

Site Specific  
Health and Safety Plan  
*Brandt Pike Oil Pipeline and Distribution  
Facilities  
Dayton, Ohio*

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ERM Project No. 0074201

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The Brandt Pike Oil Pipeline and Distribution Facilities (Site) are located on Brandt Pike Road and Farr Avenue in Dayton, Montgomery County, Ohio (Figure 1). Four active petroleum terminals and a pipeline facility are located at the Site.

The petroleum terminals and pipeline company (henceforth referred to as the Respondents) that currently occupy the Site include BP Products North America, Inc., BP Oil Pipeline Company, Buckeye Terminals, LLC, Inland Corporation, CITGO Petroleum Corporation, and Sunoco, Inc. (R&M).

In 1986, the Ohio Environmental Protection Agency (Ohio EPA) Department of Emergency Response, responded to a reported release of petroleum products at the Site. Under the direction of the Ohio EPA, the Respondents and/or their predecessors installed monitoring wells and recovery wells to address petroleum-related groundwater contamination at the Site.

On 3 December 2007, the Respondents entered into an Administrative Order by Consent (AOC) with U.S. EPA Region V pursuant to Section 7003 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. § 6973), and Section 311 (c) and (e) of the Clean Water Act (CWA), 33 U.S.C. § 1321(c) and (e). The AOC required that an investigation of MTBE and benzene be conducted that will delineate the lateral and vertical extent of contamination within the study area. The study area is comprised of those off-site areas that are: (1) located between the Site and the Great Miami River or the Dayton Wellfield and (2) approximately one-quarter mile to the south of the Site and includes all areas where groundwater contamination may have migrated or may reasonably be expected to migrate in the future from the Site at concentrations which may pose imminent or substantial endangerment to human health or the environment (Figure 2).

This Health and Safety Plan (HASP) describes the procedures that will be followed during the investigative actions required by the AOC. This HASP is designed to protect the health and safety of personnel involved in the investigative activities and to develop a contingency plan for dealing with emergencies.

This HASP establishes responsibilities and procedures for the health and safety program to be followed during the investigative activities. The site operations, procedures, and equipment will meet the requirements of OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response and the applicable subparts of OSHA 29 CFR 1926 and 29 CFR 1910.

Every potential safety hazard associated with this investigation cannot be predicted. This HASP does not attempt to establish rules to cover every contingency that may arise, but it is intended to provide a basic framework for the safe completion of field activities and planning for reasonable contingencies. The procedures provided herein are to be used by all ERM employees who will be involved in the performance of the project. All personnel are required to enforce and adhere to the established rules specified in the approved HASP, which will be made available to them.

Subcontractors shall prepare a project-specific health and safety plan for their employees, and shall complete all work in accordance with that plan. Subcontractors may use this HASP as a guide in developing their own programs or they may choose to adopt this plan in full. However, at a minimum, all subcontractors will follow this plan while working on this project. The subcontracting companies are ultimately responsible for having a written health and safety plan addressing their activities and also for the health and safety of their employees. Copies of the subcontractors' health and safety plans will be provided to the ERM Project Manager (PM) and Project Coordinator prior to their starting work, and a copy will be kept on site during periods of field work. ERM will review and approve the subcontractor's health and safety plans to ensure they meet the requirements of this HASP and to ensure that applicable policies at the Respondents facilities are adhered to.

Safety responsibilities must be incorporated into project management roles to ensure proper program implementation. Additionally, all persons participating in this investigation must be aware of the potential hazards involved and assume appropriate responsibilities to protect themselves and others. A well-defined organizational structure is an important factor for instilling a strong safety ethic into field operations. Responsibilities as they impact health and safety are described below.

## 3.1

**PROJECT MANAGER**

The Project Manager (PM) is Mr. William B. Lozier of ERM. The Project Manager is responsible for coordinating activities so that project objectives are met without compromising health and safety. This responsibility includes identifying the resources necessary to complete project activities in accordance with the provisions of the HASP and other project plans.

## 3.2

**SITE MANAGER**

The Site Manager (SM) will be Mr. Gregory A. Ayres of ERM or a designated alternate. He will be responsible for the overall implementation and monitoring of the HASP by:

1. Ensuring that all personnel, including subcontractors, are aware of and in compliance with the provisions of the HASP;
2. Ensuring that appropriate personal protective equipment is available and properly used by all personnel as required by this HASP;
3. Ensuring that personnel are aware of potential hazards associated with the project;
4. Correcting any work practices that may result in injury or exposure to hazardous substances;
5. Maintaining communications with the ERM Health and Safety Officer;
6. Assisting the ERM Health and Safety Officer with ambient air monitoring; and
7. Conducting daily safety meetings during periods of field work.

**ERM HEALTH AND SAFETY OFFICER**

ERM's Health and Safety Officer (HSO) is Ms. Stacey Lucas. She will be responsible for the overall coordination of safety matters at ERM. Her responsibilities include arranging safety training programs, evaluating new procedures, providing a follow-up investigation on corrective actions, and generally monitoring the site investigation safety program. She also is responsible for ensuring that proper safety equipment and clothing are available and in working order, and providing liaison to field teams.

She will coordinate the health and safety program at the Site and will be responsible for the following:

1. Advising on health and safety policy issues;
2. Providing guidance on operational and logistical options;
3. Ensuring that all protective equipment remains in proper working order;
4. Ensuring that all personnel have received required Health and Safety training in accordance with applicable requirements of 29 CFR 1910.120;
5. Supervising and monitoring the safety performance of all personnel by conducting field audits when deemed necessary to ensure that the required work practices described in this health and safety plan are employed;
6. Following up on necessary corrective actions;
7. Stopping work should conditions warrant such action;
8. Ensuring and verifying that all employees at the work site are being monitored under appropriate medical surveillance, hearing conservation, and respiratory protection programs in accordance with applicable requirements of 29 CFR 1910.120;
9. Recommending proper and necessary precautions to take or work limitations required to reduce heat or cold stress; and
10. Investigating accidents, implementing appropriate corrective actions, and preparing accident/incident reports.

The HSO works with the SM to coordinate activities such that project objectives are met without compromising health and safety.



**FIELD PERSONNEL**

All field personnel will report directly to the SM and will be required to:

1. Be familiar with, and conform to provisions of the HASP;
2. Ensure that they are well informed of potential hazards at the work site and exercise informed consent in their work;
3. Report accidents and/or hazardous conditions to the SM; and
4. Have complete familiarity with their job requirements and the health and safety procedures involved.

All field personnel will have been trained according to the OSHA standards set forth in 29 CFR 1910.120, and should be able to identify potential hazards if they arise. The key personnel responsible for implementing this HASP are as follows:

- William B. Lozier, Project Manager
- Gregory A. Ayres, Site Manager
- Stacey Lucas, Health and Safety Officer

The purpose of the Hazard Identification is to determine the health and safety hazards that exist or potentially exist at the Site. OSHA requires that a hazard analysis be performed prior to the planned activities to identify specific hazards and to determine the control procedure(s) necessary to protect workers from the hazards identified. This HASP is based on the evaluation of the past Site activities and a review of available information from previous investigations. It is imperative that all activities be conducted in a manner that does not compromise the safety and health of employees or the general public. During periods of field activity, the SM will conduct daily safety meetings.

**CHEMICAL HEALTH HAZARDS**

Based upon information obtained previously, potential compounds that may be encountered during the investigation include aromatic hydrocarbons, polynuclear aromatic hydrocarbons and chlorinated solvents. Chemical hazard information is presented in Table 4.1 for the contaminants of concern identified in the AOC. This information is from Occupational Safety and Health Guidelines for Chemical Hazards, published by the National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services. The data in Table 4.1 provides general information about the properties of the chemicals identified in the AOC. However, this information should be used with the understanding that, in many cases, the chemicals at the Site are probably in different forms than those for which NIOSH has published data, and they are found in very low concentrations compared to the occupational uses of the chemicals.

In order for the chemicals present at the Site to be a health hazard to workers, there must be an exposure through inhalation, dermal contact, or ingestion at a concentration high enough to cause health effects. Therefore, a chemical must satisfy two criteria before it can be considered a health hazard: (1) it must be present in a sufficient concentration and (2) worker exposure must be possible.

During the performance of the investigative activities, hazards posed by the chemicals will be controlled mainly by minimizing worker contact. This approach will be used since the chemical source(s) will not be removed prior to conducting the field activities, and the routes of

exposure cannot be eliminated. The protective measures associated with each potential route of exposure are as follows:

Route of Exposure	Protective Measures to Prevent Contact
Inhalation	Natural ventilation, air monitoring and respiratory protection (if necessary)
Dermal Contact	Protective apparel including nitrile gloves, safety glasses, and Tyvek suits (if necessary) etc.
Ingestion	Protective apparel, personnel decontamination and Site control
All Routes	Safe work practices

The specific protective measures outlined above are described in more detail within this HASP. As the work progresses, these measures will be reviewed frequently to provide an ongoing analysis of their suitability based on newly developed information.

## **4.2 SAFETY HAZARDS**

### **4.2.1 *Underground Installations***

As appropriate, utility companies will be contacted and advised of proposed work prior to the start of actual excavation or drilling. Prior to field work, efforts will be made by the SM to determine whether underground installations, i.e. sewer, telephone, water, fuel, electric lines, etc., will be encountered and, if so, where such underground installations are located. If no underground lines are identified, care will still be employed while drilling, because underground lines may be found in areas where they are not anticipated. Boreholes will be cleared to a minimum of five feet via hand augering or other approved methods prior to drilling operations. Additionally, any vertical profile or monitoring well location will be moved if it is determined to be within 10-feet of marked or known underground utilities. Detailed descriptions of the underground utility clearing procedures are contained in Section 3.0 of the Sampling and Analysis Plan.

