the contents of approximately 200 containers of material found on-site. There was a removal action to dispose of the drums and containers at the Site in 2012.

Note: Currently, there are no anticipated drums onsite that require disposal.

In response to a request from Allegan County and the City of Otsego, USEPA conducted a removal assessment of the Power House at the Site in April 2018. Analytical results from the assessment confirmed the presence of ACM inside the Power House. Based on these findings, a removal action by USEPA was scheduled for Spring 2019.

4.3. Scope and Purpose

This Health and Safety Plan (HASP) establishes the framework to safely achieve the performance objectives and standards for the remedial activities at this site. The project objective is to alleviate the human health risk posed by abandoned structures and ACM

contaminated surfaces by cleaning, decontaminating, excavating, or otherwise removing the contaminants, properly manifesting them for transportation and disposal in accordance with (IAW) all local, state, and federal regulatory guidelines.

In the powerhouse, most of the debris pile samples indicate the presence of asbestos and hence, all debris within the powerhouse is considered asbestos containing material. Outside the powerhouse, no debris on the north or west sides of the powerhouse were positive for asbestos. There is an amount of asbestos on the feed line penetration near the ground on the north side of the boiler room. There is a small amount of asbestos containing material on the east side of the powerhouse. The south side of the powerhouse was used as a loading and shipping area for the demolition activities that took place on site for the previous year. As such, there are several piles of debris that are positive for asbestos.

The boilers are approximately 18' X 21' X 28' in dimension and the mud on the firebrick is about 4" thick. The volume of this material includes about 25 cubic yards of asbestos containing mud per boiler.

Under the turbines – where the turbines originally were – It appears that the main steam lines and most of the extraction steam lines had ACM insulation. The turbine and all these steam lines have been removed. The main steam would have come from the top of the two boilers while some of the extraction lines would have been directed to feed heaters, if they existed in this facility, or been directed straight to the deaerating feed tank in the northeast comer of the powerhouse. These lines and feed heaters no longer exist, and it is unknown whether these lines would have still been ACM insulated or if the ACM had been replaced. Other uses of the extraction steam would have been as process steam in the paper mill. The paper machines were immediately west of the powerhouse. At the current time, the paper machines have been removed, and all the steam and condensate piping has been removed. It is unknown what happened to the insulation originally encasing these lines. Other than as discussed above, no visible asbestos was found outside the buildings on this site.

This project involves cleaning up ACM-debris and Presumed Asbestos Containing Material (PACM) debris from the interior floor surfaces within the building using wet methods. In general, the powerhouse, the turbine building, and basements are contaminated with ACM that was inappropriately removed over approximately the last year of demolition activities. The EQM scope of work does not include removing in-place ACM from boilers, steam pipes, or other structures where the materials remain intact. These will stay in-place during building demolition, which be accomplished by a subcontractor who is licensed for ACM/PACM demolition in the state of Michigan.

The plan addresses the requirements of 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. It outlines the work practices and procedures implemented on site to minimize worker hazards and reduce the possibility of injury or adverse health effects.

Note: Because OSHA Standards §1910.120 and §1926.65 both address HAZWOPER and are duplicates of one another, the two standards may be referenced interchangeably. The reason for referencing §1926.65 in this document is due to the construction and demolition activities generally employed during remedial projects, whereas §1910.120 is directed toward General Industry emergency response and waste operations.

While visitors and the public may not be a regulatory concern of OSHA, it is a concern of Environmental Quality Management, Inc. (EQM) and our clients. Therefore, information regarding public safety was added herein for that purpose.

Basic site activities consist of the following:

- Perform a site visit;
- Mobilize and prepare the site;
  - Establish a Command Post by provided office trailers, secure storage, utilities and facilities;
  - Clear and grub vegetation and debris from around the power plant building and areas to be utilized for equipment laydown and waste roll-off container staging;
  - Install a water supply and distribution system for dust suppression during ACM removal and wet building demolition; and
  - Install barriers, barricades and signage (IAW 29 CFR §1926.1101(k)(7)(ii)(A)) in basement and 1st floor of the building in areas deemed not suitable for personnel and equipment access.
- Remove ACM – not to include Thermal Systems Insulation (TSI) – to include contaminated debris, from the first and basement floors using a wet removal method;
- Remove remaining ACM debris from building via the structure's demolition;
- Load, transport and dispose of contaminated waste to an approved landfill;
- Restore the site and demobilize;
  - Remove temporary site infra-structure; and
  - Re-seed the grassy areas and repair roads, and parking lots as needed.

4.4. EQM Health and Safety Policy

EQM is committed to providing 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, and
- Strong management commitment toward safety and health compliance.

Our objective is to meet these goals by ensuring all EQM employees understand their responsibility, regardless of their management or employment level, to adhere to corporate

policies, and to ensure their personal safety and the safety of their coworkers in all projects and workplaces.

4.5. Daily "Tailgate" Safety Meetings

The Response Manager (RM), or their designate, will hold safety meetings onsite at the start of each shift to ensure that all personnel understand daily site conditions and operating procedures, ensure correct personal protective equipment (PPE) use, to address worker health and safety concerns, and discuss new activities in detail to include a review of Activity Hazard Analyses (AHAs), as appropriate.

4.6. Safety Recognition Program

The program's purpose is to increase safety awareness and to promote "all in" participation in safe practices. To accomplish this, there is a project-specific safety incentive program that includes all EQM employees working at the Site. It consists of the following three-pronged approach:

- Safety Improvement/Awareness, which includes identifying "Near Miss" incidents where the workers are directly involved,
- Monthly Safety Progress Meetings, in the form of a slightly extended tailgate meeting, where deserving workers are recognized, and
- Identifying and recognizing field staff members on a monthly basis that demonstrate outstanding adherence to safety policies and/or otherwise promote the safety culture by reporting near-miss incidents, offering suggestions, and/or by conducting effective safety inspections.

4.7. Site Health and Safety Plan Acceptance/Acknowledgment

The RM is responsible to inform all individuals entering the Exclusion Zone (EZ) of the contents of this plan and ensuring that each person signs Appendix F – *Health and Safety Plan Acknowledgment Form*. By signing, an individual acknowledges he/she recognizes the potential hazards present onsite and the policies and procedures required to minimize exposure or adverse effects of these hazards.

5. HEALTH AND SAFETY ORGANIZATION

This section outlines the project's operational structure.

5.1. Roles and Responsibilities

There are three essential entities working together to accomplish the project; EQM, the OSC, and a START contractor. Their roles and responsibilities are as follows.

5.1.1. USEPA On Scene Coordinator

The OSC, as the representative of the Federal Government, is responsible for overall project administration to include monitoring and enforcing the applicable federal OSHA standards in combination with each contractor's health and safety guidelines and requirements. The OSC is the overall Site Health and Safety Officer (SHSO) and is additionally responsible for onsite visitors. Other contractors, to include subcontractors to EQM – as individual employers under OSHA – are also responsible for their own employee's health and safety.

The OSC may designate an alternate individual to act in their stead, however, for the sake of this document; any reference to the OSC will refer to either the OSC or their 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. The RM has the responsibility for fulfilling the terms of the USEPA Task Order by overseeing the project and ensuring all technical, regulatory, and safety requirements are met.

It is the RM's responsibility to communicate with the OSC as frequently as directed by the OSC, (but no less than daily) regarding the project's progress and any problems encountered. If a dispute arises regarding health and safety, the issue should be brought to the RM who should attempt to resolve the issue directly on site. 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 subcontractor is responsible to provide technical, regulatory, and safety assistance to the OSC for all aspects of the site activity. They also advise the OSC on matters relating to hazardous materials and waste sampling, treatment, packaging, labeling, compatibility, transport, and disposal, and monitors EQM's activities onsite.

Note: The START is not contracted to, nor works on behalf of, EQM. The START is a direct contractor for the USEPA and therefore reports directly to the OSC. 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

ERRS Site Health and Safety Officers (SHSO) are assigned on a full-time basis with functional responsibility to implement the HASP. Typically, the RM is designated as the ERRS SHSO. The EQM Corporate Health and Safety Manager (CHSM), START safety personnel, the USEPA, or any other federal, state, or local authority may conduct site audits as approved by the OSC.

