September 24, 2009

HEALTH AND SAFETY PLAN FOR OPERABLE UNIT 4

Sunnyside Yard
Queens, New York

Prepared for:

NATIONAL RAILROAD PASSENGER CORPORATION
Washington, D.C. 20002

ROUX ASSOCIATES, INC.

Environmental Consulting & Management

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1.0 Introduction

This Site-specific Health and Safety Plan (HASP) has been prepared in accordance with 29 CFR 1910.120 Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER), Department of Transportation Roadway Worker Protection, and Roux Associates, Inc.'s (Roux Associates) Standard Operating Procedures (SOPs). It addresses all activities associated with the Sunnyside Yard, Queens, New York (Yard) and will be implemented by the designated Site Health and Safety Officer (SHSO) during work at the Yard. This HASP attempts to identify all potential hazards at the Yard; however, Yard conditions are dynamic and new hazards may appear constantly. Personnel must remain alert to existing and potential hazards as Yard conditions change and protect themselves accordingly.

Compliance with this HASP is required of all Roux Associates employees, Subcontractor personnel, and third parties who enter the Yard. Assistance in implementing this HASP can be obtained from the Roux Associates Office Health and Safety Manager (OHSM). The content of this HASP may change or undergo revision based upon additional information made available to health and safety personnel, monitoring results, or changes in the technical scope of work. Any changes proposed must be reviewed and approved by the Roux Associates OHSM or his/her designee, with the SHSO implementing the changes to the HASP.

Responsibility	**Name**	**Telephone Number**
Project Principal	Charlie McGuckin	(631) 232-2600 (work)
Project Manager	Harry Gregory	(631) 232-2600 (work) (631) 445-0961 (cell)
Site Health and Safety Officer		(631) 232-2600 (work)
Office/Corporate Health and Safety Manager	Joseph Gentile, CIH	(856) 423-8800 (work) (610) 844-6911 (cell)

Upon entering the Site, all visitors are required to sign in with the SHSO. All visitors entering the Contamination Reduction Zone (CRZ) (defined in Section 8.1.2) or the Exclusion Zone (EZ) (defined in Section 8.1.1) will be required to read and comply with the provisions of this

HASP. Visitors will also be required to comply with all applicable OSHA requirements such as training, medical monitoring, and respiratory protection. In the event that a visitor does not adhere to the provisions of this HASP, the visitor will be required to leave the Yard.

1.1 Scope of Work

The scope of work consists of soil excavation in select areas of concern in OU-4 including:

1. Site preparation activities including submittals and payment of all necessary fees to complete the Work.

2. Obtaining all necessary permits, insurance, bonds, and licenses required to complete all Work and payment of all fees necessary to obtain these permits.

3. Mobilization to the Yard and the provision of all temporary facilities and utilities.
   a. Provision of temporary erosion control to minimize storm water runon/runoff in the excavation area.

   b. Construction of decontamination pads to be used by the Contractor and Subcontractors in OU-4. The Contractor shall be responsible to store, test, and dispose or discharge all decontaminated water generated in OU-4. The Contractor is responsible for the proper decontamination of equipment and personnel.

   c. Construction and maintenance of temporary access roads, stabilized construction entrances, and signs, as necessary.

   d. Set-up and maintenance of staging areas for soil and construction debris, dust and odor control devices, and decontamination wastewater.

4. Performance of site preparation work.
   a. Removal of asphalt pavement or other covers over soil excavation areas.

   e. Removal of any debris in soil excavation areas.

5. Implementation of a Community Air Monitoring Plan (CAMP).

6. Removal of the Track 4 Maintenance Pit and any sediment/debris within the pit.

7. Soil excavation of PCB and lead-impacted soil with concentrations exceeding the Yard soil cleanup levels.

8. Segregation and stockpiling of soil and debris for offsite disposal.

9. Backfill with clean fill from offsite sources.

10. Compaction and grading after backfill to promote drainage.

11. Offsite transportation and disposal of non-hazardous and hazardous materials. Transportation shall be performed in accordance with the New York State Department of Transportation (NYSDOT) regulations. All materials shall be treated in accordance with the applicable land disposal requirements prior to disposal. Disposal shall only be permitted at approved disposal facilities. The Owner and Engineer shall approve the proposed disposal facilities prior to removal of materials from OU-4.

12. Collection of decontamination water for transportation and disposal at an off-site facility.

13. Final OU-4 restoration and demobilization from the Yard.

1.2 Emergency Information

Multiple emergency services may be obtained from 911, including the New York City Police Department (NYPD) and New York City Fire Department (FDNY). More specific numbers for local services are listed below.

Type	Name	Telephone Numbers
Police	Amtrak Police	(212) 630-7113
Fire	Fire Department	911
Hospital (Figure 1 - Map)	Mount Sinai Hospital of Queens 25-10 30th Avenue Long Island City, New York 11102	(718) 932-1000
Ambulance		911
Poison Control Center		(800) 222-1222
Hazardous Material Emergency Response		911

Environmental Emergency

National Response Center (Release or Spill)		(800) 424-8802
Penn Station Control Center		(212) 630-6308 (212) 630-6309
Center for Disease Control		(770) 385-3386
NYSDEC Emergency Spill Response		(800) 457-7362
Project Principal	Charles McGuckin	Work: (631) 232-2600
Project Manager	Harry Gregory	Work: (631) 232-2600 Cell: (631) 445-0961
Site Health and Safety Officer		Work: (631) 232-2600
Amtrak Contact	Richard Mohlenhoff	Work: (212) 630-7249 Cell: (917) 692-2127

(Additional emergency information is provided in Section 13)

1.3 Directions to Mount Sinai Hospital of Queens

From 42nd Place:

- Make a left onto Northern Boulevard.
- Turn right onto Steinway Street.
- Turn left onto 30th Avenue.
- The hospital is located at Crescent Street and 30th Avenue.

From 39th Bridge Ramp:

- Make a right onto 39th Street.
- Continue through traffic intersection at Northern Boulevard onto Steinway Street.
- Turn left onto 30th Avenue.
- The hospital is located at Crescent Street and 30th Avenue.

1.4 Emergency Equipment List

- First Aid Kits
- ABC Fire Extinguisher
- Air Horns
- Absorbent Boom
- Emergency Spill Equipment
- Absorbent Pads
- Eye Wash
- Two Way Radio Communication

2.0 HEALTH AND SAFETY PERSONNEL DESIGNATIONS

This section briefly describes all site personnel and their health and safety responsibilities for the Yard remediation activities. All personnel are responsible for ensuring compliance with the HASP.

2.1 Office Health and Safety Manager

The OHSM serves in assuring that the policies and procedures of the HASP are implemented by the SHSO. The CHSM provides guidance regarding the appropriate monitoring and safety equipment and other resources necessary to implement the HASP. The OHSM is responsible for the development of new task safety protocols/procedures and the development of any outstanding safety issues which may arise during the Yard work. The OHSM ensures that all Roux Associates personnel and Subcontractors designated to work onsite are qualified according to applicable USEPA, OSHA, and state requirements. The OHSM for Sunnyside Yard is Joseph Gentile, CIH.

2.2 Site Health and Safety Officer

The SHSO will be onsite during intrusive field operations and will conduct and document an initial onsite health and safety tailgate meeting prior to personnel and/or Subcontractors commencing work. On a site-specific basis, routine activities such as groundwater sampling and gauging may be performed when the SHSO is not onsite. The SHSO is responsible for health and safety activities and has the authority to make related decisions. The determination of hazard levels will be made by the SHSO and he/she will ensure that the field crew utilizes proper personal protective equipment (PPE). The SHSO shall ensure that monitoring instruments are calibrated daily or as suggested by the manufacturer's instructions. The SHSO will complete and maintain Accident/Incident Report Forms and notify the Project Manager (PM) or Project Principal of all accidents/incidents, who will then communicate to the designated representative the following at the end of the day: end of day tasks completed, next day's planned activities, third party issues, change of plans, change in level of PPE.

The SHSO has stop-work authorization that will be executed upon determination of an imminent safety hazard, emergency situation, or other potentially dangerous situation such as detrimental weather conditions. Authorization to proceed with work will be issued by the

OHSM in consultation with the Project Principal or PM. The SHSO or Project Principal will contact emergency facilities and personnel when appropriate.

The SHSO will maintain contact with the CAMP Technician and provide summaries of field operations and progress to the OHSM. The SHSO is responsible for submitting and maintaining health and safety field log books, daily safety logs, training logs, air monitoring result reports, and weekly safety reports. Alternate SHSOs may be designated by the SHSO, if required, but must be pre-qualified and approved by the OHSM. The SHSO is responsible for ensuring that a duplicate office copy of this HASP is placed in the central project files.

2.3 Project Principal

The Project Principal is responsible for defining the overall project objectives (field and office related activities), determining chain-of-command, evaluating program outcome, and serving as the final technical review of deliverables. For Roux Associates, the Project Principal is ultimately responsible for overall Yard activities, including health and safety issues. The Project Principal also ensures that adequate resources are provided to the field staff to carry out their responsibilities in a safe and efficient manner. The day-to-day management of health and safety issues is the responsibility of the PM. The SHSO, OHSM, PM, and Project Principal shall consult and make an agreeable determination should Yard information or unforeseen circumstances indicate that a change in field procedures may be warranted. Changes to the HASP must be made by formal addendum and approved by the Project Principal, PM, OHSM, and SHSO. The Project Principal is responsible for ensuring that all required signatures are in place prior to implementing fieldwork. The Project Principal for Sunnyside Yard is Charles McGuckin.

2.4 Project Manager

The PM is responsible for day-to-day activities associated with the project, including health and safety. The PM ensures that fieldwork is scheduled with adequate personnel and equipment resources to complete the job safely, adequate telephone communication between field crews and emergency response personnel is maintained, and field personnel are adequately trained and qualified to work at the Yard. The PM maintains Yard activity records and CAMP data provided by the CAMP Technician, coordinating the CAMP monitoring with the CAMP

Technician to ensure effective perimeter controls/protection. The PM must ensure that the HASP addresses the hazards associated with each phase of the project and is appropriate for the current specified scope of work. The PM for Sunnyside Yard is Harry Gregory.

2.5 CAMP Technician

The CAMP Technician is responsible for daily implementation of CAMP requirements, monitoring equipment calibration, monitoring data evaluation and compilation, and management of Action Reports (if any) due to Yard conditions/activities. The CAMP Technician is responsible for communicating perimeter air monitoring data and conditions to the PM as needed, as well as providing the PM direction on work activity based on upwind and downwind monitoring data, including changes in wind direction or monitoring locations when necessary.

2.6 Field Crew Personnel

All field crew personnel are responsible for reporting unsafe or potentially hazardous conditions to the SHSO. All field personnel (including the above listed personnel) are responsible for understanding and complying with the rules, regulations, and procedures set forth in this HASP, as well as any instituted revisions. This includes maintaining knowledge of the information, instructions, and emergency response actions contained in this HASP. The field crew personnel must also prevent admittance to the work area by unauthorized personnel.

3.0 YARD HISTORY AND PHYSICAL DESCRIPTION

The National Railroad Passenger Corporation (Amtrak) Sunnyside Yard is located in an urban area at 39-29 Honeywell Street in northeastern Queens County, New York. The East River is located approximately one mile to the west. Land use immediately adjacent to the Yard is almost exclusively mixed commercial and light industrial, with surrounding residential areas located primarily to the south and east. Sunnyside Yard is a Class 2 Site, No. DEC 241006, listed in the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites. As a result of the listing for the entire Yard, Amtrak, New Jersey Transit Corporation (NJTC), and the NYSDEC entered into an Order on Consent (OOC) Index #W2-0081-87-6 effective October 1989

The Pennsylvania Tunnel and Terminal Company, a subsidiary of the Pennsylvania Railroad (later known as the Penn Central Transportation Company), constructed the terminal in the early 1900s. On April 1, 1976, the Consolidated Rail Corporation (Conrail) acquired the Yard and, on the same day, conveyed it to Amtrak. The Yard consists of an active railroad maintenance and storage facility for railroad rolling stock, encompassing approximately 133 acres. It functions primarily as a maintenance facility for electric locomotives and railroad cars for both Amtrak and NJTC.

As a result of several investigations performed in accordance with the OOC, areas of the Yard were identified where levels of contamination require remedial efforts. With the NYSDEC's concurrence, to accommodate the High Speed Trainset Facility (HSTF) Service and Inspection (S&I) Building construction schedule and still address remedial efforts site-wide in a timely and orderly manner, the Yard has been subdivided into six operable units described as follows:

- Operable Unit 1 (OU-1) designated as the soil above the water table within the footprint of the proposed HSTF S&I Building;
- Operable Unit 2 (OU-2) designated as the soil above the water table within the footprint of the HSTF S&I Building ancillary structures (i.e., the access road and utilities route, the parking area, the construction easement area which surrounds the building, and the construction lay down area);
- Operable Unit 3 (OU-3) designated as the soil and separate-phase petroleum accumulation above the water table in Area 1 of the Yard, as defined in the Phase I Remedial Investigation (RI) report;

- Operable Unit 4 (OU-4) designated as the soil above the water table in the remainder of the Yard;
- Operable Unit 5 (OU-5) designated as the sewer system beneath the Yard; and
- Operable Unit 6 (OU-6) designated as the groundwater, including the saturated soil beneath the Yard.

Records of Decision for OU-1, OU-2, OU-3, and OU-4 have been issued by the NYSDEC.

3.1 OU-4 Site Description and History

OU-4 is defined as the soil existing above the water table at the Yard, excluding areas occupied by OU-1, OU-2, and OU-3. OU-4 encompasses approximately 120 acres of the Yard. The portion of the sewer that lies within the extent of the OU-4 boundary will be addressed in the OU-5 RI. Groundwater and soil vapor beneath OU-4 will be addressed in the OU-6 RI.

4.0 SITE-RELATED INCIDENTS, COMPLAINTS, AND ACTIONS

Investigations in OU-4 have included the Phase I RI, Phase II RI, and numerous track maintenance, utility installation, and construction related sampling activities. The investigations were conducted between October 1990 and April 2009. The RI report was submitted to the NYSDEC on October 2, 2008 (Roux Associates, 2008) and approved by the NYSDEC on February 27, 2009.

4.1 Summary of Previous Remedial Investigation Findings in OU-3

In summary, 1,555 soil samples were collected from 1,100 sampling locations within OU-4 on behalf of Amtrak and NJTC. The field activities and findings of the numerous investigations were described in the RI report. The Yard-specific compounds of concern (COCs) are polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and lead. The soil cleanup levels for the Yard were re-established in the OU-4 ROD and are as follows:

- Total PCBs – 25 mg/kg;
- Total SVOCs – 500 mg/kg; and
- Lead – 3,900 mg/kg.

Forty-nine samples exceed the Yard soil cleanup level for PCBs with concentrations ranging from 26 mg/kg to 25,000 mg/kg. One sample exceeds the Yard soil cleanup level for lead with a concentration of 7,020 mg/kg.

5.0 WASTE DESCRIPTION AND CHARACTERIZATION

The following information is presented to identify the types of materials that may be encountered at the Yard.

5.1 Compounds of Concern

Investigation results indicate that inorganic compounds (metals), SVOCs, and PCBs are present in the Yard. As discussed in Section 4.1, the NYSDEC set forth COCs in soil for the Yard, including PCBs, cPAHs/SVOCs, and lead. A summary of toxicological data for metals, cPAHs/SVOCs, and PCBs is found in Table 1. The toxicological data summary provides information such as the chemical's exposure limits, routes of exposure, toxic properties, target organs, and physical/chemical properties.

5.2 Waste Types, Characteristics, and Containment

Wastes may be encountered or generated during Yard activities. These wastes are anticipated to be characterized as follows:

- Waste Types

Liquid	☒	Solid	☒	Gas	☐
Sludge	☒	Semi-Solid	☐	Other (describe)_____	

- Waste Characteristics

Corrosive	☐	Toxic	☐	Flammable	☒
Volatile	☒	Carcinogen	☒	Radioactive	☐
Reactive	☐	Other (describe) _____			

For purposes of this HASP, toxic chemicals are those materials as defined by OSHA in 29 CFR 1910.1200 Appendix A. In general, OSHA defines toxicity on the basis of median lethal dose (LD50) or median lethal concentration (LC50) based upon the effects of the chemical in laboratory studies. A chemical is considered a carcinogen, as defined by OSHA in 29 CFR 1910.1200 Appendix A, if "(a) It has been evaluated by the International Agency for Research

on Cancer (IARC) and was found to be a carcinogen or potential carcinogen; (b) It is listed as a carcinogen or a potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition); or (c) It is regulated by OSHA as a carcinogen."

- Waste Containment

Pond	☐	Process Vessel	☐	Tank	☐
Lagoon	☐	Piping	☐	Lab	☐
Lake	☐	Drum	☐	Other	☐
Tank Car	☐	Soil Stockpile	☐	Describe:	_____

6.0 HAZARD ASSESSMENT

The potential to encounter chemical hazards is dependent upon the work activity performed (intrusive versus non-intrusive), the duration, and the location of the work activity. Such hazards could include inhalation and/or skin contact with chemicals or gases that could cause dermatitis, skin burns, or asphyxiation.

Prior to the beginning of each new phase of work, an activity hazard analysis will be prepared by the SHSO with assistance from the OHSM. The analysis will address the hazards for each activity performed in the phase and will present the procedures and safeguards necessary to eliminate the hazards or reduce the risk. The Activity Hazard Analysis Sheets are located in Appendix A.

6.1 Chemical Hazards

Investigation results identified PCBs, lead, and cPAHs/SVOCs to be the COCs present in the Yard. The toxicological, physical, and chemical properties of potential contaminants, as well as chronic and acute toxicity data, are presented in Table 1. The potential for personnel and Subcontractors to come in contact with chemical hazards may occur during the following tasks:

- Excavation activities;
- Screening, segregation, and stockpiling of excavated material;
- Decontamination activities; and
- Transport of excavated hazardous soil.

The compounds listed in Table 1 may pose a potential exposure hazard through ingestion, inhalation, skin absorption, or a combination of these routes. Exposures will be further controlled through the use of PPE, designated action levels based upon on-site air monitoring, and the assignment of experienced field personnel.

6.1.1 Exposure Pathways

Exposure to chemical compounds during work activities may occur through inhalation of contaminated dust particles by way of dermal absorption or accidental ingestion of the contaminant by either direct or indirect cross-contamination activities, or a combination of these routes.

Inhalation of particulates can occur during adverse weather conditions (high or changing wind directions) or during operations that may generate airborne dust, such as excavation and loading of contaminated soils. Dust control measures such as applying water to roadways and excavations will be implemented where visible dust is generated. Where dust control measures are not feasible or effective, respiratory protection may be used (see Table 2 for action levels). However, if the dust control measures are not feasible and dust is migrating offsite, work will be temporarily halted and the activity creating the dust will be evaluated and modified as appropriate. Vapor mitigation will be managed through the application of vapor/odor suppression foam within all work areas, as needed. In the event an action level is exceeded (see Section 8.2.2 for action levels), further vapor suppression foam techniques/measures will be employed to protect the surrounding community and/or work activities will cease until additional controls can be implemented.

Dermal absorption or skin contact with chemical compounds is possible during intrusive activities at the Yard. The use of PPE in accordance with Section 8.2.2 and strict adherence to proper decontamination procedures should significantly reduce the risk of skin contact.

The potential for accidental ingestion of potentially hazardous chemicals is expected to be remote when good hygiene practices are used.

6.1.2 Operational Action Levels

Potential exposures will be further controlled through the use of PPE, designated action levels based upon onsite air monitoring, and the assignment of experienced field personnel. A decision-making protocol for an upgrade in levels of protection and/or withdrawal of personnel from an area based on atmospheric hazards is outlined in Table 2.

