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Titan Earthwork

SITE SPECIFIC HEALTH AND SAFETY PLAN

JSCEE Central Kitchen Project
2445 Third Avenue South
Seattle, Washington

December 28, 2023

This Site Health and Safety Plan is intended to cover activities performed by Titan Earthwork where potential chemical contamination may be encountered during construction activities at the John Stanford Center for Educational Excellence (JSCEE) Phase II Central Kitchen Renovation Project in Seattle, Washington. This HASP is a supplement to Titan Earthwork's existing Accident and Prevention Program and Site Safety Plan.

THIS ORIGINAL HASP PREPARED BY:

Martin Rose, CIH, CSP
ABIH Cert 8071CP, Expires June 2026
Rose Environmental LLC

1.0 Site Description and Evaluation

Titan Earthwork is the excavation contractor for the John Stanford Center for Educational Excellence (JSCEE) Phase II Central Kitchen Renovation Project in Seattle, Washington (Forma Construction is the General Contractor). The project is to remove existing soil underneath the existing building to create a crawlspace to allow crews to install new plumbing waste and supply lines.

Review of recent soil sample analysis conducted by Krazan & Associates (Phase II ESA dated July 10, 2023) indicated that, of seven soil samples collected from six borehole locations, one sample at the B1 Borehole location contained benzo[a]pyrene above cleanup levels of the State of Washington Model Toxic Control Act (MTCA), but this was at a depth of 6 feet bgs.

In addition, groundwater, which was encountered only at the B6 Borehole location, was found to contain contained diesel, arsenic, cadmium, chromium, lead, mercury, and PAHs above applicable MTCA cleanup levels, but this was at a depth of 10-12 feet bgs. Titan/Rose also conducted a sample test (roughly at the location of B2 in the map on the next page) which came back clean with contamination below MTCA levels.

WAC 296-843 requires where there is potential for contact with contaminated air, soil, or water, work zones must be established. This is further discussed in this HASP's Section 8.0, *Site Control Measures*.

Washington Administrative Code (WAC) 296-843, *Hazardous Waste Operations*, or "HAZWOPER", requires various training, safety plan, and work practice requirements for hazardous waste sites. HAZWOPER only applies (1) where soils or groundwater exceed MTCA levels and (2) the State Department of Ecology has made a determination the site poses a potential threat to human health. L&I interprets this language as sites that are listed either in (A) Ecology's annual Hazardous Sites List (www.ecy.wa.gov/programs/tcp/mtca_gen/hazsites.html) or (B) Toxics Cleanup Site database (fortress.wa.gov/ecy/gsp/SiteSearchPage.aspx).

Because the soil and groundwater at the JSCEE Phase II Central Kitchen Renovation Projec exceeded MTCA cleanup levels and the Seattle SD John Stanford Center is listed in Ecology's Toxics database, HAZWOPER requirements, including a HASP, 40-hour HAZWOPER training, etc., apply.

This HASP should be regarded as living document and will be updated as needed when new information arises. This plan is made available to site personnel, and compliance will be enforced by the Site Safety and Health Officer and Titan Earthworks' principals.