The EQM SHSO's specific duties include:

- Assuming responsibility for the health and safety of EQM personnel,
- Monitoring for safety compliance, to include subcontractors,
- Documenting health and safety issues,
- Overseeing the decontamination process,
- Conducting exposure monitoring on affected ERRS employees as outlined in Paragraph 6.4 – *Exposure Monitoring*,
- Selecting PPE levels based on the specific site contaminants and atmospheres,
- Ensuring personnel are fit for duty based on medical surveillance reports and personal observations,
- Inspecting first-aid kits, fire extinguishers, and other company equipment, as necessary and before use,
- Updating the HASP to reflect changes in site conditions or the scope of work *(Note:* Review and approved HASP updates before implementation*)*,
- Working with the EQM RM and OSC to develop and implement corrective action plans to correct deficiencies discovered during site inspections.
- Determining and/or verifying emergency evacuation routes, posting local emergency telephone numbers, and arrange for emergency transportation should the need arise,
- Ensuring all site personnel have the proper training and medical clearance prior to entering the site,
- Establishing controlled work areas (as designated in this HASP or other safety documentation), and
- Initiating tailgate safety meetings and maintaining attendance logs and records.

5.2. EQM Multi-Employer Concept

Unless specifically contracted, EQM assumes no responsibility for the USEPA, the START, 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. HEALTH AND SAFETY HAZARDS

This section details the chemical, physical, biological, and task-specific hazards posed to site personnel during planned project activities. At the daily safety tailgate meetings, discuss the potential hazards in conjunction with their preventive measures.

EQM developed detailed Activity Hazard Analysis (AHA) for each definable work element. They identify the hazards anticipated during the project, along with related control measures to minimize or eliminate them. Use these to augment the daily safety meetings and heighten safety and hazard awareness. The AHAs are attached in Appendix C – *Activity Hazard Analysis*. START-specific information, including safe work practices, policies and procedures, forms, additional AHAs, and safety data sheets, are contained in Appendix H – *START-Specific Information*.

In addition, Appendix B – *POLs, SOPs, and WIs*, contains the EQM health and safety Standard Operating Procedures (SOPs) that relate to this project.

6.1. Chemical Hazards

This section relates to the chemical hazards encountered during materials removal. Manage them in accordance with the HAZCOM Standard (29 CFR §1910.1200) and EQM SOP 301 – *Hazard Communication Program*.

Appendix D – *Specific Hazard Information*, contains basic chemical exposure and avoidance information, along with generic Safety Data Sheets (SDSs), for the products used during cleanup operations, to include:

- Diesel Fuel
- Gasoline
- Propane, Acetylene, and Oxygen Cylinders
- WD-40 (when used as a cutting lubricant)

This project only includes ACM removal, with the expectation that there are no other hazardous substances onsite. However, there is always the possibility that unknown substances may surface, and if other substances are found, they may be added as they are identified during remediation. Personnel should always be alert for the signs and symptoms that may indicate possible exposure, such as:

- Unusual smells
- Stinging or burning eyes, nose, or throat
- Skin irritation
- Mood changes, such as euphoria or depression
- Sleepiness or tiredness
- Report any symptoms immediately to the RM/SHSO!

6.2. Physical Hazards

There are numerous potential hazards associated with this and any project that, if not identified and addressed, could lead to accidents and personal injury. To minimize physical hazards, EQM has developed a set of Corporate Policies (POL), SOPs, and Work Instructions (WI) that provide the basic safety and health requirements for remedial work. Workers must always follow these safety protocols, and failure to follow them, or continued negligence of the company's work policies, may result in disciplinary actions, up to and including expulsion from the site.

6.2.1. General Site Hazards

The RM/SHSO will observe the general work practices of each site worker and enforce safe procedures to minimize safety hazards. The following sections discuss additional safety hazard considerations that may occur at this site, along with relevant hazard control procedures, beyond what is covered in the SOPs, as referenced.

- **Compromised Structures** – The structures in which workers will be employed are slated for demolition and may not be entirely secure or structurally sound. Therefore, the RM must take measures to assess each planned work area prior to employing personnel and equipment within them. If the work area is not deemed to be safe for operations, the RM or responsible supervisor will block, barricade, fence, or otherwise restrict the area so works are not placed in potential danger. Only when structural integrity can be assured may personnel work within a given work location.
- **Utilities –** Overhead power lines, downed electrical wires, and buried cables all pose a danger of shock or electrocution if workers contact or sever them during site operations. Workers must use extreme caution when moving or operating equipment near overhead power lines. Always assume that downed or buried cables are energized, unless proven otherwise and locked-out appropriately. Obtain a utility clearance prior to starting intrusive operations, as well as obtaining authorization from all concerned public utility department offices. Each state has its own means for reporting the intention to excavate. They will send someone to mark the underground utilities, and once this is complete, use Pot Holing to verify exactly where the utility lines lie within the marked locations. Once the utilities have been located and Pot Holed, use day-lighted hand digging to further clear utility lines through excavations.

  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. 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; for example, 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.

In the event equipment contacts a utility line during intrusive operations, notify the RM/SHSO immediately! Suspend work until the applicable utility agency is contacted and the appropriate actions are taken. EQM's policy is to immediately remove any operator from the project who violates this protocol.

Note: EQM has a "Zero Tolerance" policy regarding utility strikes.

- **Confined Spaces** – While there are Confined Spaces associated with this project, this work does not require entering any of them. However, should changes make it necessary, address these spaces according to SOP 314 - Confined Spaces.
- **Housekeeping** – Poor housekeeping can produce congestion, disorder, dirt, waste, trash, and other obstacles and can 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's imperative to do observe the following:
  - Keep work areas sufficiently clean and orderly so that work activities can proceed in an efficient and safe manner.
  - Work areas must have adequate light, ventilation, physical protection, and accessibility as appropriate for the work being performed.
  - Arrange or store machinery and equipment to permit safe, efficient work activities and to provide for cleaning.
  - Safely store tools and accessories in cabinets, racks, or other suitable devices out of high traffic areas.
  - Provide sufficient waste containers and receptacles in appropriate locations and empty them regularly.
  - Maintain work areas and floors to keep them free of material, debris, obstructions, foreign materials, or slippery substances such as oil, water, and grease.
  - Ensure aisles, traffic areas, and exits are free of materials and debris.
  - Store flammable and combustible materials in approved containers that are appropriately labeled and secured.
  - Properly dispose of 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.

Managers at all levels are to hold their assigned personnel accountable for keeping work areas orderly and clear of housekeeping hazards.

- **Elevated Noise Levels** – Operating heavy equipment including backhoes, compressors, powered hand tools, pumps, or generators can create noise levels exceeding the OSHA PEL and 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. See SOP 309 – *Hearing Conservation Program*.
- **Materials Handling** – Improperly 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. When using lifting devices, the wire rope used in rigging may have broken strands and frayed ends, leading to punctures and cuts. Banding wraps used to secure loads could snap, leading to crushing, lacerations, and puncture wounds. Even lifting oversized or heavier objects pose back sprains and strains. To avoid being injured, workers are advised to do the following:

- 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** – There are a variety of tasks that require workers to open and subsequently replace manways and other access panels. Depending on what the worker is doing, they could be exposed to hazardous constituents in tanks, explosive atmospheres from leaking containers, falls from different levels, and potentially being trapped in a confined space. Consult SOP 333 – *Walking and Working Surfaces and Fall Protection*, for further guidance.
- **Stairs and Ladders** –Ladders also present a danger for workers who are not properly trained on their use and limitations. Consult SOP 333 – *Walking and Working Surfaces and Fall Protection*, for further guidance.
- **Illumination** – For temporary work environments, lighting must meet the requirements outlined in 29 CFR §1910.120(m) - *Illumination*. Essentially this means a minimum of five (5) foot-candles illumination for all general site areas, whereas, first-aid stations and offices must maintain levels at thirty (30) foot-candles. To protect from improper illumination, perform the following:
  - 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).

6.2.2. Specific Site Hazards

The following table indicates more typical hazardous conditions which workers may encounter onsite. These issues are addressed in each of the documents referenced below in Table 6-1, *Specific POL, SOP, and WI Applicability*. These documents are contained in Appendix B – POLs, SOPs, and WIs.