6.2 Physical Hazards

A variety of physical hazards may be present during Yard activities. These hazards include, but are not limited to, typical construction activities: operation of heavy equipment; motor vehicle traffic; use of power and hand tools; crushing of fingers, toes, or limbs; slip, trip, and fall hazards associated with uneven terrain, obstacles, and slippery or icy surfaces; sharp edges; broken glass; exposed nails; rusty metal; pinch points; skin burns; overhead hazards; head injuries caused by falling objects; airborne particulate hazards; loss of one's hearing and/or eyesight, heat/cold stress, and sun exposure. The referenced hazards are not unique and are generally familiar to most hazardous waste site workers at construction sites. Physical hazards that are unique to the Yard include moving trains, third rail on railroad tracks, and live caternary wires. These hazards can be significantly reduced if all workers wear fluorescent vests furnished with reflective stripes, hard hats, and safety glasses or face shields at all times while working onsite. General housekeeping should be performed to reduce slip, trip, and fall hazards. In addition, an Activity Hazard Analysis shall be submitted to the PM prior to the beginning of each phase of work (i.e., definable task). Task specific safety requirements for each phase will be covered during safety briefings. Activity Hazard Analysis summaries are contained in Appendix A.

6.2.1 Noise

Noise is a potential hazard associated with the operation of heavy equipment, power tools, pumps, and generators. Personnel with 8-hour time weighted average (TWA) exposures exceeding 85 dBA must be included in a hearing conservation program in accordance with 29 CFR 1910.95 and 1926.52. It is mandated that employees working around heavy equipment or using power tools that dispense noise levels exceeding 90 dB-A are to wear hearing protection consisting of earplugs or protective ear muffs or are to maintain set-backs from high noise equipment as warranted.

6.2.2 Heat/Cold Stress and Sun Exposure

Heat and cold stress are significant potential hazards associated with heavy physical activity and/or the use of PPE. Heat and cold stress symptoms, prevention, and treatment are described in Appendix B. Protection against heat and cold stress must be implemented when warranted.

6.3 Biological Hazards

Biological hazards having the potential to cause adverse health effects include, but are not limited to, potentially rabid stray or wild animal bites, ticks or other insect bites, bee and wasp stings, and bloodborne pathogens. The Activity Hazard Analysis (Appendix A) suggests controls for various hazards to be potentially encountered onsite.

Other biological hazards include poison ivy, poison oak, and poison sumac. If exposed to these plants, wash skin thoroughly with soap and water. Wearing long plants and sleeves when in a wooded area can minimize contact with poisonous plants.

6.3.1 Insect Stings

Stings from insects are often painful, may cause swelling, and can be fatal if a severe allergic reaction such as anaphylactic shock occurs. If a sting occurs, the stinger should be scraped out of the skin, opposite of the sting direction. The area should be washed with soap and water, followed by an ice pack. Personnel allergic to bee and/or wasp stings shall provide medicine and antidotes to treat allergic reactions immediately as prescribed by their personal physician, or if the victim has a history of allergic reaction, he/she should be taken to the nearest medical facility. If the victim experiences a severe reaction, a constricting band should be placed between the sting and the heart. The bitten area should be kept below the heart if possible. A physician should be contacted immediately for further instructions.

Ticks may carry Lyme disease and/or Rocky Mountain spotted fever. Personnel shall examine themselves for ticks during and following fieldwork. Insecticides containing DEET may be an effective tick repellent.

6.3.2 Bloodborne Pathogens

The majority of the occupational tasks onsite will not involve a significant risk of exposure to blood, blood components, or body fluids. The highest risk of acquiring any bloodborne pathogen for employees onsite will be following an injury. When administering first aid care, there are potential hazards associated with bloodborne pathogens that cause diseases such as Human Immunodeficiency Virus (HIV), Hepatitis B (HBV), Hepatitis A (HAV), Hepatitis C (HCV), or the Herpes Simplex Virus (HSV). An employee who has not received the appropriate certification should never execute first aid and/or CPR.

In order to minimize any potential pathogen exposure, all employees should use the hand washing facilities on a regular basis. The decontamination area will provide an adequate supply of water, soap, and single use towels for hand washing. Additionally, the following universal precautions should be followed to prevent further potential risk:

- Direct skin or mucous membrane contact with blood should be avoided.
- Open skin cuts or sores should be covered to prevent contamination from infectious agents.
- Body parts should be washed immediately after contact with blood or body fluids that might contain blood, even when gloves or other barriers have been used.
- Gloves and disposable materials used to clean spilled blood shall be properly disposed of in an approved hazardous waste container.
- First aid responders shall wear latex or thin mil nitrile gloves when performing any procedure risking contact with blood or body substances.
- Safety glasses will be worn to protect the eyes from splashing or aerosolization of body fluids.
- A CPR mask will be worn when performing CPR to avoid mouth-to-mouth contact.
- Work gloves will be worn to minimize the risk of injury to the hands and finger when working on all equipment with sharp or rough edges.
- Never pick up broken glass or possible contaminated material with your unprotected hands.

6.4 Electrical Hazards

Portable pumps, generators, and other power tools require proper grounding and/or a ground fault circuit interrupter (GFCI) before operation. Personnel should never attempt to move an operating pump or generator.

Personnel must also use extreme caution near overhead catenary systems, third rail on railroad tracks, overhead and underground utility lines, and electrical lines as they may be charged.

6.5 Flammability/Explosive Hazards

A variety of highly flammable/explosive materials are stored at the Yard. Prior to performing activities near potentially flammable/explosive materials (i.e., within storage areas), all applicable sections of the HASP procedures specific to these areas need to be thoroughly understood and adhered to. Any questions or concerns should be directed to the SHSO or the Roux Associates PM.

6.6 Excavation Safety

All excavation work will be accomplished in strict conformance with 29 CFR 1926.650 - 652. Yard and safety controls will be implemented to ensure both the safety of the person(s) excavating and all general personnel.

6.7 Track Safety

All employees assigned to work at the Yard must attend the Amtrak Contractor Employee Safety Program Course (CSG-101), which includes Roadway Worker Protection for compliance with 49 CFR Part 214. In addition, all employees will display the Amtrak Contractor Employee Safety Trained Badge.

As part of Amtrak's compliance efforts, each employee must understand the following:

- a job briefing with an Amtrak representative is required prior to commencing work;
- never foul any track without protection provided by Amtrak;
- immediately clear tracks upon signal from watchman;
- never return to tracks until clear signal is given by watchman; and
- follow all Amtrak on-track safety rules and instructions.

The two most common dangers involved with working on or about railroad tracks are moving trains and electrical power lines. The following procedures must be followed.

- Clear the tracks when a train approaches from either direction. A gang watchman will signal that a train is approaching by blowing a whistle or air horn and by raising a black and white signal disc overhead.
- To avoid the dangers from electrical hazards, stay at least 15 feet away from any energized line. Do not approach closer than 15 feet to an electrical wire unless a Class A employee tells you it is de-energized and properly grounded.

A copy of the Contractor Safety Course booklet and New York Division Supplement is included as Appendix C. Amtrak provides Contractor Responsibilities for conducting work and handling equipment and materials to prevent any part of the equipment from fouling an operating track or wire line without written permission. The Contractor Responsibilities are also included as Appendix C.

6.8 Hazard Assessment

Task	Hazards	Risk of Exposure
Mobilization/Demobilization	Inhalation/Skin Contact	Low
	Heat Stress/Cold Stress	Low
	Noise	Moderate
	Physical Injury	High
Decontamination	Inhalation/Skin Contact	Moderate
	Heat Stress/Cold Stress	Moderate
	Noise	Moderate
	Physical Injury	Moderate
Earthwork	Inhalation/Skin Contact	Moderate
	Heat Stress/Cold Stress	Moderate
	Noise	Moderate
	Physical Injury	Moderate
Concrete Work	Inhalation/Skin Contact	Moderate
	Heat Stress/Cold Stress	Moderate
	Noise	Moderate
	Physical Injury	High

7.0 TRAINING REQUIREMENTS

The Hazardous Waste Operations and Emergency Response Rule (29 CFR 1910.120) requires that all personnel be trained to recognize onsite hazards, the provisions of this HASP, and the responsible personnel. This section discusses the means to meet these requirements.

7.1 Basic Training

In accordance with Roux Associates' corporate policies and pursuant to OSHA 29 CFR 1910.120(e), hazardous waste site workers shall, at the time of the job assignment, have received a minimum of 40 hours of initial health and safety training for hazardous waste site operations. As a minimum, the training shall have consisted of instruction in the topics outlined in the above reference. Personnel who have not met the requirements for initial training will not be allowed to perform any Yard activities in which they may be exposed to hazards (chemical or physical).

In addition to the required initial training, each employee shall have received three days of directly supervised on-the-job training. This training will address the duties the employees are expected to perform.

The SHSO has the responsibility of ensuring that personnel assigned to this project comply with these requirements. Written certification of completion of the required training will be provided to the PM, and training records will be maintained by the SHSO onsite and as described in Section 7.5.

All employees will receive the Amtrak Contractor Employee Safety Program course.

7.1.1 Subcontractor Training

All Subcontractor personnel working at the Yard shall have completed the 40-hour training requirement and meet medical surveillance requirements. Subcontractor training shall be performed in accordance with 29 CFR 1910.120 and HASP specifications. In certain unique situations (i.e., mechanical failure of equipment), a non-trained individual performing emergency repairs may be allowed, at the discretion of the SHSO, to perform repairs when no

intrusive activities are being performed and provisions have been made to mitigate potential exposure.

7.2 Annual Eight-Hour Refresher Training

Annual 8-hour refresher training will be required of all hazardous waste site field personnel in order to maintain their qualifications for fieldwork. The following topics will be reviewed: toxicology; respiratory protection, including air purifying devices and self-contained breathing apparatus (SCBA); medical surveillance; decontamination procedures; and personnel protective clothing. Additional topics may be added as deemed necessary.

7.3 Site-Specific Training

Health and safety related training that will specifically address the activities, procedures, monitoring, and equipment for the Yard operations will be provided to all Yard personnel and visitors by the SHSO. It will include Yard and facility layout, hazards, first aid equipment locations, and emergency services at the Yard and will detail all provisions contained within this HASP. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity. Site-specific training will be documented and kept as part of the project records.

7.4 Safety Briefings

Daily safety briefings will be conducted by the SHSO each morning to discuss potential safety concerns for the upcoming activities. Safety briefings will also be provided when new operations are to be conducted (e.g., soil borings, excavation), when changes in work practices must be implemented due to new information made available, and before work begins at each location. The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety audits. Records of safety briefings will be kept as part of the project records.

7.5 Record Keeping Requirements

All record keeping requirements mandated by OSHA 29 CFR 1910.120 will be strictly followed. Specifically, all personnel training records, injury/incident reports (Appendix D), medical examination records, and exposure monitoring records will be maintained by Roux Associates for a period of at least thirty years after the employment termination date of each Roux Associates employee. Pertinent health and safety training and medical certifications will be kept onsite during the field operations. The SHSO will maintain a daily written log of all health and safety monitoring activities, and monitoring results shall become part of the project records.

Each Subcontractor will maintain the above-mentioned records for his/her employees.

7.6 First Aid and CPR

The SHSO will identify individuals having first aid and CPR training in order to ensure that emergency medical treatment is available during field activities. The training will be consistent with the requirements of the American Red Cross Association. Certification and appropriate training documentation will be kept with the Site personnel records.

8.0 ZONES, PROTECTION, AND COMMUNICATION

8.1 Site Zones

Based on Yard history and operations, a potential for the presence of hazardous material does exist. Upgrading to Level C protection is not anticipated on this project. However, should the level of protection worn by field personnel be upgraded to Level C, a three-zone approach will be employed in order to prevent the spread of contamination from the disturbed areas onsite. Level D operation will not generally require segregated zones. The three zones to be employed when Level C is in use include: the EZ, the CRZ, and the Support Zone (SZ). Each of the areas will be defined through the use of control barricades and/or construction/hazard fencing. A clearly marked delineation between the SZ and the remaining two zones will be maintained. The preferred method will utilize high visibility orange fencing. Signage will be posted to further identify and delineate these areas.

8.1.1 Exclusion Zone

The EZ is the area where contamination exists and where work will be conducted. All areas where excavation and handling of contaminated materials take place will be considered the EZ. This zone will be clearly delineated by orange high visibility fencing. Safety tape may be used as a secondary delineation within the EZ. The SHSO may establish more than one EZ where different levels of protection may be employed or where different hazards exist. No unauthorized persons will be allowed in the EZ during Yard activities.

No personnel are allowed in the EZ without:

- a buddy (when appropriate);
- the proper PPE;
- medical authorization; and
- training certification.

8.1.2 Contamination Reduction Zone

A CRZ will be established between the EZ and the SZ. The CRZ will contain the Contamination Reduction Corridor (CRC) and will provide an area for full personnel and portable equipment decontamination (Section 11.2). The CRZ will be used for general site

entry and egress in addition to access for heavy equipment and emergency support services. The CRZ will also contain safety and emergency equipment such as first aid equipment (bandages, blankets, eye wash) and containment equipment (adsorbent, fire extinguisher).

No personnel are allowed in the CRZ without:

- a buddy (when appropriate);
- the proper PPE;
- medical authorization; and
- training certification.

8.1.3 Support Zone

The SZ is considered the uncontaminated area that will be the field support area for Yard operations. The SZ will contain the temporary project trailer and provides for field team communication and staging for emergency response. Appropriate sanitary facilities and safety and support equipment will be located in this zone. The SZ will be located upwind of Yard operations, if possible, and may be used as a potential evacuation point. Meteorological conditions will be observed and noted from this zone, as well as those factors pertinent to heat and cold stress. No potentially contaminated personnel or materials are allowed in this zone except appropriately packaged/decontaminated and labeled samples or drummed wastes.

8.1.4 Buddy System

Select field activities conducted in contaminated, hazardous, and/or remote areas of the Yard may require the use of the buddy system. Instances when the buddy system should be employed include, but are not limited to, excavation activities and confined space entry (permit required and non-permit required). Prior to commencing with field tasks in a potentially hazardous area, the need for using the buddy system should be evaluated. If required, a buddy should be able to:

- provide his/her partner with assistance;
- observe his/her partner for signs of chemical or heat/cold exposure;
- periodically check the integrity of his/her partner's protective clothing; and
- notify the SHSO or others if emergency help is needed.

8.2 Personal Protection

This section describes the required levels of protection for personnel during all field activities performed at the Yard.

8.2.1 General

Appropriate PPE shall be worn by site personnel when there is a potential exposure to chemical hazards or physical hazards (e.g., falling objects, flying particles, sharp edges, electricity, noise) and as otherwise directed by the SHSO. The level of personal protection and type and kind of equipment selected depends on the hazardous conditions and, in some cases, cost, availability, compatibility with other equipment, and performance. An accurate assessment of all these factors must be made before work can be safely carried out.

Roux Associates, Inc. maintains a comprehensive written PPE program that addresses proper selection, use, maintenance, storage, fit, and inspection. PPE to be used at the site will meet the appropriate American National Standards Institute (ANSI) standards and the following OSHA (General Industry) standards for PPE:

- Head Protection - 29 CFR 1910.132;
- Eye and Face Protection - 29 CFR 1910.133;
- Respiratory Protection - 29 CFR 1910.134;
- Hand Protection - 29 CFR 1910.138;
- Foot Protection - 29 CFR 1910.136; and
- Protective Clothing - Not specifically regulated.

The level of protection to be worn by field personnel and visitors will be defined and controlled by the SHSO with approval of the OHSM. Levels of protection may be upgraded at the discretion of the SHSO in conjunction with the OHSM. Where more than one hazard area is indicated, further definition shall be provided by review of Yard hazards, conditions, and operational requirements, and by monitoring at the particular operation being conducted.

During all intrusive activities, continuous monitoring will be performed using a photoionization detector (PID). Tasks that will require continuous monitoring to ensure that exposure levels are below the required action levels include, but are not limited to, excavation activities, Track 4 Maintenance Pit inspection and sludge removal, and sampling activities. Protection may be upgraded or downgraded by the SHSO in conjunction with the OHSM and Project Principal on the basis of action levels presented below:

Action Levels for Respiratory Protection (Total Organic Vapors)	
Total Organic Vapors in Breathing Zone (ppm)[(1)]	**Action**
≤5	No Action
>5 - <25	Level C
≥25	Cease Field Operations

[(1)] Based on relative response (sensitivity of PID to total organic vapors).

OVM Action Levels

If organic vapor meter measurements are above 5 ppm-v but below 25 ppm-v above background for five minutes in the breathing zone, employee protection will be upgraded to Level C with the use of a full-face respirator.

If organic vapor detector measurements exceed 25 ppm-v above background for five minutes in the breathing zone, work activities will cease until airborne vapor levels can be reduced to less than 25 ppm-v and are quantified or the SHSO determines alternate methods to be followed in order to proceed.

All non-intrusive activities that preclude contact with contaminated media will be performed in Level D protection without continuous monitoring, unless monitoring results indicate that additional protection is warranted.

Action Levels for Oxygen Levels and Combustible Gases

Combustible Gases[1]	
2.0% - 10.0% LEL	Continue monitoring
10.0% - 19.0% LEL	Notify SHSO
20.0% LEL or greater	Potential explosion hazard Interrupt task/Evacuate Area
Oxygen[1]	
20.8% O_2	Oxygen level normal
19.5% O_2 - 20.8% O_2	Oxygen deficient - Notify SHSO
< 19.5% O_2	Oxygen deficient Interrupt task/Evacuate area

[1] Action levels based on USEPA Standard Operating Safety Guides; Table 5-1, Atmospheric Hazard Action Guides.

8.2.2 Personal Protective Equipment Specifications

The two levels of protective equipment discussed below include Level D and Level C PPE. The minimum level of PPE for entry into the Yard is Level D. Tasks requiring Level B PPE are not anticipated.

Level D
Coveralls (as appropriate)
Boots/shoes - chemical resistant with steel toes and shanks
Safety glasses
Hard hat
Gloves - cotton, leather, neoprene, or nitrile (as required)
Hearing protection (as required)
Fluorescent Traffic Safety Vest w/ Reflective Strips

Level C
Full-face, air-purifying, HEPA cartridge-equipped respirator (MSHA/NIOSH specifically approved for protection from organic vapors and particulates per OSHA 1910.1028) or half-face if approved by the SHSO
Chemical-resistant clothing (coverall; hooded, two-piece chemical splash suit; chemical-resistant hood and apron; disposable chemical-resistant coveralls)
Coveralls (as appropriate)
Gloves (outer), chemical-resistant – latex
Gloves (inner), chemical-resistant – nitrile
Boots (inner), chemical-resistant, steel toe and shank
Boots (outer), chemical-resistant (disposable)
Safety Glasses (if half-face respirator is utilized)
Hard hat
Hearing protection (as required)
2-Way Radio Communication

8.2.3 Safety Equipment

Basic emergency and first-aid equipment will be available at the work site, as appropriate. This may include HASP-specified communications, first-aid kit, emergency eyewash or emergency shower/drench system, fire extinguisher, and other safety-related equipment. Other safety equipment will be located at the site of specific operations, e.g., drilling, as appropriate. Traffic cones, barricades, and traffic vests will be used when work is required in high traffic areas.

8.3 Communication

While working in Level C respiratory protection, personnel may find that communication becomes a more difficult task and process to accomplish. Distance and space further complicate communication. In order to address this problem, electronic instruments, mechanical devices, or hand signals will be used as follows:

Telephones – Mobile telephones will be carried by all personnel for communication with emergency support services/facilities. A hard-wired telephone line will be established in the field office trailer.

Radios – Two-way radios will be utilized onsite for communication between field personnel in areas where visual contact cannot be maintained and where hand signals cannot be employed.

Air Horn – An air horn will be located in the SZ to alert field personnel to an emergency situation. The emergency signal will be the sharp blasts of the air horn.

Hand Signals – This communication method will be employed by members of the field team, along with use of the buddy system. Signals become especially important when in the vicinity of heavy moving equipment and when using Level C/B respiratory equipment. The signals shall be known by the entire field team before Yard operations commence and will be reinforced and reviewed during site-specific training.

