



## Appendix C-3 Site Specific Health and Safety Plan – Readville – Yard 2

*June 2016*

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## Site Specific Health and Safety Plan – Readville – Yard 2

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Designated Health and Safety (H&S) Plan Writer

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Project Manager

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## Foreword

The following Health and Safety Plan (HASP) has been prepared in accordance with the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard, 29 CFR 1910.120. This HASP is applicable to the future Phase II Environmental Site Assessment (ESA) activities planned for the Readville – Yard 2 site. At the time of preparation of this HASP, a Phase II ESA Scope of Work (SOW) has not been prepared for the site. Therefore, there are several sections of the following HASP that will require review once the Phase II ESA SOW is finalized. The sections requiring potential revisions are identified in the text of the HASP and include, but are not limited to, emergency contact information, job safety analyses, personnel exposure monitoring, and client specific health and safety (H&S) requirements.

## 1. Introduction

This HASP has been prepared for the Phase II ESA work planned for Readville – Yard 2 site, located in Boston, Massachusetts. The work on this project will be carried out in compliance with Contractor's H&S Standards, and the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation. Specific H&S information for the project is contained in this HASP. All personnel working on hazardous operations or in the area of hazardous operations shall read and be familiar with this HASP before doing any work. All project personnel shall sign the certification page acknowledging that they have read and understand this HASP.

Changes in the scope of the project or introduction of new hazards to the project shall require revision of the HASP by the HASP writer and reviewer, and approval by the Project Manager (PM). The HASP Addendum Form and Log Table are included as Attachment A.

## 2. Emergency Contact Information and Procedures

Table 1 presents the Emergency Contact Information associated with the planned Phase II ESA work. List the appropriate Contractor PM, Contractor H&S Manager, and Client H&S Contact once they have been identified. The information in Table 1 should be revised, if necessary, upon review of the Phase II ESA SOW and prior to initializing the Phase II ESA activities.

**Table 1 — Emergency Contact Information**

Contact	Contact Information
Local Police – Boston Police	911 and 617-343-5600
MBTA Transit Police	617-222-1212
Local Ambulance – Boston Fire Department	911 and 617-364-9677
Local Fire Department – Boston Fire Department	911 and 617-364-9677
Local Hospital: Boston Medical Center	617-313-1132
Local Weather Data	Weather.com
Poison Control	800-332-3073
National Response Center (all spills in reportable quantities)	800-424-8802
U.S. Coast Guard (spills to water)	800-424-8802
Team PM	TBD
Team H&S Manager	TBD
Client H&S Contact	TBD

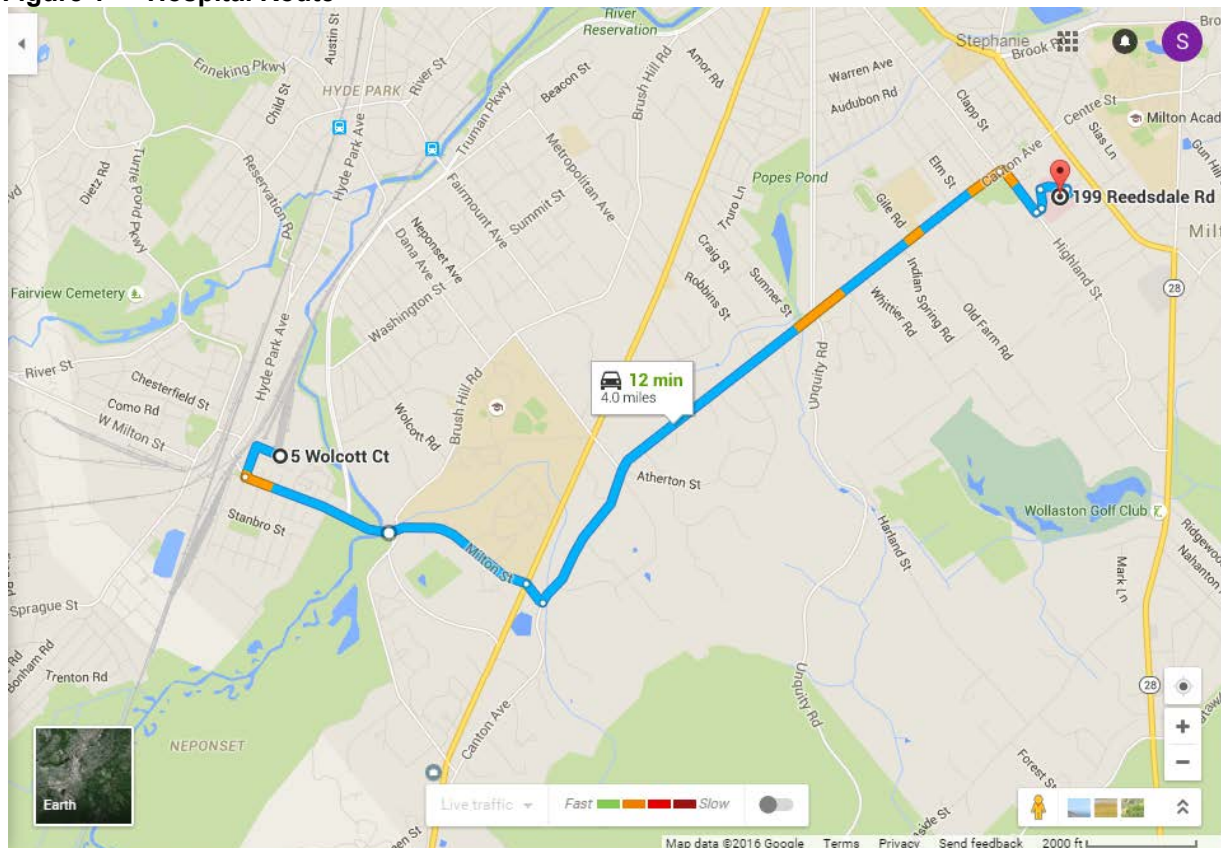
Table 2 presents the location of and directions to the nearest hospital with emergency medicine capabilities should transportation be required during the completion of the Phase II ESA work. The information in Table 2 should be revised, if necessary, upon review of the Phase II SOW and prior to initializing the Phase II ESA activities.

**Table 2 —Hospital Locations and Directions**

Medical Facility	Beth Israel Deaconess Hospital
Address	199 Reedsdale Road, Milton, Massachusetts 02189
Phone Number	617-313-1132

1. Head northwest on Wolcott Court towards Wolcott Street.
2. Turn left onto Neponset Valley Parkway.
3. Slight left onto Milton Street.
4. Milton Street turns slightly right and becomes Dollar Lane.
5. Turn left onto Canton Avenue, continue for 2.2 miles.
6. Turn right onto Highland Street.
7. Turn left at into Beth Israel Deaconess Hospital, 199 Reedsdale Road, Milton, MA 02186.

**Figure 1 — Hospital Route**





## 2.1 Emergency Notification Procedure for the Project

1. Dial 911 (if necessary).
2. Contact Project Manager (PM)/Task Manager (TM).
3. Contact Team H&S Coordinator.
4. Contact Client H&S Contact.

## 2.2 Emergency Supplies and Equipment List

Table 3 presents the appropriate Emergency Supplies and Equipment List for the planned Phase II ESA work. Select the appropriate supplies and equipment based on the proposed work. The information in Table 3 should be revised, if necessary, upon review of the Phase II SOW and prior to initializing the Phase II ESA activities.