Table 6-1, Specific POL, SOP, and WI Applicability

EQM SOPs / SITE SPECIFIC HAZARDS	POL 300	SOP 301	SOP 307	SOP 309	SOP 311	SOP 316	SOP 318	SOP 326	SOP 333	SOP 334	SOP 347	WI 307A	WI 850A
Asbestos Abatement Activities		X	X		X					X		X	X
Decontamination			X									X	
Elevated Noise Levels				X	X			X			X		
Excavations			X		X	X		X					

EQM SOPs / SITE SPECIFIC HAZARDS	POL 300	SOP 301	SOP 307	SOP 309	SOP 311	SOP 316	SOP 318	SOP 326	SOP 333	SOP 334	SOP 347	WI 307A	WI 850A
Hazard Testing and Delineation		X			X								X
Lifting Heavy Objects	X										X		
Slips, Trips, and Falls	X								X				
Working Around Heavy Equipment	X			X		X		X					
Working Around Utilities						X							
Working in Adverse Weather	X						X						

- Table Index:
  - SOP 300 – *Incident Prevention Plan*
  - SOP 301 – *Hazard Communication Program*
  - SOP 307 – *Decontamination*
  - SOP 309 – *Hearing Conservation Program*
  - SOP 311 – *Personal Protective Equipment*
  - SOP 316 – *Excavation and Trenching*
  - SOP 318 – *Cold-Heat Stress*
  - SOP 326 – *Working Around Heavy Equipment & Machinery Excavators & Loaders*
  - SOP 333 – *Walking and Working Surfaces and Fall Protection*
  - SOP 334 – *Asbestos Awareness*
  - SOP 347 – *Manual Lifting*
  - WI 307A – *Asbestos Decontamination*
  - WI 805A – *Asbestos Air*

6.3. Biological Hazards

Working outdoors or in and around abandoned structures often present biological hazards or involve bio-hazardous materials. Contact with bodies of water, animals, insects, and plants can cause injury and illness to personnel. Some examples of biological hazards that workers may be encounter include:

- **Water** – Stagnant water may contain a variety of microorganisms, many of which are hazardous, or at a minimum could cause infection. Contact with these microorganisms may present a significant hazard by causing dermatitis, infection (i.e., through cuts or lacerations), digestive distress, and other diseases.
- **Animals** – When encountering animals, avoidance is the best course of action. They not only can bite and scratch, but some carry transmittable diseases (e.g., rabies). Even domesticated animals can be an issue, either by size, temperament, or disease. Therefore, avoid contacting or cornering any animals whenever possible. If bitten, scratched, or trampled, notify your supervisor immediately and seek medical attention. Also avoid dead animal carcasses, as they generally carry further disease and infectious substances.
- **Insects** – Insects can cause injury through either direct contact, or through the diseases they carry. Whenever you enter areas that provide an insect habitat (e.g., tall grass, brush, or woods), wear light-colored clothing, long pants, and a long-sleeve shirt. Also apply insect repellant that contains diethyltoluamide (DEET) to exposed skin and

clothing. However, use such sprays or lotions sparingly, always following the manufacturer's instructions. In general, keep away from high grass wherever possible, and keep your eyes and ears open for insect nests. If bitten, seek medical attention if symptoms appear or there is any question of a serious allergic reaction.

- **Plants** – Plants such as nettles, poison ivy, and poison oak often cause rashes on exposed skin. Be careful where you walk, wear long pants and a long-sleeve shirt, and minimize touching exposed skin with your hands after walking through thickly vegetated areas until after you have thoroughly washed them with soap and water.

Biological hazards don't just exist in rural or isolated environments. Urban areas can also contain any or all the considerations above.

6.4. Exposure Monitoring

The RM/SHSO (i.e., Competent Person) has the responsibility to anticipate, recognize, evaluate, and control health hazards and related risks at the site. Central to this effort is the comprehensive assessment of potential occupational exposures. Comprehensive exposure assessment is the systematic review of the site conditions, anticipated chemical substances, microbiological, and physical agents, work practices and exposure controls, and division of labor at the site to define and judge all exposures for all workers on all days. Such a rationale and methodical approach to exposure recognition and evaluation helps ensure that all health risks are managed, that all related risks are considered, and that resources are focused on the most important risks. Depending on the project's scope, the nature and form of contaminants, and degree of hazard determines the personal (and personal breathing zone) and/or area monitoring requirements.

6.4.1. Personnel Monitoring

According to HAZWOPER, use air monitoring as a primary means toward identifying and quantifying airborne hazardous substances and health hazards, and to determine the appropriate employee protection level(s). Table 6-2, *Detailed Air Monitoring Summary*, provides a summary of air monitoring requirements for personnel protection during site activities.

Table 6-2, Detailed Air Monitoring Summary

Contaminant	Instrument	Frequency	Action Level/Comment
asbestos	Personal Air pump w/25-mm cassette equipped with electrically conductive 50-mm extension cowl. Use NIOSH Method 7400	Continuous during Asbestos Activities. Frequency, type (i.e., TWA and 30 min short term, and number of workers sampled in strict	• ≥0.1 fiber/cm^3 TWA for 8 hours – Level C required and utilize wet methods when applicable. • ≥1.0 fiber/cc for any 30-minute period of the work-day, or ≥0.1 fiber/cm^3 TWA for 8 hours, - Level C required and utilize wet methods when applicable. When in Level C, use full-faced respirators with high-efficiency cartridges that are at least 99.97%

		accordance with OSHA Standard 29 CFR §1926.1101.	efficient against mono-dispersed particles of 0.3 µm in diameter or higher. See paragraphs below.

Asbestos is the initial contaminant noted onsite. As found in 29 CFR §261101, the OSHA PEL for asbestos fibers (i.e., actinolite asbestos, amosite, anthophyllite asbestos, chrysotile, crocidolite, and tremolite asbestos) is an 8-hour TWA airborne concentration of 0.1 fiber (longer than 5 µm and having a length-to-diameter ratio of at least 3 to 1) per cubic centimeter of air (0.1 fiber/cm^3), as determined by the membrane filter method at approximately 400X magnification with phase contrast illumination. No worker should be exposed in excess of 1 fiber/cm^3 (excursion limit) as averaged over a sampling period of 30 minutes.

Note: Employee exposure is that exposure which would occur if the employee were not using a respirator.

NIOSH considers asbestos to be a potential occupational carcinogen and recommends that exposures be reduced to the lowest feasible concentration. For asbestos fibers >5 micrometers in length, NIOSH recommends a REL of 100,000 fibers per cubic meter of air (100,000 fibers/m^3), which is equal to 0.1 fiber per cubic centimeter of air (0.1 fiber/cm^3), as determined by a 400-liter air sample collected over 100 minutes in accordance with NIOSH Analytical Method #7400. Airborne asbestos fibers are defined as those particles having (1) an aspect ratio of 3 to 1 or greater and (2) the mineralogic characteristics (that is, the crystal structure and elemental composition) of the asbestos minerals and their non-asbestiform analogs. The asbestos minerals are defined as chrysotile, crocidolite, amosite (cummingtonite-grunerite), anthophyllite, tremolite, and actinolite. In addition, airborne cleavage fragments from the non-asbestiform habits of the serpentine minerals, antigorite, and lizardite, and the amphibole minerals contained in the series cummingtonite-grunerite, tremolite-ferro-actinolite, and glaucophane-riebeckite should also be counted as fibers, provided they meet the criteria for a fiber when viewed microscopically.

When performing air sampling, EQM uses validated NIOSH and/or OSHA sampling and analytical methods. Collect all samples with sampling pumps that are calibrated both before and after sample collection; and use the average flow rates to calculate the air volume. The laboratory that analyzes the samples must successfully participate in the American Industrial Hygiene Association (AIHA) Industrial Hygiene Proficiency Analytical Testing (IHPAT) Program to ensure the results are within the quality assurance limits the OSHA or other standard(s) require(s).

Within five (5) business days after receiving the results from the lab, the RM or SSO will inform each sampled employee of their test results, and both the RM/ or SSO and the employee will sign an acknowledgement form to indicate the employee has obtained and understands the results. Once the process is complete, forward the signed form to the Corporate Human Resources Director (HR) to place in the employee's personnel file. All other site employees will be notified of the results, minus the names, that are below the action limit or PEL. Document the correction

actions for any results above the action limit, and then communicated the corrections to the site employees.

Note: Periodic sampling within the workers' PBZ is recommended after a negative exposure assessment performed in accordance with 29 CFR §1926.1101(f)(2) to ensure that contamination levels remain below the 8-hr TWA PEL and 30-minute excursion limit.

6.4.2. Monitoring Noise Exposure

Excessive noise exposure is not anticipated during certain activities because of sound control measures (i.e., enclosed-cab equipment combined with PPE). However, the RM/SHSO will periodically perform general screening to ensure personnel remain below the exposure threshold during routine activities. The noise measurements will be made at the workers' ear using a hand-held sound level meter or by personal-noise dosimetry. For non-routine activities involving powered equipment, also monitor the sound environment, to ensure that using ear plugs/muffs provides adequate for noise attenuation – which is required for working around heavy equipment – is adequate, as noted in EQM SOP 309 – *Hearing Conservation Program*. If any activity or equipment results in exposure outside of normal project expectations, the RM/SHSO will re-evaluate the exposure to ensure workers are protected by adjusting the hearing protection equipment and practices on-site.