The following hand signals will be used, if needed:

Signal	Meaning
Hand gripping throat	Out of air; can't breathe
Grip partner's wrist	Leave area immediately, no debate
Hands on top of head	Need assistance
Thumbs up	Okay; I'm alright; I understand
Thumbs down	No; I'm not alright; unable to understand you

9.0 MONITORING PROCEDURES FOR SITE OPERATIONS

9.1 Monitoring Procedures For Yard Operations

The SHSO will monitor wind direction and approximate temperature during all invasive site activities and record the data in a log book. An air monitoring program is important to the safety of onsite and offsite personnel. Ambient air monitoring and continuous air monitoring in the various work areas during intrusive tasks will accompany Yard operations, as described in this HASP, or as mandated by the SHSO. Monitoring will be performed to verify the adequacy of respiratory protection and to document worker/community exposure. A preliminary survey to establish background conditions in the immediate work area may be performed prior to the initiation of Yard work. This survey will be conducted with the appropriate air monitoring instrument(s) as warranted by the field activity. Once this survey has been completed, any change in the type of PPE will be determined.

If ambient and continuous air monitoring during intrusive activities indicates the presence of potentially hazardous materials, control measures consisting of the application of vapor suppression foam will be implemented. All monitoring instruments shall be operated by qualified personnel only and will be calibrated daily prior to use, or more often as necessary. No intrusive activity will be performed without the presence of the SHSO or a designated approved substitute and without personnel air monitoring.

9.1.1 Instrumentation (Exclusive of CAMP Monitoring Instrumentation)

Air monitoring will be performed to verify that the proper level of protective equipment is used and to determine if increased protection or work stoppage is required. The following monitoring instruments will be available for use during field operations as necessary. There will be a minimum of one of each piece of equipment at the Yard at all times.

- PID with 10.6 EV probe or Flame Ionization Detector (FID) or equivalent.
- Dust/Particulate Monitor (DM), MIE Miniram or equivalent.

Section 8.2.2 and Table 2 list the acceptable ranges for each piece of monitoring equipment and the action levels for changes in respiratory protection. A PID shall be used to monitor total volatile organic compounds (VOCs) in active work areas during intrusive activities. VOCs shall also be measured upwind of the work areas to determine background concentrations. A

multi-gas meter shall be used to monitor for combustible gases and oxygen content during confined space entry or when the SHSO deems necessary. A particulate monitor shall be used to measure concentrations of dust and particulate matter.

All instruments shall be calibrated before each daily use in accordance with manufacturer's procedures. Calibration records shall be documented and recorded daily in the daily air monitoring report. This report will be specific to work area monitoring. A separate daily report will be issued specific to the Yard perimeter monitoring related to the CAMP obligation.

9.1.2 Monitoring During Field Activities

Intrusive Operations – Continuous personnel breathing zone (BZ) air monitoring will be performed by the SHSO during the conduct of all intrusive activities at the Yard. A PID and/or FID equipped organic vapor meter will be utilized to monitor the BZ. The highest reading will be recorded on the air-monitoring log every 30 minutes during intrusive activities. Real-time monitoring for all onsite activities will be accomplished as follows:

- Prior to the start of daily activities an upwind background reading will be taken and recorded.
- Monitoring of total VOCs in and around the work zones.
- Monitoring for particulates in and around the work zones.

The frequency of monitoring may be modified by the OHSM after consultation with the PM. The rationale for any modification must be documented in the HASP.

Confined Space Operations – Monitoring will be performed during all confined space operations. A PID and/or FID and multi-gas meter shall be used to monitor the confined space for the presence of VOCs, combustible gases, oxygen deficiency, CO, and H_2S.

9.1.3 Meteorological Monitoring

Roux Associates will obtain daily temperature, barometric pressure, wind direction, wind speed, and rain accumulations from onsite conditions. This information will be used to assist with the determination of daily health and safety measures and locations of both work zone and perimeter monitoring devices. All meteorological data will be kept in a daily record.

9.2 Personnel Monitoring Procedures

Personnel BZ samples, 8-hour, time-weighted average (TWA) sampling may be conducted if sustained operations in Level C are required. The personnel BZ samples will be collected according to NIOSH analytical methods and analyzed by an American Industrial Hygiene Association (AIHA) certified laboratory.

9.2.1 Level D Intrusive Activities

Level D intrusive activities will initially include all intrusive Yard activities. These investigations/activities will begin utilizing Level D protection as described in Section 8.2.2, with upgrading as necessary to ensure adequate personnel protection.

The SHSO will monitor the BZ with a PID in continuous operating mode and with the alarm activated. The alarm will be set at 5 ppm, which is below the PEL for all constituents of concern, except benzene. If the PID indicates that the 5 ppm concentration has been exceeded, the SHSO will order cessation of the activity and the EZ will be cleared of all personnel until the PID indicates a reading of less than 5 ppm, or until the nature of the hazard has been more thoroughly evaluated.

9.2.2 Level C Intrusive Activities

Level C intrusive activities will initially include only those activities that require upgrading from Level D protection. Level C protection will be as described in Section 8.2.2. Downgrading to Level D protection will also be possible if monitoring demonstrates that no inhalation hazards exist for the activity.

The SHSO will monitor the BZ with a PID in continuous operating mode and with the alarm activated. The alarm will be set at 5 ppm, which is below the PEL for all constituents of concern.

If the PID readings exceed 25 ppm total organic vapor, the SHSO will order cessation of the activity until: 1) the PID indicates a reading of less than 25 ppm; 2) all potentially exposed personnel have donned Level B respiratory protection; or 3) the nature of the hazard has been

more thoroughly evaluated and it is determined that the measured concentrations do not pose a potential exposure in excess of the PEL utilizing the Level C protection.

9.3 Non-Intrusive Activities

Non-intrusive activities result in exposure(s) to hazardous or toxic chemicals or physical agents at or above the PEL, or to flammable or oxygen deficient atmospheres. Based upon the current understanding of Yard conditions, personnel monitoring may be performed using colorimetric indicator tubes or activated charcoal sampling devices on the first day of non-intrusive activities and periodically thereafter if the PID readings indicate a more accurate assessment is warranted.

10.0 SAFETY CONSIDERATIONS FOR YARD OPERATIONS

10.1 General

In addition to the specific requirements of this HASP, common sense should be used at all times. In this section, non-monitoring safety-related procedures are described. The following general safety rules and practices will be in effect at the Yard.

- Signs will be posted in the EZ and/or around the perimeter of the Yard stating RESTRICTED AREA – AUTHORIZED PERSONNEL ONLY. In addition, high visibility orange fencing will be utilized to delineate the work zones. Caution tape may be used for secondary marking or delineation. This will restrict/control unauthorized visitors but not hinder emergency services if needed.

- All open holes, trenches, and obstacles will be properly barricaded in accordance with local Yard needs and requirements. Proximity to traffic ways, both pedestrian and vehicular and the location of the open hole, trench, or obstacle will determine these needs.

- All excavation and other Yard work will be planned and performed with consideration for underground lines.

- Smoking and ignition sources in the vicinity of potentially flammable or contaminated materials are strictly prohibited.

- Drilling, boring, use of cranes/drilling rigs, erection of towers, movement of vehicles and equipment, and other activities will be planned and performed with consideration for the location, height, and relative position of aboveground utilities and fixtures, including catenary wires, signs, lights, canopies, buildings and other structures or construction, and natural features such as trees, boulders, bodies of water, and terrain.

- When working in areas where flammable vapors may be present, particular care shall be exercised with tools and equipment that may be sources of ignition. All tools and equipment provided must be properly bonded and/or grounded.

- Approved and appropriate safety equipment (as specified in this HASP) such as eye protection, hard hats, foot protection, and respirators must be worn in areas where required. In addition, eye protection must be worn when sampling soil or water that may be contaminated.

- All Yard personnel may be called upon to use respirator protection in some situations. Fit testing will be necessary for all personnel using respirators. The criteria for facial hair will be determined by the SHSO. In general, the guideline is that facial hair cannot impede the fit of the respirator.

- No smoking, eating, chewing tobacco, gum chewing, or drinking will be allowed outside of the SZ.

- Contaminated tools and hands must be kept away from the face.

- Personnel must use personal hygiene safe guards (washing up) at the end of the shift.
- Each sample must be treated and handled as though it were contaminated.
- Personnel with long hair and/or loose-fitting clothing that could become entangled in power equipment must take adequate precautions.
- Horseplay is prohibited in the work area.
- Work while under the influence of intoxicants, narcotics, or controlled substances is strictly prohibited.

10.2 Site Walk-Through

Safety considerations during site walk-throughs precede all other field operations. The field team will maintain line of sight with each other at all times and regularly maintain communication with the SZ. Air monitoring will be performed as discussed in Section 9.0 and will be used to alert the walk-through team if a dangerous situation exists. Air monitoring will assist in prescribing levels of protection for future site operations, designating site layout, and identifying hazard areas, if any.

10.3 Vehicular Traffic Safety Procedures

A vehicular traffic area is any area where a vehicle may legally travel including, but not limited to, a roadway, roadway shoulder, driveway, or parking area. When performing activities on or adjacent to Yard roads, the following traffic safety procedures must be followed.

- Fluorescent vests and hard hats, as well as any other applicable PPE specified in this HASP, must be worn at all times.
- The worker's vehicle should be positioned, to the fullest extent possible, to form a barrier between the worker(s) and oncoming traffic. In addition, each work vehicle will be equipped with a minimum of four high visibility traffic cones. All traffic cones will be placed as necessary to alert traffic of ongoing activities.
- In high volume traffic areas or areas with unpredictable traffic patterns, a traffic watchman or police detail should be utilized. The traffic watchman must be equipped with a warning flag and remain alert and focused on traffic conditions at all times. The need for a traffic watchman or police detail should be discussed with the PM and client prior to deployment.
- Notify the local police of the work location, dates of work, and the anticipated work times when work is to be conducted in a public roadway.

- Additional requirements of local transportation, highway, public safety, and police departments must also be followed when work is performed in a public roadway. For example, double parking shall not be permitted.

- Anytime work is initiated or there is a change in the type or location of work, the SHSO should consider the potential traffic safety hazards. If appropriate, implement protective measures in addition to those described above.

- Workers should take care to avoid sudden movements across the road and should use caution when crossing the road.

- Daily safety briefings should include a discussion of traffic safety as it relates to the activities planned for that day.

- All Roux Associates' Subcontractors performing work at the Yard must also adhere to the above safety procedures.

Vehicular traffic in the onsite work areas is generally very light. Traffic consists of car and large-commercial truck traffic typically moving at speeds of 5 to 10 miles per hour (mph). Vehicular traffic in the adjacent road areas is generally light to moderate. Traffic consists of car and large-commercial truck traffic typically moving at speeds of 30 to 40 mph. Note that the local speed limit is 30 mph. Vehicle speed in work areas within parking lots is typically low but may be hazardous due to vision limitations caused by miscellaneous obstructions. During activities within all of these work areas, project staff generally park within the Yard utilizing designated parking spaces.

10.4 Construction Activities

A variety of physical hazards may be present during any construction-type project. Personnel should be aware of safety issues associated with: hot/cold work such as welding, cutting and burning; heavy lifting; rough terrain; heavy equipment operation; ladders; scaffolding; excavating and trenching; underground and overhead utilities; electrical hazards; and the hazards associated with hand and power tools. These hazards are not unique and are generally familiar to most construction personnel.

10.4.1 Intrusive Operations

The SHSO will be present during all intrusive work. Intrusive work is defined as any work being conducted in an area of known contamination that may disturb the impacted material

and/or expose the worker to contaminants. The SHSO will ensure that appropriate monitoring, levels of protection and safety procedures are followed. All personnel will keep a safe distance from the edge of the excavation and out of the swing radius of the excavation equipment.

The proximity of water, sewer, and electrical lines will be identified prior to intrusive operations. The possibility of the presence of underground conduits or vessels containing materials under pressure will also be investigated prior to intrusive operations. Properly sized containment systems will be utilized and consideration of the potential volume of liquid or waste disposed during Yard operations will be discussed with the PM to minimize the quantity of stored aqueous materials. Emergency evacuation procedures and the location of safety equipment will be established prior to start-up operations. The use of protective clothing, especially hard hats, boots, and gloves, will be mandatory during excavation and other heavy equipment work.

Equipment to be employed may include all of the mechanical equipment used on any major construction site. Typical machinery to be found includes pumps, compressors, generators, portable lighting systems, pneumatic tools (drum openers), hydraulic drum crushers, pug mills, forklifts, trucks, bulldozers, backhoes, and drill rigs. The equipment poses a serious hazard if not operated properly or if operators cannot see personnel near machinery.

Drilling crews are confronted with all of these heavy equipment hazards. They must be responsible for good housekeeping around the rig because of the rods, auger sections, rope, and hand tools used for the operation. Maintenance is a constant requirement. Overhead and buried utilities require special precautions because of electrical and natural gas hazards. Electrical storms may seek out a standing derrick. The hoist or cathead rope poses specific hazards; always use clean, dry, sound rope. Keep hands away from the test hammer. Hearing loss, while not an immediate danger, is considerable over time. Use hearing protection.

Proper containment and disposal practices will be followed in regard to the potential amount of waste generated during operations. The location of safety equipment and evacuation procedures will be established prior to initiation of operations according to this HASP. The use of hard hats, eye protection, fluorescent safety vests, ear protection, and steel-toed boots will be

required during heavy equipment operations. Contaminated equipment will be placed on liner material when not in use or when awaiting/during decontamination. Communication with the SZ will be regularly maintained.

10.4.2 Inspection

Each piece of potentially dangerous equipment (i.e., power tools) will be inspected for proper and safe operation prior to its use.

- All mechanical and rigging equipment will be inspected by the operators prior to beginning this work effort and at least daily thereafter to ensure proper operating capability. Defective equipment must be repaired or replaced prior to continued use/operation.
- Inspect all cables, sheaves, slings, chains, hooks, and eyes prior to use.
- Secure equipment firmly or be sure it is supported.
- Be sure all power lines are deactivated, removed, or at a safe distance.
- Always use proper loading for capacity at lifting radius.
- Keep all equipment lubricated and maintained.
- Employ signal persons whenever needed. Make certain that signals are understood and observed.

10.5 Operation and Maintenance Activities

Any personnel involved in sampling, testing, and operation and maintenance activities must be health and safety trained before being allowed to work at the Yard. Verifications of compliance with 29 CFR 1910.120 must be provided to, and will be maintained by, the SHSO onsite as described in Section 7.5 of this HASP. The following PPE shall be worn: hardhat, safety glass, fluorescent safety vest, hearing protection if necessary, and steel toe boots.

10.6 Overhead/Underground Power Lines

The positioning or operation of heavy equipment in the vicinity of utility services will not be initiated until the activities have been coordinated with the Yard Manager. Operation of equipment adjacent to or under overhead power lines in such a manner that encroaches on authorized clearances will not take place unless one of the following is satisfied:

- power has been shut off and positive steps are taken to prevent the lines from being energized;
- the equipment does not have the ability to move vertically or horizontally within the minimum clearance, specified in the table below, from energized power lines;
- the equipment has been positioned and blocked to allow no part, including cables, to come within the minimum clearance specified in the table below; or
- excavation operations are not initiated within 25 feet of the verified position of underground power lines.

Minimum Required Clearances for Energized Overhead Power Lines

Nominal System Voltage of Power Line (kV)	Minimum Required Clearance (feet)
0-50	10
51-100	12
101-200	15
201-300	20
301-500	25
501-750	35
751-1000	45

1 kilovolt (kV) = 1,000 volts

10.7 Sampling

Sampling personnel must wear prescribed protective clothing, especially eye protection and chemical resistant gloves, when sampling soils and/or liquids. Sample bottles will be labeled prior to sampling to ease decontamination procedures. The sampling team must be aware of emergency evacuation procedures described in this HASP and the location of emergency equipment, including spill containment materials, prior to sampling. Contamination avoidance will be practiced at all times. In some situations, additional monitoring by the SHSO may be needed to confirm or establish the proper level of protection before the sampling team can proceed.

10.8 Sample Handling

Personnel responsible for the handling of samples will wear the level of protection described in Section 8.2.2. Samples will be identified according to their hazard and packaged to prevent spillage or breakage. Any unusual sample conditions will be noted. Laboratory personnel and all field personnel will be advised of sample hazard levels and the potential contaminants present. This can be accomplished by a phone call to the lab coordinator and/or inclusion of a written statement with the samples. It may be necessary for the SHSO to review safety procedures in handling Yard samples to assist or ensure that these practices are appropriate for the type of suspected contaminants in the sample.

10.9 Waste Disposal

Waste disposal operations will be monitored by the SHSO and performed under the appropriate level of personal protection described in Section 8.2.2. Personnel will wear the prescribed clothing, especially eye protection and chemical resistant gloves, when handling or drumming waste materials. Contamination avoidance will be practiced at all times.

10.10 Heavy Equipment Decontamination

Equipment will be dry decontaminated in the EZ first. This shall consist of the gross removal of the contaminated material from buckets, wheels, or blades using hand tools. If wet decontamination is required, the equipment will be taken to the designated decontamination pad. Personnel performing the decontamination of equipment shall use the prescribed level of protection. Initially, this task shall employ modified Level D protection as described in Section 8.2.2. The equipment decontamination shall be restricted to authorized personnel only. Special consideration will be given to wind speed and direction. Downwind areas are to be kept free of personnel to avoid unnecessary exposure to potential airborne contamination.

A steam cleaner or pressure washer may be used to decontaminate the excavation equipment. Personnel will exercise caution when using a steam cleaner. The high-pressure steam can cause severe burns. Protective gloves, face shields, hard hats, steel-toed boots, and Tyvek suits or rain gear may be worn when using steam cleaners.

10.11 Confined Space Entry

The scope of work does not require Roux Associates personnel to enter confined spaces for this project. Any changes to the field activities that may necessitate confined space entry will be reported to the Project Principal and OHSM. No Roux Associates personnel are permitted to make a confined space entry. A confined space is defined as any space, depression, or enclosure that has limited opening for entry and egress; may have limited ventilation; may contain or produce life-threatening atmospheres due to oxygen deficiency, the presence of toxic, flammable, or corrosive contaminants; and which is not intended for continuous occupancy.

Examples of confined spaces prohibited from entry include, but are not limited to, storage tanks, ventilation and exhaust ducts, stacks, pits, basements, silos, vats, vaults, pipes, and any topped open space four or more feet deep that is not adequately ventilated.

10.12 Hot/Cold Welding

Roux Associates shall not perform welding unless specific clearance has been obtained from the PM and the Yard Manager. Any contractors or Roux Associates personnel performing welding must adhere to the procedures outlined below.

Welding equipment shall be chosen for safe application to the work and shall be installed properly. Employees designated to operate welding equipment shall be properly instructed and qualified to operate it. Mechanical ventilation shall be provided when welding or cutting:

- where there is less than 10,000 cubic feet per welder; and
- where the overhead height is less than 16 feet.

Proper shielding and eye protection shall be worn to prevent exposure of personnel to welding hazards. Proper precautions (isolating welding and cutting, removing fire hazards from vicinity, etc.) for fire prevention shall be taken in areas where welding or other "hot work" is being done.

10.12.1 Welding in Confined Spaces

The scope of work does not require Roux Associates personnel to perform welding in a confined space for this project. Any changes to the field activities that may necessitate welding

in a confined space will be reported to the Project Principal and OHSM. No Roux Associates personnel are permitted to work in a confined space.

10.13 Control of Hazardous Energy (Lockout/Tagout)

Hazardous energy at the Yard will be controlled through the use of a lockout/tagout procedure developed in accordance with OSHA's lockout/tagout standard (29 CFR 1910.147). The purpose of lockout/tagout procedures is to minimize exposures to hazards from the unexpected energizing, startup, or release of residual or stored energy from equipment, machinery, or processes. Lockout/tagout procedures will be followed during the installation, servicing, and maintenance of machines or equipment that involve hazardous energy sources. Hazardous energy sources include any electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy source that is capable of causing injury to personnel.

