SOUTH STATION
EXPANSION

Appendix C-1 Site Specific Health and Safety Plan – South Station

June 2016

massDOT
Massachusetts Department of Transportation

This Page Intentionally Left Blank

Site Specific Health and Safety Plan – South Station

TBD

Designated Health and Safety (H&S) Plan Writer

TBD

Designated Health and Safety (H&S) Plan Reviewer

TBD

Project Manager

This Page Intentionally Left Blank

Table of Contents

Attachments

List of Figures

List of Tables

Forward

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 South Station 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 South Station located at 700 Atlantic Avenue 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 617-343-4730
MBTA Transit Police	617-222-1212
Local Ambulance – Boston Fire Department	911 and 617-343-3415
Local Fire Department – Boston Fire Department	911 and 617-343-3415
Local Hospital: Tufts Medical Center	617-636-5566
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

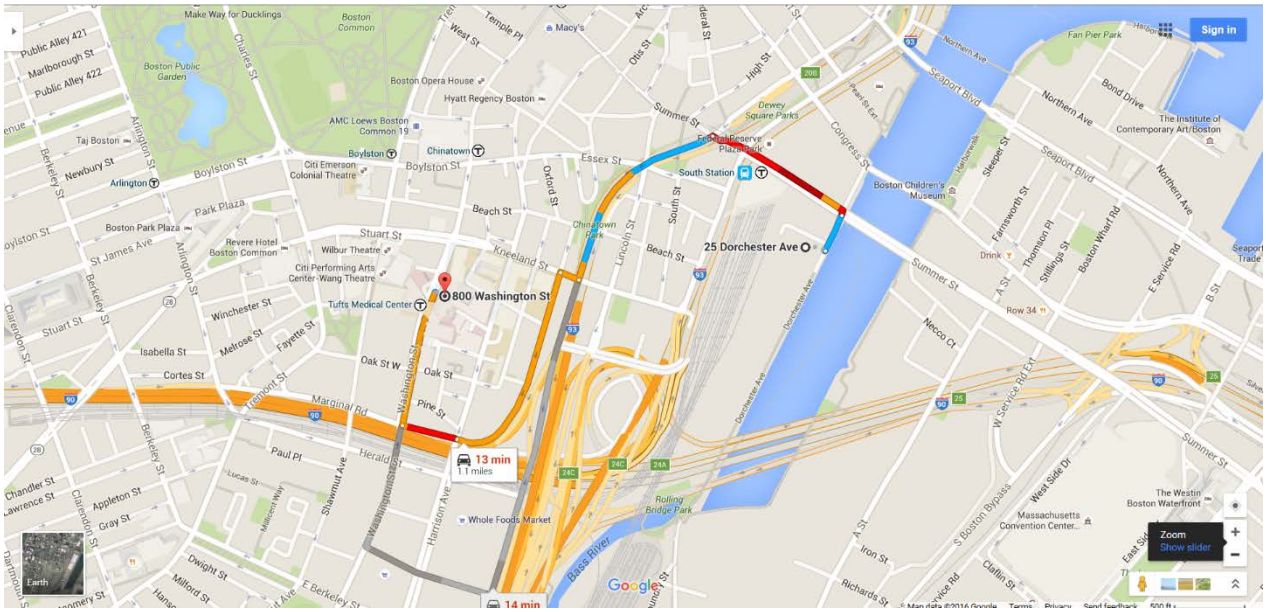
Table 2 presents the location of and directions to the nearest hospital with emergency medicine capabilities should transportation be required during the completion of the Phase II ESA work (see Figure 1). The information in Table 2 should be revised, if necessary, upon review of the Phase II SOW and prior to initializing the Phase II ESA activities.

Table 2 —Hospital Location and Directions

Medical Facility	Tufts Medical Center
Address	800 Washington Street, Boston, MA 02111
Phone Number	617-636-5000

1. Head northeast on Dorchester Avenue toward Summer Street.
2. Turn left onto Summer Street
3. Use the left 2 lanes to turn left onto John F Fitzgerald Surface Road/Surface Road for 0.3 miles.
4. Turn right onto Kneeland Street.
5. Turn left at the 1st cross street onto Hudson Street for 0.3 miles.
6. Continue onto Marginal Road.
7. Turn right onto Washington Street, Tufts Medical Center.
8. Your destination, 800 Washington Street, Boston MA 02111 is on the right.