6.4.3. Heat/Cold Stress Monitoring

Begin heat stress monitoring when ambient temperatures exceed 70°F. Conduct heat stress monitoring for personnel working in permeable clothing (e.g., normal work cloths, single launderable cloth, or single disposable Tyvek), semi-permeable clothing (e.g., double launderable cloth, double disposable Tyvek, or single poly-coated Tyvek), and impermeable clothing (e.g., triple launderable cloth, triple disposable Tyvek, or single Saranex coated Tyvek) in accordance with the ACGIH TLVs for heat stress. The SHSO is responsible to verify the work/rest schedules; determine Wet Bulb Globe Temperatures (WBGT) using a black globe thermometer, a natural wet bulb thermometer, and a dry bulb thermometer (or WBGT monitor); documenting the results, and then notify the workers. In addition, the SHSO may use OSHA's Smartphone App (*OSHA Heat Safety Tool* for smart-phones/tablets) in place of the aforementioned instruments for calculating and evaluating the conditions for conduciveness to a heat-related injury.

Begin cold stress monitoring when temperatures fall below 40°F and monitor in accordance with the ACGIH TLV for cold stress on personnel working in permeable clothing, such as cotton or synthetic work clothes. The SHSO is responsible to verify the work/rest schedules, and to notify workers of, and document, the results.

6.4.4. Calibration Procedures

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 the owner's manual is not available, contact the applicable office

representative, rental agency, or manufacturer for technical guidance on proper calibration. 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. Calibrate personal sampling pumps during pre- and post-shift sampling by using a calibrated primary calibration standard or flowmeter calibrated against a primary flow standard at the lab.

6.4.5. Maintaining Monitoring Records

Retain copies of the monitoring records in EQM's on-site office during the project, and in the job file upon its completion. Monitoring records will include, but are not necessarily limited to any or all the following:

- The name of the person sampled,
- The task(s) performed during monitoring,
- Exposure levels during sampling,
- The sample number,
- Pre-and post-sampling calibration flowrates,
- Start and stop times, and
- The PPE worn by the employee during sampling.

Each sampled employee's personnel file will contain the sampling results that relate to them. These files will be kept within the Corporate HR department in Cincinnati, Ohio. OSHA regulation 29 CFR 1926.1101(n)(2)(iii) requires that the employer maintain this record for at least thirty (30) years, in accordance with 29 CFR 1910.20.

6.5. Personal Protective Equipment (PPE) Selection

For this project, the anticipated PPE is primarily Level C, with a full-face APR respirator and attached P-100 cartridges, while working within the building. After the structure is collapsed, personnel may step-down to Level D depending on the contaminant sampling within the PBZ, as compared to the guidelines noted in Paragraph 6.4.1 – *Personnel Monitoring*. Initial entry and work will commence in Level C with an APR and affixed P-100 particulate cartridges.

As a rule, PPE does not keep a worker completely isolated from hazards, but only reduces the contaminant level to an acceptable amount. Therefore, always take the individual worker's personal physiology into consideration prior to making work assignments or issuing protective gear. The various levels are discussed as follows, from least restrictive to the most.

The following minimum PPE requirement is for any person who enters an EQM worksite to perform construction, demolition, and/or remediation activities:

- Hard hat,
- Safety glasses with permanent side shield or goggles,
- Appropriate work clothing such as a shirt with sleeves and durable pants such as blue jeans,
- Gloves, whenever handling materials,

  - Chemical resistant gloves when there is the possibility the worker will contact contaminants,
  - Cotton, or other fabric material, gloves when performing manual tasks such as loading/unloading supplies (e.g.; Handling clean breathing air cylinders, moving furniture in and out of a building, working on equipment with pinch points, etc.),
  - Cut-Resistant gloves when handling sharp objects to preclude lacerations or other cutting injuries,
- Boots or shoes with a protected toe.

For guidance on selecting the most appropriate protection level as it relates to the specific work activities and worksites on this project, consult SOP 311 – *Personal Protective Equipment*, contained in Appendix B – *POLs, SOPs, and WIs*, and the AHA's in Appendix C – *Activity Hazard Analysis*.

6.5.1. PPE Upgrade/Downgrade

As site conditions change, so do the PPE requirements. Reevaluate the present or proposed PPE level if any of the following conditions are met:

- Commencement of a new work activity not previously identified,
- Change of job tasks during a work phase,
- Change of season/weather,
- Contaminants are discovered other than those identified in the Health and Safety Plan,
- Change in in personal breathing zone and ambient levels of contaminants, and/or
- Change in work 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. Any 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*, and the associated WI 307A – *Asbestos Decontamination*, instructions

Personal decontamination is not required during an emergency for Level D (including Level D Modified) beyond hand 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 of 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 PPE and decontamination materials (i.e., rinsate, tubs, brushes, etc.) in accordance with federal, state, and local laws and regulations. Consider that contaminated PPE and decontamination materials may require toxic waste disposal based on the types and degree of

contamination. Unless otherwise noted, spent PPE and contaminated materials may be containerized and/or included with excavated soils when transported by dump truck or roll-off.

7. MEDICAL SURVEILLANCE

EQM and team subcontractors performing hazardous waste operations are required to participate in a medical surveillance program and undergo associated examinations in accordance with 29 CFR §1926.65(f), *Hazardous Waste Operations and Emergency Response - Medical Surveillance*.

These medical examinations establish an employee's baseline health status and determine if their health status changes over time due to occupational exposures. In addition, the medical examination determines whether an employee can perform his/her duties while wearing PPE under the adverse conditions (e.g., temperature extremes) expected at a work site. These examinations are performed by, or under the supervision of, a physician, who, at a minimum, is:

- licensed in medicine,
- Possesses specific training or expertise in occupational medicine, and
- Has experience performing medical surveillance examinations.

Complete and document all medical examinations prior to work assignment. Current medical clearance documentation must be kept onsite or immediately available for all personnel.

7.1. Baseline Examination

Baseline examinations – sometimes referred to as an "initial" or "pre-employment" physical – are required prior to sending personnel to perform hazardous waste operations. They establish whether an employee is fit to perform his/her duties and to characterize his/her health prior to beginning a field assignment. These examinations are conducted following parameters established by EQM's corporate health and safety management, in conjunction with EQM's consulting occupational physician.

7.2. Annual Examination

Personnel performing hazardous waste site work must receive a follow-up medical examination on no less than annually. Complete these medical exams and provide clearance within the twelve (12) month period prior to on-site activity. Not all medical tests in the baseline examination are repeated during the annual follow-up, unless there is an exposure concern or symptoms reported indicating the need for further evaluation.

7.3. Site-Specific Monitoring/Examination

There may be a need for additional medical surveillance or evaluation if there are concerns an individual has been exposed to certain contaminants. The OSHA chemical-specific regulations in 29 CFR §1910.1001 and §1926.1101 – *Asbestos*, outline specific provisions for monitoring personnel for and in the event of asbestos exposure. These requirements largely depend on the exposure duration and health status of the individual. Testing and examination elements are triggered by the past or potential exposure situation and are left to the discretion and judgment of

EQM's occupational physician consultant with input from EQM corporate health and safety management.

7.4. Episodic Examination

Episodic examinations occur outside of the annual exam period and are only performed if there is reason to believe that an individual has been over-exposed to a contaminant or a physical stressor. Generally, schedule an examination as soon as possible after an employee reports either of the following:

- An injury or exposure above permissible exposure limits or published exposure levels, or
- They developed signs or symptoms indicating possible exposure to hazardous substances or health hazards.

They should be specific to the contaminants, stressor, and associated target organs or physiological system. The exam's parameters will be left to the discretion and judgment of EQM's consulting occupational physician in conjunction with EQM's corporate health and safety management.

In addition, if blood or other potentially infections materials contact a worker's eyes, mouth, mucous membranes, non-intact skin, or parenteral region, handle the individual in accordance with 29 CFR §1910.1030 – *Bloodborne Pathogens*.

7.5. Subcontractor Requirements

All subcontractor personnel must be included in either EQM's medical surveillance program, or their own company's program dependent upon to whom they report during work activities and undergo the same examinations in accordance with 29 CFR §1926.65(f) – *Hazardous Waste Operations and Emergency Response - Medical Surveillance*. Complete these examinations and maintain the current medical clearance documentation onsite, providing copies to EQM's corporate health and safety management, prior to work assignment.