Lockout/tagout procedures require the placement of a lock and/or tag on an energy isolating device (a device that physically prevents the transmission or release of energy, such as manually operated electrical circuit breakers, disconnect switches, valves, and selector switches). After the energy isolation device is placed in the "off" or "safe" position, the lockout/tagout is placed on the energy isolation device to secure it in the "off" or "safe" position. This ensures that the equipment, machinery, or process is not capable of being operated while installation, servicing, or maintenance is taking place.

If it is determined that lockout/tagout procedures are required for any aspect of Yard work, the following generic lockout/tagout procedures will be implemented. Note, these procedures will be tailored to the specific application of a lockout/tagout, when necessary. Presently, there are no known situations that would require the application of lockout/tagout procedures at the Yard.

1. Affected personnel and authorized personnel will receive lockout/tagout orientation training to become familiar with procedures to control hazardous energy. Affected personnel is defined as personnel whose job requires that they operate or use equipment, machinery, or processes on which servicing or maintenance is being performed under lockout/tagout, or whose job requires them to work in an area in which such servicing or maintenance is being performed. Authorized personnel is defined as a qualified person to whom authority and responsibility to perform a specific lockout and/or tagout assignment has been given by the employer.

2. Before proceeding with the installation, maintenance, or servicing of any equipment, machinery, or process at the Yard for which lockout/tagout procedures apply, a survey will be made to locate and identify associated energy isolation devices.

3. Once the survey is complete, the authorized personnel will notify all affected personnel, including the SHSO, that a shutdown of the equipment or machine will occur.

4. Following notification, the equipment or machine, if operating, will be shut down by normal stopping procedures (i.e., depress stop button, open toggle switch, turn light switch off, etc.).

5. Once turned off, the energy isolating device (i.e., circuit breaker, disconnect switch, valve, etc.) will be operated in such a manner that the machine or equipment will be isolated from the energy source (electrical, mechanical, hydraulic, pneumatic, chemical, thermal, etc.).

6. The energy isolating device is then "locked out" by applying the lockout, padlock, and tag to the device. In some cases, a chain must be used (in combination with a padlock) to sufficiently "lockout" a device (i.e., steam valve, hydraulic valve, etc.).

7. The tag will be filled out by the authorized personnel indicating the personnel's name and the date and time of the lockout.

8. Once the energy-isolating device has been locked out and tagged, all potentially hazardous sources or residual energy will be purged or dissipated (i.e., grounding, bleeding, venting, lowering, etc.).

9. After ensuring that no personnel are exposed, the authorized personnel will operate the normal operating controls to make certain the equipment will not restart. The operating controls must be returned to the "off" or "neutral" position after the test.

10. Use a voltmeter to make sure that work is not energized, if applicable.

11. Attach a "ground stick" of sufficient size to handle any possible fault current to all three phases of the source, if applicable.

12. Maintenance or servicing of the machine or equipment can be performed.

13. When the maintenance and/or service is completed, the work area is to be inspected to ensure that all affected personnel are safely positioned and/or removed. In addition, remove all nonessential items from the equipment.

14. The lockout, padlock, and tag shall then be removed from the energy-isolating device by the authorized personnel who applied the lockout devices.

15. All personnel involved with the service or maintenance of the locked out equipment will place their assigned padlock to each and every lockout device and/or chain in such manner that if every other padlock were removed, the personnel would still have a

padlock assuring that each and every source of energy is still "locked out". No personnel may affix the personal lockout/tagout device of another personnel.

16. If work on a piece of equipment or machinery that is locked out carries over to the next shift, the authorized personnel may remove their lockout device provided that the next authorized personnel applies their lockout device at the same time the previous authorized personnel removes their lock device.

10.14 Hazard Communication

Personnel working at the Yard have the right to know about the chemical hazards associated with hazardous materials used and stored onsite. This information will be readily available to all site workers as required by OSHA's Hazard Communication Standard (29 CFR 1910.1200). This information will be communicated to personnel through the maintenance of a chemical inventory system, chemical labeling, material safety data sheets (MSDSs), and hazard communication training.

Chemicals imported to the Yard will bear the original NYSDOT required labeling on the chemical's container. In addition, a new label will be affixed to the original container, if necessary, and to new containers to which the chemical is dispensed providing the chemical name and specific hazard warnings (i.e., flammability, health, reactivity). Hazard warnings will follow either the National Fire Protection Association (NFPA) format or the Hazardous Material Information System (HMIS) format. Both systems are easy to use and rely on numerically ranking hazards on a 0 to 4 scale. Most chemicals used onsite, which are subject to the Hazard Communication Standard, are related to sampling activities. These chemicals may include hexane, methanol, acetone, and nitric acid.

10.15 Automobile Safety

Motor vehicle safety and awareness is a very important aspect in the health and safety plan regarding the prevention of injuries. Deaths, injuries, and property damage can occur from careless and unsafe driving acts. The main rules for vehicle safety are being smart and driving defensively. Driving defensively means not only taking responsibility for yourself and your actions, but also being mindful of other vehicles and potential obstacles on the roadway.

The following are guidelines to help reduce your risk on the road:

- Secure each passenger before starting the engine. Lock all doors.
- Driving too fast or slow can increase the likelihood of collisions.
- Avoid an impaired driver by turning right at the next corner or exiting. If an oncoming car appears to cross into your lane, pull over, sound horn, and flash lights.
- Do not contest the "right of way" or try to race another car during a merge.
- Be aware of sudden traffic slow downs due to security checkpoints and accidents.
- While driving, be cautious, aware, and responsible.

Before operating your vehicle and on a regular basis, check the following:

- Does the driver have a valid driver's license?
- Does the vehicle have valid inspection stickers, registration, and insurance information?
- Are the tires inflated to the right pressure?
- Is there an inflated spare?
- Are the lights and indicators working?
- Are the windshield wipers and washer fluid working?
- Are vehicle attachments (such as ladders) secured?
- Is the horn working?
- Is the license plate clean and visible?

Remember, commercial vehicles are prohibited from left lanes, HOV lanes, and many roadways. Always be aware and responsible.

10.16 Additional Safe Work Practices

Refer to the SHSO for specific concerns regarding each individual site task. The safety rules listed below must be strictly followed.

- Use the buddy system when required.
- Practice contamination avoidance, both on and offsite.
- Plan activities ahead of time.

- Do not climb over/under obstacles.
- Be alert to your own physical condition.
- Watch your co-workers for signs of fatigue, exposure, heat or cold stress, etc.
- Report all accidents, no matter how minor, immediately to the SHSO.
- Do not eat, drink, chew gum, apply cosmetics, or use tobacco products while working in the Yard (except in the SZ).
- Be aware of traffic, heavy equipment, and other obstacles around you.
- Do not work onsite while under the influence of drugs or alcohol, including prescription drugs that may cause drowsiness.
- Copies of this HASP shall be readily accessible at all times.
- Note wind direction. Personnel shall remain upwind wherever possible during onsite activities.
- READ AND SIGN YOUR HEALTH AND SAFETY PLAN BEFORE ENGAGING IN YARD ACTIVITIES.
- Hands must be washed thoroughly upon leaving the Work Zone or before eating, drinking, or any other activities.
- Contaminated protective equipment shall not be removed from the Yard until it has been decontaminated and properly packaged and labeled.
- Portable eyewash stations shall be located in the decontamination staging area in the SZ.
- No facial hair which interferes with a satisfactory fit of respiratory equipment will be allowed on personnel that may be required to wear respiratory protective equipment.
- An emergency first aid kit and fire extinguisher shall be onsite in the SZ at all times.
- All respiratory protection selected to be used onsite shall meet NIOSH/MSHA requirements for the existing contaminants.
- Any skin contact with surface and groundwater shall be avoided.
- No contact lenses may be worn in the Work Zone or CRZ.

A work/rest regimen will be initiated when ambient temperatures and protective clothing cause a stressful situation. Work will not be conducted without adequate light or without supervision. Safety briefings will be held prior to beginning each task.

11.0 DECONTAMINATION PROCEDURES

A steam cleaner may be utilized to decontaminate the excavation equipment. Personnel should exercise caution when using a steam cleaner. The high pressure steam can cause severe burns. Protective gloves, face shields, hard hats, steel-toed boots, and Tyvek suits or rain gear will be worn when using steam cleaners.

11.1 Contamination Prevention

Adequate contamination prevention should minimize worker exposure and help ensure valid sample results by precluding cross-contamination. Procedures for contamination avoidance include the following:

Personnel

- Do not walk through areas of obvious or known contamination;
- Do not handle or touch contaminated materials directly;
- Make sure all PPE has no cuts or tears prior to donning;
- Fasten all closures on suits, covering with tape if necessary;
- Take particular care to protect against any skin injuries;
- Stay upwind of airborne contaminants;
- Do not carry cigarettes, gum, etc. into contaminated areas; and
- Use disposables to cover non-disposables when contact is probable.

Sampling/Monitoring

- When required by the SHSO, cover instruments with clear plastic, leaving openings for sampling and exhaust ports; and
- Bag sample containers prior to the placement of sample material.

Heavy Equipment

- Care should be taken to limit the amount of contamination that comes in contact with heavy equipment (i.e., tires, augers, etc.);
- If contaminated tools are to be placed on non-contaminated equipment for transport to the decontamination pad, plastic should be used to keep the equipment clean;

- Excavated soils should be contained and kept out of the way of workers; and
- Dust control measures, including water misting, will be used on roads inside the Yard boundaries.

11.2 Decontamination

All personnel and equipment shall be thoroughly decontaminated. Figures 2 and 3 illustrate decontamination procedures for Levels D and C, respectively. Safety briefings shall explain the decontamination procedures for the various levels of protection. A field wash for equipment and PPE shall be set up and maintained for all persons exiting the EZ. The system will include a gross wash and rinse for all disposable clothing and boots worn in the EZ. As necessary, equipment and facilities will be available for personnel to wash their hands, arms, neck, and face before entering the SZ. Rinseates will be collected, handled, and/or drummed as potentially hazardous waste

Heavy equipment will be decontaminated at the decontamination pad and inspected by the SHSO and/or designated individual before it leaves the Yard. The decontamination pad will provide for the containment of all wastewater from the decontamination process.

Sampling equipment will be decontaminated through the following steps, if necessary:

- fresh water rinse;
- non-phosphorus detergent wash;
- fresh water rinse;
- distilled water rinse;
- acetone rinse; and
- distilled water rinse.

11.3 Decontamination During Medical Emergencies

If emergency, life-saving first aid and/or medical treatment are required, normal decontamination procedures may need to be abbreviated or omitted. The SHSO or designee will accompany contaminated victims to the medical facility to advise on matters involving decontamination, when necessary. The outer garments can be removed if they do not cause

delays, interfere with treatment, or aggravate the problem. Respiratory equipment must always be removed. Protective clothing can be cut away. If the outer contaminated garments cannot be safely removed, a plastic barrier between the individual and clean surfaces should be used to help prevent contaminating the inside of ambulances and/or medical personnel. Outer garments are then removed at the medical facility. No attempt will be made to wash or rinse the victim, unless it is known that the individual has been contaminated with an extremely toxic or corrosive material, which could also cause severe injury or loss of life to emergency response personnel. For minor medical problems (ambulatory) or injuries, the normal decontamination procedures will be followed. Note that heat stroke requires prompt treatment to prevent irreversible damage or death. Protective clothing must be promptly removed. Less serious forms of heat stress also require prompt attention and removal of protective clothing immediately. Unless the victim is obviously contaminated, decontamination should be omitted or minimized and treatment begun immediately.

12.0 DISPOSAL PROCEDURES

A system for segregating all waste will be developed by the SHSO. All waste disposal operations conducted by Roux Associates will be monitored by the SHSO and carried out under the appropriate level of personal protection.

All discarded materials, waste materials, or other objects shall be handled in such a way as to preclude the potential for spreading contamination, creating a sanitary hazard, or causing litter to be left at the Yard. All potentially contaminated materials (i.e., clothing, gloves, etc.) will be bagged or drummed, as necessary, labeled, and segregated for disposal. All contaminated materials shall be disposed of in accordance with appropriate regulations. All non-contaminated materials shall be collected and bagged for appropriate disposal as domestic waste.

All excavated soils will be amended, as necessary, for moisture control and direct loaded to transport vehicles for immediate offsite disposal at an owner-approved permitted waste treatment/disposal facility. All transport vehicles will be properly decontaminated prior to departing the Yard.

All construction water, stormwater, and decontamination water shall be collected in 55-gallon drums and transported to an approved, permitted offsite disposal facility.

13.0 EMERGENCY PLAN

As a result of the hazards onsite and the conditions under which operations are conducted, the possibility of an emergency exists. An emergency plan is required by OSHA 29 CFR 1910.120 to be available for use at all times during Yard work and is included below. A copy of this plan shall be posted in the SZ at each work site. Should an emergency situation occur, the emergency plan shall be known by all field personnel prior to the start of work. The plan provides the phone numbers for the fire, police, ambulance, hospital, poison control centers, and directions to the hospital from the Yard.

Various individual Yard characteristics will determine preliminary actions taken to ensure that this emergency plan is successfully implemented in the event of an emergency. Careful consideration must be given to the proximity of neighborhood housing or places of employment and to the relative possibility of Yard release of vapors that could affect the surrounding community.

13.1 Site Emergency Coordinator(s)

The SHSO shall act as the Site Emergency Coordinator to make contact with the local fire, police, and other emergency units prior to beginning work onsite. In these contacts, the SHSO will inform the emergency units about the nature and duration of work expected at the Yard and the type of contaminants and possible health or safety effects of emergencies involving these contaminants. At this time, the SHSO and the emergency response units shall make necessary arrangements to be prepared for any emergencies that could occur.

The SHSO or designee shall implement this emergency plan whenever conditions at the Yard warrant such action. The coordinator(s) will be responsible for the coordination of the evacuation, emergency treatment, emergency transport of Yard personnel as necessary, and notification of emergency response units and the appropriate management staff.

During an emergency, the SHSO will perform air monitoring, as needed, as well as lend assistance and provide health and safety information to the responding emergency personnel. Yard personnel will endeavor to keep non-essential personnel away from the incident until the appropriate emergency resources arrive. At that time, the responders will take control of the

Yard. Yard personnel may be asked to lend assistance to emergency personnel during evacuations, help with the injured, etc.

13.2 Evacuation

Evacuation procedures will be discussed prior to the start of work and periodically during safety meetings, and the emergency evacuation route shall be clearly posted in the SZ. In the event of an emergency situation such as fire, explosion, significant release of particulates, etc., an air horn or other appropriate device will be sounded by the SHSO for approximately ten seconds, indicating the initiation of evacuation procedures. All persons in both the restricted and non-restricted areas will evacuate and assemble near the SZ or other safe area as identified in advance by the SHSO. Under no circumstances will incoming personnel or visitors be allowed to proceed into the evacuated area once the emergency signal has been given. The SHSO must see that access for emergency equipment is provided and that all combustible apparatuses have been shut down once the alarm has been sounded. Once the safety of all personnel is established, the fire department and other emergency response groups will be notified by telephone of the emergency. The hospital route will be posted onsite (Figure 1). Any other evacuation routes will be specified by the appropriate emergency personnel.

13.3 Potential/Actual Fire or Explosion

If the potential for a fire exists or if an actual fire or explosion occurs, the following procedure will be implemented:

- immediately evacuate the Work Zone as described above (Section 13.2); and
- notify fire department and security.

13.4 Environmental Incident (Release or Spread of Contamination)

The SHSO shall instruct a person onsite to immediately contact police and fire authorities to inform them of the possible or immediate need for a nearby evacuation. If a significant release (above the reportable quantity as described in 40 CFR 302) has occurred, the National Response Center and other appropriate groups should be contacted. Those groups will alert National or Regional Response Teams, as necessary. The personnel listed below shall be notified as necessary.

Type	Name	Telephone #
Fire Department	Fire Department	911
Hazardous Material Emergency Response		911
Police	Amtrak Police	(212) 630-7113
Ambulance		911
Poison Control Center		(800) 222-1222
Hospital (Figure 1 – Map)	Mount Sinai Hospital of Queens 25-10 30th Avenue Long Island City, New York 11102	(718) 932-1000
Penn Station Control Center		(212) 630-7465
Center for Disease Control		(770) 385-3386
NYSDEC Emergency Spill Response		(800) 457-7362
National Response Center (Release or Spill)		(800) 424-8802
Site Health and Safety Officer	Harry Gregory	Work: (631) 232-2600 Cell: (631) 445-0961
Office Health and Safety Manager	Joseph Gentile, CIH	(631) 232-2600
Project Manager	Harry Gregory	Work: (631) 232-2600 Cell: (631) 445-0961

13.5 Personnel Injury

Emergency first aid shall be applied onsite as warranted to stabilize the patient. If necessary, the individual shall be decontaminated and transported to the nearest hospital (Figure 1). The SHSO will supply medical data sheets to medical personnel and complete the accident/incident report in accordance with Section 13.6 of this HASP.

13.6 Accident/Incident Reporting

As soon as first aid and/or emergency response needs have been met, the Project Principal, PM, SHSO, and OHSM are to be contacted by telephone (direct contact, no phone messages). If the injured worker is not a Roux Associates employee, his/her employer should be contacted.

Written confirmation of verbal reports are to be submitted within 24 hours. The report form titled "Incident Report" (Appendix D) is to be used for this purpose. All representatives contacted by telephone are to receive a copy of this report. If the employee involved is not a Roux Associates employee, his/her employer shall receive a copy of the report.

For reporting purposes, the term accident refers to fatalities, lost time injuries, spill or exposure to hazardous materials (radioactive, toxic, explosive, or flammable materials), fire, explosion, property damage, or potential occurrence of the above.

Any information released from the health care provider, which is not deemed confidential patient information, is to be attached to the appropriate form. Any medical information, which is released by patient consent, is to be filed in the individual's medical record and treated as confidential.

13.7 Overt Personnel Exposure

If an overt exposure to toxic materials should occur, the exposed person shall be treated onsite as follows.

Skin Contact:	Wash/rinse the affected area thoroughly with copious amounts of soap and water, then provide appropriate medical attention. An eyewash and/or emergency shower or drench system will be provided onsite at the CRZ and/or SZ as appropriate. Eyes should be rinsed for at least fifteen (15) minutes upon chemical contamination.
Inhalation:	Move to fresh air and/or, if necessary, decontaminate and transport to the hospital.
Ingestion:	Decontaminate and transport to the emergency medical facility. Never induce vomiting on an unconscious person. Also, never induce vomiting when acids, alkalis, or petroleum products are suspected. Contact the poison control center. Contact EMS, if necessary.
Puncture Wound:	Decontaminate and transport to the emergency medical facility. Do not contact blood or bodily fluids. The SHSO will provide medical data sheets to medical personnel as requested.

13.8 Adverse Weather Conditions

In the event of adverse weather conditions, the SHSO will determine if work can continue without sacrificing the health and safety of any field workers. Some of the items to be considered prior to determining if work should continue are:

- heavy rainfall or other treacherous weather-related conditions;
- potential for heat stress and heat-related injuries;
- potential for cold stress and cold-related injuries;
- limited visibility;
- potential for electrical storms;
- potential for malfunction of health and safety monitoring equipment or gear; and
- potential for accidents.

Yard activities will be limited to daylight hours and acceptable weather conditions. Inclement working conditions include heavy rain, fog, high winds, and lightning. Observe daily weather reports and evacuate if necessary in case of inclement weather conditions.

14.0 LOGS, REPORTS, AND RECORD KEEPING

The following is a summary of required health and safety logs, reports, and record keeping for this project.

14.1 Daily Operations Log

A daily operations log shall be completed by the SHSO and reviewed by the PM. The original will be kept in the project file.