**Table 3 — Emergency Supplies and Equipment List**

Emergency Supplies and Equipment (check all that apply)	Location on Project Site
<input checked="" type="checkbox"/> First Aid Kit (type):	TBD
<input checked="" type="checkbox"/> Fire Extinguisher	TBD
<input checked="" type="checkbox"/> Mobile Phone <input type="checkbox"/> Satellite Phone	TBD
<input checked="" type="checkbox"/> Traffic Cones	TBD
<input type="checkbox"/> Walkie Talkies	
<input type="checkbox"/> Water or Other Fluid Replenishment	
<input type="checkbox"/> Eye Wash/Quick Drench Station	
<input checked="" type="checkbox"/> Eye Wash Bottle	TBD
<input type="checkbox"/> Wash and Dry Towelettes	
<input type="checkbox"/> Sunscreen (SPF 15 or higher)	
<input type="checkbox"/> Insect Repellent	
<input checked="" type="checkbox"/> Chemical Spill Kit	TBD
<input type="checkbox"/> Other (specify):	

## 3. Project and Site History Requirements

### 3.1 Site Background

The Readville – Yard 2 is generally located on property currently owned by the Massachusetts Bay Transportation Authority (MBTA) and the Commonwealth of Massachusetts. This area has been used as a rail yard storage and maintenance area since the early 1900s. The expanded rail yard facility will be partially located on a private parcel adjacent to the MBTA property, which also been historically and presently used as a scrap and junk yard for old cars and metal debris.

### 3.2 Site Description

The majority of the expanded rail yard will be located on property that is currently a MBTA rail layover and maintenance facility. The existing MBTA property has 12 layover tracks, paved roads, and a full maintenance building for train repairs. This is an active rail yard secured by a perimeter fence and generally flat. The adjacent private parcel is presently being used by the James Grant Company for a metal recycling facility and storage.

Table 4 lists various site types which can have an effect on HASP requirements for the planned Phase II ESA work. Select the appropriate characteristics for the site.

**Table 4 — Site Type (Check as many as applicable)**

X	Active	X	Secure		Industrial		Landfill		Service station
	Inactive	X	Unsecured		Commercial		Well field		Water work
			Uncontrolled		Residential	X	Railroad		Undeveloped
Other specify:									

Based on the completion of a Phase I ESA, several potential Chemicals of Concern (COCs) were identified. These primary COCs include, but may not be limited to, those listed in Table 5.

**Table 5 — Primary Chemicals of Concern**

Known Compounds	Source (soil/water/drum, etc.)	Known Concentration Range (ppm, mg/kg, mg/l)	
		Lowest	Highest
Polychlorinated biphenyls (PCBs)	Soil	unknown	44.5 mg/kg
Asbestos	Soil	unknown	present
Volatile Petroleum Hydrocarbons	Soil/Water	unknown	unknown
Extractable Petroleum Hydro Carbons	Soil/Water	unknown	3,290 mg/kg (C9-C18 Aliphatic hydrocarbons)
Volatile Organic Compounds	Soil/Water	unknown	unknown
Polycyclic Aromatic Hydrocarbons	Soil/Water	unknown	5,870 mg/kg (Benzo(a)pyrene)

### 3.3 List of Project Tasks and Phase II Scope of Work

1. Task 1 – Subsurface Investigation: Prior to completion of the subsurface investigation activities, a ground penetrating radar survey will be completed.
2. Task 2 – Soil Sampling: A soil sampling program will be conducted to determine the extent of potential impacts at the site. Samples will be obtained via Geoprobe® sampling techniques. Specific safety issues related to Geoprobe or other drilling techniques will be addressed in the Job Safety Analysis (JSA), a sample of which can be found in Attachment B.
3. Task 3 – Groundwater Sampling: An evaluation of the groundwater conditions at the site will include the surveying, gauging and sampling of monitor wells.

## 4. Contractor Organization and Responsibilities

### 4.1 All Personnel

Each person is responsible for completing tasks safely, and reporting any unsafe acts or conditions to their supervisor. No person may work in a manner which conflicts with these procedures. Prior to initiating site activities, all Contractor and subcontractor personnel will receive training in accordance with applicable regulations, and be familiar with the requirements and standards referenced in this HASP. In addition, all personnel will attend daily safety meetings (tailgate meetings) to discuss site-specific hazards prior to beginning each day's work. Every Contractor employee, subcontractor, and client representative at the site has the responsibility and authority to **Stop Work** of a coworker or subcontractor if the working conditions or behaviors are considered unsafe by them. When a **Stop Work** occurs, a review of the concerns should be conducted by the crew involved. Should the crew involved not be able to address the **Stop Work** concerns, the Site Safety Officer should be notified to review the conditions. There is no required period of down time for a **Stop Work** and work can commence once the conditions have been reviewed and addressed if necessary.

## **4.2 Project Manager /Task Manager**

The PM is responsible for verifying that project activities are completed in accordance with the requirements of this HASP. The TM is the person generally responsible for the implementation of the field activities and safety on the project site. The PM is responsible for verifying that project activities are completed in accordance with the requirements of this HASP. The PM is responsible for confirming that the project has the equipment, materials, and qualified personnel to fully implement the safety requirements of this HASP, and/or that subcontractors assigned to this project, meet the requirements established by the Contractor. It is also the responsibility of the PM to:

- Review all applicable H&S Standards, and ensure that project activities conform to all requirements;
- Obtain client-specific H&S information and communicate with the client on H&S issues;
- Communicate with the Site Safety Officer (SSO) on H&S issues;
- Allocate resources for correction of identified unsafe work conditions;
- Ensure the Contractor's site workers have all training necessary for the project; and
- Report all injuries, illnesses and near-misses to the client representative, lead incident investigations, and ensure that any recommendations made are implemented.

## **4.3 Site Safety Officer (SSO)**

The SSO has overall responsibility for the technical H&S aspects of the project. Inquiries regarding the Contractor's H&S standards, project procedures, and other technical or regulatory issues should be addressed to this individual. It is also the responsibility of the SSO to:

- Review and work in accordance with the components of this HASP;
- Ensure that this HASP is available to and reviewed by all site personnel including subcontractors;
- Ensure that necessary site-specific training is performed (both initial and "tailgate" safety briefings);
- Ensure site visitors have been informed of the hazards related to the Contractors work;
- Ensure that work is performed in a safe manner and has authority to stop work when necessary to protect workers and/or the public;
- Coordinate activities during emergency situations;
- Ensure that all necessary permits and safety information provided by the client is disseminated to other site personnel and is maintained in an organized manner;
- Communicate with the PM on H&S issues;
- Report all injuries, illnesses and near-misses to the PM;
- Ensure that necessary safety equipment is maintained and used at the site; and
- Contact a H&S professional for assistance in establishing the respiratory cartridge change schedule as required.

An individual can act as more than one role, PM, TM, and/or SSO, during field activities.