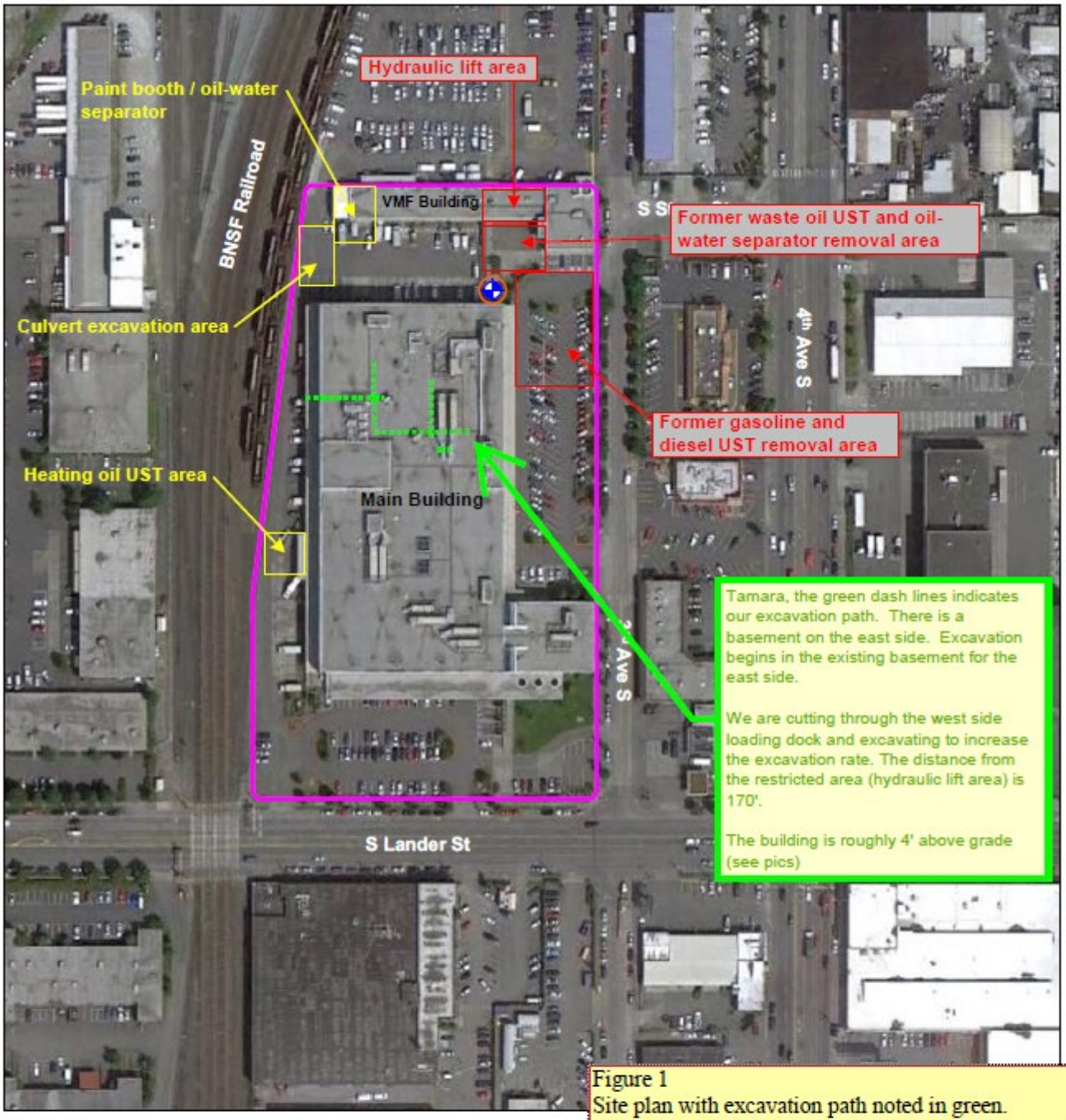

Figure 1
Site plan with excavation path noted in green.

Legend:

- Property location (approximate)
- Site areas with remaining primary contaminant impacts (approximate)
- Other site areas with historical releases (approximate)
- Monitoring well (MW-3) with cPAH concentrations above cleanup levels in 2011

Notes:

1. All locations are approximate, and not to scale.

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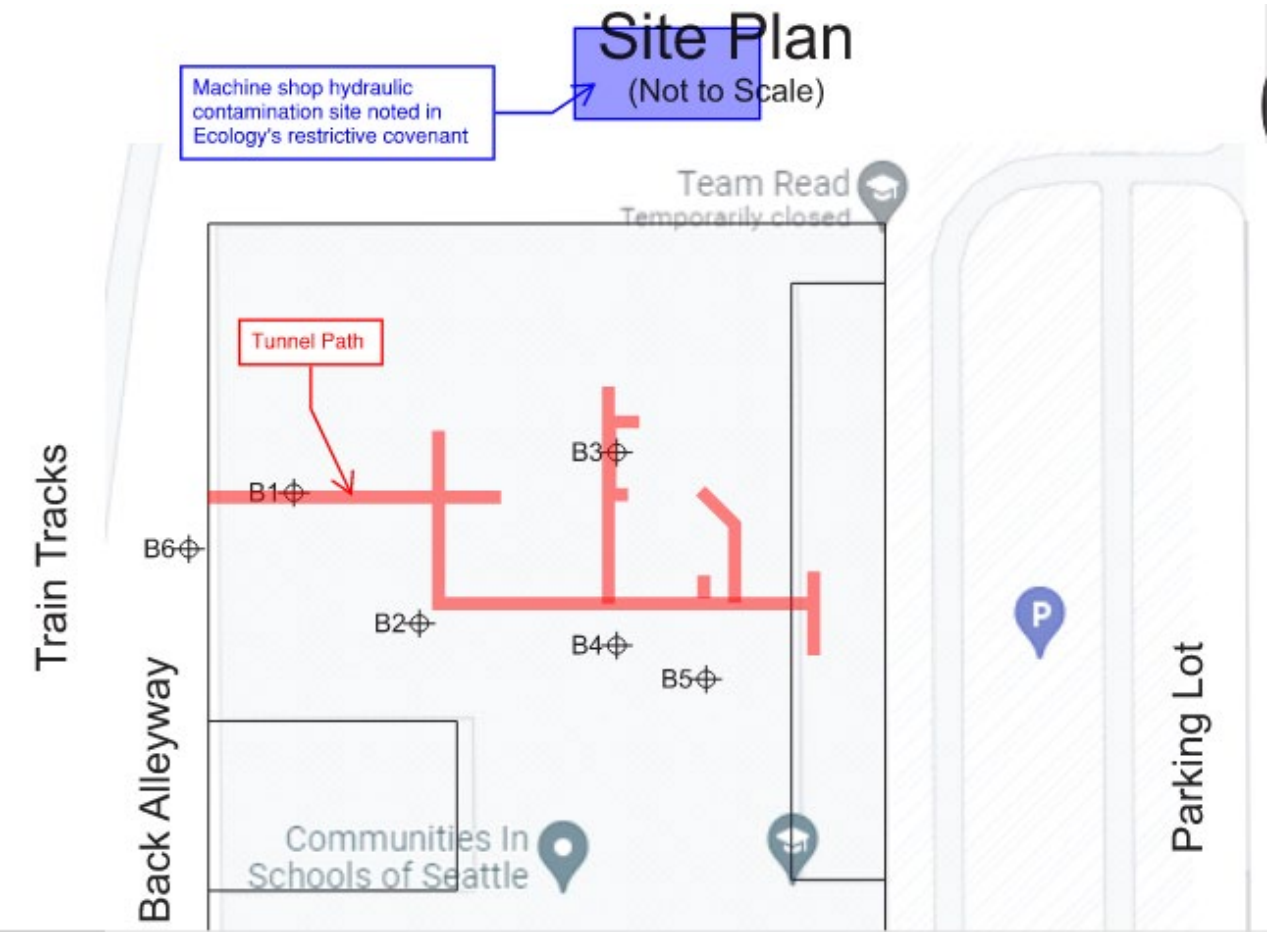
Seattle School John Stanford Center
2445 3rd Avenue S
Seattle, WA 98134

DEPARTMENT OF ECOLOGY
State of Washington

Site Overview Map

CSID 6720

CSID6720.vsd



2.0 Names of Key Personnel

TITLE	NAME	TELEPHONE NUMBERS
Project Manager	Chris Pierce	253-720-0523
Superintendent	Bill Feeney	253-204-5946
Safety Representative	Doug Harrison	253-261-4652
Certified Industrial Hygienist	Martin Rose, CIH	206-679-0699

EMERGENCY INFORMATION

Ambulance:	9-1-1
Poison Control:	Seattle (206) 253-2121; other (800) 732-6985
Police:	9-1-1
Fire:	9-1-1
Nearest Telephone:	Cell phones are carried by Titan Earthwork employees
Nearest Fire Extinguisher:	Located in company vehicles on site
Nearest First Aid Kit:	Located in company vehicles on site

Standard Emergency Procedures

1. Get help - send another worker to phone 911 (if necessary)

2. Reduce risk to injured person -turn off equipment

    - move from injury location (if possible)
    - keep warm
    - perform CPR (if necessary)

3. Transport injured person to medical treatment facility (if necessary)

    - by ambulance (if necessary) or company vehicle.
    - stay with person at medical facility.