14.2 Medical And Training Records

The employer keeps medical and training records. The subcontractor employer must provide verification of training and medical qualifications to the SHSO. The SHSO will keep a log of personnel meeting appropriate training and medical qualifications for Yard work. The log will be kept in the project file. Roux Associates will maintain medical records in accordance with 29 CFR 1910.20.

Appendix E, "Medical Data Sheet/Field Team Review," will be completed by all permanent, onsite personnel and will be kept onsite during Yard operations. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

14.3 Onsite Log

The SHSO or PM will keep a log of onsite personnel daily. A copy of these logs will be given to the Project Principal upon request. Originals will be kept in the project file.

14.4 Exposure Records

Any personnel monitoring results, laboratory reports, calculations, and air sampling data sheets are part of an employee exposure record. These records will be kept in accordance with 29 CFR 1910.20. For Roux Associates employees, the originals will be sent to Roux Associates.

14.5 Accident Investigation Reports

An accident investigation report must be completed following procedures given in Appendix D. The originals will be sent to Roux Associates for maintenance. Copies will be distributed as stated. A copy of the forms will be kept in the project file.

14.6 Training Logs

The Training Logs will be completed by the SHSO and submitted to the PM prior to allowing personnel onsite.

14.7 Daily Safety Logs

The Daily Safety Log form in Appendix F will be completed daily by the SHSO and submitted to the PM.

14.8 Air Monitoring Log

The Air Monitoring Log form in Appendix G will be completed by the SHSO and submitted to the Project Principal or PM.

14.9 Weekly Safety Reports

The Weekly Safety Reports in Appendix H will be completed by the SHSO and submitted to the owner's representative.

14.10 Close-Out Safety Report

At the completion of the work, Roux Associates will submit a closeout Safety Report that will include all logs and reports generated during the project. The report will be signed and dated by the SHSO and submitted to the owner's representative.

15.0 AUTHORIZATIONS

Personnel authorized to enter the Yard while operations are being conducted must be approved by the SHSO and the PM. This document will be completed when the Subcontractors have assigned trained personnel for this Site. Authorization will require completion of appropriate training courses, medical examination requirements as specified by OSHA 29 CFR 1910.120, and review and sign-off of this HASP.

The following Roux Associates personnel are authorized to perform work onsite:

1. Joseph Duminuco
2. Harry Gregory
3. Charles McGuckin
4. Rob Kovacs
5. Jessica Diminich
6. Tim Unalp

Other personnel authorized to enter the Site are:

1. Amtrak Employees
2. Remedial Contractors
3. Waste Disposal Contractors
4. Surveyors
5. LIRR Employees
6. NYSDEC Representatives
7. NYSDOH Representatives

16.0 FIELD TEAM REVIEW

Each person entering the Yard and each field member shall sign this section after site-specific training is completed and before being permitted to work onsite.

I have read and understand this Site-Specific Health and Safety Plan. I will comply with the provisions contained therein.

Site/Project: OU-4 Remedial Action – Sunnyside Yard, Queens, New York

Name Printed	Signature	Date

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at Operable Unit 4, Sunnyside Yard, Queens, New York

Compound	CAS#	TLV (mg/m^3)	IDLH (ppm)	PEL (mg/m^3)	Routes of Exposure	Toxic Properties	Target Organs	Physical/ Chemical Properties
Trichloroethene	79-01-6	270 50 ppm	None	270 50 ppm	Dermal; inhalation; ingestion	CNS depression Sensory irritant Kidney damage Liver damage Heart damage	CNS skin eyes kidney liver CVS	Liquid BP = 189°F flammable LEL = 12.5% UEL = 90%
Toluene	108-88-3	375 100 ppm	2,000	375 100 ppm	Dermal; inhalation; ingestion	CNS depression Liver damage Kidney damage Defatting of skin	CNS liver kidney skin	Liquid benzene odor BP = 232°F flammable LEL = 1.2% UEL = 7.1%
1,2-Dichloroethene	540-59-0	790 200 ppm	4,000	790 200 ppm	Dermal; ingestion; inhalation	CNS depressant Epigastric cramps Sensory irritant Dermatitis	CNS stomach skin	Colorless liquid BP = 118-140°F LEL = 9.7% UEL = 12.8%
Petroleum hydrocarbons (Petroleum distilled)	8002-05-9	1,600 400 ppm	10,000	1,600 400 ppm	Dermal; inhalation; ingestion	CNS depressant Respiratory irritant Dried/cracked skin	CNS respiratory tract skin	Colorless liquid BP = 86-460°F UEL = 5.9% LEL = 1.1% Flammable
Chromium	7440-47-3	0.5	None	1	Dermal; inhalation; ingestion	Decreased pulmonary function Sensory irritant	lung skin eyes	Steel gray metal

TLV - Threshold Limit Value
mg/m^3 - milligrams per cubic meter
IDLH - Immediately dangerous to life or health
ppm - parts per million
PEL - Permissible Exposure Limit
CNS - Central Nervous System
CVS - Cardiovascular System
GI - Gastrointestinal

BP - Boiling Point
LEL - Lower Explosive Limit
UEL - Upper Explosive Limit
°C - degrees Celcius
°F - degrees Fahrenheit

Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at Operable Unit 4, Sunnyside Yard, Queens, New York

Compound	CAS#	TLV (mg/m^3)	IDLH (ppm)	PEL (mg/m^3)	Routes of Exposure	Toxic Properties	Target Organs	Physical/ Chemical Properties
Arsenic	7440-38-2	0.2	None	0.5 organic 0.01 - inorganic	Dermal; inhalation; ingestion	Sensory irritant Lung & skin cancer Aplastic anemia Numbness	skin eyes lungs blood peripheral nervous system	Silver gray - tin white BP = sublimes
Lead	7439-92-1	0.15	700	0.2	Dermal; inhalation; ingestion	Abdominal pain CNS depressant Anemia Nephropathy Reproductive effects	GI tract CNS blood kidneys	Metal - soft gray BP = 3,164°F
Zinc	7440-66-6	10	None	10	Dermal; inhalation; ingestion	Skin irritant Cough	skin lungs	Bluish-white metallic element BP = 908°F
Copper (dusts and mists)	7440-50-8	1	None	1	Dermal; inhalation; ingestion	Sensory irritant GI irritation CNS depressant	skin eyes GI tract CNS	Reddish metal BP = 4,730°F Powdered form may ignite

TLV - Threshold Limit Value
mg/m^3 - milligrams per cubic meter
IDLH - Immediately dangerous to life or health
ppm - parts per million
PEL - Permissible Exposure Limit
CNS - Central Nervous System
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Table 1. Toxicological, Physical, and Chemical Properties of Compounds Potentially Present at Operable Unit 4, Sunnyside Yard, Queens, New York

Compound	CAS#	TLV (mg/m^3)	IDLH (ppm)	PEL (mg/m^3)	Routes of Exposure	Toxic Properties	Target Organs	Physical/ Chemical Properties
Aroclor 1254	11097-69-1	0.5 (Skin)	None	0.5 (Skin)	Dermal; inhalation; ingestion	Eye, skin irritation Acne form dermatitis Potential carcinogen	skin eyes liver	Colorless to pale yellow mild hydrocarbon odor nonflammable
Chrysene	218-01-9	0.1	None	0.2	Dermal	Mutagen Carcinogen	NA	White crystals
Aroclor 1260	11096-82-5	0.001	None	None	Dermal; inhalation; ingestion	Liver damage Nausea Abdominal pain	liver skin	Colorless Mild hydrocarbon odor
Benzo(a)pyrene	50-32-8	None	None	None	Dermal; inhalation; ingestion	Teratogen carcinogen	Reproductive lung skin	Yellowish needles; BP = 312°F
Manganese	7439-96-5	1.0 fume	10,000	5.0	Inhalation; ingestion	Metal fume fever Apathy Anorexia Insomnia Headaches	Resp. system CNS blood kidneys	Lustrous, brittle, silvery solid BP = 3,564°F

TLV - Threshold Limit Value
mg/m^3 - milligrams per cubic meter
IDLH - Immediately dangerous to life or health
ppm - parts per million
PEL - Permissible Exposure Limit
CNS - Central Nervous System
CVS - Cardiovascular System
GI - Gastrointestinal
BP - Boiling Point
LEL - Lower Explosive Limit
UEL - Upper Explosive Limit
°C - degrees Celcius
°F - degrees Fahrenheit

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TABLE 2

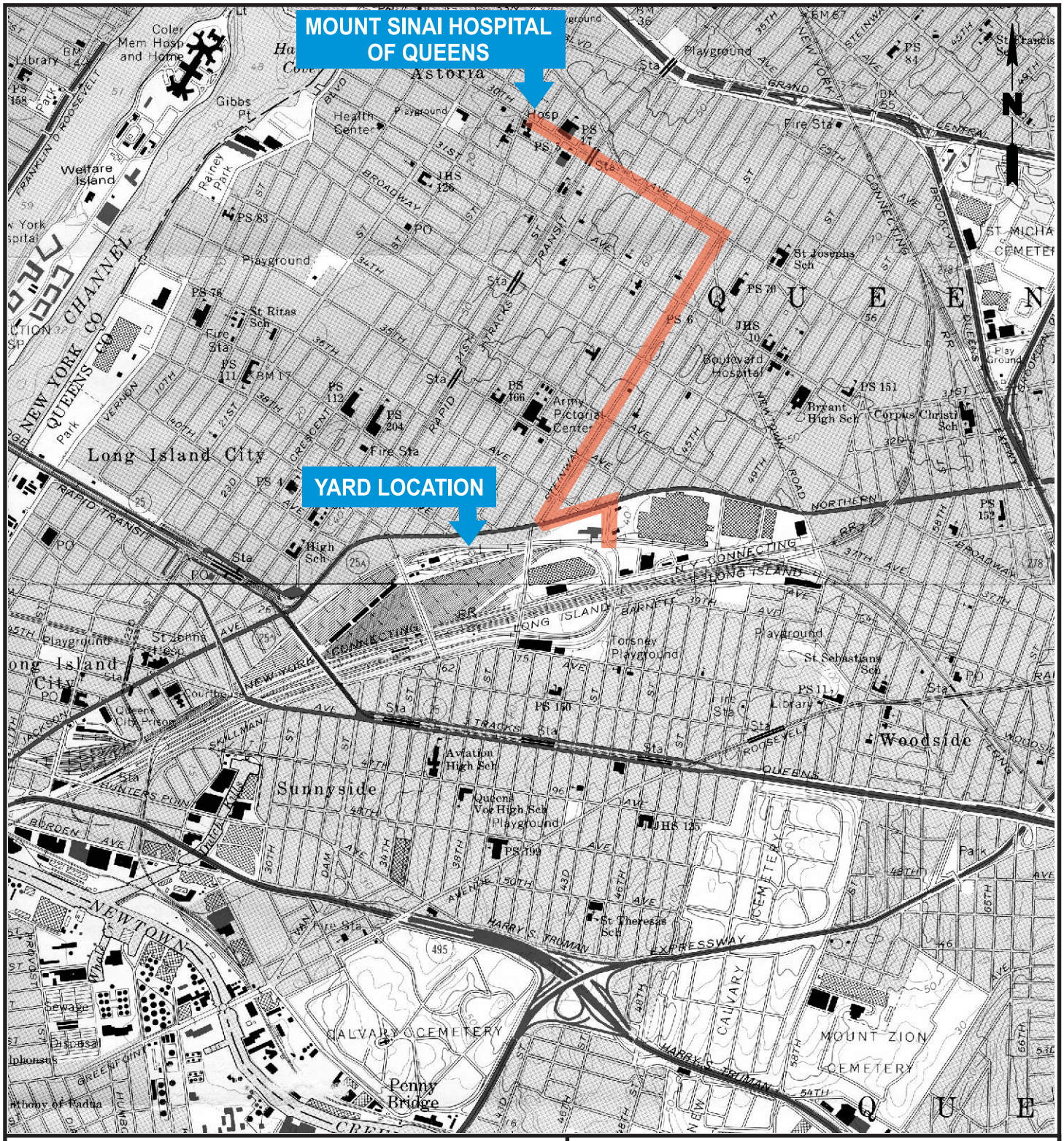
ACTION LEVELS FOR WORKER BREATHING ZONE

Instrument	Action Level *	Level of Respiratory Protection/Action
PID	0 to <5 ppm (one minute sustained)	Level D *
PID	>5 to <50 ppm (one minute sustained)	Utilize APR (Level C)
PID	>50 to <100 ppm (one minute sustained)	Level B
PID	>100ppm	Stop work** (ventilate, apply foam)
CGI/H_2S Meter	<5%	Level D
CGI/H_2S Meter	>5% to <25%	Level B
CGI/H_2S Meter	>25%	Stop work**
CGI/CO Meter	>25%	Level B
CGI/CO Meter	>50%	Stop work**(ventilate area)
CGI/O_2 Meter	<10% LEL, in excavation 19.5% oxygen - 23.5%	Level D Level D
CGI/O_2 Meter	>10% LEL, in excavation >23.5% oxygen	Allow to vent, apply foam** Stop work, Oxygen Enriched ATM.**
Dust Monitor	0 – 1.0 mg/m^3, 5-minutes average	Level D
Dust Monitor	>1.0 to 50 mg/m^3, 5-minutes	Level D - Institute dust suppression measures
Dust Monitor	>50 mg/m^3, 5-minute ave.	Level C - Institute dust suppression measures

Note: Action levels are based on above background levels.

* Instrument readings will be taken in the breathing zone (BZ) of the workers, unless otherwise indicated.

** Suspend work in immediate area. Conduct air monitoring periodically to determine when work can continue. Implement mitigative measures.



EMERGENCY ROUTE DIRECTIONS TO MOUNT SINAI HOSPITAL OF QUEENS:

- FROM 42nd PLACE MAKE A LEFT ONTO NORTHERN BOULEVARD.
- TURN RIGHT ONTO STEINWAY STREET.
- TURN LEFT ONTO 30th AVENUE.
- THE HOSPITAL IS LOCATED AT CRESCENT STREET AND 30TH AVENUE.

0 2000'

Title:

ROUTE FROM SUNNYSIDE YARD TO MOUNT SINAI HOSPITAL

SUNNYSIDE YARD
39-29 HONEYWELL STREET
QUEENS, NEW YORK

Prepared for:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: J.P.		Date: 01JUL09	FIGURE 1
Prepared by: B.H.C.		Scale: 1"=2000'	
Project Mgr.: H.G.		Office: NY	
File No.: AM7114803.CDR		Project No.: 05571Y10	

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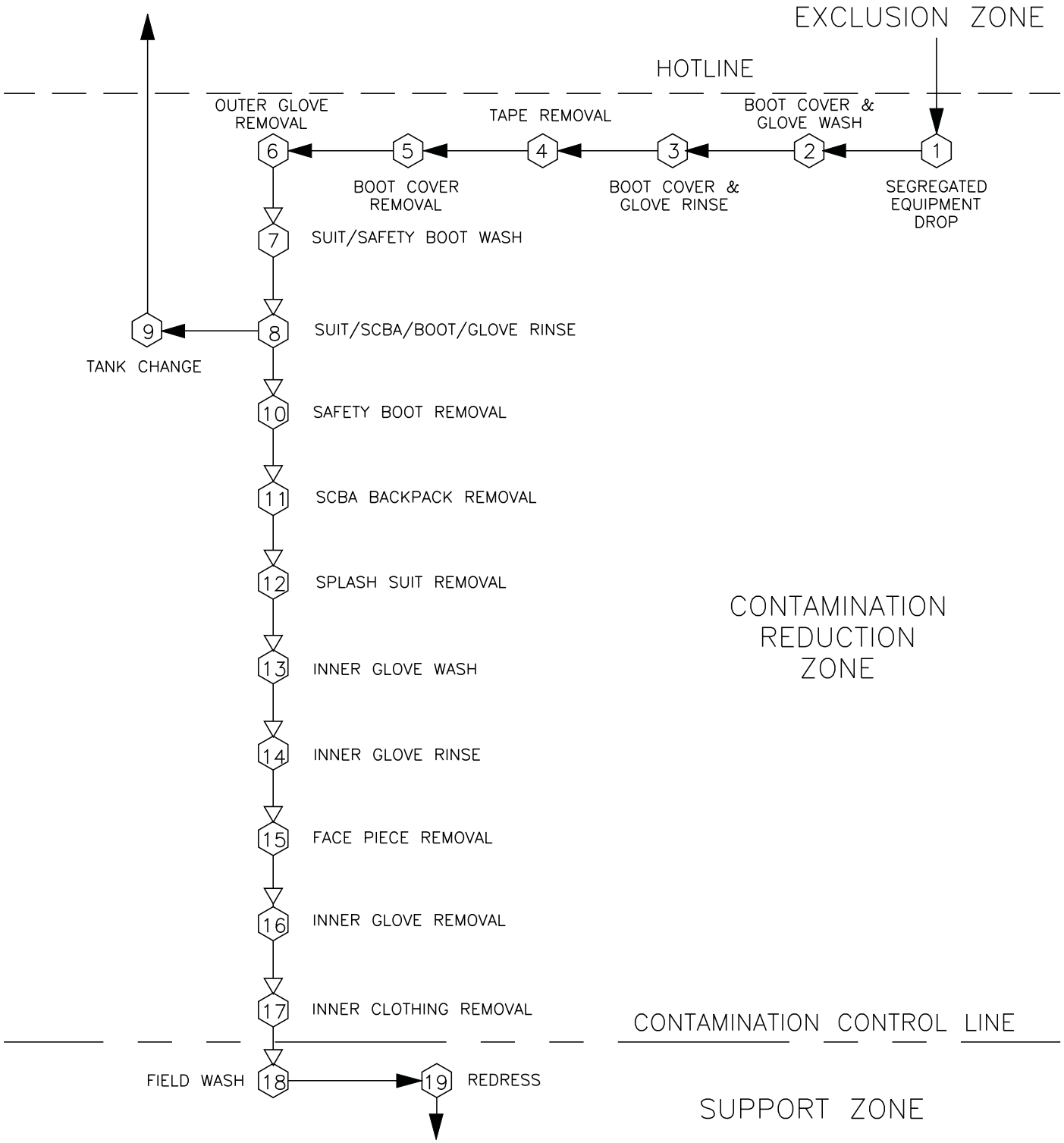

Title:

TYPICAL DECONTAMINATION LAYOUT

LEVEL B PROTECTION

SUNNYSIDE YARD
39-29 HONEYWELL STREET
QUEENS, NEW YORK

Prepared for:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: J.P.	Date: 01JUL09	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	2
Project Mgr.: J.P.	Office: NY	
File No.: AM7114804.CDR	Project No.: 05571Y10	