8. EMERGENCIES, ACCIDENTS, AND INJURIES

It is essential that site personnel are prepared in the event of an emergency, which can take many forms, including, but not limited to:

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

The following sections outline the general procedures for emergencies. Post the information, as appropriate from Appendix F - *Maps*, in the EQM Field Office in site work trucks and transport vehicles.

All essential emergency contacts are in Paragraph 3.2 - *Emergency Contacts*. The RM/SHSO will brief these numbers during the Tailgate Meetings, as necessary, to ensure that all personnel are aware of whom to contact during an emergency.

Use attached START emergency control information and plans in conjunction with this HASP, as noted in Appendix H – *START-Specific Information*.

8.1. Emergency Response Responsibilities

The RM has primary responsibility for responding to and correcting emergency situations. These duties include:

- Responding appropriately to protect personnel, including withdrawing workers from the EZ, completely evacuating and securing the site, and/or upgrading or downgrading PPE levels,
- Taking appropriate measures to protect the public and the environment,
- Informing the appropriate federal, state, and local agencies and coordinating emergency response plans,
  - In the event of fire or explosion, summon the local fire department immediately.
  - In the event of a toxic materials air release, depending on the size of the release, inform the local authorities in order to assess the need for civil evacuation.
  - In the event of a spill, alert the sanitary district to determine response measures.
- Ensuring appropriate decontamination, treatment, or testing for exposed or injured personnel,
- Determining the incident's cause and take actions to prevent recurrence, and
- Preparing and submitting all required reports.

The RM must first take appropriate measures to control the emergency, and then to assist the OSC as necessary in responding to and mitigating the emergency.

Note: EQM is not considered to be a "first responder" but is only to respond to onsite emergencies for which EQM is engaged in active operations.

8.2. Building Collapse

Due to the condition of the building in which this project will occur, there is a considerable concern for building collapse. The START Emergency Control Plan (ECP) covers this contingency in detail. Consult this plan, as noted in Appendix H – *START-Specific Information*.

8.3. Specific Response Plans

Beyond the typical response actions applicable to all emergencies, the following address specific emergency types.

8.3.1. Medical Emergencies

The first consideration during a medical incident is to protect the worker's health and safety by determining the extent of the worker's injury or illness and then acting swiftly to prevent further deterioration.

If the injury is life-threatening, contact 911 and seek immediate medical attention! Once the worker has been transported to the hospital or their condition is stable, The RM/SHSO will contact EQM's Medical Case Administrator and the CHSM to notify them of the incident and to gain further medical advice.

If the worker's condition is not life-threatening, immediately call EQM's Medical Case Administrator for initial triage and to determine the best route of treatment. The Medical Case Administrator will advise the RM/SHSO on the best treatment actions and will coordinate with the worker from that point forward. Injured workers are advised to remain in-touch with the RM/SHSO and/or the CHSM throughout the process for recording, reporting, and recordkeeping purposes.

If a worker becomes ill or injured while working in the EZ, follow the decontamination procedures outlined in Paragraph **Error! Reference source not found.**, *Decontamination P rocedures*.

When administering first aid, if there is the possibility the injury will involve contacting blood, body fluids, or other potentially infectious material, the caregiver must wear surgical-type impermeable gloves. Personnel must immediately report the exposure to the RM, SHSO, or the CHSM, naming the injured person(s) and the person(s) administering first aid. The RM will then notify the OSC. EQM must offer the Hepatitis B vaccination and follow-up treatment to exposed individuals within 24 hours, or as soon as possible, after exposure. Exposed individuals may decline the vaccination and treatment but must sign a declination statement stating their intent.

Any person who transports an injured/exposed person to a clinic or hospital for treatment should take the directions to the hospital and information on the chemical(s) and/or conditions to which

the injured person may have been exposed. Upon return, any vehicle used to transport contaminated personnel will be cleaned or decontaminated, as necessary.

8.3.2. Fire or Explosion

In the event of a fire or explosion, immediately summon the local fire department. Upon their arrival, the RM/SHSO will advise the fire commander of the fire location, nature of the fire, and other hazardous materials on site, relinquishing control of Incident Command to the arriving Fire Captain. If it is safe, onsite personnel may:

- Use any fire-fighting equipment provided onsite and for which they have been trained to operate, and/or
- Remove or isolate flammable or other hazardous materials that may contribute to the fire.

Note: Those personnel not specifically trained to use fire extinguishers or other fire-fighting equipment must evacuate to a safe distance and await further instructions. There is no expectation that EQM personnel or subcontractors will engage in fire suppression, unless they have been specifically trained and tasked to do so.

8.3.3. Spills, Leaks, or Releases

In the event of a spill or a leak, it is essential to contain the contaminants to keep them from spreading offsite or into public sewers or waterways. Should such a situation occur, those personnel who are trained in remediation/emergency response will:

- Locate the source of the spill and stop the 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.

8.3.4. 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.). Sudden or extreme weather changes and natural disasters can create several hazards, such as:

- Making walking and working surfaces slippery, creating slips, trips, and falls,
- Generating airborne dust and debris,
- Damaging electrical equipment to create shock or electrocution,
- Breaching gas lines to create fire and explosions, and
- Generally twisting up the work area creating other physical hazards.
- Natural disasters can also create secondary hazards such as hazardous materials release, structural failures, direct contact injuries, vehicle/equipment damage, and fires, many of which may occur hours or even days after the disaster. For this reason, the RM must inspect the site for potential damage as soon as appropriate after a natural disaster.

8.3.5. Weather Notification Definitions

When adverse weather is in the forecast, continuously monitor related broadcasts (e.g., radio, internet, television, etc.) to maintain up-to-date information. Weather terminology includes:

- **Advisory** – weather condition that is less serious than a warning and is for an event that may cause significant inconvenience, where a lack of caution could lead to a situation that may threaten life and/or property.
- **Watch** – This term is used when a hazardous weather or hydrologic event has increased injury risk significantly, but its occurrence, location, and/or timing is still uncertain. A Watch is intended to provide enough lead time so that those who need to set their plans in motion can do so.
- **Warning** – These are issued when a hazardous weather or hydrologic event is occurring, is imminent, or has a very high probability. Warnings are used for conditions posing a threat to life or property and are generally affiliated with evacuation or sheltering information.
- **Flash Flood** – This notice is issued to indicate current or developing hydrologic conditions that favor flash flooding in and close to the watch area. ***Note:*** Flowing or noticeable surface water does not have to be present prior to the watch or warning, and conditions can change quickly and without notice.
- **High Winds** – This warning is issued when there are sustained winds of 40 mph or greater lasting for 1 hour or longer, or there are 58 mph winds, or greater, for any duration.
- **Lightning** – This involves a visible electrical discharge produced by a thunderstorm. The discharge may occur within or between clouds or the clouds and the ground. Note that lightning can travel for over five miles from its origin and may not be associated with a flash or thunder.
- **Severe Thunderstorm** – These watches and warnings are issued for a thunderstorm producing hail 3/4 inch or larger in diameter and/or winds that equal or exceed 58 mph.
  - The size of a "Watch" will vary depending on the local geography and meteorological conditions, will usually last from four to eight hours, and are normally issued well in advance of the actual storm.
  - Severe Thunderstorm Warnings generally last for 1 hour and can be issued without a Severe Thunderstorm Watch already in effect.
- **Tornado Watch/Warning** – These are issued when conditions favor tornado development, when radar indicates tornadic conditions, or weather spotters report a tornado.
  - A Tornado Watch area can vary depending on weather conditions, is usually issued from four to eight hours, and is normally issued well in advance of the actual storm.
  - A Tornado Warning can be issued without a Tornado Watch in effect and is usually issued for duration of around 30 minutes.
- **Winter Storm Watch/Warning** – These are issued for heavy snow or significant ice accumulation. Watches usually last between 24 to 36 hours in advance of the storm, whereas warnings are issued when a winter storm begins producing, or is forecasted to produce, heavy snow or significant ice accumulations. The criteria for these watches and warnings vary by geographic locations and their support systems. "Significant

accumulations" vary from a single inch in the Deep South, to several feet in more northerly regions.

Remember that local emergency response and support functions will likely be hindered by the responders' resources and experience with winter weather. Do not assume that all locations have similar response capabilities!

Use the information provided by emergency and weather broadcasts to determine what actions to take. If an area is experiencing severe weather, the EPA OSC, in conjunction with the RM/SHSO, will decide what operations, if any, are safe to perform based on existing and anticipated weather conditions. The RM/SHSO will then notify personnel when to suspend operations and seek shelter. When notification is given that severe weather is approaching, secure the site (if time permits) and personnel should take appropriate action immediately.