			Compressed air/aerosols		Cadmium
	<b>Environment</b>	M	Hydraulic systems		Hydrogen sulfide
L	Heat			M	Lead
L	Cold		<b>Sound</b>		Silica
	Lightning	L	Equipment noise		
	Inclement weather		Tool noise		<b>Gravity</b>
	High wind	L	Traffic noise (vehicle/train/etc.)	M	Slip, trip, fall
					Fall from height
					Ladders or scaffolds
					Struck by falling object

## 5.2 Job Safety Analyses, Health and Safety Standards, and Personal Protective Equipment

Site specific Job Safety Analyses (JSAs) will be completed for each safety critical task. An example is included in Attachment B. Hazards identified in the table above will be addressed specifically in the JSAs as well as control methods to protect employees and property from hazards. The JSA must list the type of personal protective equipment (PPE) required for the completion of the project.

- Level D protection is the minimum protection required. Appropriate Level D protective equipment may include: Gloves, coveralls, safety glasses, face shield, and chemical-resistant, steel-toe shoes.
- Level C protection is required when the concentration and type of airborne substances is known and the criteria for using air purifying respirators are met. Typical Level C equipment may include: full-face air purifying respirators, inner and outer chemical-resistant gloves, hard hat, escape mask, and disposable chemical-resistant outer boots.
- Level B protection is required under circumstances requiring the highest level of respiratory protection, with lesser level of skin protection. Examples of Level B protection include: positive pressure, full face-piece self-contained breathing apparatus (SCBA) or positive pressure supplied air respirator with escape SCBA; inner and outer chemical-resistant gloves; face shield; hooded chemical resistant clothing; coveralls; and outer chemical-resistant boots.
- Level A protection is required when the greatest potential for exposure to hazards exists, and when the greatest level of skin, respiratory, and eye protection is required. Examples of Level A clothing and equipment include: positive pressure, full face-piece SCBA or positive pressure supplied air respirator with escape SCBA; totally encapsulated chemical- and vapor-protective suit; inner and outer chemical-resistant gloves; and disposable protective suit, gloves, and boots.

A detailed list of PPE for the project is located in Attachment C.

Items for which the contractor should have H&S Standards for this project are listed below. These standards should be reviewed by the PM, TM and site personnel. Prior to initializing the Phase II ESA SOW the potential for client specific JSAs, H&S standards, and PPE requirements need to be reviewed. The Client's H&S Contact should be contacted with any questions concerning the standards, including:

- Utility Location;
- Drilling, Excavation and Trenching;
- Benzene;
- Asbestos;
- Polychlorinated biphenyls (PCBs); and/or

- Lead.

## 6. Hazard Communication

All project-required chemicals must be handled in accordance with the Contractor's Standard. The table below lists all chemicals that will be brought, used, and/or stored on the site by Contractor's and/or its subcontractors. Material Safety Data Sheets (MSDS) for chemicals brought on site are included in Attachment D. In Table 7 below, list the chemicals anticipated to be used by the Contractor on this project subject to HazCom requirements. Modify quantities as needed.

Table 7 provides a list of various chemicals that may be used on site during the activities for the planned Phase II ESA work. Select the appropriate on-site chemicals based on the proposed work and the expected quantities. The information in Table 7 should be revised, if necessary, upon review of the Phase II SOW and prior to initializing the Phase II ESA activities. This list should be revised when any new chemicals are brought onto the site and reviewed every six months during the project to ensure it is accurate.

**Table 7 — On-Site Chemicals**

	Acids/Bases	Qty.		Decontamination	Qty.		Calibration	Qty.
<input type="checkbox"/>	Not applicable		<input type="checkbox"/>	Not applicable		<input type="checkbox"/>	Not applicable	
<input type="checkbox"/>	Hydrochloric acid		<input type="checkbox"/>	Alconox		<input type="checkbox"/>	Isobutylene/air	
<input type="checkbox"/>	Nitric acid		<input type="checkbox"/>	Liquinox		<input type="checkbox"/>	Methane/air	
<input type="checkbox"/>	Sulfuric acid		<input type="checkbox"/>	Acetone		<input type="checkbox"/>	Pentane/air	
<input type="checkbox"/>	Sodium hydroxide		<input type="checkbox"/>	Methanol		<input type="checkbox"/>	Hydrogen/air	
<input type="checkbox"/>	Zinc acetate		<input type="checkbox"/>	Hexane		<input type="checkbox"/>	Propane/air	
<input type="checkbox"/>	Ascorbic acid		<input type="checkbox"/>	Isopropyl alcohol		<input type="checkbox"/>	Hydrogen sulfide/air	
<input type="checkbox"/>	Acetic acid		<input type="checkbox"/>	Nitric acid		<input type="checkbox"/>	Carbon monoxide/air	
<input type="checkbox"/>	Other:		<input type="checkbox"/>	Other:		<input type="checkbox"/>	pH standards (4,7,10)	
						<input type="checkbox"/>	Conductivity standards	
						<input type="checkbox"/>	Other:	
	Fuels	Qty.		Kits	Qty.			
<input type="checkbox"/>	Not applicable		<input type="checkbox"/>	Not applicable				
<input type="checkbox"/>	Gasoline		<input type="checkbox"/>	Hach			Specify:	
<input type="checkbox"/>	Diesel		<input type="checkbox"/>	DTECH			Specify:	
<input type="checkbox"/>	Kerosene		<input type="checkbox"/>	EPA 5035 Soil			Specify:	
<input type="checkbox"/>	Propane		<input type="checkbox"/>	Other:				
<input type="checkbox"/>	Other:							
	Remediation	Qty.					Other:	Qty.
<input type="checkbox"/>	Not applicable					<input type="checkbox"/>	Not applicable	
<input type="checkbox"/>	Other:					<input type="checkbox"/>	Spray paint	
<input type="checkbox"/>	Other:					<input type="checkbox"/>	WD-40	
<input type="checkbox"/>	Other:					<input type="checkbox"/>	Pipe cement	
<input type="checkbox"/>	Other:					<input type="checkbox"/>	Pipe primer	
<input type="checkbox"/>	Other:					<input type="checkbox"/>	Mineral spirits	

## 7. Chemical Hazards

As required, air monitoring will be conducted and as outlined in this HASP to collect exposure data for COCs or for chemicals brought onsite for use. Table 8 lists the properties of chemicals that will be encountered at the site.

**Table 8 — Chemical Hazard Information**

Chemical Name	IP (eV)	Routes of Entry/ Exposure Symptoms	8-hr TWA <sup>a</sup> (ppm)	IDLH <sup>b</sup> (NIOSH) (ppm)	STEL (ppm)	Source TLV/PEL
PCBs		Inhalation, absorption	.5 mg/m <sup>3</sup>	5 mg/ m <sup>3</sup>	.5 mg/m <sup>3</sup>	.5 mg/m <sup>3</sup>
Lead	NA	inhalation	.05 mg/m <sup>3</sup>	100 mg /m <sup>3</sup>	Not Listed	.05 mg/m <sup>3</sup>
Asbestos		Inhalation	0.1 fibers/cm <sup>3</sup>	Not Listed	1.0 fibers/cm <sup>3</sup>	0.1 fibers/cm <sup>3</sup>

NA – Not Applicable

<sup>a</sup> The Threshold Limit Value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) is listed unless the Permissible Exposure Limit (PEL), designated by OSHA, is lower.

<sup>b</sup> Immediately Dangerous To Life or Health (IDLH) per the National Institute for Occupational Safety and Health (NIOSH).

See Section 9 for information on air monitoring requirements.

## 8. Tailgate Meetings

Tailgate safety briefings must be conducted at least once daily and should be conducted twice daily (at the start of the job and after midday meal break), or as tasks/hazards change. Each tailgate safety briefing must be documented on the form included in Attachment E and maintained with the project files. The tailgate safety briefing will serve as a final review for JSAs, hazard identification and controls to be utilized.