### **4.2.2 *Overhead Obstructions***

No excavation, construction or hoisting equipment will be operated within 10 feet of energized electrical overhead lines. Before any field

work is to take place, all overhead obstructions will be identified by the SM. The overhead lines will be moved, de-energized, or guarded as to protect against contact.

#### **4.2.3     *Explosion and Fire***

Care will be taken to prevent explosions and fires. Explosions and fires can result in intense heat, open flames, smoke inhalation, flying objects and release of toxic chemicals. Such releases can threaten both on-site personnel and the nearby public. To protect against explosions and fires, workers will keep all potential ignition sources away from areas where explosive or flammable environments may occur, and use work practices that will minimize the potential agitation or release of chemicals. Smoking will be prohibited on-site and in the work zone.

#### **4.2.4     *Drilling Operations***

Drill rigs pose potential safety hazards of noise, crushing, entanglement, and lightning strike. Hearing protection will be used by personnel operating or in the vicinity of the drill rig. In addition, all field personnel will wear safety glasses, hard hats, leather work gloves, and steel toe boots. Careful physical actions and close communications by those operating and in the vicinity of the drill rig will minimize the potential safety hazard of this operation. An exclusion zone with a radius equal to the drill rig mast height plus 5 feet will be established for drilling operations. Only personnel required for the operation will be allowed within the exclusion zone. Drilling will not be performed during lightning or thunderstorms. Drilling will not resume until 30 minutes after the last lightning occurrence.

### **4.3         *BIOLOGICAL HAZARDS***

Potential biological hazards include ticks and vegetation such as poison ivy. Field personnel will routinely inspect for and remove any ticks from skin and clothing. Health and safety briefings will include identification of poison ivy so that contact with it can be avoided.

## **5.0**

### ***AIR MONITORING***

Air quality monitoring equipment is used to determine whether hazardous conditions exist and to establish the required level of respiratory protection. Air quality will be continuously monitored during intrusive work activities to determine the level of volatile organics in the air and the concentration of combustible gases in the atmosphere. Measurements will be recorded in the field log book. To ensure that all monitoring instruments are operating properly, a field calibration will be performed and documented in the field log book prior to each day's use, or more frequently if necessary. The specific instruments identified below will be calibrated and maintained in accordance with the manufacturers' procedures.

## **5.1**

### ***ORGANIC VAPORS***

Air quality will be monitored during intrusive activities by the HSO, SM, or designated personnel for the presence of volatile organic vapors. A MiniRAE 2000 photoionization detector (PID) or equivalent monitor will be used to measure organic vapors.

## **5.2**

### ***COMBUSTIBLE GASES***

Based on previous sampling results, levels of combustible gases capable of causing an explosion are not likely to be encountered at the Site. All intrusive activities will take place in open spaces, thus minimizing the potential for accumulation of combustible gases in confined areas. An explosimeter, such as the Gastech GX-82 or GX-86, will be utilized to measure the presence of combustible gases. Combustible gases will be monitored only when levels of organic vapors are detected at action levels discussed in Section 6.

## **5.3**

### ***PARTICULATES***

When Site conditions or field activities are conducive to generating dust, airborne particulates will be monitored using an MEI-1 real time air monitor, or an equivalent monitoring device. Dusty conditions are not anticipated during this investigation.

## 6.0

## WORK LIMITATIONS

To ensure that all personnel are protected against the known or anticipated hazards, the following work limitations and conditions have been established. When these limitations have been exceeded, work will be suspended.

### 6.1

### WORK LIMITATION CRITERIA

All jobs will be carried out as per the directions of the SM and HSO.

#### 6.1.1

#### *Air Criteria*

The SM is responsible for conducting air monitoring for health and safety purposes. Air monitoring will be conducted during all intrusive field operations, i.e. drilling, soil sampling, etc. to determine limitations to work activities. Air monitoring will routinely analyze for the following parameters:

1. Volatile organic compounds — Measured by a MiniRAE 2000 PID or equivalent monitoring device.
2. Combustible gases — Measured by an explosimeter such as the Gastech GX-82 or GX-86.
3. Particulates — Measured by a real time air monitor (MEI-1) or equivalent monitoring device (during dusty conditions only).

The following action levels or work limitations will be used during the investigation.

1. Volatile Organic Gases (constant levels measured in breathing space)  
Background to 5 parts per million (ppm) — Level D protection required (see Section 8.2)  
5 ppm to 25 ppm (continuous readings) — Level C protection required (see Section 8.1)  
Greater than 25 ppm (continuous readings) — Evacuate work area until concentrations have been determined to be at safe levels by the SM in conjunction with the HSO. If there is any field activity to identify the source and control the vapors, Level B respiratory equipment will be brought to the Site. Appendix HASP-C describes the Level B respiratory equipment and operating procedures.

2. Combustible gases

0-10% of (lower explosive limit) LEL – routine operations, monitor other parameters

10-20% of LEL – evacuate work area, investigate situation until concentrations return to safe level

3. Particulates

Less than 15 (milligrams per cubic meter)  $\text{mg}/\text{m}^3$  – Level D protection required

15  $\text{mg}/\text{m}^3$  – Level C protection required or dust suppression

6.1.2 *Extreme Weather Conditions*

Cold-related illness, or cold stress, can occur when working in temperatures at or below freezing. An illness such as frostbite may cause severe injury to the skin and extremities. Unless the victim is obviously contaminated, decontamination should be minimized or omitted and treatment begun immediately. First aid and emergency procedures for handling cold-related disorders are described in Section 11.2.

In order to reduce the occurrence of cold stress, the following will be observed while conducting field activities, unless the HSO approves a work rule exception:

1. Drilling and related activities will only be conducted in sustained daily average temperatures at or above 25°F. When average daily temperatures are below 25°F, the SM will consult with the HSO to determine whether field activities will be conducted.
2. When work involves water and the sustained daily average temperatures are below 25°F, the SM will consult with the HSO to determine whether field activities will be conducted.

Heat-related illnesses, or heat stress, may occur at any time when restrictive protective clothing is worn. An illness such as heatstroke requires prompt treatment to prevent irreversible damage or death. Protective clothing may have to be cut off and decontamination may have to be minimized or omitted to allow treatment to begin immediately. First aid and emergency procedures for handling heat-related disorders are described in Section 11.2.

In order to avoid the occurrence of heat stress, continuous physical labor work may be conducted as long as outdoor temperatures do not exceed

86°F. The HSO will consider such factors as the type of protective equipment being worn and physical work being done and will modify the temperature limitations and/or the work schedule accordingly to further minimize the risk of heat stress. As a further precaution against heat stress, periodic monitoring of body temperature will be performed at times deemed appropriate by the HSO, based on the work load and outdoor temperature.

## 6.2 **WORK ZONE EVACUATION**

It is anticipated at this time that, if necessary, evacuation will only involve evacuation of the immediate work zone area.

### 6.2.1 ***Upwind Withdrawal***

The SM will determine a safe upwind location for withdrawal from the work zone. Withdrawal will be necessary in the following cases:

1. Work zone breathing space air quality concentrations contain hazardous concentrations of volatile organic vapors (greater than 25 ppm above instrument background) or combustible gases (greater than 10 percent LEL).
2. Occurrence of a minor accident. The victim will undergo decontamination procedures and be transported to a safe upwind location. Field operations will resume after first aid and/or decontamination procedures have been administered to the affected individual, and the cause of the accident is identified and corrected by the SM.

### 6.2.2 ***Evacuation of Work Site***

The Work Site will be evacuated in the following cases:

1. The air quality monitoring determines that a majority of the work area atmosphere contains greater than 20 percent of LEL combustible gases, or greater than 25 ppm volatile organic vapors.
2. A major accident or injury occurs.
3. Fire and/or explosion.

When any of these evacuation conditions are met, the SM will use three blasts on an air horn to notify the workers to evacuate the work zone. All equipment will be turned off and the keys will be left in the vehicle



ignitions. Gross decontamination may take place or may be omitted at the discretion of the SM. Personnel will withdraw to the safety and support area. As the investigation work will take place at various locations throughout the study area, temporary safe zones will be identified during the daily safety meetings. If the area is no longer in a safe zone, the SM will identify an alternate area for rendezvous. The SM's log of on-site personnel will be used to ensure that all individuals have been evacuated. Control of personnel at the rendezvous point will be the responsibility of the SM.

Should a major accident or injury, fire and/or explosion occur, the SM shall immediately request emergency assistance from the local authorities. As soon as the emergency is deemed under control, the SM shall notify the PM and the Respondents project coordinator. On all such emergencies, a written report will be provided to the PM within 48 hours.

All non-life threatening and minor injuries will either be treated in the field or at a local occupational health center. These injuries will be reported in writing to ERM's PM within 48 hours of occurrence.