First Aid Requirements

1. First Aid Trained Personnel: This section is designed to assure that all employees are afforded quick and effective first-aid attention in the event of an on-the-job injury. To achieve this purpose the presence of personnel trained in first-aid procedures at or near the places where employees are working is required.

2. A person or persons holding a valid first-aid certificate shall be available at any worksite where a crew is present.

3. All crew leaders, supervisors or persons in direct charge of one or more employees must have a valid first-aid certificate.

Minimum health and safety equipment stored on-site includes an air horn, fire extinguishers, first aid kits, portable eyewash, hardhats, safety glasses, disposable protective clothing, and nitrile gloves.

As part of on-site safety meetings, emergency response procedures will be reviewed, including the location of first aid/emergency equipment, telephone numbers, emergency communications, equipment emergency shutdown procedures, and evacuation routes.

Potential spills can occur from heavy equipment, truck fuel, vehicle lubricant tanks, and hydrocarbon-containing oils. Spill containment/cleanup kit will be maintained on-site and will include, at a minimum: disposal containers, polyethylene, adsorbent, shovels and PPE. These materials should be capable of stopping a release from entering storm water systems or migrating off-site. If necessary, excavators will be used to contain releases by creating pits, dams, or trenches.

For major emergencies involving potential loss of life, limb, or poisoning, the nearest emergency room to the JSCEE site is Harborview Medical Center:

Harborview Medical Center
325 9th Ave
Seattle, WA 98104
Phone: (206) 744-3000

The route to these medical facilities, including driving directions, is provided in the figure on the the end of the HASP.

3.0 Site Specific Hazard Evaluation

3.1 Site Contaminants

The following list of chemicals has been identified as potential substances that may be encountered:

1. Total petroleum hydrocarbons (TPH), including diesel- and oil-range organics
2. Heavy metals
3. PAHs

During all soil and groundwater disturbance operations, special attention should be paid unusual odors and discolored soil, including the suppression of visible dust. The use of water sprays to irrigate the job site during excavation and other soil disturbing work, especially on dry days, shall be used to suppress the development of visual dust. Inhaled dust is a hazard to the health of employees by itself, and the dust also serves as a transport vehicle for possible soil contaminants, e.g. heavy metals or organic compounds. The suppression of dust generation is an effective step toward minimizing exposure of workers to a wide range of airborne contaminants.

Dermal contact: Excavating soils and groundwater, including using pumps and the lining of trucks, may entail intimate contact with potentially-contaminated soils and groundwater. Impervious clothing (e.g., raingear), rubber boots, and impervious gloves should be used to prevent dermal contact.

Any hazardous materials that will be brought on site to facilitate this project (e.g., decontamination solutions, fuel for equipment operation) will require a safety data sheet (SDS), labeling, and approval for use.

Below are listed the typical exposure routes for contaminants in soil and water.

3.2 Potential Exposure Routes

Inhalation

Inhalation of vapors and dust is one potential exposure route of concern. Measures shall be taken to suppress the development of visible dust during the courses of the project. The elimination of visible dust directly reduces exposure to dust and other possible contaminants that adhere to dust particulate. Air monitoring shall be performed to determine the air concentration of dust, if visible dust cannot be suppressed at all times. Should soil contaminants be discovered during the course of the project, this plan shall be amended to address air monitoring for specific expected contaminants.

Skin and Eye Contact

Skin and eye contact with contaminated soil presents a potential for exposure to employees. Protective clothing, boots and safety glasses shall be worn at all times by workers on site to prevent potential exposure. In addition, adherence to personal hygiene practices is important in minimizing the risks of exposure.

Ingestion

The inadvertent transfer of site contaminants from hands or other objects to the mouth could occur if site workers engage in eating, drinking, smoking, chewing gum or tobacco in contaminated areas, or if hand washing is not performed. This could result in ingestion of contaminants. For this reason, eating, drinking, smoking, chewing gum or tobacco, or similar activities are not allowed in the work area.