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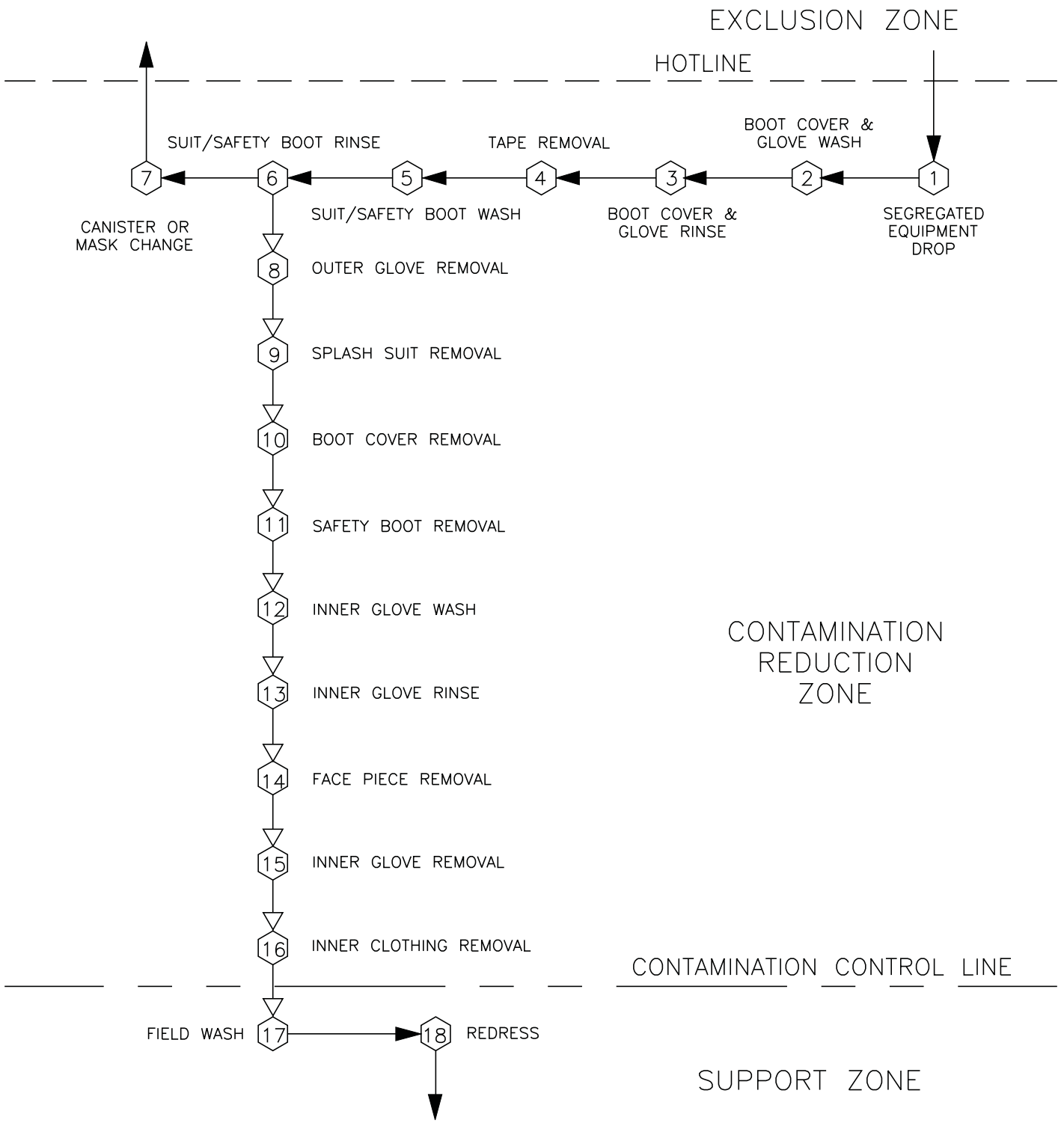

Title:

TYPICAL DECONTAMINATION LAYOUT

LEVEL C PROTECTION

SUNNYSIDE YARD
39-29 HONEYWELL STREET
QUEENS, NEW YORK

Prepared for:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: J.P.	Date: 01JUL09	FIGURE 3
Prepared by: B.H.C.	Scale: AS SHOWN	
Project Mgr.: J.P.	Office: NY	
File No.: AM7114804.CDR	Project No.: 05571Y10	

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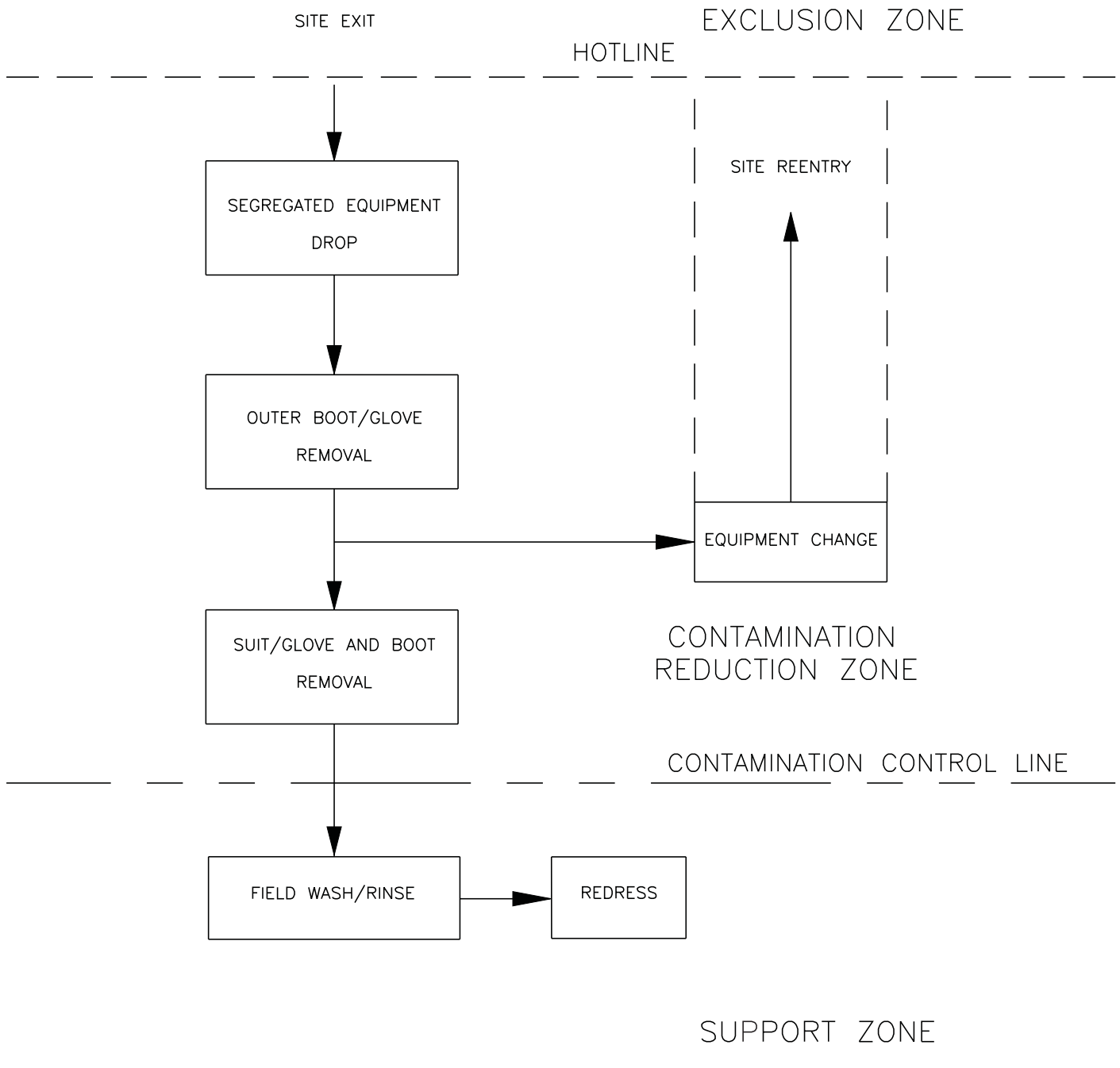

Title:

TYPICAL DECONTAMINATION LAYOUT

LEVEL D PROTECTION

SUNNYSIDE YARD
39-29 HONEYWELL STREET
QUEENS, NEW YORK

Prepared for:

AMTRAK

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: J.P.	Date: 01JUL09	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	4
Project Mgr.: J.P.	Office: NY	
File No.: AM7114804.CDR	Project No.: 05571Y10	

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HEALTH AND SAFETY PLAN

APPENDIX A

Activity Hazard Analysis

ACTIVITY HAZARD ANALYSIS

ACTIVITY: Mobilization/Demobilization		Analyzed by / Date:
Principal Steps	**Potential Hazards**	**Recommended Controls**
Set Up of Temporary Facilities (Support, Contamination Reduction, and Exclusion Zones)	Noise	Ear plugs, ear muffs.
	Eyes	Safety glasses with side shields, safety visor, or shield.
	Slips/Trips/Falls	Be sure footing is in a clear area free of loose material.
	Power Tools	Hard hats.
	Heat Stress/Cold Stress	Follow heat stress/cold stress guidelines in HASP appendices.
	Cuts and Abrasions	Wear work gloves.
	Punctures	Wear puncture resistant steel toe boots, long sleeve shirts, work shirts, or coveralls.
	Electrocution	Ground fault circuit interrupters.
	Traffic Hazards	Wear orange safety vests.
	Insect Bites	Use bug repellent.
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
Power Tools (i.e., Drills, Saws) Hand Tools (i.e., Hammer, Shovel, Pry Bars) Trailers, Vehicles, Heavy Equipment	Daily inspections to ensure personnel wear appropriate PPE during mobilization and demobilization work	Tool box safety meetings. Review heavy equipment safety guidelines.

ACTIVITY HAZARD ANALYSIS

(Continued)

ACTIVITY: Sediment and Erosion Control Maintenance		
Principal Steps	**Potential Hazards**	**Recommended Controls**
Install/Repair Silt Fence	Slips/Trips/Falls	Beware of changes in terrain/debris. Keep work areas organized.
	Strain from lifting and bending	Use proper lifting and bending techniques. Do not lift objects >50 lbs. without help.
	Hazardous atmospheres	Intrusions into soil will be scanned by SHSO.
	Excavation	No entry into excavations greater than 5 feet without protective measures.
	Heat Stress	Symptom awareness; drink fluids and take breaks in shade.
	Cold Stress	Warm clothing. Symptom awareness.
	Pinch-points	Beware of compromising situations, i.e., between trailers and equipment.
Heavy Equipment Operation	Operation	Controlled work area. Experienced operators.
	Noise	Wear hearing protection; SHSO will monitor noise levels.
	Dust generation	Monitor with appropriate equipment, and implement dust controls as required by the action level.
	Equipment	Inspect equipment for mechanics and function. Back-up alarms. Equipment has right of way. Set brake when parked. Operators aware of personnel. Seat belts must be worn.

ACTIVITY HAZARD ANALYSIS

(Continued)

ACTIVITY: Sediment and Erosion Control Maintenance		
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
Level D PPE Rubber-Tire Backhoe D5 Dozer Ditchwitch Hydroseeder Water Truck	Daily	40-Hour HAZWOPER. 8-Hour Update. Medical Monitoring. Site Specific Training and Orientation.

ACTIVITY HAZARD ANALYSIS

(Continued)

ACTIVITY: Contaminated Soil Excavation		**Analyzed by / Date:**
Principal Steps	**Potential Hazards**	**Recommended Controls**
Work Zone Delineations Decon Area Layout Personal/Perimeter Air Monitoring Removal of Contaminated Soil Verification of Soil Removal Loading Contaminated Soil for Disposal Decon/Demobilization	Noise	Ear plugs, ear muffs.
	Eyes	Safety glasses with side shields or upgrade to Level C full-face respirators.
	Electrocution	Inspect area for overhead electrical lines. Follow Lockout/Tagout Procedures.
	Puncture	Steel toe/steel shank boots. Avoid direct handling of soil – use shovels, rakes, or squeegees.
	Wildlife	Avoid contact with all animals.
	Hose Connections	Make sure all vacuum line connections are clamped and secured.
	Traffic – Vehicle	Cones and flagging to be used for vehicles parked on streets – if a lane is to be taken, flagmen to be used.
	Traffic – Pedestrian	All work zones to be delineated. SHSO to be able to control area from curious onlookers.

ACTIVITY HAZARD ANALYSIS

(Continued)

ACTIVITY: Contaminated Soil Excavation		Analyzed by / Date:
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
Dump Truck(s) Rubber Tire Backhoe Miscellaneous Hand Tools Level D and Level C PPE Cat 330L Excavator	Prior to start of daily work: -secure the area, -put barriers in place, -inspect equipment. PPE Inspections: -before donning, -use buddy system to continually observe PPE and each other, -upon de-suiting. During Operations that are to remain secure, monitor the atmosphere: -prior to entering confined space, -continually during operations.	40-Hour HAZWOPER. 8-Hour Refresher. Site Specific Training and Orientation. Daily Safety Meetings.

ACTIVITY HAZARD ANALYSIS

(Continued)

ACTIVITY: Miscellaneous Fill Placement		**Analyzed by / Date:**
Principal Steps	**Potential Hazards**	**Recommended Controls**
Grading Placement of Fill	Abrasions; heat stress/cold stress; cuts; slips/trips/falls; insects; rodents and stray animals; hazardous noise; punctures; struck by moving heavy equipment; loading and unloading of heavy equipment; crushed or pinned between machinery; nuisance dust; and contaminated leachate (during drainage system installation)	Hard hats; safety glasses/goggles; work gloves; puncture resistant steel toe/steel shank work boots. Hearing protection (muffs/plugs). Personnel should stand at least 10 feet from moving or the swing radius of equipment. Personal protective equipment.
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
D6 Bulldozer Grader TRI Axle Dump Trucks Water Truck Hand Tools (i.e., Shovels, etc.)	Periodic inspection to ensure site personnel wear the appropriate PPE. Daily site safety inspection checklist. Heavy equipment/machinery must be inspected by SHSO & Operator.	Tool box safety meetings. Review working around or near heavy equipment and review heavy equipment safety guidelines.

ACTIVITY HAZARD ANALYSIS

(Continued)

ACTIVITY: Foundation Demolition		Analyzed by / Date:
Principal Steps	**Potential Hazards**	**Recommended Controls**
Break Concrete Slabs Demolish Foundation Structure	Noise Eyes Slips/Trips/Falls Dust generation Heat Stress Contaminated Soil Heavy Equipment Operation	Ear plugs, ear muffs. Safety glasses with side shields, safety visor, or shield. Be sure footing is in a clear area free of loose material. Monitor with appropriate equipment, and implement dust controls as required by the action level. Replenish fluids, take breaks, get out of the sun, be aware of symptoms. Stop excavation activities. Establish monitoring procedure, upgrade level of PPE as required. Equipment operators to be trained. Equipment has right of way. Back up/travel alarms. Set brakes when parked.
Equipment to be Used	**Inspection requirements**	**Training requirements**
Level D PPE Cat 963 Loader Daewoo 280 Excavator with Grapple Daewoo 280 Excavator with Hammer	Pump is in good working condition. Daily equipment maintenance in accordance with manufacturers' recommendations.	Site specific training. Tool Box Safety Meetings. Review Heavy Equipment Operating and Safety Guidelines.

HEALTH AND SAFETY PLAN

APPENDIX B

Heat and Cold Stress Information

Heat Stress

Heat stress is a significant potential hazard and can be associated with heavy physical activity and/or the use of personal protective equipment (PPE) in hot weather environments.

Heat cramps are brought on by prolonged exposure to heat. As an individual sweats, water and salts are lost by the body resulting in painful muscle cramps. The signs and symptoms of heat cramps are as follows:

- severe muscle cramps, usually in the legs and abdomen;
- exhaustion, often to the point of collapse; and
- dizziness or periods of faintness.

First aid treatment includes moving to a shaded area, rest, and fluid intake. Normally, the individual should recover within one-half hour. If the individual has not recovered within 30 minutes and the temperature has not decreased, the individual should be transported to a hospital for medical attention.

Heat exhaustion may occur in a healthy individual who has been exposed to excessive heat. The circulatory system of the individual fails as blood collects near the skin in an effort to rid the body of excess heat. The signs and symptoms of heat exhaustion are as follows:

- rapid and shallow breathing;
- weak pulse;
- cold and clammy skin with heavy perspiration;
- skin appears pale;
- fatigue and weakness;
- dizziness; and
- elevated body temperature.

First aid treatment includes cooling the victim, elevating the feet, and replacing fluids and electrolytes. If the individual has not recovered within 30 minutes and the temperature has not decreased, the individual should be transported to the hospital for medical attention.

Heat stroke occurs when an individual is exposed to excessive heat and stops sweating. This condition is classified as a **MEDICAL EMERGENCY**, requiring immediate cooling of the victim and transport to a medical facility. The signs and symptoms of heat stroke are as follows:

- dry, hot, red skin;
- body temperature approaching or above 105°F;
- large (dilated) pupils; and
- loss of consciousness - the individual may go into a coma.

First aid treatment requires immediate cooling and transportation to a medical facility.

Heat stress (heat cramps, heat exhaustion, and heat stroke) is a significant hazard if any type of protective equipment (semi-permeable or impermeable) which prevents evaporative cooling is worn in hot weather environments. Local weather conditions may require restricted work schedules in order to adequately protect personnel. The use of work/rest cycles (including working in the cooler periods of the day or evening) and training on the signs and symptoms of heat stress should help prevent heat-related illnesses from occurring. Work/rest cycles will depend on the work load required to perform each task, type of protective equipment, temperature, and humidity. In general, when the temperature exceeds 88°F, a 15 minute rest cycle will be initiated once every two hours. In addition, potable water and fluids containing electrolytes (e.g., Gatorade) will be available to replace lost body fluids.

Cold Stress

Cold stress is a danger at low temperatures and when the wind-chill factor is low. Prevention of cold-related illnesses is a function of whole-body protection. Adequate insulating clothing must be used when the air temperature is below 40°F. In addition, reduced work periods followed by rest in a warm area may be necessary in extreme conditions. Training on the signs and

symptoms of cold stress should prevent cold-related illnesses from occurring. The signs and symptoms of cold stress include the following:

- severe shivering;
- abnormal behavior;
- slowing of body movement;
- weakness;
- stumbling or repeated falling;
- inability to walk;
- collapse; and/or
- unconsciousness.

First aid requires removing the victim from the cold environment and seeking medical attention immediately. Also, prevent further body heat loss by covering the victim lightly with blankets. Do not cover the victim's face. If the victim is still conscious, administer hot drinks, and encourage activity, such as walking wrapped in a blanket.

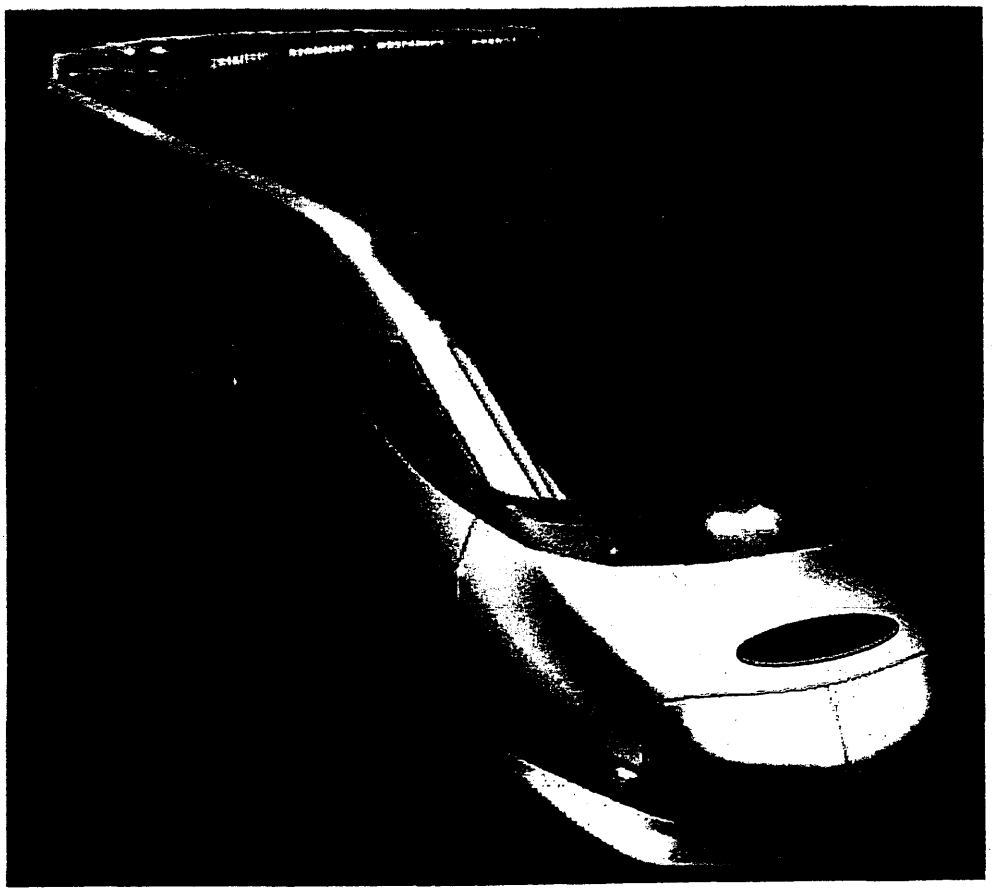
HEALTH AND SAFETY PLAN

APPENDIX C

Amtrak Contractor Employee Safety Program

CONTRACTOR / LESSEE /AGENCY EMPLOYEE SAFETY

For Contractors Working On Or About The Right-Of-Way



COURSE HANDOUT

COURSE NUMBER – CSG-106

© National Railroad Passenger Corporation
December 27, 2001

Contractor / Lessee / Agency Employee Safety

Senior Project Manager, Chief Engineer, or Duly Authorized Representative -

NAME : _____

TELEPHONE : _____

Local Safety Department Representative -

NAME : _____

TELEPHONE : _____

Other –

NAME : _____

TELEPHONE : _____

Other –

NAME : _____

TELEPHONE : _____

AMTRAK Police –

TELEPHONE : 1-800-331-0008 (24 hour)

AMTRAK, Engineering Employee Services
30th Street Station - 3 North, Box 1
Philadelphia, PA 19104

ATS : 728-1553
Commercial :215-349-1553

DANGER! DANGER! DANGER!