During this investigation, all personnel must adhere to the following rules:

1. While in the work zone, the buddy system must be used to allow workers to act as safety backups to each other.
2. All personnel should be aware of the dangerous situations that may develop because of the physical constraints that may be imposed by personnel protection equipment required by this HASP.
3. Eating, drinking, chewing gum or tobacco, smoking, and any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in the work zone.
4. Medicine and alcohol can increase the effects from exposure to toxic chemicals. Prescription drugs should not be taken by personnel where the potential for contact with toxic substances exists, unless specifically approved by a qualified physician. Alcohol intake is prohibited during the work day.
5. When working one of the terminal properties, coveralls will need to be constructed of fire resistant rated materials.
6. Because of the potential for Level C personal protection equipment being required, facial hair (including beards and long sideburns) that would interfere with the respirator face seal is not allowed on personnel.
7. If Level C is required, contact lenses will not be permitted at the Site. If glasses are required, prescription or "plano" safety glasses meeting the requirements of ANSI Z87.1-1979 standards must be worn. Employees will be fitted with spectacle kits for use with full-face respirators when necessary.
8. Procedures for leaving any Level C contaminated area will be planned and implemented prior to going onsite. Work exclusion zones, and decontamination procedures will be established (see Section 10.0).
9. Contact with contaminated or potentially-contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, mud, or any discolored ground surface; do not kneel on the ground; do not lean, sit or place equipment on drums, containers, vehicles or on the ground.

10. Air monitoring will be conducted continuously in work zones where intrusive activities are being performed. Ambient air quality can change rapidly during subsurface excavations.
11. No personnel will be admitted to the work exclusion zones without the proper safety equipment, OSHA training, and medical clearance as required by 29 CFR 1910.120.
12. Proper decontamination procedures must be followed before leaving the work site (see Section 9.0).
13. All personnel must comply with established safety procedures. Any person who does not comply with the established safety policy will be asked to leave the Site due to safety violations and will not be allowed to return to the Site without disciplinary action taken.
14. Any medical emergency supersedes routine safety and decontamination requirements (see Section 11.0).

Personnel protection and procedures for specific tasks to be conducted during this investigation are discussed in this section.

All personnel must wear appropriate protective equipment and follow safe work practices during field investigations. Protective clothing shields the skin from contact with hazardous chemicals, respirators protect the lungs and respiratory system (and eyes, when full-face respirators are worn), safety glasses/goggles protect the eyes, and good personal hygiene limits or prevents ingestion/absorption or inhalation of foreign materials. Standard operating procedures minimize the potential for accidents.

Levels of protection for specific field activities will be reviewed throughout this project. The levels of protection contained herein are to be considered requirements based upon PID readings. At each drilling location, air quality monitoring will be conducted and will be used to establish appropriate levels of personnel protection.

The SM will modify the level of protection to be utilized in the field after consulting with the HSO. The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated will result in the suspension of work until the HSO and the PM have been notified and appropriate instructions have been provided to the SM.

During the performance of field activities, drill rig work areas will be considered work exclusion zones. These work areas will surround the location of the field activity.

Air monitoring equipment will be used to determine the level of protection needed within that work area. All personnel entering a work exclusion zone will be required to use the level of protection that has been deemed appropriate.

Based on preliminary information, the activities conducted within the exclusion zone should be conducted in Level D. The field team will be equipped to upgrade to Level C if daily monitoring indicates levels of organic vapors above the action level specified in Section 6.1.1 of the HASP.

## 8.1 *LEVEL C*

Level C safety equipment will be worn when in the work exclusion zone if organic vapor concentrations are persistently greater than 5 ppm (above background) and less than 25 ppm as measured with PIDs in the worker's breathing zone. Based on preliminary information, it is anticipated that fieldwork will be conducted in Level D. If air monitoring indicates an upgrade to Level C is required, work will be suspended until the HSO approves the upgrade. If concentrations exceed 25 ppm, work will be suspended until the HSO determines whether the concentrations present are approaching the IDLH levels.

### 8.1.1 *Level C Protective Equipment*

1. Full-face air purifying respirator with organic vapor/high efficiency particulate air (OV/HEPA) cartridges
2. Poly-coated chemical-resistant coveralls (e.g. Tyvek overalls)
3. Outer gloves, chemical resistant, nitrile (solvex) taped to sleeves and inner gloves (vinyl)
4. Chemical resistant boots (outer) disposable (taped to cuffs)
5. Hard hat and steel toe boots
6. Hearing protection (when within 25 feet of an operating drill rig)

### 8.1.2 *Level C Selection Criteria*

1. Atmospheric organic contaminants 5 to 25 ppm
2. Atmospheric particulates at 15 mg/m<sup>3</sup> or greater
3. Conditions are such that small exposed areas about the head and neck will not be contacted by hazardous substances.
4. If the atmosphere contains concentrations greater than 25 ppm of volatile organic vapors, as monitored by PID, work will cease until the HSO and the PM evaluate the situation. If there is any field activity to identify the source and control the organic vapors, Level B protective equipment will be brought to the Site.

## 8.2 *LEVEL D*

Based on preliminary information, it is anticipated that all field work will be conducted in Level D.

### 8.2.1 *Level D Protective Equipment*

1. Work clothes (long pants required)
2. High visibility vest (recommended)
3. Hard hat
4. Steel toe shoes/work boots
5. Goggles or safety glasses
6. Hearing protection (when within 25 feet of operating equipment or where posted)
7. Nitrile (solvex) chemically protective gloves (if needed)
8. Leather work gloves (if needed)

### 8.2.2 *Level D Selection Criteria*

Level D protection is the basic work uniform. It can be worn in areas where only boots can be contaminated, no visible toxic substances are present, VOC concentrations in the breathing space are equal to or less than 5 ppm above background levels and particulate levels are less than 15mg/m<sup>3</sup>.

## 9.0

### ***DECONTAMINATION AND HAZARDOUS MATERIALS HANDLING PROCEDURES***

This project is anticipated to be conducted in Level D protective equipment. The level of contamination is, therefore, anticipated to be minimal. The following procedures concerning decontamination and materials handling will be implemented to ensure the health and safety of field personnel and the general public. The SM is responsible for making the determination to implement any or all of the decontamination procedures.

## 9.1

### ***EQUIPMENT DECONTAMINATION PROCEDURES***

All equipment will be decontaminated prior to and after its use, if contact with contamination is believed to have occurred. The following procedures will be used for decontamination of equipment.

### 9.1.1

#### ***Heavy Equipment***

Drill rigs, drilling equipment such as augers and drill stems, support vehicles, backhoe buckets, and any other heavy equipment that has come in contact with contaminated materials will be decontaminated.

The procedure for decontamination of heavy equipment is as follows:

1. Remove all loose soil
2. High pressure, high temperature wash
3. Potable water rinse

All cuttings, soils and fluids generated will be handled following the procedures discussed in Section 9.3 of this HASP.

### 9.1.2

#### ***Small Sampling Equipment***

Small equipment used for sampling includes soil collection equipment, portable electronic equipment, well purging equipment, and groundwater sampling equipment.

Sampling equipment such as split spoons, Shelby tubes, hand augers, stainless steel scoops/trowels, compositing containers, groundwater pumps, and bailers will be decontaminated prior to their initial use,

between each sample and between each sample location. The procedure for decontaminating soil sampling equipment is as follows:

1. Remove loose soil
2. Non-phosphate soap wash
3. Tap water rinse
4. Deionized/distilled water rinse
5. Methanol rinse
6. Rinse with deionized/distilled water
7. Air dry

All cuttings, soils and fluids generated will be handled following the procedures outlined in Section 9.3.

Electronic equipment such as PID will be decontaminated prior to their initial use and at the end of each working day. The procedure for decontaminating electronic equipment is as follows:

1. Brush to remove particulate contamination
2. Wipe down with a clean, damp cloth (deionized water)
3. Air dry

Decontaminated electronic equipment will be wrapped in plastic and stored on a clean surface in a clean location.

### **9.1.3 *Monitoring Well Construction Supplies***

Supplies used to construct monitoring wells will be decontaminated prior to being installed. These supplies include screens, riser pipes, and outer casings. If not contained in sealed packaging, these supplies will be decontaminated with a steam cleaner at the on-site decon area. Decontaminated monitoring well materials will be stored on plastic sheeting within the on-site storage area.

## **9.2 *PERSONNEL DECONTAMINATION PROCEDURES***

The total personnel decontamination process is divided into a number of individual steps. Each step within the decon process has specific decon tasks that must be performed. Each step is performed at a separate decon "station." Personnel will proceed from station to station until the total



decon process has been completed. At the beginning of the decon line, small tools and equipment will be placed in containers or on a protective surface. Personnel decontamination procedures will be dependent upon the level of protection that has been donned by the personnel. The following sections describe decon procedures for Level C and Level D protection.

### 9.2.1 *Level C Decontamination Procedure*

Level C protection will be worn during investigative activities when organic vapor concentrations in the breathing zone are measured at concentrations greater than 5 ppm or particulate levels are greater than 15mg/m<sup>3</sup>. Such work will be approved by the HSO prior to the upgrade from Level D to Level C. For a description of equipment and protective clothing required for Level C see Section 8.1.1 of this HASP.

The personnel decon procedure for individuals wearing Level C protection is as follows:

Stations 1 through 4 are located within the work exclusion zone.

#### 1. Glove and Boot Wash

Scrub and rinse outer gloves. Scrub and rinse outer boots. Remove tape from the outer boot/Tyvek joint and the outer glove/Tyvek joint. Dispose of tape in receptacle.

*Equipment for Station 1:*

1. Containers with detergent solution and containers with clean water.
2. Chairs to sit upon during outer boot wash.
3. Long-handle, soft-bristle scrub brushes.
4. Disposal receptacle.