3.3 Chemical Hazard Information

Following is a description of typical soil contaminants that might be encountered during construction, and information about measures that will need to be taken in the case that they will be encountered during the course of this project.

Petroleum Hydrocarbons (TPH), Solvents and Volatile Organic Compounds (VOCs)

Petroleum hydrocarbons including heating oil, gasoline, and diesel, along with volatile organic compounds (VOCs) and methane, may be present in the soil or groundwater at the project site. These are normal constituents of petroleum distillates, which can affect the body if they are inhaled or if they come in contact with the eyes or skin.

The volatile components of petroleum hydrocarbons can cause irritation of the eyes, nose and throat. Skin contact may lead to dermatitis. Repeated contact may also lead to absorption through the skin, allowing the contaminant into the body.

Acute exposures to hydrocarbon vapors may lead to central nervous system depression and minor effects on the liver and kidneys. The most common petroleum distillate volatiles are benzene, toluene, ethyl benzene, and xylene (BTEX). Exposure to TPH is not expected at this time.

Heavy Metals

Heavy metals and their associated compounds can be mucous membrane irritants. Exposure to arsenic may cause liver damage and lung or skin cancers. Initial acute symptoms of arsenic exposure include irritation of the upper respiratory tract, gastrointestinal pain, severe nausea, vomiting, and diarrhea.

The DOSH PEL for arsenic is 0.01 mg/m^3 as an eight-hour TWA, with an action level (AL) of 0.005 mg/m^3. The DOSH PEL and AL for lead is 0.050 mg/m^3 and 0.030 mg/m^3 respectively. Personal airborne exposures above the action level trigger specific requirements, such as medical surveillance and additional air monitoring.

PAHs

PAHs (e.g., naphthalene) in surface soils are worrisome due to their potential for causing cancer, birth defects, and chromosome changes. The toxicity of PAHs can vary from being nontoxic to extremely toxic (e.g., benzo-a-pyrene), mostly due to chronic effects. Few short term (acute onset) effects will be observed before symptoms from overexposure to other substances present on-site likely become apparent.

Air Monitoring and Instrumentation

Monitoring for VOCs, if needed, shall be performed using a PID or FID during soil disturbance activities when their presence is suspected.

4.0 Training

Where workers involved in drilling, excavation, loading, and transport are found to be potentially exposed to MTCA-level contaminants, such personnel (none currently) involved in these activities and working inside the Exclusion and Contamination Reduction Zones must have at least 24 hours of Hazardous Waste Operations and Emergency Response (HAZWOPER) training.

For MTCA-contamination sites, the Site Safety Officer should be 40-Hour HAZWOPER trained.

***Note:**
All workers entering a designated **exclusion zone,** as described below, must have a current 40-hour training certificate in Hazardous Waste Operations or current 8-hour refresher, as appropriate. All workers onsite will be required to have read and signed the Site-Specific Health and Safety Plan (SSHSP).

Type of Work Involved	Recommended Level of Training
Workers and Equipment Operators in the Exclusion Zones (areas with exposed contaminated native soil or exposed groundwater).	• 24-Hour Hazardous Waste Operations Training and Current 8-Hour Refresher, as appropriate • Site-Specific Health and Safety Orientation • Read/Sign Site-Specific Health and Safety Plan (see Appendix)
Workers onsite in clean zones, such as laborers, repair persons, etc.	• Site-Specific Health and Safety Orientation • Read/Sign Site-Specific Health and Safety Plan (see Appendix)

5.0 Personal Protective Equipment

Site workers will need to wear PPE as noted in the table below and still need to decontaminate and/or properly dispose of personal protective equipment worn on site when working with contaminated soils. Site workers are responsible to inspect all PPE for integrity prior to use**.** If any other activities are discovered that would be considered to potentially overexpose workers to these metals, the contents of this plan will be amended to apply to those activities.

Description of Personal Protective Equipment (PPE) Action Levels

Level of Protection	Activities Required	PPE
Level D	• Routine construction work on site • Work involving no contact with contaminated soils or groundwater	Hard hat, safety glasses, work clothing, chemically protective (nitrile dipped cotton) gloves, puncture resistant work boots, and hearing protection (where applicable), and reflective vests.
Modified Level D	**Work with contaminated soils or ground water**	Chemical protective disposable overalls/coveralls, inner and outer gloves (Neoprene, Nitrile, Viton, or Butyl), chemical protective puncture resistant work boots or disposable boot covers over puncture resistant work boots Hard hat, safety glasses, and hearing protection (where applicable).