## 9. Personal Exposure Monitoring and Respiratory Protection

This section has been provided should personal exposure monitoring and respiratory protection be required. Based on the final Phase II SOW, the Team H&S Manager will determine the necessity of this section. This determination is to be conducted prior to implementing the Phase II ESA SOW.

Personal and area exposure monitoring will be documented on the Real Time Exposure Monitoring Data Form provided in Attachment E. All monitoring equipment will be maintained and calibrated in accordance with manufacturer's recommendations. All pertinent monitoring data will be logged on the form and maintained on site for the duration of project activities. Calibration of all monitoring equipment will be conducted daily and logged on the same form.

Table 9 lists exposure monitoring requirements and associated action levels for site exposure hazards (e.g. chemical, noise, radiation, etc.). Action levels have been developed for exposure monitoring with real-time air monitoring instruments as specified in the table. Air monitoring data will determine the required respiratory protection levels at the Site during scheduled intrusive activities. The action levels are based on sustained readings indicated by the instrument(s). Air monitoring will be performed and recorded at up to 30-minute intervals.

If elevated concentrations are indicated, the monitoring frequency will be increased, as appropriate. If sustained measurements are observed during this time, the following actions will be instituted, and the PM and Project Health and Safety Manager will be notified. For purposes of this HASP, sustained readings are defined as the average airborne concentration maintained for a period of one (1) minute.

**Table 9 — Exposure Monitoring Requirements**

TASK 1 – Is exposure monitoring required for the completion of this task? <input type="checkbox"/> YES <input type="checkbox"/> NO				
If yes, complete the following:				
Exposure Hazard	Monitoring Equipment	Monitoring Frequency	Action Level	Required Action
TBD				
TASK 2 – Is exposure monitoring required for the completion of this task? <input type="checkbox"/> YES <input type="checkbox"/> NO				
If yes, complete the following:				
Exposure Hazard	Monitoring Equipment	Monitoring Frequency	Action Level	Required Action
TBD				
TASK 3 – Is exposure monitoring required for the completion of this task? <input type="checkbox"/> YES <input type="checkbox"/> NO				
If yes, complete the following:				
Exposure Hazard	Monitoring Equipment	Monitoring Frequency	Action Level	Required Action
TBD				

## 9.1 Respirator Cartridge Change Schedule

Respirators will be stored in clean containers (i.e., self-sealing bag) when not in use. If respirators are required to be worn based on the action levels established above, respirator cartridges will be replaced in accordance with the following change-out schedule.

**Table 10 — Respirator Cartridge Change Schedule**

Type of Cartridge	Cartridge Change-out Schedule
Particulate (i.e., High Efficiency Particulate Air)	At least weekly or whenever the employee detects an increase in breathing resistance. This will occur as the filter becomes loaded with particulate matter.
Sorbent (i.e., organic vapor)	At the end of each day's use or sooner, if the respirator manufacturer change-out schedule software program dictates otherwise. The Project H&S Manager or the PM must be consulted regarding gas/vapor cartridge change-out schedule. This will be determined per the Contractors Respiratory Protection standard.

Personnel who wear air purifying respirators (APRs) must be trained in their use, must have successfully passed a qualitative respiratory fit test within the last 12 months, and must have medical clearance for APR use.

With the exception of protection against particulates<sup>1</sup>, if the action plan outlined above calls for an upgrade to an air-purifying respirator (for protection against organic vapors and other gaseous chemicals), the following will apply:

<sup>1</sup> Cartridge Change Schedule is not necessary for cartridges used in the protection against particulates provided that the cartridges are changed out when there is a perceived resistance in breathing experienced by the user.



- The respirator cartridge will be equipped with an end-of-service-life indicator (ESLI) certified by National Institute for Occupational Safety and Health (NIOSH) for the contaminant; or
- If there is no ESLI appropriate for a contaminant, the project will implement a change schedule for cartridges to ensure that they are changed before the end of their service life.

## **10. Medical Surveillance**

Medical surveillance requirements are outlined in the Contractor Medical Monitoring Standard. All medical surveillance requirements as indicated must be completed and site personnel medically cleared before being permitted on the project site.

## **11. General Site Access and Control**

The SSO will coordinate access and control security at the work site. As the work dictates, the SSO will establish a work area perimeter. The size of the perimeter will be based on the daily task activities and will be discussed with all project personnel during the tailgate meeting and then documented on the tailgate meeting form. Control zones for Level C or above, as described previously, will be demarcated by either visual or physical devices and will be monitored for effectiveness by the SSO.

Only authorized personnel will be allowed beyond the perimeter. Other site workers and visitors to the site should be kept out of the work site. If visitors need access to the site, the SSO will escort the visitor at all times. All visitors will log in and out with the SSO. The visitor log sheet is included in Attachment F.

### **11.1 Sanitation at Temporary Workplaces**

#### **11.1.1 Potable Water**

An adequate supply of potable water must be provided on the site. Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers. Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose. Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

Potable water is available at facilities on site.

#### **11.1.2 Toilet Facilities**

Under temporary field conditions, the SSO will make provisions so that no less than one toilet facility is available. Use of a nearby toilet facility is an acceptable arrangement for mobile crews having transportation readily available.

Restroom facilities are available on site.

## **12. Decontamination Control Zones and Procedures**

This section has been provided should decontamination control zones and procedures for Level C or higher be required. Based on the final Phase II SOW, the Team H&S Manager will determine the

necessity of this section and make appropriate revisions. This determination is to be conducted prior to implementing the Phase II ESA SOW.

The zones for Level C and above will be designated by traffic cones, barricades, signs, caution tape, or other means effective in identifying the different areas. The SSO will establish control boundaries for the exclusion zone, contamination reduction zone, and the support zone. The zones will be identified by the SSO during tailgate meetings and documented on the meeting form. Entrance and exit to the exclusion zone will only be through controlled access points established for each work area.

Level B or Level A decontamination procedures are detailed in the table below.

**Table 11 — Level A/B Decontamination Steps**

Level A Decontamination Steps		Level B Decontamination Steps	
EZ-1	Segregated Equipment Drop	EZ-1	Segregated Equipment Drop
EZ-2	Boot Cover and Glove Wash	EZ-2	Boot Cover and Glove Wash
EZ-3	Boot Cover and Glove Rinse	EZ-3	Boot Cover and Glove Rinse
EZ-4	Tape Removal	EZ-4	Tape Removal
EZ-5	Boot Cover Removal	EZ-5	Boot Cover Removal
EZ-6	Outer Glove Removal	EZ-6	Outer Glove Removal
CRZ-7	Suit/Safety Boot Wash	CRZ-7	Outer Glove Removal
CRZ-8	Suit/Safety Boot Rinse	CRZ-8	Suit/SCBA/Boot/Glove Rinse
CRZ-9	Encapsulated Suit Partial Removal/Tank Change	CRZ-9	Tank Change
CRZ-9a	Redress-return to EZ	CRZ-9a	Redress-return to EZ
CRZ-10	Safety Boot Removal	CRZ-10	Safety Boot Removal
CRZ-11	Encapsulated Suit Removal	CRZ-11	SCBA Removal
CRZ-12	SCBA Removal	CRZ-12	Splash Suit Removal
CRZ-13	Inner Glove Wash	CRZ-13	Inner Glove Wash
CRZ-14	Inner Glove Rinse	CRZ-14	Inner Glove Rinse
CRZ-15	Face-piece Removal	CRZ-15	Face-piece Removal
CRZ-16	Inner Glove Removal	CRZ-16	Inner Glove Removal
CRZ-17	Inner Clothing Removal	CRZ-17	Inner Clothing Removal
SZ-18	Field Wash	SZ-18	Field Wash
SZ-19	Redress	SZ-19	Redress

Zones include:

- EZ-Exclusion Zone – The area of investigation or contamination. No personnel allowed unless appropriate PPE is worn;
- CRZ-Contamination Reduction Zone – The transition area of between contaminated areas and the support zone. Decontamination activities are conducted here; and
- SZ-Support Zone – Non-contaminated areas outside the work zone.