Two Of The Biggest Dangers Involved With Working About Railroad Tracks

MOVING TRAINS
&
ELECTRIC POWER LINES

Amtrak ®
December 27, 2001

CONTRACTOR / LESSEE / AGENCY EMPLOYEE SAFETY *COURSE GOALS*

The goal of this course is your safety, the safety of your co-workers, and the safety of everyone on AMTRAK property, including guests on our trains.

To reach this goal, your company must have submitted, and have had approved, a **Site Specific Safety Work Plan**. This Plan will describe the work you will be doing, the hazards that are present in the work, and how you, your co-workers, and everyone else on AMTRAK property will be protected from these hazards. The Senior Project Manager or Project Engineer, and the local Safety Department Representative will approve this plan. If your job meets the Federal Railroad Administration (FRA) criteria (49CFR214) for **Roadway Worker**, you **must complete** an approved Roadway Worker Protection **course** prior to starting work.

The training you receive will:

1. Emphasize the importance of the **Site Specific Work Plan and** the rules and work practices that you must follow while working on AMTRAK property.

2. Stress the importance of using Personal Protective Equipment (PPE) that is required while working on Amtrak property.

3. Familiarize you with the hazards involved in working on or near track over which trains move.

4. Stress the importance of maintaining a safe environment that protects AMTRAK "Guests" and individuals working on the property.

BASIC RULES AND GUIDELINES

1. To access AMTRAK property, an AMTRAK Senior Project Manager/or Chief Engineers Duly Authorized Representative must approve a contractor/lessee/agency.

2. All activities must be coordinated with the Senior Project Manager/Chief Engineers, Duly Authorized Representative.

3. The Senior Project Manager must arrange for appropriate track outages and protection.

4. You must report any unsafe or hazardous conditions to your supervisor and to the AMTRAK representative so that corrective actions can be taken.

5. While on AMTRAK property, you will have on your person the AMTRAK PHOTO ID badge, indicating you have received this training.

6. The color orange will be used only to designate the presence of workers. It will not be used on barriers or fencing materials on or along the right-of-way.

7. Before starting any work, you must participate in a documented job briefing with the employee in charge, at your location.

8. You may not possess, consume, or be under the influence of intoxicants, narcotics or other mood altering substances, including medication while performing work on AMTRAK property.

9. Horse play, fighting, practical jokes, scuffling, or wrestling will not be tolerated.

FAILURE TO COMPLY WITH THESE RULES WILL RESULT IN YOUR IMMEDIATE EXPULSION FROM AMTRAK PROPERTY.

CLOTHING AND PERSONAL PROTECTIVE EQUIPMENT

AMTRAK complies with all OSHA Personal Protective Equipment (PPE) Regulations

Your clothing must fit well and not be so loose that it would be easily snagged or become a hazard.

Normal PPE for working on AMTRAK property will be a hard hat, safety glasses, reflective vests and proper footwear and must be used as appropriate to the work being done.

Other PPE requirements, such as goggles, face shields, safety belts, safety harnesses, respirators, and hearing protection will be determined by your Site Specific Safety Work Plan and provided by your employer.

Your shoes must be at least six inches high, preferably leather, and completely laced, buckled, zipped or otherwise fastened. The shoe must have a defined heel with preferably steel or composite toe.

Do not wear shoes with loose, thin, cracked, rippled, or wedged-type soles.

Do not wear shoes with a metal plate or cleat on the sole or heel. **Do not** allow shoelaces to dangle far enough to become a hazard.

Do not wear sandals, open toe, canvas, athletic type, or shoes that cannot be fastened.

Specific footwear required by law must be addressed in your Site Specific Safety Work Plan.

NOTE: You or your co-workers will not be permitted on AMTRAK property if you are not utilizing the proper Personal Protective Equipment.

BASIC TERMINOLOGY

CLEARANCE POINTS - A point **25 feet from the centerline of outside track** for employees and standing equipment or **15 feet from overhead catenary systems.**

CLASS "A" EMPLOYEE - An AMTRAK Electrical Traction (ET) Department Employee qualified to provide protection from electrical hazards.

CONTRACTOR - A person, persons, or company that have entered into a contract with AMTRAK to perform work on AMTRAK property or AMTRAK equipment, including any sub-contractors, lessees or agencies.

FLAGMAN (New England Division only) - An AMTRAK Train Service employee qualified to protect contractor employees against the movement of trains and to obtain the use of track. The flagman is qualified on the "Rules for Conducting Transportation" and qualified on the physical characteristics of the portion of the railroad involved.

FOUL TIME - A method of establishing working limits through exclusive track occupancy. No trains will operate within a specific segment of track during a specific time period.

GANG WATCHMAN - A person assigned to signal others of the approach of a train. Only a Qualified AMTRAK Employee may perform this function.

HOT RAIL - Expression used to indicate train movement.

JOB BRIEFING - A formal, documented discussion, conducted by the Amtrak representative on site, with each work group or gang, on all safety aspects of the job to be performed. A Job Briefing will be conducted at the beginning of each shift, prior to the start of any task and whenever the conditions of a job may change.

LESSEE - A person, persons, or company that has leased AMTRAK property for their use, to include any sub-contractors or lessees.

OPERATING or LIVE TRACK - Track over which trains may move.

QUALIFIED AMTRAK EMPLOYEE - An AMTRAK employee, such as a foreman or conductor, qualified to remove track from service.

RAILROAD BRIDGE WORKER - Any employee of a railroad (or a contractor) responsible for the construction, inspection, testing or maintenance of a bridge whose assigned duties to be performed on the bridge include inspection, testing, maintenance, repair, construction, or re-construction of the structural member, operating mechanisms and water traffic control systems, or train control systems integral to that bridge (Ref. FRA Bridgeworker Safety Guide).

RIGHT-OF-WAY - The limits of railroad property ownership on either side of tracks.

ROADWAY WORKER - Any employee of a railroad, or of a **contractor** to a railroad, whose duties include inspection, construction, maintenance, or repair of railroad track, bridges, roadway, signal and communication systems, electric traction systems, roadway facilities or roadway maintenance machinery on or near track with the potential of fouling a track, and flagman and watchmen/lookouts.

THIRD PARTY CONTRACTOR WORKER – A contractor whose employees are performing work for utility companies, i.e., overhead power lines, underground pipe jacking, etc. or for public works projects such as overhead highway bridge reconstruction.

USE OF TRACK – Obtaining permission from proper authority for track occupancy (Track out of service / fouling time).

WORKING LIMITS – A segment of track with definite boundaries established in accordance with this rule, upon which trains and engines may move only as authorized by the roadway worker having control over that defined segment of track. Working limits may be established through "exclusive track occupancy", "inaccessible track", or "foul time."

CONTRACTOR/LESSEE RESPONSIBILITIES

Contractors/Lessees are responsible for providing the AMTRAK Senior Project Manager/Chief Engineers Duly Authorized Representative and the local Safety Representative with a **Site Specific Safety Work Plan** that, as a minimum - **1**. Defines the job, **2**. Lists the hazards present in the job, **3**. Lists the controls that will be used to mitigate the hazards. The list of controls will include the specific PPE and employee training requirements.

The contractor's/lessee's workers will attend the Contractor / Lessee / Agency Safety Training prior to commencing work and upon successful completion they will receive their AMTRAK PHOTO ID which must be on their person at all times when on AMTRAK property. The ID will be issued at the end of the safety training. The photo ID is valid for one year from date of issue.

The contractor's / lessee's / agency's equipment operators will be qualified on their equipment and will provide the Senior Project Manager/Chief Engineers Duly Authorized Representative a copy of their qualification certificate, and the current/updated inspection record for the equipment.

NOTE: Cranes and other heavy equipment must be inspected prior to arriving on AMTRAK property. A photo copy of the crane inspection will be kept on the crane at all times.

The contractor / lessee / agency will conduct a documented Job Briefing at the start of each work shift. The Job Briefing will be conducted by the contractor supervisor / foreman or with a qualified AMTRAK employee when appropriate.

Those contractors/lessees/agencies who meet the requirements of a Roadway Worker, will not foul any track unless they have permission from the qualified AMTRAK employee in charge at the job site who will ensure it is safe to work on or near the tracks.

Construction material will not be placed or stored within **25 feet** of the centerline of the track.

If needed, the contractor/lessee/agency will provide and install an approved barrier when the work will have the opportunity to put debris or equipment within **25 feet** of the **centerline of the track** or **15 feet** from **the overhead catenary system**.

It is the contractor's/lessee's responsibility to monitor and enforce the applicable OSHA, EPA, FRA and all other federally required regulations and safe work practices.

Subcontractors/sub-lessees will adhere to the same AMTRAK Safety requirements as the primary Contractor/Lessee.

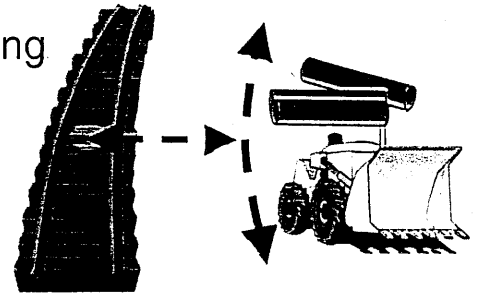
Contractor/lessee/agency employees will become familiar with placement of Watchmen to understand the importance of safety around the tracks. This can be accomplished through the job safety briefings.

GENERAL SAFETY POINTS

1. The safety of Amtrak's passengers ("Guests") is of the highest priority and this must influence all aspects of the job being performed.

2. Expect movement at any time, on any track, in any direction.

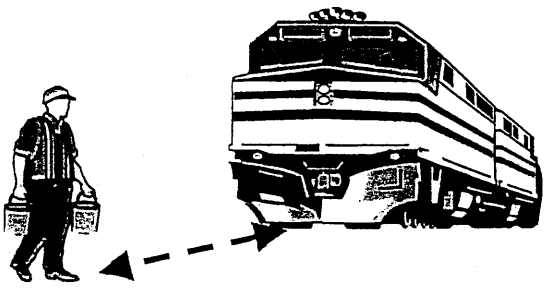
3. Remain further than **25 feet** from operating tracks unless you have permission from the Senior Project Manager/qualified AMTRAK employee in charge.



25 Feet from track

4. When around trains, you must not rely on others to notify you of the approach of a train.

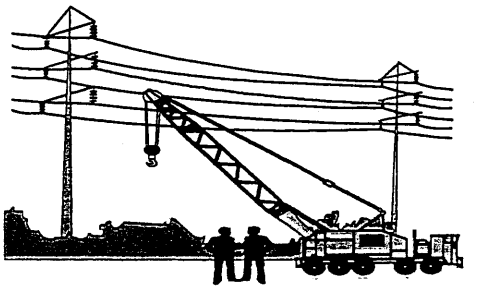
5. Stay **15 feet** from the front or back of standing equipment or trains.



15 Feet from either end of equipment

6. Do not cross, step, sit on, or foul a track(s). Tracks and rails provide poor footing.

7. There may be high voltage electric lines nearby or underfoot. Stay at least **15 feet** from these wires and expect them to be energized at all times. *Note: Grounds for Equipment may be required.*



15 feet from all wires – EXPECT THEM TO BE ENERGIZED

GANG WATCHMAN/FLAGMAN REQUIREMENTS

An AMTRAK Employee In Charge, Watchman or Flagman is required when a contractor/lessee is inspecting, constructing, maintaining, or repairing a railroad track, bridges, roadway, signal & communication systems, electric traction systems, roadway facilities or roadway maintenance machinery within **25 feet** of operating track or within **15 feet** of the overhead catenary system. A protective barrier may be erected to reduce the distance, if approved by the Senior Project Manager/Chief Engineers Duly Authorized Representative and the local Safety Representative. An Advance Gang Watchman/Flagman will be assigned when the watchman positioned with the gang has a restricted view of approaching trains.

The AMTRAK employee responsible for contractor/lessee protection will conduct a Job briefing at the start of each work shift with all employees, contractor and AMTRAK.

An AMTRAK Gang Watchman/Flagman will signal that a train is approaching by blowing a whistle or air horn. They will also raise an orange disc with a large white "W" on it overhead. The Gang Watchman/Flagman will warn the work crew in time for the crew to be clear of the tracks at least **15 seconds** before the train reaches the point of work. You must know where to clear when the train approaches. You must clear all tracks to a predetermined location after receiving the warning from the Gang Watchman/Flagman. When it is safe to resume work, the Gang Watchman/Flagman will signal the crew by holding the orange disc at arm's length toward the point of work.

The Gang Watchman/Flagman will give their total attention to watching for trains and warning employees. They will not perform any other duties, even momentarily. They will not leave their post until protection is unnecessary or another Gang Watchman/Flagman is on the job. In general, the individual providing watchman protection rotates every 4 hours

If anything blocks the watchman's view of trains in either direction or if something interferes with his duty, even momentarily, the watchman will signal the work crew to clear the tracks.

REMOVING TRACKS FROM SERVICE

There are five occasions when the contractor/lessee/agency who is inspecting, constructing, maintaining, or repairing a railroad track, bridges, roadway, signal & communication systems, electric traction systems, roadway facilities or roadway maintenance machinery must obtain fouling time; or, when requesting a track and/or power to be removed from service.

1. When any machinery/equipment occupies the traffic envelope or is within **25 feet** of the outside tracks centerline unless other arrangements have been authorized by the Senior Project Manager/Chief Engineers duly Authorized Representative

2. When any unsecured construction materials (not fenced in, not tied down, not properly locked, etc.) are stored within **25 feet** of the centerline of any track.

3. When boom-equipped construction machinery is used in an area where the boom, loads, leads, etc., have the potential to accidentally swing or fall into the traffic envelope or affect the electrical power lines. **NOTE:** All boom-equipped machinery must be properly grounded, shunted and AMTRAK approved when working near overhead lines. Contractor/lessee must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any overhead wire; and further, an AMTRAK Class "A" Lineman must be present.

4. When contractor activities might affect the stability of adjacent tracks. Maintenance of Way 1000 qualified employee must be present.

5. Any other conditions, circumstances, or situations that may present a danger to employees or the safe movement of trains.

NOTE: PRIOR TO COMMENCING WORK, YOU MUST HAVE A JOB BRIEFING WHICH IS DOCUMENTED AND PLACED ON FILE.

ELECTRICAL HAZARDS

In AMTRAK's Northeast Corridor, many trains are electrically powered. The source of this electricity can be either wires running over the track (catenary) or a "third rail" on the track. These and all electrical lines near the railroad are very dangerous and should be considered energized/live.

To avoid the hazards of these wires, there are several work practices that must be followed.

Persons other than railroad employees attempting to work closer than 15 feet to overhead wires or apparatus, must meet one of the following conditions:

1. Employee is qualified in the electrical trade and a work plan has been approved by the Chief Engineer Electric Traction or his designated representative.
2. Protective measures are taken to prevent persons or equipment from coming in contact with exposed energized overhead lines and apparatus, such as guarding, isolating, protective barriers, and material handling techniques. The Chief Engineer Electric Traction or his designated representative must approve the measures.
3. Protection by a Class "A" employee is provided.

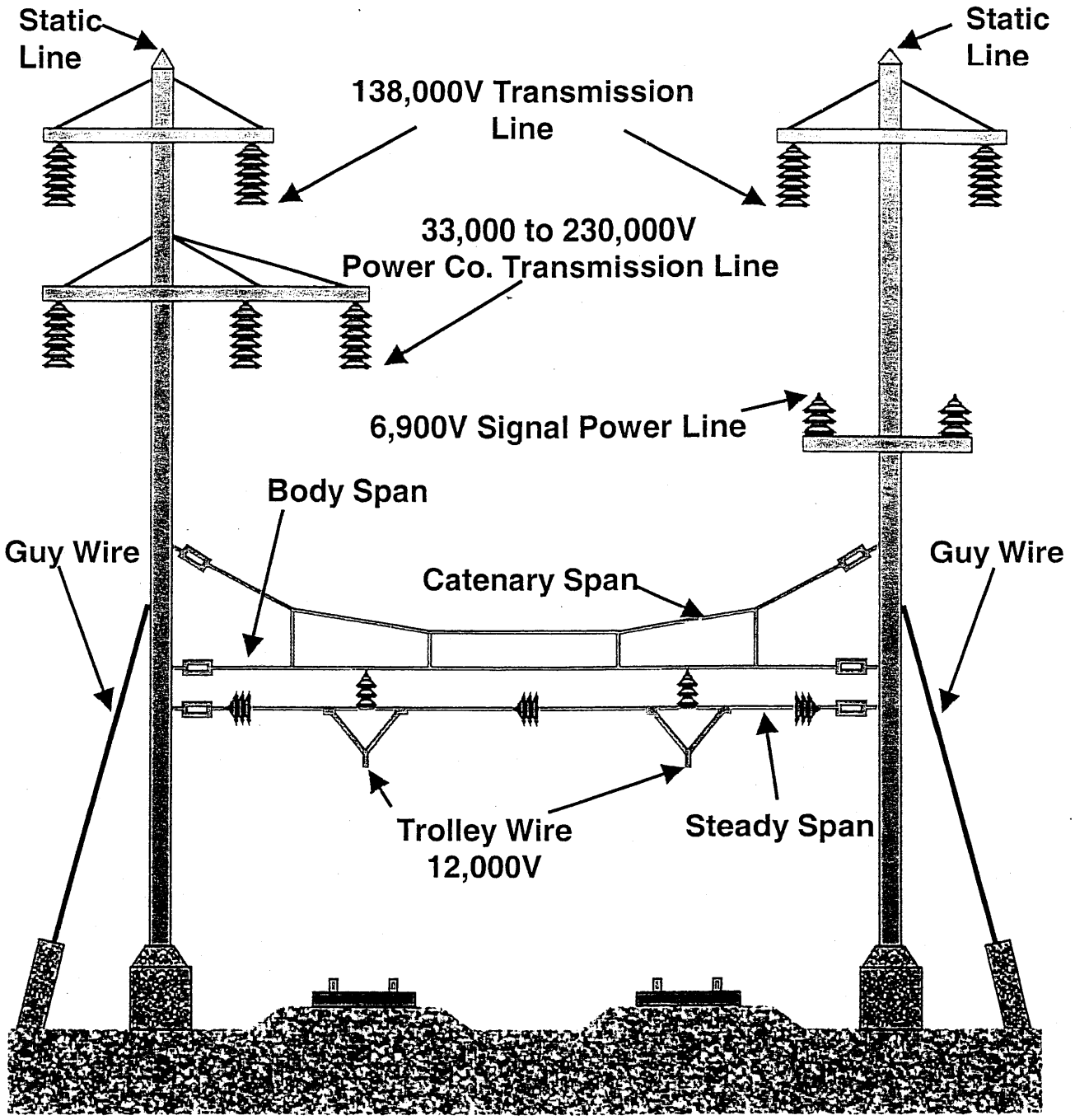
NOTE: Avoid all contact with third rail electrical equipment.