Level C	**Work with MTCA-contaminated soils and air monitoring indicates breathing zone concentrations exceed PEL**	Air purifying respirator with appropriate HEPA cartridges Chemical protective disposable overalls/coveralls, inner and outer gloves (Neoprene, Nitrile, Viton, or Butyl), chemical protective puncture resistant work boots or disposable boot covers over puncture resistant work boots. Hard hat, safety glasses, and hearing protection

Note: Areas of the site where native soils and/or groundwater is not exposed shall require Level D PPE. Specifically, crushed concrete and/or pit-run fill are not native soil are do not require PPE more protective than Level D.

6.0 Medical Approval to Wear Respiratory Protection

Employees assigned to duties that require them to wear respirators will, prior to work, be assessed by a physician or other licensed health care professional to determine if they are qualified to do so. This may be performed through the use of a questionnaire submitted to a primary health care provider. Respirator Fit Tests will be performed at least annually. All employees will be trained on the use of respiratory protection in compliance with the Titan Earthwork's Respiratory Protection Program. If hazardous materials are identified on the site, additional medical surveillance may be required in consultation with an occupational medicine physician and the CIH.

7.0 Air Monitoring and Instrumentation

Air monitoring and visual observations of the site will be conducted to evaluate levels of personal protective equipment, to determine the effectiveness of engineering controls, and to determine if site conditions have changed.

Monitoring for VOCs, if needed, shall be performed using a PID or FID during soil disturbance activities when their presence is suspected. Either a PID or FID will be employed to detected low levels (1-2000 ppm) concentrations of volatile organic compounds. The use of a combustible gas meter will be used to detect organic vapors or gases in the percent range.

If additional hazardous materials are identified on the site, a Certified Industrial Hygienist (CIH) shall design, develop, and implement an Air Monitoring Program to detect and quantify airborne contaminants that may be present during the work. The CIH will determine the appropriate monitoring necessary to ensure that employees are not exposed to levels which exceed established Permissible Exposure Limits (PEL) for hazardous substances.

8.0 Site Control Measures

If hazardous materials are identified on the site, additional site control measures are required, including the establishment of an exclusion zone, contamination reduction zone, and support zone. The specific delineations of each zone will be determined based on site conditions and contamination found.

During work on hazardous waste sites where there is potential for contact with contaminated air, soil, or water or direct contact with chemical or physical hazards, work zones must be established. The size and shape of the work zones must be tailored to fit the specific hazards of the site. There may be several sub-zones of contamination within the exclusion zone based on the known or suspected type and degree of hazard. Different levels of PPE may be used in some cases within the same Exclusion Zone based on the nature of the hazards and the task being performed.

Dermal contact: Excavating soils and groundwater, including using pumps and the lining of trucks, may entail intimate contact with potentially-contaminated soils and groundwater. Impervious clothing (e.g., raingear), rubber boots, and impervious gloves should be used to prevent dermal contact.

Establishing a Hotline

The Hotline separates the Exclusion Zone and the Contamination Reduction Zone.

To establish the Hotline:

- Visually inspect the immediate site environment
- Determine the locations of:
    - hazardous substances/contaminated soil/water/air
    - drainage, leachate, and spilled material
    - visible discolorations
- Evaluate data from the initial site survey indicating presence of:
    - combustible gases and vapors
    - organic and inorganic gases, particulates, or vapors
- Evaluate the results of soil and water sampling.
- Consider the distances needed to prevent an explosion or fire from affecting personnel outside the Exclusion Zone.
- Consider the distances that personnel must travel to and from the Exclusion Zone.
- Consider the physical area necessary for site operations.
- Consider the weather conditions and the potential for contaminants to be blown from the area.
- Secure or mark the Hotline with placards, hazard tape/signs, cones, chains, rope, flagging, fencing and/or materials designated
- Modify its location, if necessary, as more information becomes available.