8.3.6. Specific Weather Responses

During inclement weather, follow these precautions by condition:

- **Flash Flood** – Seek higher ground.
- **High Wind** – Secure materials and equipment and seek shelter.
- **Lightning** – Alert all personnel if lightning appears imminent. Because lightning can travel miles from its origin, suspend outdoor work and seek shelter in substantial buildings, enclosed vehicles, or other predetermined location when lightning strikes within six miles from the site. To measure this distance, either activate a lightning detector, a smart phone application (e.g., The Weather Channel or Weather Bug Spark apps), or use the "flash to bang" rule (i.e., lightning to thunder) where a count of five seconds equals one mile. After taking shelter, wait a minimum of 30 minutes following the last lightning strike within six miles before resuming operations.
- **Severe Thunderstorm** – Seek shelter in substantial buildings, enclosed vehicles, or other predetermined locations. If no shelter is available, seek cover in clumps of bushes or within groups of trees. Avoid metal objects, towers, fences, and creek beds.
- **Tornado** – Vacate trailers/automobiles and seek shelter in the center of a secure building, or below ground level (e.g., basement, ditch, or culvert).
- **Winter Storm** – Seek shelter and avoid unnecessary travel.

8.4. Evacuation Routes and Resources

The RM/SHSO will establish evacuation routes and designate exit points for outside work areas prior to beginning each day's operations. Brief these during the daily tailgate meeting. In the event 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.
- The RM/SHSO will conduct a head count to ensure all personnel have been evacuated safely.

The RM/SHSO will establish a secondary gathering point as a precaution should the EQM Field Office be contaminated during an emergency. Brief this secondary assembly point to all personnel.

8.5. Emergency Equipment Available Onsite

Medical Equipment: (Ensure that each piece of medical equipment is inspected, and the inspection is documented. Include the inspector's name and the date inspected.)

- First-aid Kits
- Eye-Wash Station
- Hand-Wash Station

Firefighting Equipment: (Ensure that each fire extinguisher is inspected monthly, and the inspection is documented, to include the inspector's initials and the date inspected.)

- Portable Fire Extinguishers

Spill or Leak Equipment:

- Absorbent booms/pads and dry absorbent

Communications Equipment:

- Private Telephones
- Cell Phones: Various Personnel
- Emergency Alarms/Horns

Additional Emergency Equipment Onsite: *(List additional equipment below.)*

_____

_____

_____

8.6. Accident Reporting and Investigation

All accident and incident reporting, investigation, and management must be done as per SOP 310 – *Incident Management*.

Note: If a SHSO is assigned to the project, they will inform the RM.

From there, the RM/SHSO will inform the EPA OSC regarding the incident details and the investigation's progress. 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. Summarize the results in a report and maintain it onsite for the duration of the project. Also make it available to the EPA OSC after approval by the EQM CHSM.

9. SITE CONTROL

For the safety of site workers, as well as the public, it is essential that the RM/SHSO set up the requisite work zones and traffic controls to ensure that bystanders and others are not exposed to onsite contaminants. It is also imperative to manage the traffic flow to, from, and within the site to minimize traffic interaction.

9.1. Work Zones

The primary purpose of site controls is to establish a perimeter to reduce migration of contaminants into clean areas and prevent unauthorized persons from accessing or being exposed to hazardous materials. The RM/SHSO will divide the work and support areas into specific zones and delineate what activities occur in each. Clearly mark each zone to identify their location and establish Entry/Exit Control Points (ECP) from the Support Zone (SZ) into the Contamination Reduction Zone (CRZ) and CRZ into the EZ to restrict access. These zones are further described below.

Establish site control by placing caution tape, barricades, or temporary fencing across sidewalks, driveways, and other public walkways to prevent pedestrians from entering the work area. Designate this zone to keep individuals away from the excavator's bucket swing during open excavation. If an excavation remains open overnight, place construction fencing around the entire open 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.

9.1.1. Exclusion Zone

The EZ – also called the "hot zone" or "work zone" – is where all remedial 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. Decontaminate personnel and equipment exiting the EZ as described in Paragraph 6.6 – *Decontamination Procedures*. The RM and/or OSC establishes the EZ by the building footprint (for buildings) or contaminated area (for soil contamination) once onsite.

If the operation either creates, discovers, or otherwise interacts with a confined space, address them in accordance with SOP 314 – *Confined Spaces*.

Note: This SOP is not included at this time because, while there are confined spaces onsite, there is no expectation workers will enter any confined spaces on this project.

9.1.2. Contamination Reduction Zone

The CRZ – or "warm zone" – provides a location for removing contaminated PPE and final personnel and equipment decontamination. All personnel and equipment must exit the EZ via the CRZ, with separate decontamination areas for personnel/personal equipment and vehicles/heavy equipment. The CRZ is for transitioning between contaminated and clean areas

and is generally identified by caution tape and/or barricades. The RM and/or OSC establishes the CRZ once onsite.

9.1.3. Support Zone

The SZ involves the uncontaminated area – or "cold zone" – outside of the EZ and CRZ, and is within the geographic perimeters of the site. This area is used for staging materials, parking vehicles, office facilities locations, sanitation facilities, and receiving deliveries. Personnel entering this zone may include delivery personnel, visitors, security guards, etc., who will not necessarily be permitted in the EZ. All personnel arriving in the SZ will, upon arrival, report to the command post and sign the site entry/exit log. The RM and/or OSC establishes the SZ location prior to site activity and no later than the start of mobilization.

9.2. General Field Safety Rules

The following are the general field safety rules all visitors and workers will follow while onsite:

- All visitors must report to the EQM Field Office and are referred to the RM or SHSO.
- The EZ is restricted to essential personnel only.
- All operations are administered through operational SOPs.
- Eating, drinking, and smoking is only permitted in designated areas.
- Workers engaged in handling contaminants must wash their hands and faces thoroughly upon leaving the EZ.
- Personnel must use all PPE and monitoring equipment as appropriate and described in this HASP during work activities.
- Personnel will only travel in vehicles where each occupant is provided a seat and must wear a seatbelt.
- Fire extinguishers are available and included in vehicles and all areas with increased fire danger, such as the refueling area.
- Maintain first-aid kits and disposable eyewash bottles in work trucks and select support vehicles – excluding heavy equipment – and in the EQM site office.
- When operating heavy equipment, a minimum of two personnel, the operator and a spotter, are allowed within proximity to the equipment. (If other personnel are necessary, their function should be noted in the HASP and/or other necessary documentation.)
- Employees may not interfere or tamper with air monitoring equipment!
- Do not operate backhoes or other boom equipment within 10 feet of any electrical conductor.
- Use the "Buddy System" while engaged in the EZ, remote areas, or when conditions present a personnel risk. (Note: A buddy system requires at least two trained/experienced personnel working as a team and maintaining audible and/or visual contact.)
- Do not engage in horseplay!

9.3. Communication Procedures

Use cell phones or radios for on-site communications, and work crews must remain in cell phone, radio, or visual contact while working on site. In an emergency, three blasts on an air or vehicle horn is the site evacuation signal.

9.4. Traffic Control

Depending on the project, access to the site(s) is often 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) 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.

9.4.1. Methods for Handling Material at the Site

Minimize truck-loading that takes place on main streets and thoroughfares that disrupt local traffic patterns by utilizing onsite haul roads and staging areas, as practical. If trucks must be loaded on the main streets, use flagmen to stop traffic while the vehicle is being loaded and as it pulls out into the main traffic. Use signage to inform local commuters about traffic activities and notify police and fire departments when appropriate.

When public streets and thoroughfares are not an issue, still develop haul-roads to organize the traffic flow onsite for efficiency and to deconflict different types of vehicles (e.g.: separating dump truck traffic from a visitor/delivery entrance).

9.4.2. General Haul Route

If a haul route is specified, the route-map is in Appendix F – *Maps* – which depicts the primary haul route(s) both within the site, as well as to the designated TSDF, as applicable. EQM's drivers and subcontractors will follow the haul route(s) identified on the map. This is particularly important if there are highway or neighborhood load or hazard restrictions. Discuss any route changes with the OSC and brief them during the daily tailgate meetings. If using more than one landfill or TSDF, list all of them, along with the specific materials permitted for each. Ensure that all personnel and transporters are clearly aware of any TSDF restrictions and/or special requirements.