#### 2. Glove and Boot Removal

Remove outer boots and outer gloves. Dispose of boots or store them in a plastic-lined receptacle. Dispose of outer gloves. Wash and rinse inner gloves. Remove respirator.

*Equipment for Station 2:*

1. Plastic-lined storage receptacle and disposal receptacle.
2. Chairs to sit upon during outer boot removal.
3. Containers with detergent solution and containers with clean water.

### 3. Safety Equipment Wash

Decontaminate equipment if it was used or soiled. Such equipment may include a hard hat, safety glasses, hearing protection or respirator.

*Equipment for Station 3:*

1. Containers with detergent solution and containers with clean water.
2. Soft-bristle scrub brushes.
3. Clean, wet wipe cloths.
4. Sanitizing solution for cleaning respirators. New cartridges to replace spent respirator cartridges.
5. Disposal receptacle for spent respirator cartridges and plastic-lined storage receptacles for decontaminated equipment.

### 4. Protective Clothing Removal

Remove and dispose Tyvek suit. Remove and dispose inner gloves.

*Equipment for Station 4:*

1. Disposal receptacle.

## 9.2.2 **Level D Decontamination Procedure**

The personnel decon procedure for individuals wearing Level D protection will be determined by the SM, which may include at a minimum the following:

### 1. Boot and Glove Wash

- Scrub and rinse gloves or put on a new pair of gloves.
- Scrub and rinse outer boots if they are visibly soiled.

*Equipment:*

1. Containers with detergent solution and containers with clean water.
2. Long-handle, soft-bristle scrub brushes.

### 2. Safety Equipment Wash

Decontaminate equipment if it was used or soiled. Such equipment may include a hard hat, safety glasses, hearing protection.

*Equipment:*

1. Containers with detergent solution and containers with clean water.
2. Soft-bristle scrub brushes.
3. Clean, wet wipe cloths.

**9.3**

***HAZARDOUS MATERIALS HANDLING PROCEDURES***

Soil and decontamination water will be handled according to the following procedures. The soil brought to ground surface during boring procedures (termed "cuttings") will be handled as non-hazardous special waste. Each boring not completed as a monitoring well will be capped with a 1- to 2-foot-thick bentonite/cement grout mixture.

The liquid by-products of decontamination, well development, and well purging will be temporarily containerized and eventually disposed of in one of the groundwater treatment systems located at the Site.

The solid byproducts of decontamination (i.e. PPE such as Tyvek coveralls, gloves, tape, etc.) will be handled as non-hazardous special waste.

## **10.0 SITE CONTROL**

A sign in/out log will be used to record all personnel entering and leaving the site.

Work zone exclusion areas will be defined around each field activity. The boundaries of such a work area will surround the location of the field activity. Within the boundaries of the work area, air monitoring equipment will be used to determine the level of protection needed in the work area. All personnel entering a work area will be required to use the level of protection that has been deemed appropriate. It is anticipated that tasks performed within these work areas will be performed with Level D protection.

Access to the work exclusion zones will be limited. The boundaries of the work zone will be marked with high visibility equipment (e.g., caution tape, flags, flashers) and barricades will be setup in an attempt to prevent unauthorized access. The boundaries of these zones may be modified depending on such factors as prevailing winds and organic vapor levels.

If work is conducted in roadways, traffic cones and, if warranted, off-duty police or private traffic control personnel, will be utilized to control traffic.

## **10.1 ACCESS-PERSONNEL**

Only authorized personnel will have access into the work exclusion zones as deemed necessary by the SM.

## **10.2 SECURITY**

The SM will be responsible for security during working hours. For all activities that take place, the SM will limit access to the property. Security during non-work hours will be provided by a caution tape surrounding the exclusion zone.

## **10.3 HASP VIOLATIONS**

Personnel who violate the provisions specified in the HASP will have their actions documented and submitted to their company's supervisor for

appropriate disciplinary action. The document generation and liaison actions will be completed by the PM.

#### **10.4            *TRAINING VERIFICATION***

The HSO will verify the training and medical monitoring of all ERM personnel proposed for participation in the investigation. All available site-specific training and medical monitoring certificates for ERM personnel identified to date are included in Appendix D. All other certificates for identified personnel, and for those personnel to be identified at a later date, will be reported to the ERM PM and U.S. EPA On-Scene Coordinator prior to site work.

## 11.0

## EMERGENCY PROCEDURES AND CONTACTS

The HASP for this project has been established to allow Site operations to be conducted without adverse impacts to on-site workers' or the general public's health and safety. The severity of any injury will be assessed in the field by the SM to determine the appropriate medical attention and the need for seeking assistance from paramedics or visiting the emergency room. All minor injuries will be treated in the field with appropriate first aid equipment or at a local occupational health center and the injury will be reported to the ERM PM and U.S. EPA On-Scene Coordinator.

## 11.1

## GENERAL MEDICAL PROCEDURES

In the event of an emergency, appropriate corrective measures must immediately be taken to assist those who have been injured or exposed and to protect others from hazard. The SM should be immediately notified of the incident and, if necessary, first aid will be obtained from the county-wide Emergency Medical Service and/or Miami Valley Hospital. Emergency phone numbers are provided in Section 11.6 of the HASP.

Accident reports will be completed as necessary, returned to the HSO, and kept on file at ERM's Health Services Department. These and other forms are described in Section 12.0 and can be found in the Appendices.

In life threatening situations, care must be instituted immediately without considering decontamination protocol. Outside protective clothing can be removed if it does not cause delays, interfere with treatment, or aggravate the problem. Respirators must always be removed. If outer contaminated garments cannot be safely removed, the individual should be wrapped in suitable material to help prevent contaminating ambulances and/or medical personnel. For minor medical problems or injuries, normal decontamination procedures should be followed when at all possible.

All accidents/unusual events will be reported to the SM and the HSO. The SM is responsible for conducting the emergency response in an efficient, rapid, and safe manner. The SM will decide whether off-site assistance and/or medical treatment is required and the SM will arrange for assistance. All minor injuries will be treated in the field with appropriate first aid equipment or at a local occupational health center (such as Miami Valley Hospital) and the injury will be reported to the ERM PM and U.S. EPA On-Scene Coordinator.

All workers are responsible to conduct themselves in a mature, calm manner in the event of an accident/unusual event. All personnel must conduct themselves in a manner to avoid spreading the danger to themselves and to surrounding workers.

The following emergency equipment will be available in the safety and support area:

- First aid kit;
- Fire extinguisher (Type A, B, and C);
- Towels or sheets;
- Plentiful supply of potable water;
- Portable eye wash station; and
- Communication equipment such as cellular telephone.

## **11.2**

### ***COLD WEATHER/HEAT RELATED EMERGENCIES***

Cold weather related emergencies include frostbite, trench foot, and hypothermia. Treatment of individuals experiencing any of these injuries will be administered immediately. Employees will be monitored by the SM to detect signs of cold weather related emergencies.

Frostbite occurs when there is actual freezing of the tissues with the attendant mechanical disruption of cell structure. With increasing wind velocity, heat loss is greater and frostbite will occur more rapidly. Once started, freezing progresses rapidly. Furthermore, if the skin comes in direct contact with objects whose surface temperature is below the freezing point, frostbite may develop in spite of warm environmental temperatures. The first warning of frostbite is often a sharp, pricking sensation. However, cold itself produces numbness and anesthesia which may permit serious freezing to develop without the warning of acute discomfort. Injuries produced by frostbite may range from a simple superficial injury with redness of the skin, transient anesthesia and superficial bullae to deep tissue freezing with persisting ischemia, thrombosis, deep cyanosis, and gangrene.

If frostbite is suspected, individuals should be transported to an emergency facility.

Trench foot or immersion foot may be caused by long continuous exposure to cold without freezing, combined with persistent dampness or

actual immersion in water. This condition is due to persistent local tissue anoxia, combined with mild or severe cold with resultant injury to the capillary walls. Edema, tingling, itching, and severe pain occur and may be followed by blistering, superficial skin necrosis, and ulceration.

If trench foot is suspected, the individual should be placed in blankets and moved to a warm, dry location. If symptoms persist, the individual should seek medical attention.

General hypothermia is an extreme acute problem resulting from prolonged cold exposure and heat loss. If an individual becomes fatigued during physical activity, he will be more prone to heat loss, and as exhaustion approaches, the vasoconstrictor mechanism is overpowered; then sudden vasodilatation occurs with resultant rapid loss of heat, and critical cooling ensues. Sedative drugs and alcohol increase the danger of hypothermia.

If hypothermia is suspected the individual should be wrapped with blankets and transported immediately to an emergency facility.

Heat related emergencies can range from heat cramps to life threatening heatstroke. Treatment of individuals suffering from any of these injuries will be administered immediately. Employees will be monitored by the Site Safety Officer to detect signs of heat related emergencies.

Heat rash (prickly heat) may be caused by unrelieved exposure to hot and humid air as may occur in warm-moist climatic zones. The orifices of the sweat ducts become plugged due to the swelling of the moist keratin layer of the skin which leads to inflammation of the glands. There are tiny red vesicles visible in the affected skin area and, if the affected area is extensive, sweating can be substantially impaired. As a consequence heat rash not only is a nuisance because of the discomfort it causes but also can greatly diminish the worker's capacity to tolerate heat.

Heat cramps may occur after prolonged exposure to heat with profuse perspiration and inadequate replacement of salt. The signs and symptoms of heat cramps consist of spasm and pain in the muscles of the abdomen and extremities. Albuminuria may be a transient finding.