### 13. Emergency Action Plan (EAP)

An Emergency Action Plan (EAP) will be prepared and approved by the SSO. The EAP will be included in Attachment G. The EAP details the procedures to take in the event that an injury, over-exposure or spill has occurred. The EAP must be approved by the SSO and reviewed by site personnel working under this HASP. All employees working on this project must be shown the location and proper use of all emergency equipment prior to beginning work on the project.

## 14. Client-Specific Health and Safety Requirements

Prior to implementing the Phase II ESA, the Team H&S Manager should verify that the client does not have specific health and safety requirements that apply to the proposed work. If the client has requirements they should be listed and defined in this section, otherwise this section can be removed.

Contractor project personnel must comply with the client's specific H&S requirements at all times. Client-specific H&S requirements are as follows:

- (list requirements here)

## 15. Ground or Air Shipments of Hazardous Materials (HazMat)

All samples, electronic equipment with batteries, powders, gases, liquids, magnetized materials or radioactive materials being shipped by air or ground transport will be evaluated using the appropriate Shipping Determination process to determine if the material or equipment being shipped is hazardous for transport. All materials identified as HazMat will be shipped according to applicable MassDOT and International Air Transport Association (IATA) regulations and requirements as prescribed by the Contractor DOT Program.

All employees collecting samples, preparing HazMat packages, or offering HazMat to a 3rd-party carrier such as FedEx will have current HazMat training.

## 16. H&S Orientation and Task Improvement Process

As part of any project, no matter how simple or complex, Task Improvement Processes (TIPs) should be conducted when practical and when able to integrate into normal business activities. TIPs should be scheduled based on the risk of the tasks being performed, and should be conducted for different tasks and at different times. Completion of TIPs should be documented on the tailgate meeting form. The following table should be filled out upon completion of TIPs conducted on this project.

**Table 12 — TIP Plan**

Identified Task for TIP	Schedule Date	Observer Name	Observee Name	Feedback Supervisor Name

## 17. Subcontractors

A copy of this HASP is to be provided to all subcontractors prior to the start of work so that the subcontractor is informed of the hazards at the site. While the Contractor HASP will be the minimum health and safety requirements for the work completed by Contractor and its subcontractors, each subcontractor, in coordination with Contractor health and safety personnel, is expected to perform its operations in accordance with its own HASP, policies and procedures unique to the subcontractor's work to ensure that hazards associated with the performance of the work activities are properly controlled.

Copies of any required safety documentation for a subcontractor's work activities will be provided to Contractor for review prior to the start of on-site activities.

In the event that the subcontractor's procedures/requirements conflict with requirements specified in this HASP, the more stringent guidance will be adopted after discussion and agreement between the subcontractor and Contractor project health and safety personnel. Hazards not listed in this HASP, but known to the subcontractor or known to be associated with the subcontractor's services, must be identified and addressed to the Contractor project or TM and SSO prior to beginning work operations.

Should Subcontractors working at the site choose to utilize this HASP they will need to have this plan with them, and will also need to sign the Subcontractor HASP receipt signature page of the Contractor HASP (Attachment H). Subcontractors are responsible for the H&S of their employees at all times, and have the authority to **Stop Work** if unsafe conditions arise.

The PM/TM and SSO (or authorized representative) has the authority to halt the subcontractor's operations and to remove the subcontractor or subcontractor's employee(s) from the site for failure to comply with established health and safety procedures or for operating in an unsafe manner.

## **18. Project Personnel HASP Certification**

All site project personnel will sign the certification signature page provided in Attachment H of this HASP.

## **19. Roadway Work Zone Safety**

All project work performed in a public or private roadway, regardless of work duration, will require a either a written Traffic Control Plan (TCP) or a Construction Management Plan (CMP). Projects having work activities on both public and private roadways will operate under a TCP approved by an employee designated with Engineering Judgment. A site specific TCP and/or CMP have been prepared for the site and work conducted as part of the Phase II Scope of Work will conform to them.

## **Attachment A – Health and Safety Plan (HASP) Addendum and Log Table**

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**Addendum Page**

This form should be completed for new tasks associated with the project. The PM and/or TM should revise the Project Hazard Analysis Worksheet with the new task information and attach to this addendum sheet. JSAs should be developed for any new tasks and attached as well.

Review the addendum with all site staff, including subcontractors, during the daily tailgate briefing, and complete the tailgate briefing form as required. Attach a copy of the addendum to all copies of the HASP including the site copy, and log in the Addendum Log Table A-1 on the next page.

Addendum Number: \_\_\_\_\_ Project Number: \_\_\_\_\_

Date of Changed Conditions: \_\_\_\_\_ Date of Addendum: \_\_\_\_\_

Description of Change that Results in Modifications to HASP:

Signed: \_\_\_\_\_  
Project Manager

Signed: \_\_\_\_\_  
Site Safety Officer

Signed: \_\_\_\_\_  
H&S Plan Writer

Signed: \_\_\_\_\_  
H&S Plan Reviewer

## Addendum Log Table

Addendums are to be added to every copy of the HASP, and logged on Table A-1 to verify that all copies of the HASP are current:

**Table A-1 — Addendum Log Table**

Addendum Number	Date of Addendum	Reason for Addendum	Person Completing Addendum
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



## **Attachment B – Job Safety Analysis (JSAs)**

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**Table B1 - Job Safety Analysis - EXAMPLE****General**

<b>JSA ID</b>		<b>Status</b>	
<b>Job Name</b>	Environment-Drilling, soil sampling, well installation	<b>Created Date</b>	
<b>Task Description</b>	Drilling, soil sampling, and well installation	<b>Completed Date</b>	
<b>Template</b>			

**Client / Project**

<b>Client</b>	
<b>Project Number</b>	
<b>Project Name</b>	
<b>Team PM</b>	
<b>Team Health and Safety Manager</b>	

**User Roles**

<b>Role</b>	<b>Employee</b>	<b>Due Date</b>	<b>Completed Date</b>	<b>Supervisor</b>	<b>Active</b>
Developer					
HASP Reviewer					