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
☒ First Aid Kit (type):	TBD
☒ Fire Extinguisher	TBD
☒ Mobile Phone ☐ Satellite Phone	TBD
☒ Traffic Cones	TBD
☐ Walkie Talkies	
☐ Water or Other Fluid Replenishment	
☐ Eye Wash/Quick Drench Station	
☒ Eye Wash Bottle	TBD
☐ Wash and Dry Towelettes	
☐ Sunscreen (SPF 15 or higher)	
☐ Insect Repellant	
☒ Chemical Spill Kit	TBD
☐ *Other (specify):*	

3. Project and Site History Requirements

3.1 Site Background

The South Station Terminal is currently Boston's largest transit hub. The property has been in use as a railroad center since 1867. A coal storage area was present on the site at that time. The property became a transit hub for the Massachusetts Bay Transportation Authority (MBTA) when the public transportation service first opened in the 1920s.

3.2 Site Description

The approximately 49-acre South Station site currently includes the following: South Station Rail/Transit Terminal; South Station Bus Terminal; and U.S. Postal Service (USPS) General Mail Facility (GMF)/South Postal Annex, including that portion of Dorchester Avenue fronting the site and running parallel to Fort Point Channel. The existing South Station Terminal area currently consists of 13 tracks, eight platforms, and a system of trackwork (also referred to as interlockings).

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

Table 4 — Site Type

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	unknown
Volatile Petroleum Hydrocarbons	Soil/Water	unknown	unknown
Extractable Petroleum Hydrocarbons	Soil/Water	unknown	unknown
Volatile Organic Compounds	Soil/Water	unknown	unknown
Polyaromatic Hydrocarbons	Soil/Water	unknown	unknown
Metals	Soil	unknown	unknown

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 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

The Site Safety Officer (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 an 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.

5. Project Hazards and Control Measures

5.1 Hazard Analysis

The hazards in the Table 6 below must be ranked using HIGH (H), MEDIUM (M) or LOW (L) based on current site knowledge and Figure 2. For hazards that are not applicable, leave blank. Use the results of this analysis to verify that controls in the Job Safety Analysis (JSA) or other supporting documents are adequate to mitigate task hazards. When in the field, use the Tailgate Safety Meeting Form for task specific evaluation of task hazards.

Table 6 provides various potential hazardous associated with the site, seasonal conditions, and proposed activities for the planned Phase II ESA work. Select the appropriate hazards and the appropriate severity based on the probability and severity of the risks based on the proposed work. The information in Table 6 should be revised, if necessary, upon review of the Phase II SOW and prior to initializing the Phase II ESA activities.

Table 6 should be reviewed and approved by the SSO at least every six months or any time site conditions or activities change from the original scope of work associated with this HASP.

Figure 2 — Hazard Ranking Chart

Severity	Consequence		Probability				
	Property Damage	Injury	Frequent	Likely	Occasional	Seldom	Unlikely
	> $100,000	Fatality	H	H	H	H	M
	> $10,000	Injury Requiring Hospitalization	H	H	H	M	L
	> $1000	Injury Requiring Medical Treatment Beyond First Aid	H	M	M	L	L
	< $1000	Injury Requiring First Aid	M	L	L	L	L

Table 6 — Hazard Rankings

Biological		**Mechanical**		**Chemical/Radiation**	
L	Biting/stinging insects	L	Cuts on equipment/tools		
L	Biting animals	M	Pinch points on equipment	L	General
L	Poisonous plants	L	Burns from equipment	H	Dusts, toxic
L	Phys. damaging plants	L	Struck by equipment	L	Dusts, nuisance
				L	Chemicals, Contractor use
Driving		**Motion**		L	Chemicals, corrosive
L	Night driving	L	Lifting/awkward body positions		Chemicals, explosive
M	Off-road driving	H	Struck by vehicle/traffic		Chemicals, flammable
L	Urban driving				Chemicals, oxidizing
	All-terrain vehicle	**Personal Safety**		M	Chemicals, toxic
	Boat		Working late/night		Chemicals, reactive
			Working alone		Radiation, ionizing
Electrical			High crime area		Radiation, non-ionizing
	Wet environments				
L	Electrical panels	**Pressure**		**Compound Specific**	
L	Electric utilities	M	Utilities (gas, water, etc.)	M	Asbestos
	Electric power tools		Compressed gas cylinders	L	Benzene
			Compressed air/aerosols		Cadmium
Environment		M	Hydraulic systems		Hydrogen sulfide
L	Heat			M	Lead
L	Cold	**Sound**			Silica
	Lightning	L	Equipment noise		
	Inclement weather		Tool noise	**Gravity**	
	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, and should be 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 lists the type of Personnel 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 H&S Contact should be contacted with any questions concerning the client specific 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 Hazard Communication (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 to be onsite. 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 updated when any new chemicals are brought to the site and reviewed every six months during the project to ensure its accuracy.