Heat cramps will be treated by administration of water, removal of the individual to a cool, shaded location, and rest.

Heat exhaustion may result from physical exertion in a hot environment when vasomotor control and cardiac output are inadequate to meet the



increased demand placed upon them by peripheral vasodilatation or the plasma volume is reduced by dehydration. Signs and symptoms of heat exhaustion may include pallor, lassitude, dizziness, syncope, profuse sweating, and cool moist skin. There may or may not be a mild hypothermia, observable by rectal measurement.

Heat exhaustion will be treated by elevating the individual's feet, transporting to a cool, shaded area; administration of water; application of cool water or compresses; and transport to emergency facility if individual response is not rapid and full.

Heat stroke is a serious medical condition. An important predisposing factor is excessive physical exertion. Signs and symptoms may include dizziness, nausea, severe headache, hot dry skin because of cessation of sweating, very high body temperature (usually 106°F and rising), confusion, collapse, delirium, and coma. Often circulation is also compromised to the point of shock. If cooling of the victim's body is not started immediately, irreversible damage to vital organs may develop, leading to death.

Heat stroke will be treated as a medical emergency. An ambulance will be called as soon as an individual is suspected of suffering from heat stroke. An immediate attempt will be made to decrease the body temperature as rapidly as possible by applying cold wet sheets or compresses and placing the individual supine, feet elevated, in an air conditioned environment until transportation to emergency care facilities is possible.

For work limitation and precautions for avoiding heat and cold related injuries, see Section 6.1.2 of the HASP.

### **11.3**      ***CHEMICAL EXPOSURE***

Chemical exposure can be divided into two categories:

- Injuries from direct contact, such as acid burns or inhalation of toxic chemicals; and
- Potential injury due to gross contamination on clothing or equipment.

For the inhaled contaminant, treatment can only be provided by qualified physicians. If the contaminant is on the skin or in the eyes, immediate measures must be taken to counteract the substance's effect. First aid treatment usually is flooding the affected area with copious amounts of water for a minimum of 15 minutes.

When protective clothing is grossly contaminated, contaminants may be transferred to treatment personnel or the wearer and cause injuries. Unless severe medical problems will be aggravated by splashing water, the protective clothing should be washed off as rapidly as possible and carefully removed. Portable eye washes and potable water will be available to provide a means of flushing and washing such contamination.

If the injury to the worker results from a chemical splash or uncontrolled release, the following first aid procedures are to be instituted:

- **Eye Exposure** — If contaminated solids or liquids get into the eyes, wash eyes immediately at the emergency eyewash station using large amounts of water and lifting the lower and upper lids occasionally. Continuously wash for a minimum of 15 minutes. Obtain medical attention immediately.
- **Skin Exposure** — If contaminated solids or liquids get on the skin, promptly wash the contaminated skin using soap or mild detergent and water. If severely contaminated material penetrates through the clothing, remove the clothing immediately and wash the skin using soap or mild detergent and water. Obtain medical attention immediately when exposed to such material.
- **Breathing** — If a person breathes in large amounts of contaminants, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration immediately. Keep the affected person warm and at rest. Obtain medical attention as soon as possible.
- **Swallowing** — When contaminants have been swallowed and the person is conscious, attempt to obtain information to aid in identifying the substance swallowed from the person. Contact the poison control center immediately. Under poison control center's direction, one or two glasses of milk or water may be administered to dilute the swallowed material. The center may direct responder to induce vomiting. Transport the person to the hospital and monitor his or her airway constantly.

## **11.4 FIRES**

Fire extinguishers will be available on-site in the safety and support area. If a small localized fire breaks out, fire extinguishers will be used to bring the fire under control. If necessary and feasible, a fire blanket, soil, or other inert materials will be placed on the burning area to extinguish the

flames and minimize the potential for spreading. If appropriate, local fire-fighting authorities will be contacted for assistance.

If an uncontrolled fire develops releasing potentially toxic gases, on-site personnel will be evacuated in accordance with procedures in Section 6.2 of the HASP. Only personnel trained in fire fighting and outfitted with proper protective equipment will be allowed in the immediate fire area. The SM or his designated assistant will alert local fire-fighting companies.

## **11.5 UNUSUAL OBJECTS OR EVENTS**

Although highly unlikely, unusual objects (i.e., buried pressurized gas cylinders, bulging drums, fuming containers) could be encountered during boring and sampling operations. If such objects are encountered, the SM will halt operations and notify the PM immediately.

## **11.6 EMERGENCY CONTACTS**

Should any emergency situation or other unplanned occurrence require outside services, the appropriate personnel from the following list should be contacted:

- |   |   |
|---|---|
| • Fire or Police                                      | 911   |
| • U.S. EPA On-Scene Coordinator –<br>Steven Renninger | 513-569-7539 (office)<br>513-260-7849 (cell)                        |
| • ERM Field Team Leader - Gregory Ayers               | 614-985-3697 (office)<br>614-595-9854 (cell)<br>614-274-4506 (home) |
| • ERM Project Manager - William Lozier                | 440-542-0750 (office)<br>440-668-5734 (cell)<br>440-543-6137 (home) |
| • William Barber (Respondents)                        | 216-271-8038 (office)<br>216-408-1660 (cell)<br>330-296-8498 (home) |

Driving directions and a map to Miami Valley Hospital are provided as Figure 3.

The following forms are described in this section and can be found in the Appendix:

- A. Plan Acceptance Form;
- B. Incident Report Form; and
- C. Respirator Inspection Record.

The Plan Acceptance Form will be completed by all personnel working at the Site and provided to U.S. EPA On-Scene Coordinator prior to site work. The Incident Report Form will be completed by the SM or the HSO. The Respirator Inspection Record will be completed by personnel when first on site and after any use of the respirator.

All completed forms will be returned to the HSO.

## **13.0 MEDICAL SURVEILLANCE PROGRAM**

To safeguard the health of personnel, a medical surveillance program has been established.

### **13.1 BACKGROUND**

Prior to work at hazardous sites, ERM employees must undergo a thorough physical examination, if not performed within the preceding 12 months. At present, they are conducted by University Mednet in Cleveland, Ohio as required by ERM's Medical Surveillance Program. Pre-site investigation medical examinations establish each individual's state of health, provide baseline physiological and psychological data, and assess the individual's ability to cope with the stress of hazardous site investigations.

Annual medical examinations are conducted to assess the health status of individual workers as to their fitness for continued assignments at hazardous sites. Periodic or follow-up medical evaluation of individual workers will be conducted as deemed necessary by ERM's HSO and Medical Advisor per exposure to various environmental factors. The content and frequency of these examinations is influenced by the kinds of work and exposures encountered by each individual. The frequency of these follow-up examinations is established by the HSO in conjunction with the Medical Advisor.

Subcontractors must have a medical surveillance program that meets the requirements of this HASP.

### **13.2 PHYSICAL EXAMINATION**

Each individual receives a thorough physical examination which includes an evaluation of blood counts and blood chemistry to assess blood-forming, kidney, liver, and metabolic functions. The examining physician, or his/her immediate supervisor, will be accredited by the American Occupational Medical Association (AOMA). In addition, the physician and/or appropriate medical staff professional(s) will be certified by the Council of Accreditation in Occupational Hearing Conservation (29 CFR 1910.95 (g)(3) Noise Standard) in order to perform and interpret audiograms/audiometric tests. Pulmonary function tests will be performed by certified spirometrists who have taken the required NIOSH

spirometry course. X-rays will be read by a doctor with a B-reader license. Specifically, the physical examination consists of the following elements:

*Physical Examination*

1. Review of personal and family health history
2. Complete physical examination
3. History of occupational exposures
4. Eye tests:
  - Near and distant vision
  - Color vision
  - Peripheral vision
  - Depth perception
5. Hearing test (Audiometric screening)
6. Electrocardiogram, 12 lead
7. Pulmonary function study (functional lung capacity)
8. Chest X-Ray

*Laboratory Studies*

1. Hematology
  - Red blood count
  - White blood count
2. Differential
  - Polys
  - Lymphs
  - Mono
  - Eos
  - Baso

3. Blood chemistries (26)

Calcium	Direct Bilirubin
BUN/Creat ratio	LDH
Creatinine	Total lipids
Total protein	Chloride
Total Bilirubin	T4
Alk. Phosphatase	BUN
Iron	Glucose
Potassium	Globulin
Triglycerides	SGOT
Phosphorus	SGPT
Uric Acid	Cholesterol
Albumin	Sodium
Alb/glob ratio	GGTP

4. Urogram:

Acetone	Specific gravity
Glucose	Blood
Albumin	pH

5. Serology

IgE

IgG

6. Papanicolaou (PAP) test for cervical cancer (female staff)

Summary reports of the examinations are sent to each employee at their home address and to ERM's Medical Department. Full results of each physical are sent to each employee's personal physician upon

written request and/or authorization of employee. Employee reports are kept at University Mednet.