You must obey all instructions from the Class "A" employee. If you do not understand and FOLLOW the instructions, you will not be permitted to work or observe.

The electric power lines which run parallel to the tracks in the Northeast Corridor consist of a catenary system that has up to 25,000 volts. There is also a potential for 6,900 volts in the signal power line and buried commercial power lines, and up to 138, 000 volts in the transmission lines coming into substations. Any and all of these lines carry enough electrical power to kill or seriously injure you.

Southend Electrification Catenary

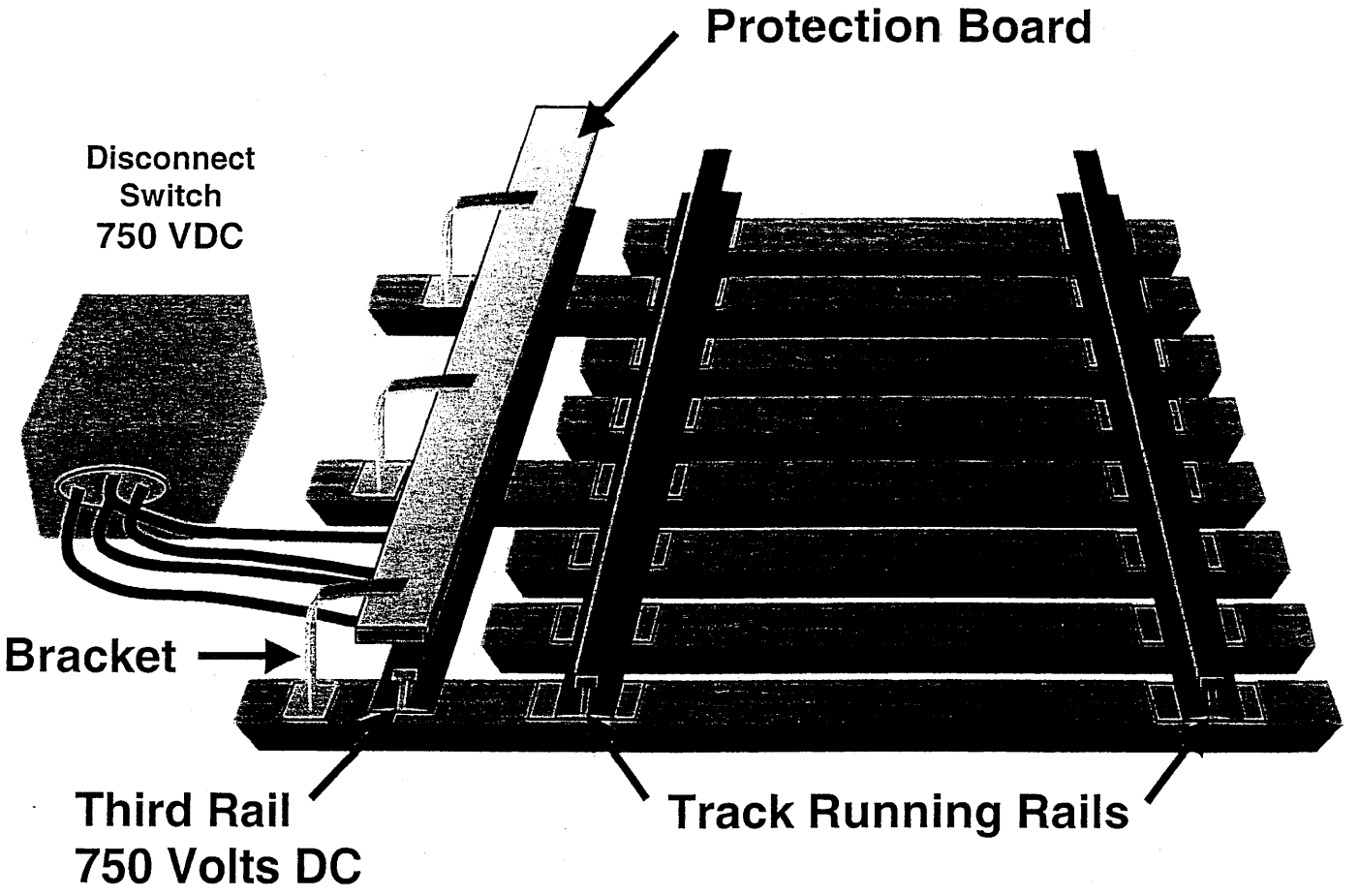
Washington DC to New Haven, CT



All components to be considered energized

Metropolitan Division Third Rail Electrification

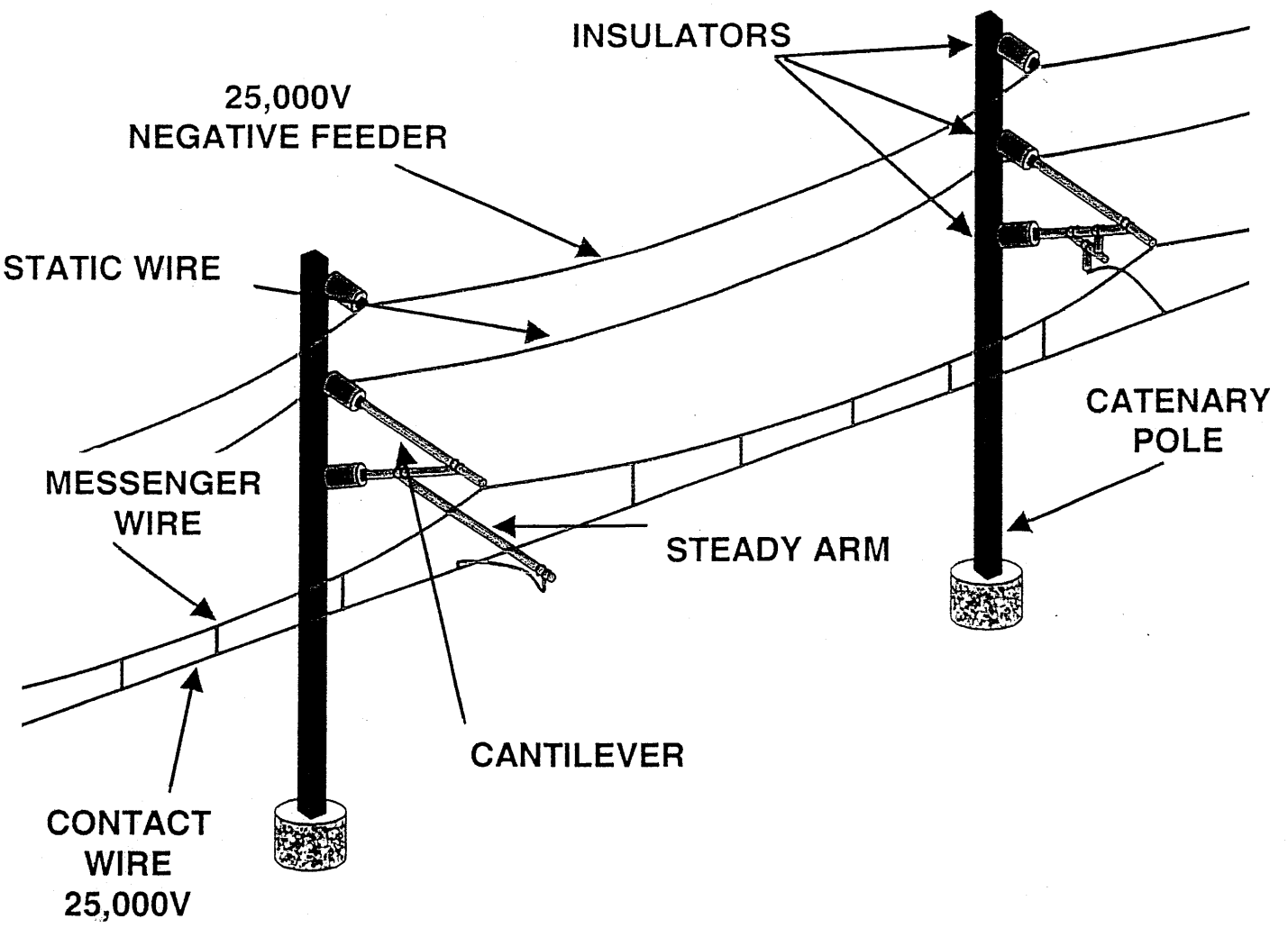
New York City Area



All components to be considered energized

Northend Electrification Constant Tension Catenary

New Haven, CT to Boston, MA



All components to be considered energized

WORKING ON DE-ENERGIZED LINES

When you must work within **15 feet** of electric lines, you must make certain that the lines are de-energized and properly grounded, unless you have written authority from the Office of the Chief Engineer of Electric Traction. When the wires are to be de-energized, each contractor tour of duty will start with the Class "A" employee conducting an/or participating in a Job Briefing. The contractor foreman and all employees working within **15 feet** of the electric lines (or **25 feet** of the track) will be instructed on how to avoid the dangers that may exist.

Before work can be started on or about power lines, an electrical clearance must be obtained by the Class "A" employee. All equipment must be de-energized and grounded. The Class "A" employee will then inform the contractor foreman about wires, equipment, and/or apparatus which are de-energized and the physical limits in which work can be done safely.

The contractor foreman must sign a standard clearance form. His/her signature indicates he/she fully understands the instructions given by the Class "A" employee and has accepted the responsibility of the job briefing to convey these same instructions to his/her gang.

Consideration must be given to the type of tools and equipment to be used. For example, ladders, measuring tapes, survey equipment, etc., must be constructed of non-conductive materials. If there is any doubt, the AMTRAK employee responsible for your protection must be consulted.

No work may be performed without the Class "A" employee being present. The work gang must stop work in the vicinity of the wires whenever the Class "A" employee leaves. Before leaving the work site, the Class "A" employee must make sure that everyone has moved a safe distance away from the wires. The Class "A" employee must also get the foreman's signature showing that he/she and the gang knows the Class "A" employee is leaving and that they will not resume work until advised to do so.

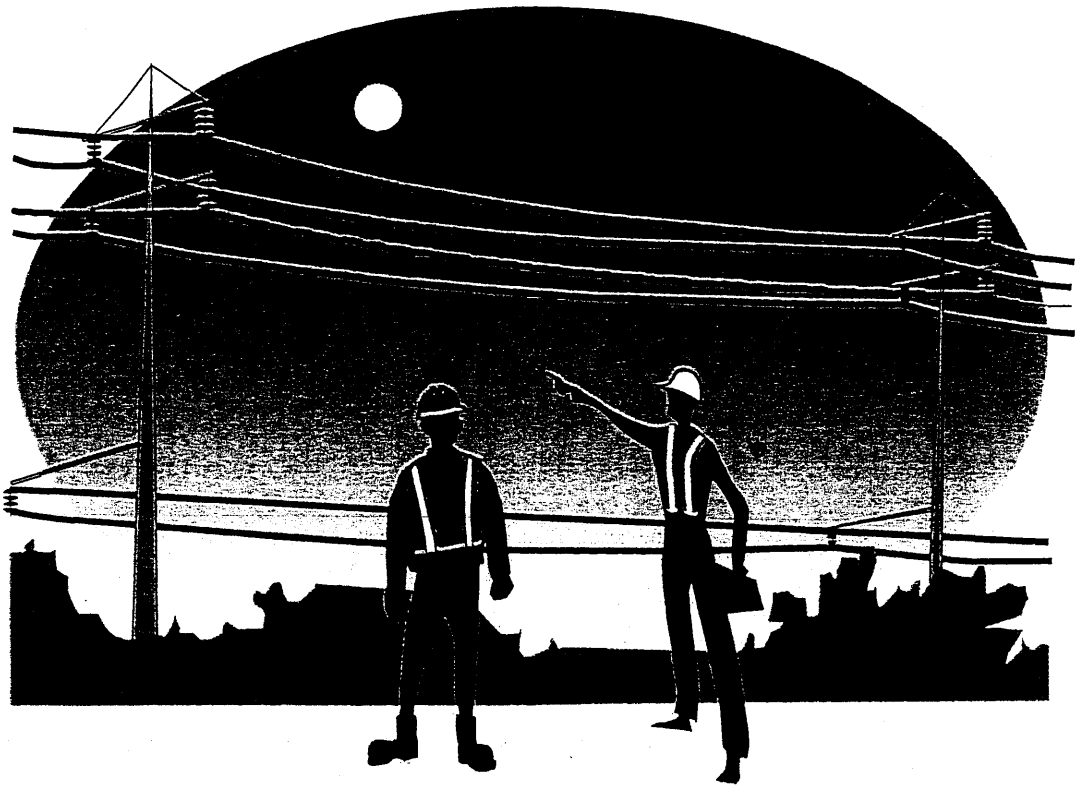
RE-ENERGIZED ELECTRIC LINES

When the electric lines, equipment, etc. are to be re-energized, you must move away at least **15 feet**.

When the clearances are to be released and the lines re-energized, the Class "A" employee will inform the contractor foreman. The foreman is responsible to notify each employee that the lines are going to be re-energized.

The Class "A" employee must be sure that everyone has moved a safe distance away from all wires before removing the grounding devices.

The Class "A" employee also will get the signature of the contractor foreman, showing that he and the work gang have been told the wires, etc., will be re-energized and that they will stay a safe distance until informed otherwise by the Class "A" employee.



REMEMBER

A SITE SPECIFIC SAFETY WORK PLAN
is required for all work.

The Senior Project Manager / Chief Engineers Duly Authorized Representative and the local Safety Department MUST approve the plan.

If your job meets the requirements of Roadway Worker, you must complete an approved Roadway Worker Protection Course PRIOR to starting work.

All Contract Employees must have on their person, their AMTRAK photo ID at all times. This photo ID is valid for one (1) year from the date of issue.

A documented Job Briefing will be conducted by the AMTRAK employee in charge prior to starting work.

HEALTH AND SAFETY PLAN

APPENDIX D

Incident Report

INCIDENT REPORT

Site _____

Site Location _____

Report Prepared By _____
Name Printed Title

Incident Category (Check all that apply)

_____ Injury	_____ Illness	_____ Property Damage
_____ Near Miss	_____ On-Site Equipment	_____ Chemical Exposure
_____ Motor Vehicle	_____ Fire	_____ Electrical
_____ Mechanical	_____ Other	

Date and Time of Incident _____

Name of Persons Insured (see end of report for details)

_____

_____

_____

Narrative Report of Incident

(Provide sufficient detail so that the reader may fully understand the actions leading to or contributing to the incident, the incident occurrence, and actions following the incident. Append additional sheets of paper, if necessary.)

_____

_____

_____

_____

_____

Witnesses to Incident

1. Name _____
   Company _____
   Address _____
   Telephone No. _____

2. Name _____
   Company _____
   Address _____
   Telephone No. _____

Property Damage

Brief Description of Property Damage _____

_____

_____

_____

Estimate of Damage _____

Incident Location

_____

_____

Incident Analysis
(Causative agent most directly related to accident (object, substance, material, machinery, equipment, conditions.)

_____

_____

Was weather a factor? _____

Unsafe mechanical/physical/environmental condition at time of incident (be specific, must be answered):

_____

Unsafe act by injured and/or others contributing to the incident (be specific, must be answered):

_____

Personal factors (improper attitude, lack of knowledge or skill, slow reaction, fatigue):

_____

On-Site Incidents

Level of personal protection equipment required in Site Safety Plan:

_____

_____

_____

Modifications:

_____

_____

Was injured using required equipment?

_____

Incident Follow-Up

Date of Incident:

Brief Description of Incident:

Outcome of Incident:

Physician's Recommendations:

Date Injured Returned to Work:

HEALTH AND SAFETY PLAN

APPENDIX E

Medical Data Sheet

MEDICAL DATA SHEET/FIELD TEAM REVIEW

The information and signature you provide at the bottom of this form affirms that you understand and will comply with the HASP.

Site/Project_____

Name_____

Address_____

Home Phone_____

Age_____ Height _____ Weight _____

Emergency Contacts (List 2)
(1)_____ Telephone_____
(2)_____ Telephone_____

Allergies/Drug Sensitivity _____

Do you wear
contacts?_____

List any illness that was a result of known chemical-exposure.

_____

_____

Have you been hospitalized as a result of a known chemical exposure?

_____

Date/Hospital/Length of
Stay_____

What medications are you presently using? _____

_____

Medical
Restrictions:_____

Name Personal Physician:_____Phone_____

I have read and reviewed the Site-Specific Health & Safety Plan, understand the information contained therein and will comply with all provisions.

Name: _____

Signature:_____

Date: _____

HEALTH AND SAFETY PLAN

APPENDIX F

Daily Safety Log

DATE: _____

TAILGATE SAFETY MEETING

Project Manager: _____ Project Name: _____

Site Supervisor: _____ Project Number: _____

Safety Officer _____ Project Location: _____

Type of Work to be Done: _____

SITE SAFETY INFORMATION:

Weather: _____

Chemical Hazards: _____

Physical Hazards: _____

Protective Clothing/Equipment _____

Exclusion Zone PPE Level(s) _____

Location of Fire Extinguishers _____

Location of First Aid Kit(s) _____

Evacuation Rally Assembly Area: _____

Hospital _____ Phone: _____

Hospital Address _____

*** Dial 9-1-1 & Notify supervisor, safety officer & project manager for emergency medical accidents/incidents**

ATTENDEES

Name Printed	Signature

Meeting Conducted By: _____ _____

Name Printed Signature

HEALTH AND SAFETY PLAN

APPENDIX G

Air Monitoring Log

AIR MONITORING LOG

PROJECT NAME: _____ **PROJECT NUMBER:** _____

PROJECT LOCATION: _____ **DATE:** _____

TYPE OF EQUIPMENT: (A) _____ **S / N:** _____ **CALIBRATION:** _____ **INITIALS:** _____
TYPE OF EQUIPMENT: (B) _____ **S / N:** _____ **CALIBRATION:** _____ **INITIALS:** _____
TYPE OF EQUIPMENT: (C) _____ **S / N:** _____ **CALIBRATION:** _____ **INITIALS:** _____
TYPE OF EQUIPMENT: (D) _____ **S / N:** _____ **CALIBRATION:** _____ **INITIALS:** _____

Location/Work Area	Time	Equip (A)	Equip (B)	Equip (C)	Equip (D)	PPE Level	Comments

_____
Signature

HEALTH AND SAFETY PLAN

APPENDIX H

Weekly Safety Report

WEEKLY SAFETY SUMMARY

Job Name_____ Job#_____

Week of: **Days Without Lost Time Injury:**

Describe any recordable incidents or accidents:

What actions were taken to prevent such incidents or accidents from occurring again:

Was training conducted addressing the incident? Y N What date?___

What level of PPE is currently in place:

Has PPE been upgraded or downgraded:

Have Perimeter Air Monitoring action limits been exceeded:

What action was taken to mitigate the exceedance:

Have personal air monitoring limits been exceeded:

What actions were taken:

List any problems with air monitoring equipment:

Write a summary of work completed during the week:

Write a summary of proposed work for the coming week:

Summarize any safety issues that are outstanding:

HSO Name: _____HSO Signature:_____

HEALTH AND SAFETY PLAN

APPENDIX I

Field Change Review

HEALTH AND SAFETY FIELD CHANGE REQUEST FORM

SITE SAFETY REVIEW – CHANGES AND OVERALL EVALUATION
(To Be Completed For Each Field Change In Plan)

Was the Safety Plan followed as presented? _____ Yes _____ No

Describe, in detail, all changes to the Safety Plan:

_____

_____

_____

Reasons for changes:

_____

_____

_____

Follow-Up, Review and Evaluation Prepared by _____ Date _____

Discipline _____

Approved by: Site Manager _____ Date _____

Site Safety Officer _____ Date _____

Approved by: Office Health & Safety Supervisor _____ Date _____

Evaluation of Site Safety Plan:

Was the Safety Plan adequate? _____ Yes _____ No

What changes would you recommend?

_____

_____

_____

_____