Table 7 — On-Site Chemicals

	Acids/Bases	Qty.		Decontamination	Qty.		Calibration	Qty.
☐	Not applicable		☐	Not applicable		☐	Not applicable	
☐	Hydrochloric acid		☐	Alconox		☐	Isobutylene/air	
☐	Nitric acid		☐	Liquinox		☐	Methane/air	
☐	Sulfuric acid		☐	Acetone		☐	Pentane/air	
☐	Sodium hydroxide		☐	Methanol		☐	Hydrogen/air	
☐	Zinc acetate		☐	Hexane		☐	Propane/air	
☐	Ascorbic acid		☐	Isopropyl alcohol		☐	Hydrogen sulfide/air	
☐	Acetic acid		☐	Nitric acid		☐	Carbon monoxide/air	
☐	Other:		☐	Other:		☐	pH standards (4,7,10)	
						☐	Conductivity standards	
						☐	Other:	
	Fuels	**Qty.**		**Kits**	**Qty.**			
☐	Not applicable		☐	Not applicable				
☐	Gasoline		☐	Hach			Specify:	
☐	Diesel		☐	DTECH			Specify:	
☐	Kerosene		☐	EPA 5035 Soil			Specify:	
☐	Propane		☐	Other:				
☐	Other:							
	Remediation	**Qty.**					**Other:**	**Qty.**
☐	Not applicable					☐	Not applicable	
☐	Other:					☐	Spray paint	
☐	Other:					☐	WD-40	
☐	Other:					☐	Pipe cement	
☐	Other:					☐	Pipe primer	
☐	Other:					☐	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[a] (ppm)	IDLH[b] (NIOSH) (ppm)	STEL (ppm)	Source TLV/PEL
Lead	NA	inhalation	.05 mg/m^3	100 mg /m^3 (as Pb)	Not Listed	.05 mg/m^3

NA – Not Applicable

[a] 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.

[b] 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 — Exposure Monitoring Requirements

TASK 1 – Is exposure monitoring required for the completion of this task? ☐ YES ☐ 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? ☐ YES ☐ 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? ☐ YES ☐ NO If yes, complete the following:				
Exposure Hazard	**Monitoring Equipment**	**Monitoring Frequency**	**Action Level**	**Required Action**
TBD				

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 H&S 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.

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 provided in Table 10.

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[1], 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:

- 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.

[1] 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.

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.

Table 11 presents the Level A and B decontamination procedures.

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

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 if the client has specific H&S requirements that apply to the proposed work. If the client has requirements they should be listed and defined in this section, otherwise thus 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

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 hazardous materials (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 H&S requirements for the work completed by Contractor and its subcontractors, each subcontractor, in coordination with Contractor H&S 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 H&S 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 PM 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 H&S 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

This Page Intentionally Left Blank

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: _____ Signed: _____
Project Manager Site Safety Officer

Signed: _____ Signed: _____
H&S Plan Writer 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)

This Page Intentionally Left Blank

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

General

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

Client / Project

Client	
Project Number	
Project Name	
Team PM	
Team Health and Safety Manager	

User Roles

Role	Employee	Due Date	Completed Date	Supervisor	Active
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
Eye Protection	safety glasses		Required
Foot Protection	steel-toe boots		Required
Hand Protection	chemical resistant gloves (specify type)	Nitrile	Required
	work gloves (specify type)	leather	Required
Head Protection	hard hat		Required
Hearing Protection	ear plugs		Required
Miscellaneous PPE	traffic vest--Class II or III		Required
Respiratory Protection	dust mask		Recommended

Supplies

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

Review Comments

Reviewer		Comments
Employee: **Role** **Review Type** **Completed Date**		

This Page Intentionally Left Blank

Attachment C – Personal Protective Equipment (PPE) Lists

This Page Intentionally Left Blank

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
Body			
Coveralls			
Chemical Protective Suit (include type in cell, e.g., Tyvek, Saranex, PVC, etc.)			
Splash Apron			
Rain Suit			
Traffic Safety Vest (reflective)			
Head			
Hard Hat (if does not create other hazard)			
Head Warmer (depends on temperature and weather conditions)			
Eyes & Face			
Safety Glasses (incorporate sun protection as necessary)			
Goggles (based on hazard)			
Splash Guard (based on hazard)			
Ears			
Ear Plugs			
Ear Muffs			
Hands and Arms			
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*			
Foot			
Safety Boots (steel toe and shank)			
Rubber, Chemical Resistant Boots			
Rubber Boots			
Disposable Boot Covers			
Respiratory Protection			
1/2 Mask APR			
Full Face APR			
Dust Protection			
Powered APR			
SCBA			
Air Line			

This Page Intentionally Left Blank

Attachment D – Material Safety Data Sheets (MSDSs)

This Page Intentionally Left Blank

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

This Page Intentionally Left Blank

Attachment E – Health and Safety Plan (HASP) Forms

This Page Intentionally Left Blank

Form E1 – Tailgate Health and Safety Meeting Form

TAILGATE HEALTH & SAFETY MEETING FORM

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.