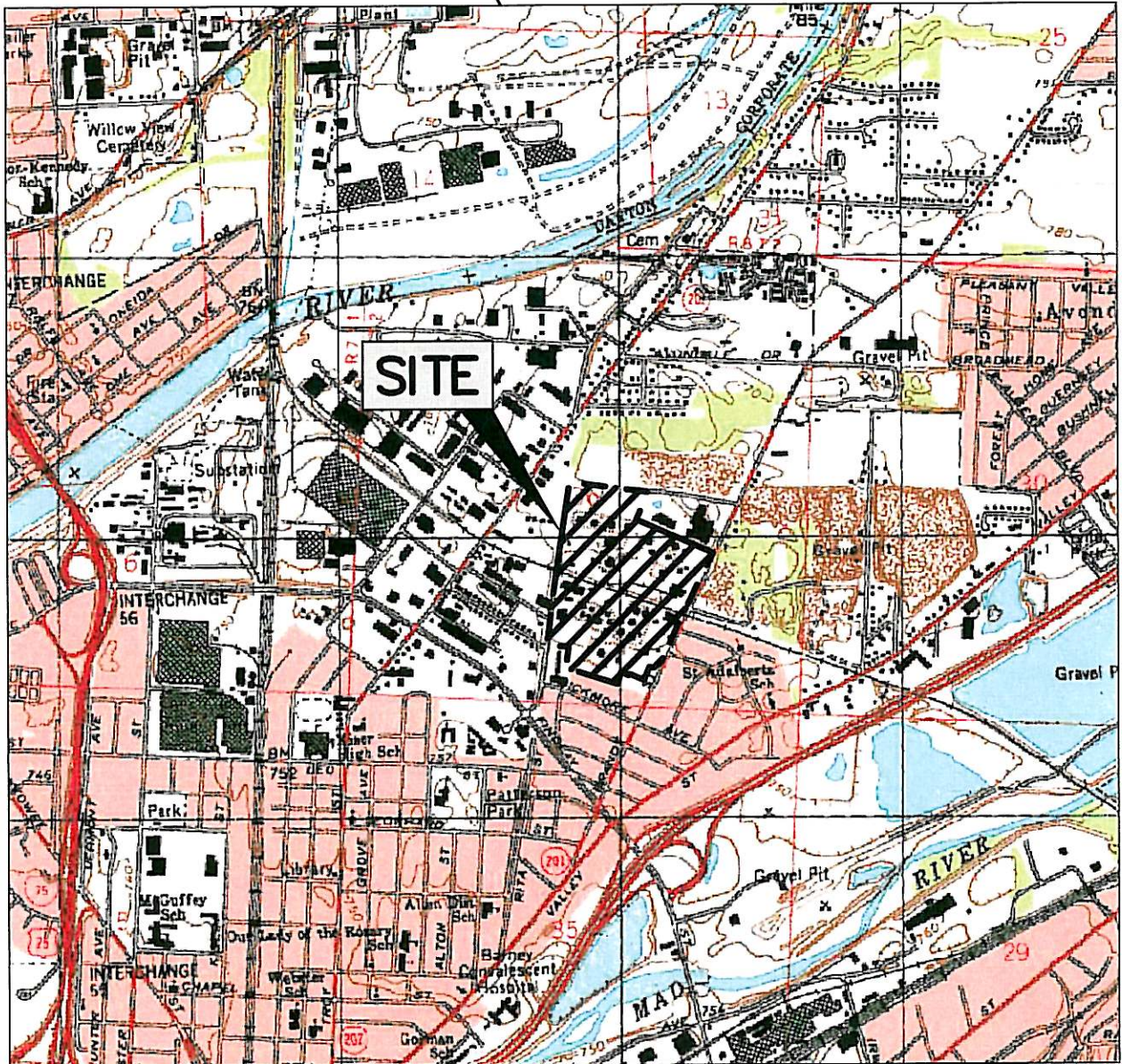
## *Figures*



SECTION 36  
R.7T.2  
CITY OF DAYTON  
MONTGOMERY COUNTY, OHIO



0 2000  
SCALE (IN FEET)



## SITE LOCATION MAP

ADAPTED FROM USGS  
DAYTON NORTH QUAD, 1996

REVISIONS ARE TO BE MADE ON THE CADD FILE ONLY



**BRANDT PIKE TERMINAL**  
DAYTON, OHIO

CADD Review FGP  
CHK'D GA-COL

0074021

Drawn By  
RMK 01/14/08

**Environmental Resources Management**

FIGURE 1

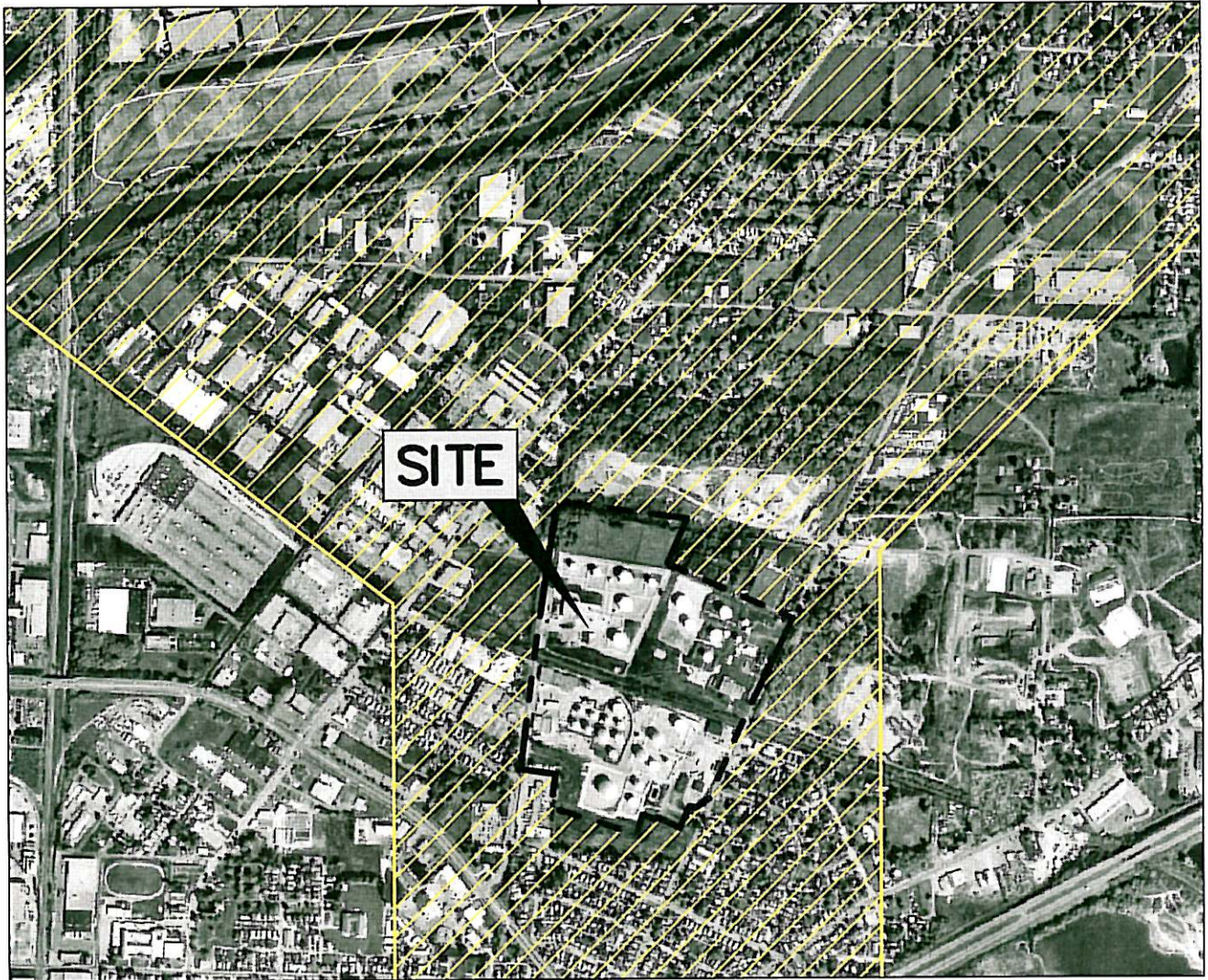




SECTION 36  
R.7T.2  
CITY OF DAYTON  
MONTGOMERY COUNTY, OHIO



0 1250  
SCALE (IN FEET)