9.4.3. Weight Restrictions

Make sure to consider the project's location and highway weight restrictions for the expected haul route, to include "bridge" and frost laws or weight restrictions based on road type and proposed equipment. Check truck weights daily by using the load tickets from the TSDF, and then adjust loading as needed to stay within federal, state, or local laws.

Often subdivision roads are not built to handle commercial truck weights. The RM/SHSO must coordinate with the city to ensure that truck traffic does not overload the roads and/or alleyways intended for transporting contaminants. This may require using smaller vehicles to transport

wastes to a single staging point, where heavier vehicles are used to transport them to their destination.

9.4.4. Traffic Control Signage and Layout

While traffic control is not anticipated at this time, other than possibly using signage stating, "Trucks Entering/Exiting", if necessary, consult the Manual of Uniform Traffic Control Devices for sign or flagging crew placement.

10. HAZARD COMMUNICATION PROGRAM

Many chemicals pose a wide range of health effects (e.g.: irritation, dizziness, sensitization, carcinogenicity, etc.) as well as physical risks due to their chemical nature (e.g.: flammability, corrosivity, and reactivity). 29 CFR §1910.1200, *Hazard Communication* (HAZCOM), is designed to ensure information about these hazards and associated protective measures are disseminated to personnel who may be exposed to them. EQM and all team subcontractors are responsible to maintain a copy of their respective HAZCOM programs on site, including a Hazardous Chemical List and the associated SDS, to ensure compliance. SOP 301 – *Hazard Communication Program*, contains the specifics for EQM's program.

10.1. Hazardous Chemicals List

EQM and each team subcontractor will separately maintain a list of those hazardous chemicals each will use onsite during field activities, with the exclusion of the hazardous contaminants that are part of the cleanup/remediation activities. The list will generally include the chemical or common name of the chemical or chemical mixture and the manufacturer and will serve as an inventory of every hazardous chemical requiring an SDS. Obtain any necessary additional information concerning each chemical, mixture, or compound from the SDS.

The list should not consider the chemical hazards posed by the remedial products at the site, given these chemicals are not routine to the operation. The section provides only the basic information for chemicals used to conduct operations.

10.2. Safety Data Sheets

EQM and each team subcontractor will maintain separate SDS for all hazardous chemicals used during field activities. Appendix E – *Safety Data Sheets*, provides generic SDS for the most significant hazardous chemicals, mixtures, and compounds inherent brought onsite to accomplish the project. All SDS will remain available for review during the work shift.

10.3. Labeling

Ensure all incoming hazardous chemical containers are labeled appropriately according to SOP 301. The RM/SHSO or the subcontractor using the material will inspect the containers to ensure compliance. This includes all secondary hazardous chemical containers, which must be labeled.

10.4. Information and Training

To comply with OSHA's HAZCOM Standard, the RM/SHSO will brief the following at the tailgate meetings for chemicals introduced into the workplace:

- Overview of the OSHA HAZCOM Standard,
- Either the individual hazardous chemicals or the grouped hazard classifications present at the site,
- The location and availability of the written HAZCOM Program,

- Any physical and/or health effects of the hazardous chemicals with which they will work,
- Methods and observations used to detect the presence or release of a hazardous chemicals,
- Methods of preventing or eliminating exposure through engineering controls, work practices, and/or personal protective equipment,
- Emergency procedures to follow if exposed,
- An explanation of how to read labels and review SDS to obtain appropriate hazard information, and
- The location of the hazardous chemicals list and individual SDS.

The information and training may cover either specific chemicals or the generic hazard categories (e.g.; reactives, flammables, corrosives, organic peroxides, carcinogens, etc.). The RM/SHSO will ensure detailed chemical-specific information is always available to project personnel through SDS and container labels and markings.

Training must also address the specifications in the National Incident Management System (NIMS).

10.4.1. Pre-Project Training

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

- **Basic Safety Training** – These are the 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** – This topic deals with the identification, recognition, and safe work procedures for hazardous materials, and the use and limitations of applicable 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, which must include the procedures to follow if a worker is exposed to blood or other body fluids.
- **Health Hazard Awareness** – This topic addresses hazardous materials exposure to include exposure routes, adverse health effects, PPE, medical surveillance, and the specific work conditions where exposure could happen.
- **Risk Assessment** – This concerns the work practices and engineering controls used to minimize risk.
- **Emergency Response Training** – This covers the emergency procedures to follow during incidents and/or emergencies.
- **Hearing Conservation** – This address how to protect from noise exposure.
- **Respirator Training** – This covers the use, limitation, and inspection of air purifying respirators and SCBAs and the requirement for fit testing.

- **Asbestos Training** – Because of this project's focus, personnel must have at least two hours of asbestos training by a qualified professional prior to commencement of cleanup work.

Under HAZWOPER, all employees and subcontractors who routinely enter the CZ and EZ must attend no less than 40 hours initial off-site instruction or equivalent training, which is refreshed annually with an annual 8-hour refresher. The RM/SSO must also perform a three (3) day observation before the worker is certified. Supervisors must complete an additional eight (8) hours of specialized training. Actual and documented hazardous waste site experience can substitute for the formal 40-hour HAZWOPER training. The RM and assigned supervisors must have the HAZWOPER Supervisor Safety Training, and, in conjunction with all of these, the PM must also accomplish the OSHA 10-hour Construction Outreach Training.

10.4.2. On-Site Training

After attending the 40-hour HAZWOPER training, the RM/SSO will further brief the workers on specific onsite hazards before allowing them site access. This briefing communicates the potential health and safety hazards on the site and instructs individuals on the HASP requirements. The worker documents this site-specific training by signing the HASP Certification form. The briefing includes the following items:

- Acute and chronic hazardous chemical effects including odors and conditions likely to indicate the presence of site-specific chemicals;
- Identified physical hazards;
- Personal hygiene;
- Safety equipment, usage procedures, and their effectiveness and limitations;
- Proper respirator fitting and use;
- Established work and break areas;
- contaminated areas prohibitions;
- Site operations Changes;
- Emergency response procedures;
- The Buddy System; and
- Asbestos awareness information

Keep this certification onsite in the personnel file for each worker during the duration of the project.

10.4.3. NIMS Training

EQM and subcontractor personnel must also complete the National Incident Management System (NIMS) training noted in Table 10-1, *NIMS Training Requirements*, by function:

Table 10-1, NIMS Training Requirements

RESPONSE ROLE	REQUIRED TRAINING	PRIMARY ROLE
Entry level first responders and disaster workers	FEMA IS-700: NIMS, an Introduction	All Field Workers

RESPONSE ROLE	REQUIRED TRAINING	PRIMARY ROLE
	ICS-100: Introduction to Incident Command System (ICS) or equivalent ICS-200: Basic ICS or equivalent ---------- FEMA IS-800: NRP	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 multiagency 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 and Program Managers

10.4.4. Training Records

Document and keep all onsite training using the appropriate forms. Retain these forms onsite in the employee's job file, forwarding copies to the HSO. This includes any subcontractor trained while working on the project, and the HSO will forward their training documentation to their respective employer(s).

10.5. Non-Routine Tasks

Periodically, project personnel may perform hazardous non-routine tasks. Prior to starting work on such tasks, the RM/SHSO will provide information about the hazardous chemicals the worker may encounter during the activity. This information will include, at a minimum:

- The specific health and physical hazards of the hazardous chemical(s),
- The methods of preventing or eliminating exposure through engineering controls, work practices, and personal protective equipment
- The requirements to use the buddy system, and
- Any specific emergency procedures.

10.6. Training on Multi-Employer Sites

When EQM subcontractors use hazardous chemicals in such a way that their employees may be exposed, the RM/SHSO will:

- Provide the subcontractor(s) with access to the appropriate SDS,
- Inform the subcontractor(s) of any precautionary measures they need to take to protect employees during the site's normal operations and in foreseeable emergencies,
- Inform the subcontractor(s) of the labeling system used in the workplace, methods of preventing or eliminating exposure, emergency procedures to follow if exposed, how to read labels and review SDS to obtain information, and the location of the SDS file and the location of the hazardous chemical list.

11. REFERENCES

The following references apply to this HASPs development or supplement the information herein.