**Table B2 - Job Steps**

Job Step No.	Job Step Description	Potential Hazard	Critical Action	H&S Reference
1	Set up necessary traffic and public access controls	1 Struck by vehicle due to improper traffic controls	Use a buddy system for placing site control cones and/or signage. Position vehicle so that you are protected from moving traffic. Wear Class II traffic vest	
2	Utility Clearance	1 Potential to encounter underground or above ground utilities while drilling.	Complete utility clearance in accordance with the Contractor Utility Clearance H&S Standard.	
3	General drill rig operation	1 Excessive noise is generated by rig operation.	When the engine is used at high RPMs or soil samples are being collected, use hearing protection.	
		2 During drill rig operation, surfaces will become hot and cause burns if touched, and COCs in the soils more readily vaporize generating airborne contaminates.	Due to friction and lack of a drilling fluid, heat will be produced during this method. Mainly drill augers. Be careful handling split spoons. Wear proper work gloves. When soils and parts become heated, the COC could volatilize. Air monitoring should always be performed in accordance with the HASP.	
		3 Moving parts of the drilling rig can pull you in causing injury. Pinch points on the rig and auger connections can cause pinching or crushing of body parts.	Stay at least 5 feet away from moving parts of the drill rig. Know where the kill switch is, and have the drillers test it to verify that it is working. Do not wear loose clothing, and tie long hair back. Avoid wearing jewelry while drilling. Cone off the work area to keep general public away from the drilling rig.	
		4 Dust and debris can cause eye injury and soil cuttings and/or water could contain COCs.	Wear safety glasses and stay as far away from actual drilling operation as practicable. Wear appropriate gloves to protect from COCs.	
		5 Drilling equipment laying on the ground (i.e. augers, split spoons, decon equipment, coolers, etc.), create a tripping hazard. Water from decon buckets generate mud and cause a slipping hazard.	Keep equipment and trash picked up, and store away from the primary work area.	

**Table B2 - Job Steps (continued)**

Job Step No.	Job Step Description	Potential Hazard	Critical Action	H&S Reference
		6 The raised derrick can strike overhead utilities, tree limbs or other elevated items	Never move the rig with the derrick up. Ensure there is proper clearance to raise the derrick, and that you are far enough away from overhead power lines. See the Utility Clearance H&S Standard for guidance.	
4	Mudd rotary drilling	1 The raised derrick can strike overhead utilities, tree limbs or other elevated items.	Never move the rig with the derrick up. Ensure there is proper clearance to raise the derrick, and that you are far enough away from overhead power lines. See the Utility Location H&S policy and procedure for guidance.	
		2 This technology uses fluid, which collects with sediments in large basin. Fluid can splash out and cause slipping/mud hazard. Liquid mixture can splash into your eyes.	Wear rubber boots if needed, and keep clear of muddy/wet area as much as practicable. If area becomes excessively muddy, consider mud spikes or covering the area with a material that improves traction. Wear safety glasses.	
5	Hollow stem auger drilling	1 All hazards in step 3 apply. Additionally, the raised derrick can strike overhead utilities, tree limbs or other elevated items	Never move the rig with the derrick up. Ensure there is proper clearance to raise the derrick, and that you are far enough away from overhead power lines. See the Utility Location H&S policy and procedure for guidance.	
		2 Hands or fingers can get caught and crushed if trying to clean by hand or with tools while the auger is still turning.	Auger should always be stopped and clutch disengaged prior to cleaning.	
6	Air Rotary Drilling	1 This drilling method works with high air pressure and can generate flying debris that can strike your body or get in your eyes.	When the drill rig is being driven into media, it will produce flying debris. The flaps behind the drill rig should stay closed whenever possible to reduce the risk of flying debris. Safety glasses and hard hat should always be worn when the drill rig is operating. When penetrating asphalt, protect surrounding cars that may be present to avoid damage to pain or windshields.	
		2 The raise derrick can strike overhead utilities, tree limbs or other elevated items.	Never move this rig with the derrick up. Ensure there is proper clearance to raise the derrick and that you are far enough away from overhead power lines. See the Utility clearance H&S Standard for guidance.	

**Table B2 - Job Steps (continued)**

Job Step No.	Job Step Description	Potential Hazard	Critical Action	H&S Reference
		3 When drilling through bedrock prior to groundwater, dust can be produced from pulverization. Inhalation of dusts/powder can occur.	Supplemental water should be used to manage dust and/or dust masks should be used if necessary.	
7	Reverse rotary drilling	1 This method will use fresh water to pump out drill cuttings through the center of the casing. Water/sediment mixture is generated and could cause contact with impacted soils or groundwater.	Ensure the pit construction can hold the amount of cuttings that are anticipated. Air monitoring should also be used of pit area.	
		2 Fire hydrants are often used for water source. Hydrants deliver water at high pressure. Pressurized water can cause flying parts/debris and excessive slipping hazards.	Water usage from fire hydrants should be cleared with local municipalities prior to use. Only persons that know how to use the hydrant should be performing this task. Ensure all connections are tight, and hose line is not run over to cut by traffic. Any leaks from the hydrant should be reported immediately.	
		3 Settling pit construction can cause tripping hazard from excavated soils, and plastic sheeting can cause slipping.	Cone off the area to keep the general public/visitors away from the settling pit. Ensure proper sloping of excavation.	
		4 The raised derrick can strike overhead utilities, tree limbs or other elevated items.	Never move the rig with the derrick up. Ensure there is proper clearance to raise the derrick, and that you are far enough away from overhead power lines. See the Utility Location H&S policy and procedure for guidance.	
8	Rotosonic drilling	1 Fire hydrants are often used for water source. Hydrants deliver water at high pressure. Pressurized water can cause flying parts/debris and excessive slipping hazards.	Water usage from fire hydrants should be cleared with local municipalities prior to use. Only persons that know how to use the hydrant should be performing this task. Ensure all connections are tight, and hose line is not run over to cut by traffic. Any leaks from the hydrant should be reported immediately.	

**Table B2 - Job Steps (continued)**

Job Step No.	Job Step Description	Potential Hazard	Critical Action	H&S Reference
		2 This method requires a lot of clearance. The drill head can turn 90 degrees to attach to the next drill flight or casing. This usually requires a large support truck to park directly behind the rig. As the drill head raises the new casing flight is angled down at the same time until it can be turned completely vertical.	Ensure sufficient overhead clearance.	
		3 Heavy lifting of cores can cause muscle strain.	Always use 2 people to move core containers. Use caution moving core samples to layout area. Plan layout area to ensure adequate aisle space between core runs for logging. Keep back straight and use job rotation.	
		4 The rotosonic drill head can move very quickly up and down while working on a borehole. Moving parts can strike someone or catch body parts.	The operator and helper must communicate and stay clear of the path of the drill head. The drill utilizes two large hydraulic clamps to continuously hold casings while load/unloading previous casings. Do not wear loose clothing.	
9	Direct push drilling	1 The drill rods will be handled by workers most of the time rather than the rig doing it, therefore pinch points can cause lacerations and crushing of fingers/body parts.	Keep a minimum of 5 feet away from drill rig operation and moving parts.	
		2 The direct push rigs are usually meant to fit in spaces where larger rig can't. Tight spaces can pin workers.	Do not put yourself between the rig and a fixed object. Use Spotters or a tape measure to ensure clearances in tight areas. Pre-plan equipment movement from one location to the next.	
		3 Some direct push equipment is controlled by wireless devices. These controls can fail and equipment can strike workers or cause damage to property.	The drill rig should be used in a large open area to test wireless controls prior to moving to boring locations. The operator of the rig will test the kill switch with wireless remote prior to use. Operator will stay in range of rig while moving so that wireless signal will not be too weak and cause errors to the controls.	