## STUDY AREA MAP

ADAPTED FROM USGS  
DAYTON NORTH SE DOQQ, 2001

REVISIONS ARE TO BE MADE ON THE CADD FILE ONLY



**BRANDT PIKE TERMINAL**  
DAYTON, OHIO

CADD Review FGP  
CHK'D GA-COL

0074021

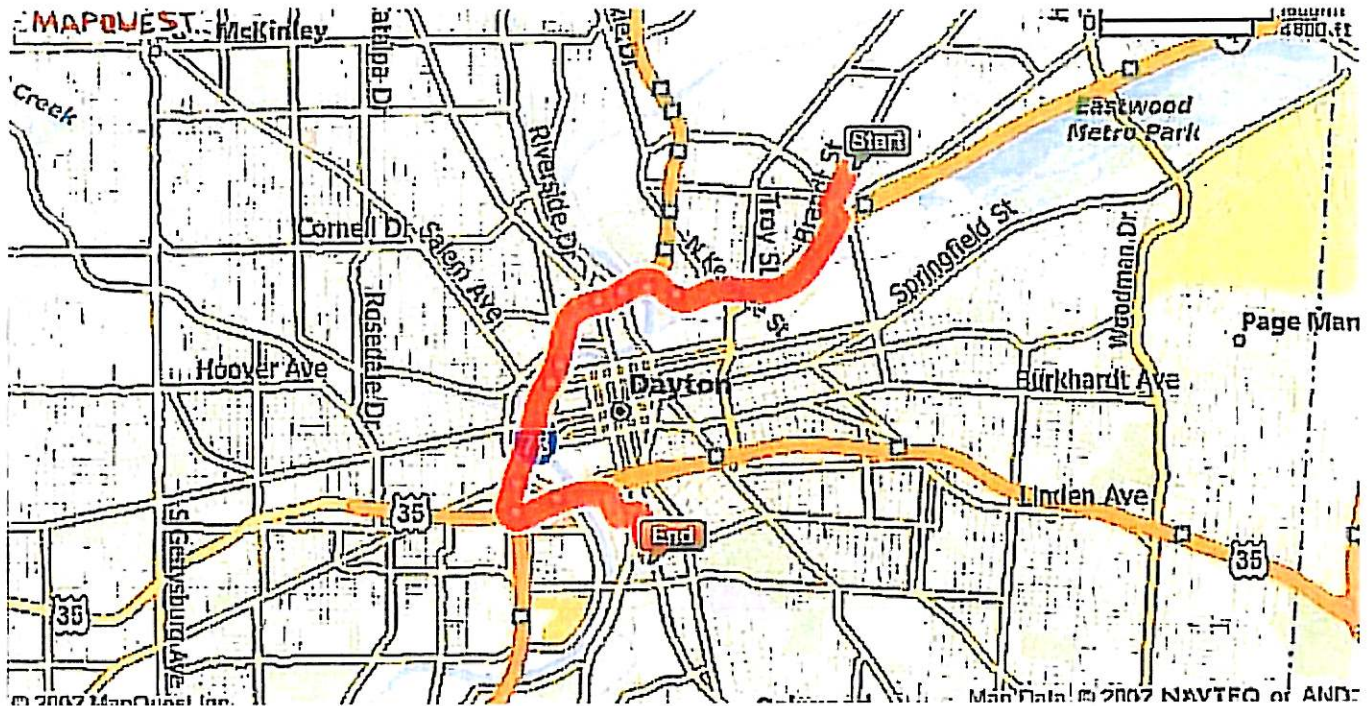
Drawn By  
RMK 01/14/08

**Environmental Resources Management**

FIGURE 2



# DRIVING DIRECTIONS TO THE MIAMI VALLEY HOSPITAL



START OUT GOING SOUTHWEST ON BRANDT ST/OH 201 TOWARD PAW PAW STREET  
 TURN LEFT ONTO STANLEY AVE.  
 MERGE ONTO OH-4S TOWARD MIDDLETOWN/INTERSTATE 75  
 MERGE ONTO INTERSTATE 75S VIA THE EXT ON THE LEFT TOWARD CINCINNATI  
 MERGE ONTO US-35E VIA EXIT 52B TOWARD XENIA  
 TAKE THE PERRY STREET EXIT TOWARD LUDLOW STREET  
 KEEP RIGHT AT THE FORK IN THE RAMP  
 KEEP RIGHT AT THE FORK IN THE RAMP  
 TURN SLIGHT RIGHT ONTO SOUTH PERRY STREET  
 TURN LEFT ONTO STOUT STREET  
 TURN RIGHT ONTO SOUTH MAIN STREET/OH-48

REVISIONS ARE TO BE MADE ON THE CADD FILE ONLY



**BRANDT PIKE TERMINAL**  
 DAYTON, OHIO

CADD Review FGP  
 CHK'D GA-COL  
 0074021  
 FIGURE 3

Drawn By  
 RMK 01/14/08

Environmental Resources Management

*Appendix A*  
*Plan Acceptance Form*

***PLAN ACCEPTANCE FORM***  
***Site Specific Health and Safety Plan***  
***Brandt Pike Oil Pipeline and Distribution Facilities***  
***Dayton, Montgomery County, Ohio***

Site Manager

---

Site Personnel

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---

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---

---

Project Manager/Date

---

Health & Safety Officer/Date

*Appendix B*  
*Incident Report Form*

*Incident Report Form*  
*Site Specific Health and Safety Plan*  
*Brandt Pike Oil Pipeline and Distribution Facilities*  
*Dayton, Montgomery County, Ohio*

CLIENT NAME: \_\_\_\_\_

LOCATION OF INCIDENT: \_\_\_\_\_

DATE: \_\_\_\_\_ EMPLOYEE NAME: \_\_\_\_\_

TYPE OF INCIDENT: \_\_\_\_\_

EMPLOYEE JOB TITLE: \_\_\_\_\_

SPECIFIC JOB AT TIME OF INCIDENT: \_\_\_\_\_

LEVEL OF PROTECTION WORN AT TIME OF EXPOSURE:

\_\_\_\_\_  
\_\_\_\_\_

INCIDENT SUMMARY: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CORRECTIVE ACTIONS: \_\_\_\_\_

\_\_\_\_\_

EMPLOYEE SIGNATURE: \_\_\_\_\_

SITE SAFETY OFFICER: \_\_\_\_\_

ERM H&S COORDINATOR: \_\_\_\_\_

TIME & DATE OF REPORT: \_\_\_\_\_



*Appendix C*  
*Respirator Inspection Record*

# RESPIRATOR INSPECTION RECORD

*Site Specific Health and Safety Plan*

*Brandt Pike Oil Pipeline and Distribution Facilities*

*Dayton, Montgomery County, Ohio*

Company: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_ Routine use only

\_\_\_\_\_ Emergency use only

Respirator type: \_\_\_\_\_

Respirator make, model, and size: \_\_\_\_\_

Defects:

Facepiece \_\_\_\_\_

Inhalation valve \_\_\_\_\_

Exhalation valve assembly \_\_\_\_\_

Headbands \_\_\_\_\_

Filter holder \_\_\_\_\_

Filter \_\_\_\_\_

Harness assembly \_\_\_\_\_

Hose assembly \_\_\_\_\_

Speaking diaphragm \_\_\_\_\_

Gaskets \_\_\_\_\_

Connections \_\_\_\_\_

Other defects \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

*Appendix D*  
*Training and Medical*  
*Monitoring Certificates*

# New Environment, Inc.

This is to certify that

**William R. Lozier**

has satisfactorily completed NEE's

HAZWOPER

[29CFR1910.120]

8-Hour Refresher Program

3/11/2008

Date

Richfield, OH

Location

NE

Timothy E. Smith

44142

Student ID Number



May 15, 2008

James Krebs  
Project Manager  
Environmental Resources Management  
30775 Bainbridge Road – Suite 180  
Solon, OH 44139

**RE: WILLIAM LOZIER**

Dear Mr. Krebs:

Mr. William Lozier was seen in our office for a Hazmat physical examination. Based on his health history and physical examination, it appears that he will need no specific accommodations to perform his duties with your organization. It should also be noted that Mr. Lozier's PFTs, chest X-ray, EKG and urinalysis were within normal limits. Of note, the patient is fit to wear a respiratory at this time.

Please call should you have any questions.

Sincerely,

A handwritten signature in black ink that reads 'David M. Rosenberg, MD MPH'.

David M. Rosenberg, M.D., M.P.H.  
Medical Director Corporate Health  
Occupational Health Services at Chagrin Highlands  
University Hospitals

DMR/ab

### Corporate Health

#### Occupational & Environmental Health Services

3909 Orange Place  
Suite 2300  
Orange Village, OH 44122  
216 896 1855 Phone  
216 896 1851 Fax

# New Environment, Inc.

This is to certify that

**John Blackman**

has satisfactorily completed NEI's

HAZWOPER

[29CFR1910.120]

8-Hour Refresher Program

12/11/2007

Date

Independence, OH

Location

*NE*

Timothy E. Smith

42239

Student ID Number

800.732.3073



**University Hospitals**  
Medical Practices

RECEIVED

**Corporate Health**

**Occupational & Environmental  
Health Services**

3909 Orange Place  
Suite 2300  
Orange Village, OH 44122  
216 896 1855 Phone  
216 896 1851 Fax

October 25, 2007

James Krebs  
Project Manager  
Environmental Resources Management  
30775 Bainbridge Road – Suite 180  
Solon, OH 44139

**RE:            JOHN BLACKMAN**

Dear Mr. Krebs:

Mr. John Blackman was seen in our office for a preplacement physical examination. Based on his health history and physical examination, it appears that he will need no specific accommodations to perform his duties with your organization. It should also be noted that Mr. Blackman's vision was within normal limits with hearing revealing a mild bilateral hearing loss.

Please call should you have any questions.

Sincerely,



Scott L. Massien, M.D.

SLM/ab

# New Environment, Inc.

This is to certify that

## Aaron Frederick

has satisfactorily completed NEI's

HAZWOPER

[29CFR1910.120]

8-Hour Refresher Program

3/11/2008

Date

Richfield, OH

Location



Timothy E. Smith

44136

Student ID Number

800.732.3073



FEB 19 2008

February 12, 2008

James Krebs  
Project Manager  
Environmental Resources Management  
30775 Bainbridge Road – Suite 180  
Solon, OH 44139

**Corporate Health****Occupational & Environmental  
Health Services**

3909 Orange Place  
Suite 2300  
Orange Village, OH 44122  
216 896 1855 Phone  
216 896 1851 Fax

**RE:           AARON FREDERICY**

Dear Mr. Krebs:

Mr. Aaron Fredericy was seen in our office for a Hazmat physical examination. Based on his health history and physical examination, it appears that he will need no specific accommodations to perform his duties with your organization. It should also be noted that Mr. Fredericy's hearing, PFTs, chest X-ray and urinalysis were within normal limits. Of note, the patient is fit to wear a respiratory at this time.

Please call should you have any questions.