- 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 §1926.1101, *Asbestos*
- 49 CFR §171.8, *Hazardous Materials Definitions*
- EQM SOP 300 *Incident Prevention Program*
- EQM SOP 301 *Hazard Communication Program*
- EQM SOP 307 *Decontamination*
- EQM SOP 308 *Safety Training*
- EQM SOP 309 *Hearing Conservation Program*
- EQM SOP 310 *Incident Management*
- EQM SOP 311 *Personal Protective Equipment*
- EQM SOP 313 *Hazard Identification and Risk Assessment*
- EQM SOP 316 *Excavation and Trenching*
- EQM SOP 318 *Cold-Heat Stress*
- EQM SOP 326 *Working Around Heavy Equipment and Machinery Excavators and Loaders*
- EQM SOP 328 *Power-Operated Tools and Hand Tools*
- EQM SOP 334 *Asbestos Awareness*
- EQM SOP 347 *Manual Lifting*
- EQM SOP 601 *Bloodborne Pathogens*
- EQM SOP 602 *First Aid*
- EQM SOP 603 *Medical Surveillance*
- EQM SOP 814 *Liquid Waste and Sludge Sampling of Pits, Ponds, lagoons and WWT Facilities*
- EQM WI 307A *Asbestos Decontamination*
- EQM WI 805F *Particulate Sampling*
- *NIOSH Pocket Guide to Chemical Hazards (Online)*

APPENDIX A: HEALTH AND SAFETY PLAN AMENDMENTS

HEALTH AND SAFETY PLAN AMENDMENT FORM		
AMENDMENT NUMBER:	AMENDMENT DATE:	PROJECT NUMBER:
SITE NAME:		
AMENDMENT TYPE:		
REASON FOR AMENDMENT:		
ALTERNATE SAFEGUARD PROCEDURES:		
REQUIRED PPE CHANGES:		
EQM RESPONSE MANAGER:	DATE:	
EQM CORPORATE HEALTH AND SAFETY MANAGER:	DATE:	
EPQ ON-SCENE COMMANDER:	DATE:	

APPENDIX B: POLs, SOPs, and WIs

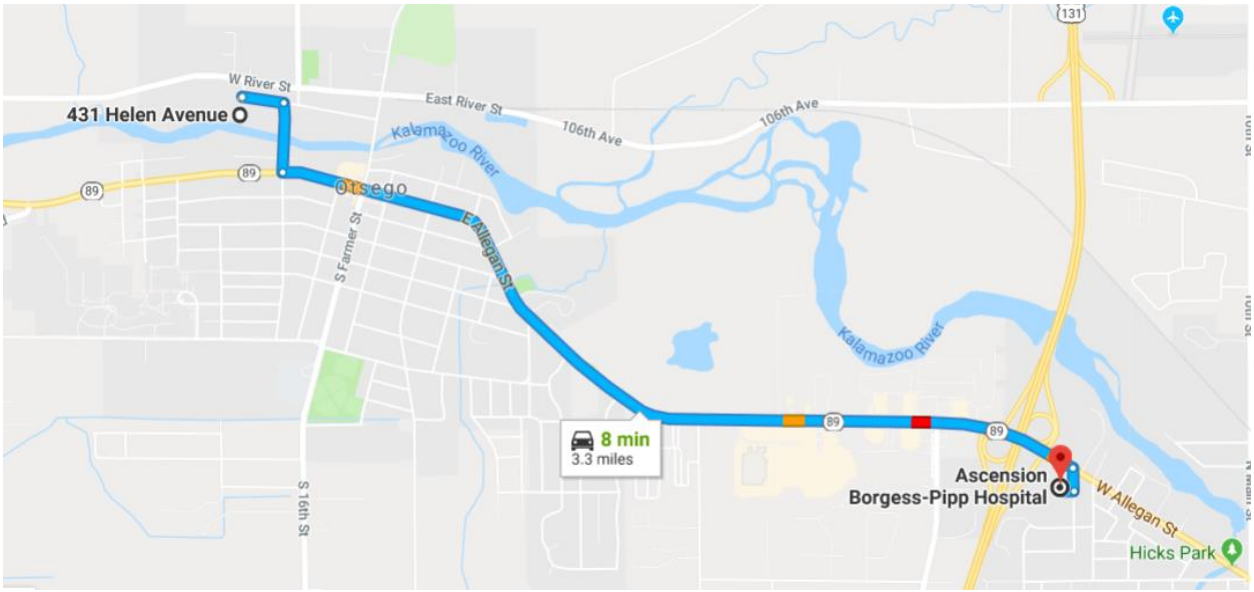
APPENDIX C: ACTIVITY HAZARD ANALYSIS

APPENDIX D: SPECIFIC HAZARD INFORMATION

APPENDIX E: SAFETY DATA SHEETS

APPENDIX F: MAPS

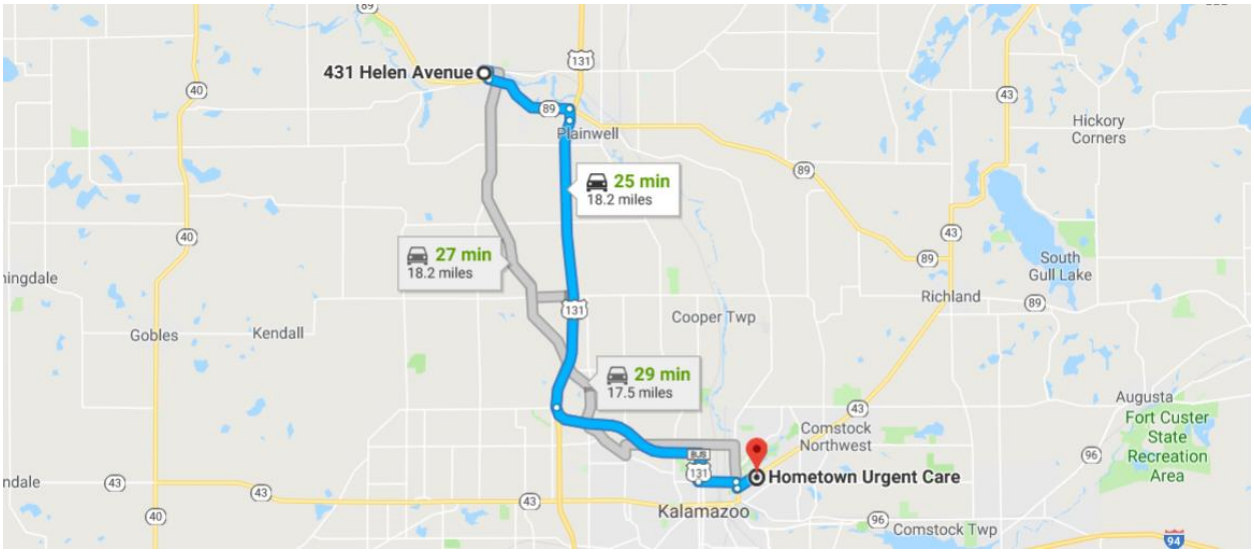
Hospital Route Map



Ascension Borgess-Pipp Hospital Emergency Room
411 Naomi St,
Plainwell, MI 49080

1. Head east on Helen Ave toward John St. for 0.1 miles,
2. Turn right onto N North St. for 0.2 miles,
3. Turn left at the 2nd cross street onto M-89 E/W Allegan St. (Pass by KFC on the right in 2.2 miles) for 2.8 miles,
4. Turn right onto Naomi St. for 384 feet, and then
5. Turn right for 203 feet to reach the destination, Ascension Borgess-Pipp Hospital ER

Occupational Health Clinic Route



Hometown Urgent Care
1634 Gull Road
Kalamazoo, MI 49048

1. Get on US-131 S in Plainwell from M-89 E/W Allegan St. for 3.2 miles (7 minutes),
2. Head east on Helen Ave toward John St. for 0.1 mile,
3. Turn right onto N North St. for 0.2 miles,
4. Turn left at the 2nd cross street onto M-89 E/W Allegan St. (Pass by KFC on the right in 2.2 miles) for 2.5 miles,
5. Turn right to merge onto US-131 South toward Kalamazoo for 0.3 of a mile,
6. Continue on US-131 South to Kalamazoo for 13.0 miles (12 minutes),
7. Merge onto US-131 South for 7.9 miles,
8. Keep left at the fork to continue on US-131 Business South, follow signs for US-131 Business/Downtown Kalamazoo for 5.2 miles,
9. Continue on W Paterson St. to your destination in Kalamazoo Township for 1.9 miles (6 minutes),
10. Turn left onto W Paterson St. for 1.0 miles,
11. Turn right onto Riverview Dr. for 0.2 miles,
12. Turn left onto Gull Rd. for 0.7 miles,
13. Turn right onto Bixby Rd. for 194 feet, and then
14. Turn right and your destination will be on the right in 223 feet.

APPENDIX G: HEALTH AND SAFETY PLAN ACKNOWLEDGMENT FORM

HEALTH AND SAFETY PLAN ACKNOWLEDGMENT FORM

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