**Table B2 - Job Steps (continued)**

Job Step No.	Job Step Description	Potential Hazard	Critical Action	H&S Reference
		4 Sampling sleeves must be cut to obtain access to soil. Cutting can cause lacerations.	It's preferable to let the driller cut the sleeves open. Many drillers have holders for the sleeve to allow for stability when cutting. If you cut the sleeves, use a hook blade, change blade regularly, and cut away from the body.	
		5 Soil cores may contain contaminated media.	Wear nitrile gloves and safety glasses for protection from contaminated media when logging soil borings.	
10	Rock coring	1 Flying debris can hit workers or cause debris to get in eyes.	Rock chips or overburden may become airborne from drilling method. Wear safety glasses and hard hat and remain at a safe distance from back of drill rig.	
		2 Heavy lifting of cores can cause muscle strain.	Always use 2 people to move core containers. Use caution moving core samples to layout area. Plan layout area to ensure adequate aisle space between core runs for logging. Keep back straight and use job rotation.	
11	Sample collection and processing	1 Injuries can result from pinch points on sampling equipment, and from breakage of sample containers.	Care should be taken when opening sampling equipment. Look at empty containers before picking them up, and do not over-tighten container caps. Use dividers to store containers in the cooler so they do not break.	Sample Cooler Handling JSA
		2 Lifting heavy coolers can cause back injuries.	Use two people to move heavy coolers. Use proper lifting techniques.	
12	Monitoring well installation	1 Same hazards as in Step 3 with general drill rig operation	See step 3	
		2 Monitoring well construction materials can clutter the work area causing tripping hazards.	Well construction materials should be picked up during the well installation process.	
		3 Heavy lifting can cause muscle strains, and cutting open bags can cause lacerations.	Well construction materials are usually 50 lbs or greater. Team lift or use drill rig to hoist bags. Always use work gloves while cutting open bags.	



**Table B2 - Job Steps (continued)**

Job Step No.	Job Step Description	Potential Hazard	Critical Action	H&S Reference
		4 Well pack material (i.e. sand, grout, bentonite) can become airborne and get in your eyes.	Wear safety glasses for protection from airborne sand and dust.	
		5 Cutting the top of the well to size can cause jagged/sharp edges on the top of the well casing.	Wear gloves when working with the top of the well casing, and file any sharp jagged edges that resulted from cutting to size.	
13	Soil cutting and purge water management	1 Moving full drums can cause back injury, or pinching/crushing injury.	Preferably have the drilling contractor move full drums with their equipment. If this is not practicable, use lift assist devices such as drum dollies, lift gates, etc. Employ proper lifting techniques and identify pinch/crush points. Wear leather work gloves, and clear all walking and work areas of debris prior to moving a drum.	Drum Handling JSA

**Table B3 - PPE Personal Protective Equipment**

Type	Personal Protective Equipment	Description	Required
<b>Eye Protection</b>	safety glasses		Required
<b>Foot Protection</b>	steel-toe boots		Required
<b>Hand Protection</b>	chemical resistant gloves (specify type)	Nitrile	Required
	work gloves (specify type)	leather	Required
<b>Head Protection</b>	hard hat		Required
<b>Hearing Protection</b>	ear plugs		Required
<b>Miscellaneous PPE</b>	traffic vest--Class II or III		Required
<b>Respiratory Protection</b>	dust mask		Recommended

## Supplies

Type	Supply	Description	Required
<b>Communication Devices</b>	mobile phone		Required
<b>Decontamination</b>	Decon supplies (specify type)	Driller to provide and manage	Recommended
<b>Miscellaneous</b>	fire extinguisher		Required
	first aid kit		Required
<b>Personal</b>	eye wash (specify type)	bottle	Required
	water/fluid replacement		Recommended
<b>Traffic Control</b>	traffic cones		Required

Review Comments		
Reviewer	Comments	
<b>Employee:</b>  <b>Role</b>  <b>Review Type</b>  <b>Completed Date</b>		

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## **Attachment C – Personal Protective Equipment (PPE) Lists**

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**Table C1 - PPE Checklist**

**R** = Equipment required to be present on the site. **O** = Optional equipment. Subcontractors must have the same equipment listed here as a minimum.

Description (Put Specific Material or Type in Box)	Level Of Protection		
	D	C	B
<b>Body</b>			
Coveralls			
Chemical Protective Suit (include type in cell, e.g., Tyvek, Saranex, PVC, etc.)			
Splash Apron			
Rain Suit			
Traffic Safety Vest (reflective)			
<b>Head</b>			
Hard Hat (if does not create other hazard)			
Head Warmer (depends on temperature and weather conditions)			
<b>Eyes &amp; Face</b>			
Safety Glasses (incorporate sun protection as necessary)			
Goggles (based on hazard)			
Splash Guard (based on hazard)			
<b>Ears</b>			
Ear Plugs			
Ear Muffs			
<b>Hands and Arms</b>			
Outer Chemical Resistant Gloves (specify the type of glove based on chemical hazard)			
Inner Chemical Resistant Gloves (specify the type of glove based on chemical hazard)			
Insulated Gloves			
Work Gloves*			
<b>Foot</b>			
Safety Boots (steel toe and shank)			
Rubber, Chemical Resistant Boots			
Rubber Boots			
Disposable Boot Covers			
<b>Respiratory Protection</b>			
1/2 Mask APR			
Full Face APR			
Dust Protection			
Powered APR			
SCBA			
Air Line			

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## **Attachment D – Material Safety Data Sheets (MSDSs)**

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Material Safety Data Sheets should be added once the Phase II Environmental Site Assessment Scope of Work has been defined.

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## **Attachment E – Health and Safety Plan (HASP) Forms**

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Form E1 – Tailgate Health and Safety Meeting Form