Sincerely,



David M. Rosenberg, M.D., M.P.H.  
Medical Director Corporate Health  
Occupational Health Services at Chagrin Highlands  
University Hospitals

DMR/ab

# New Environment, Inc.

This is to certify that

**Sarah Moud**

has satisfactorily completed NEI's

HAZWOPER

[29CFR1910.120]

8-Hour Refresher Program

3/11/2008

Date

Richfield, OH

Location

*NE*

*Timothy E. Smith*  
Timothy E. Smith

44140

Student ID Number

800.732.3073



DEC 04 2007

**Corporate Health**

**Occupational & Environmental  
Health Services**

3909 Orange Place  
Suite 2300  
Orange Village, OH 44122  
216 896 1855 Phone  
216 896 1851 Fax

November 28, 2007

James Krebs  
Project Manager  
Environmental Resources Management  
30775 Bainbridge Road – Suite 180  
Solon, OH 44139

**RE: SARAH WOOD**

Dear Mr. Krebs:

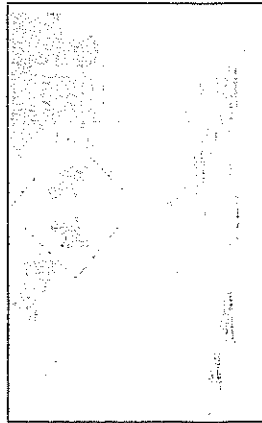
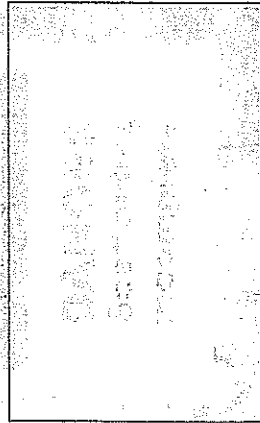
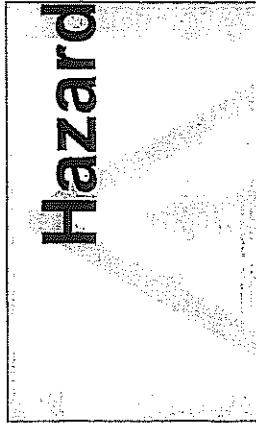
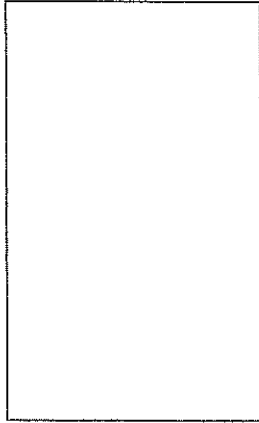
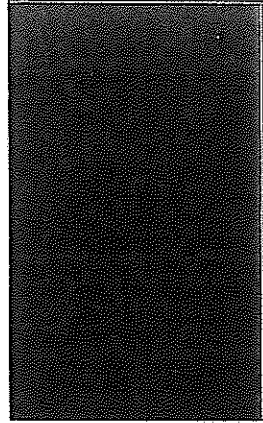
Ms. Sarah Wood was seen in our office for a preplacement physical examination. Based on her health history and physical examination, it appears that she will need no specific accommodations to perform her duties with your organization. It should also be noted that Ms. Wood's hearing and vision were within normal limits.

Please call should you have any questions.

Sincerely,

David M. Rosenberg, M.D., M.P.H.  
Medical Director Corporate Health  
Occupational Health Services at Chagrin Highlands  
University Hospitals

DMR/ab



This

**William Schoff**

**Hazardous Waste Operations and Emergency Response 8-hour Refresher**

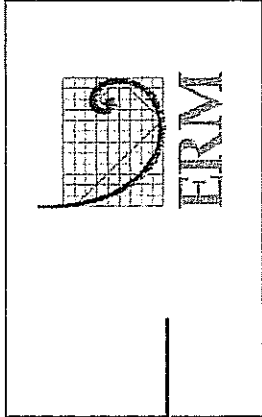
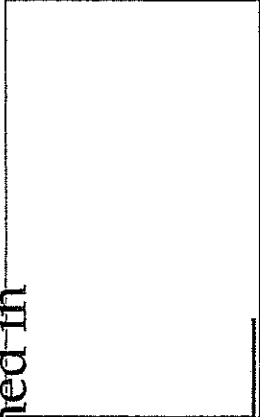
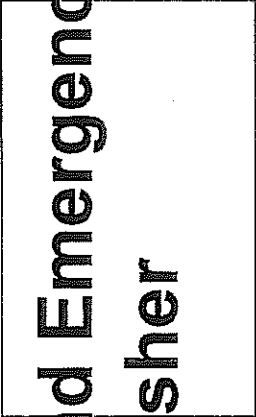
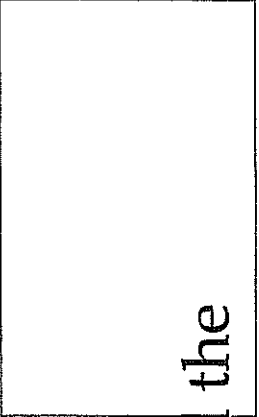
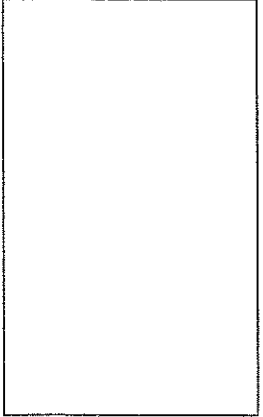
meeting the requirements as defined in  
29 CFR 1910.120

*Matthew Boardman*  
Matthew Boardman, Instructor  
Date of Training: 24-25 May 2007

certifies that

Has successfully completed the

*Trevor Pavitt*  
Trevor Pavitt, Lead Instructor



OSHA

001532034



U.S. Department of Labor  
Occupational Safety and Health Administration

William Schoff

has successfully completed a 10-hour Occupational Safety and Health  
Training Course in

Construction Safety & Health

A handwritten signature in black ink, appearing to be "W. Schoff", written over a horizontal line.

(Trainer)

6/1/2007  
(Date)



**University Hospitals**  
Medical Practices

May 15, 2008

James Krebs  
Project Manager  
Environmental Resources Management  
30775 Bainbridge Road – Suite 180  
Solon, OH 44139

**RE: WILLIAM SCHOFF**

Dear Mr. Krebs:

Mr. William Schoff was seen in our office for a Hazmat physical examination. Based on his health history and physical examination, it appears that he will need no specific accommodations to perform his duties with your organization. It should also be noted that Mr. Schoff's hearing, vision, PFTs, chest X-ray, EKG and urinalysis were within normal limits. Of note, the patient is fit to wear a respiratory at this time.

Please call should you have any questions.

Sincerely,

*David M. Rosenberg MD MPH*  
David M. Rosenberg, M.D., M.P.H.

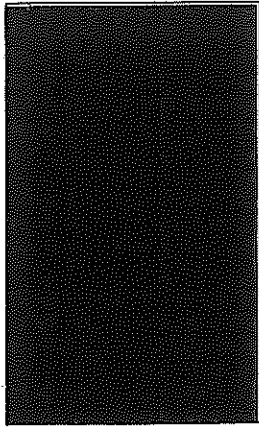
Medical Director Corporate Health  
Occupational Health Services at Chagrin Highlands  
University Hospitals

DMR/ab

## **Corporate Health**

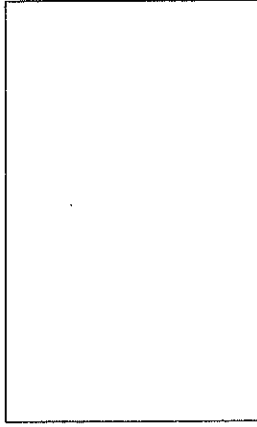
### **Occupational & Environmental Health Services**

3909 Orange Place  
Suite 2300  
Orange Village, OH 44122  
216 896 1855 Phone  
216 896 1851 Fax



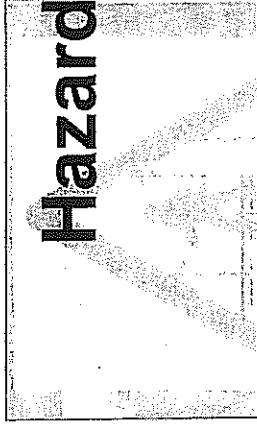
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certifies that

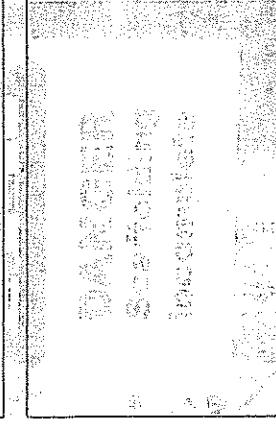


**Darin Hintz**

Has successfully completed the

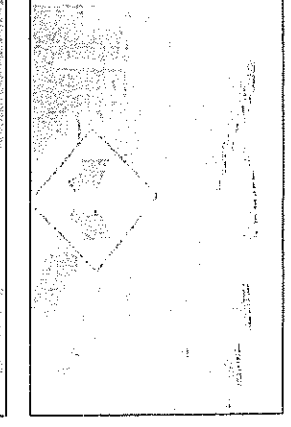


# Hazardous Waste Operations and Emergency Response 8-hour Refresher



meeting the requirements as defined in

29 CFR 1910.120



Trevor Pavitt, Lead Instructor

*Matthew Boardman*

Matthew Boardman, Instructor

Dates of Training: 8-9 August 2007