Project Name:			**Project Location:**
Date:	**Time:**	**Conducted by:**	**Signature/Title:**
Client:		**Client Contact:**	**Subcontractor companies:**

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 _____ 3 _____ 5 _____

2 _____ 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☐ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes :**

☐ Topics from Corp H&S to cover?	☐ Incidents from day before to review?	☐ Lessons learned from the day before?
☐ Any Stop Work Interventions yesterday?	☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?
☐ If deviations, notify PM & client	☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?
☐ All equipment checked & OK?	☐ Staff has appropriate PPE?	☐ Staff knows Emergency Plan (EAP)?
☐ Staff knows gathering points?		

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess** 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.

☐ Gravity (i.e., ladder, scaffold, trips) (L M H)	☐ Motion (i.e., traffic, moving water) (L M H)	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☐ Pressure (i.e., gas cylinders, wells) (L M H)	☐ Environment (i.e., heat, cold, ice) (L M H)
☐ Chemical (i.e., fuel, acid, paint) (L M H)	☐ Biological (i.e., ticks, poison ivy) (L M H)	☐ Radiation (i.e., alpha, sun, laser) (L M H)
☐ Sound (i.e., machinery, generators) (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control 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*)

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

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

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

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 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 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

Visitor Name/Co - not involved in work

In	Out
In	Out
In	Out
In	Out

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.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to **STOP THE JOB**, I will perform **TRACK**; and then amend the hazard assessments or the HASP as needed.

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.

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

- ☐ Lessons learned and best practices learned today: _____
- ☐ Incidents that occurred today: _____
- ☐ Any Stop Work interventions today? _____
- ☐ Corrective/Preventive Actions needed for future work: _____
- ☐ Any other H&S issues: _____

Keep H&S 1st 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):

_____

_____

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:

_____

_____

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):

_____

_____

List Trained Employee(s):

_____

_____

This Page Intentionally Left Blank

Attachment F – Visitor Acknowledgement and Acceptance

This Page Intentionally Left Blank

Form F1 - Visitor Acknowledgement and Acceptance of HASP Signature Form

By signing below, I waive, release and discharge the owner of the site and Contractor and their employees from any future claims for bodily and personal injuries, which may result from my presence at, entering, or leaving the site and in any way arising from or related to any and all known and unknown conditions on the site.

Name	Company	Reason for Visit	Date/Time On Site	Date/Time Off Site

This Page Intentionally Left Blank

Attachment G – Emergency Action Plan

This Page Intentionally Left Blank

Attachment H – Employee and Subcontractor Signature Form

This Page Intentionally Left Blank

Form H1- Employee Signature Form

I certify that I have read, understand, and will abide by the safety requirements outlined in this HASP.

Printed Name	Signature	Date

Form H2 - Subcontractor Acknowledgement: Receipt of HASP Signature Form

Contractor claims no responsibility for the use of this HASP by others although subcontractors working at the site may use this HASP as a guidance document. In any event, Contractor does not guarantee the health and/or safety of any person entering this site. Strict adherence to the H&S guidelines provided herein will reduce, but not eliminate, the potential for injury at this site. To this end, health and safety becomes the inherent responsibility of personnel working at the site.

Printed Name	Company	Signature	Date

Attachment I – 2016 Traffic Control Plan and Construction Management Plan

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

This Page Intentionally Left Blank

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:*
☐ Warning signs		
☐ Warning signs		
☐ Warning signs		
☐ Stop/Slow paddle		
☐ Red flag		
☐ Drums		
☐ Channelizer cone (42 inch height, 10 lb base)		
☐ Channelizer cone (42 inch height, 30 lb base)		
☐ Traffic cones (≥ 18 inches tall)		
☐ Barricade ☐ Type I ☐ Type II		
☐ Flags for cones		
☐ Lights (for night work)		
☐ Plastic fencing (rolls)		
☐ Caution tape (rolls)		
☐ Other (specify):		

5.0 Approvals

Plan Developer: _____

HASP Reviewer _____