<b>TAILGATE HEALTH &amp; SAFETY MEETING FORM</b>			
This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.			
<b>Project Name:</b>		<b>Project Location:</b>	
<b>Date:</b>	<b>Time:</b>	<b>Conducted by:</b>	<b>Signature/Title:</b>
<b>Client:</b>		<b>Client Contact:</b>	<b>Subcontractor companies:</b>
<b>TRACKing the Tailgate Meeting</b>			
<b>Think</b> through the Tasks (list the tasks for the day):			
1 _____	3 _____	5 _____	
2 _____	4 _____	6 _____	
<b>Other Hazardous Activities</b> - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations			<input type="checkbox"/> If there are none, write "None" here: _____
If yes, describe them here: _____ How will they be controlled? _____			
<b>Pework Authorization</b> - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:			
<input type="checkbox"/> Not applicable	<u>Doc #</u> _____	<input type="checkbox"/> Working at Height	<u>Doc #</u> _____
<input type="checkbox"/> Energy Isolation (LOTO)	<u>Doc #</u> _____	<input type="checkbox"/> Excavation/Trenching	<input type="checkbox"/> Confined Space
<input type="checkbox"/> Mechanical Lifting Ops	<u>Doc #</u> _____	<input type="checkbox"/> Overhead & Buried Utilities	<input type="checkbox"/> Hot Work
		<input type="checkbox"/> Other permit	<u>Doc #</u> _____
<b>Discuss following questions</b> (for some review previous day's post activities). <b>Check if yes :</b>			
<input type="checkbox"/> Incidents from day before to review?	<input type="checkbox"/> Lessons learned from the day before?	<input type="checkbox"/> Topics from Corp H&S to cover?	
<input type="checkbox"/> Any corrective actions from yesterday?	<input type="checkbox"/> Will any work deviate from plan?	<input type="checkbox"/> Any Stop Work Interventions yesterday?	
<input type="checkbox"/> JLAS or procedures are available?	<input type="checkbox"/> Field teams to "dirty" JLAS, as needed?	<input type="checkbox"/> If deviations, notify PM & client	
<input type="checkbox"/> Staff has appropriate PPE?	<input type="checkbox"/> Staff knows Emergency Plan (EAP)?	<input type="checkbox"/> All equipment checked & OK?	
<input type="checkbox"/> Staff knows gathering points?			
Comments: _____			
<b>Recognize</b> the hazards (check all those that are discussed) (Examples are provided) and <b>Assess</b> the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.			
<input type="checkbox"/> Gravity (i.e., ladder, scaffold, trips) (L M H)	<input type="checkbox"/> Motion (i.e., traffic, moving water) (L M H)	<input type="checkbox"/> Mechanical (i.e., augers, motors) (L M H)	
<input type="checkbox"/> Electrical (i.e., utilities, lighting) (L M H)	<input type="checkbox"/> Pressure (i.e., gas cylinders, wells) (L M H)	<input type="checkbox"/> Environment (i.e., heat, cold, ice) (L M H)	
<input type="checkbox"/> Chemical (i.e., fuel, acid, paint) (L M H)	<input type="checkbox"/> Biological (i.e., ticks, poison ivy) (L M H)	<input type="checkbox"/> Radiation (i.e., alpha, sun, laser) (L M H)	
<input type="checkbox"/> Sound (i.e., machinery, generators) (L M H)	<input type="checkbox"/> Personal (i.e. alone, night, not fit) (L M H)	<input type="checkbox"/> Driving (i.e. car, ATV, boat, dozer) (L M H)	
<b>Continue TRACK Process on Page 2</b>			

## TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

**C**ontrol the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - (See statements below)

<input type="checkbox"/> Elimination	<input type="checkbox"/> Substitution	<input type="checkbox"/> Isolation
<input type="checkbox"/> Engineering controls	<input type="checkbox"/> Administrative controls	<input type="checkbox"/> Monitoring
<input type="checkbox"/> General PPE Usage	<input type="checkbox"/> Hearing Conservation	<input type="checkbox"/> Respiratory Protection
<input type="checkbox"/> Personal Hygiene	<input type="checkbox"/> Exposure Guidelines	<input type="checkbox"/> Decon Procedures
<input type="checkbox"/> Emergency Action Plan (EAP)	<input type="checkbox"/> Fall Protection	<input type="checkbox"/> Work Zones/Site Control
<input type="checkbox"/> JLA to be developed/used ( <i>specify</i> )	<input type="checkbox"/> LPO conducted ( <i>specify job/JLA</i> )	<input type="checkbox"/> Traffic Control
		<input type="checkbox"/> Other ( <i>specify</i> )

### Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign In Time	Initial & Sign out Time	I have read and understand the

Important Information and Numbers	Visitor Name/Co - not involved in work	I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.
All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.	In                      Out	I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.
In the event of an Injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.	In                      Out	If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.
In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.	In                      Out	I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.
In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at	In                      Out	

### Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain:)

<input type="checkbox"/> Lessons learned and best practices learned today:	_____
<input type="checkbox"/> Incidents that occurred today:	_____
<input type="checkbox"/> Any Stop Work interventions today?	_____
<input type="checkbox"/> Corrective/Preventive Actions needed for future work:	_____
<input type="checkbox"/> Any other H&S issues:	_____

**Keep H&S 1<sup>st</sup> in all things**

WorkCare - 1.800.455.6155



**Form E2 – Real Time Exposure Monitoring Data Collection Form**

**Real Time Exposure Monitoring Data Collection Form**

Document all air monitoring conducted on the Site below. Keep this form with the project file.

Site Name: \_\_\_\_\_ Date: \_\_\_\_\_

Instrument: \_\_\_\_\_ Model: \_\_\_\_\_ Serial #: \_\_\_\_\_

Calibration Method: (Material used settings, etc.)	
Calibration Results:	
Calibrated By:	

Activity Being Monitored	Compounds/Hazards Monitored	Time	Reading	Action Required? Y/N

**Describe Any Actions Taken as a Result of this Air Monitoring and Why (does it match Table 5-1):**

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**Form E3 – Hazardous Materials Transportation Form**

**Hazardous Materials Transportation Form**

	Vehicle (place X in box)	Type (pick-up, car, box truck, etc.)
Personal		
Rental		
ARCADIS owned/leased		
Government owned		
Trailer		

Materials Transported	Quantity	Storage/Transport Container

List Trained Drivers:

---



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### Hazardous Materials Shipment Form

Material Description and Proper Shipping Name (per DOT or IATA)	Shipment Quantity	DOT Hazard Classification	Shipment Method (air/ground)

List Shipper (i.e., who we are offering the shipment to):

---



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List Trained Employee(s):

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## **Attachment F – Visitor Acknowledgement and Acceptance**

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## **Attachment G – Emergency Action Plan**

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## **Attachment H – Employee and Subcontractor Signature Form**

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[illegible]

[illegible]

## **Attachment I – 2016 Traffic Control Plan and Construction Management Plan**

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(Sample shown – to be replaced with actual TCP or CMP)

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**Form I1 – Traffic Control Plan/Site Traffic Awareness and Response Plan**



**Traffic Control Plan/Site Traffic Awareness and Response Plan**  
Revision 8, 10/15/2015

**1.0 General**

Plan type	Select
Project Name:	
Project Number:	
Developer Name:	
Not Applicable	
Not Applicable	
Not Applicable	
Not Applicable	
Not Applicable	
Not Applicable	
Comments:	

**2.0 Work Description**

Provide a brief description of scope of work:

**3.0 Type and Duration**

Work locations on this project will be: Select

Special traffic conditions may include (select most prevalent): Not applicable

**4.0 Traffic Control Layout, Number of Devices Required and Phasing**

The following pedestrian requirements in the Field Guide to RWZ Safety applies:

Select the traffic control devices to be used and enter number each required:

Check all that apply:	Wording or Pictogram	Number:
<input type="checkbox"/> Warning signs	_____	_____
<input type="checkbox"/> Warning signs	_____	_____
<input type="checkbox"/> Warning signs	_____	_____
<input type="checkbox"/> Stop/Slow paddle	_____	_____
<input type="checkbox"/> Red flag	_____	_____
<input type="checkbox"/> Drums	_____	_____
<input type="checkbox"/> Channelizer cone (42 inch height, 10 lb base)	_____	_____
<input type="checkbox"/> Channelizer cone (42 inch height, 30 lb base)	_____	_____
<input type="checkbox"/> Traffic cones (≥ 18 inches tall)	_____	_____
<input type="checkbox"/> Barricade <input type="checkbox"/> Type I <input type="checkbox"/> Type II	_____	_____
<input type="checkbox"/> Flags for cones	_____	_____
<input type="checkbox"/> Lights (for night work)	_____	_____
<input type="checkbox"/> Plastic fencing (rolls)	_____	_____
<input type="checkbox"/> Caution tape (rolls)	_____	_____
<input type="checkbox"/> Other (specify):	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____

## 5.0 Approvals

Plan Developer: \_\_\_\_\_

HASP Reviewer \_\_\_\_\_