Establishing the Contamination Reduction Zone (CRZ) and the Contamination Control Line

Establish monitored Access Control Points for entrance to and exit from the Exclusion Zone.

- Verify that proper procedures are used for entering and exiting the Exclusion Zone
- Minimize cross contamination from contaminated to clean areas of the site.

Establish at least two separate lines for decontaminating personnel and equipment within the CRZ. Width of CRZ is determined by the amount of space needed to properly conduct decontamination activities and to prevent the migration of contaminants from the Exclusion Zone to the Support Zone. Establish Access Control Points on the Contamination Control Line for entrance and exit of personnel and equipment between the Exclusion Zone and the Support Zone.

- Verify that proper procedures are used for entering and exiting the Support Zone
- Minimize cross contamination from the low contamination to clean areas of the site.

Site Work Zone Requirements

Work Zone Controls: *For each zone you must:*

Exclusion Zone	● Establish entry and exit checkpoints on the zone's boundary ● Regulate the flow of people and equipment into and out of the zone ● Make sure exits go through a contamination reduction corridor
Contamination Reduction Zone	● Enter through a control point from the clean zone ● Provide a transition or buffer between the exclusion zone and the clean zone ● Perform all decontamination procedures ● Establish separate decontamination routes for people and equipment if practical ● Remove all PPE worn in the contamination reduction or exclusion zones before entering the clean zone
Clean Zone or Support Zone	● Have no employee exposure to hazardous substances or health hazards

Table from WAC 296-843-14005

Figure 1

SITE WORK ZONES

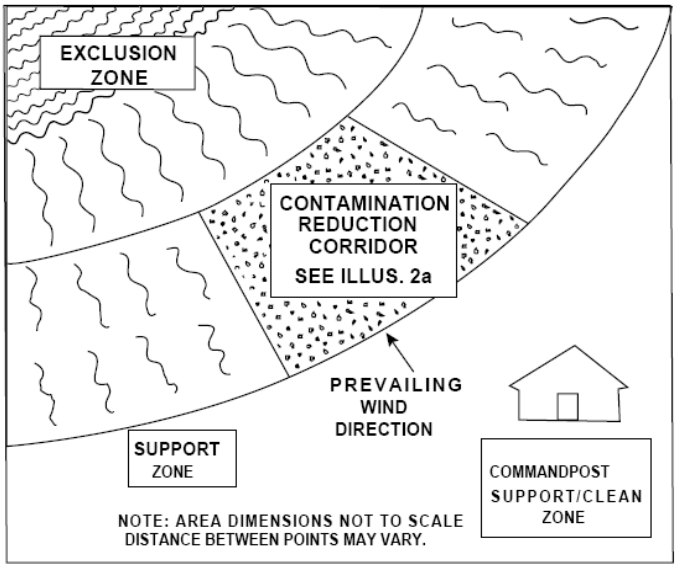
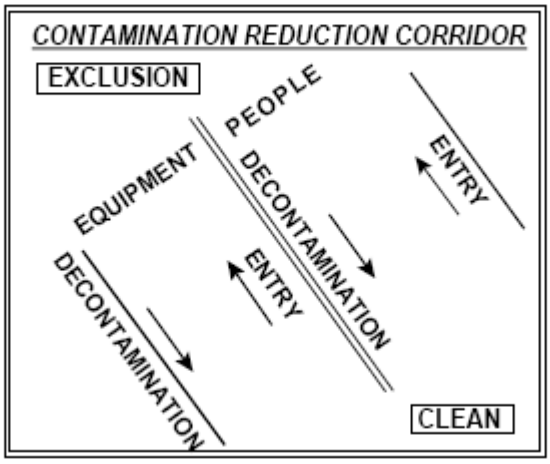


Figure 2

CONTAMINATION REDUCTION CORRIDOR



9.0 Personal Hygiene and Decontamination

1. No eating, drinking, smoking, chewing gum or tobacco or applying of cosmetics is permitted on site, except in designated areas.

2. Stay in visual contact with all excavation equipment operators.

3. No facial hair that would interfere with respirator fit, if respirators will be required to be used due to new information about soil contaminants.

4. Employees are to report any symptoms of exposure they might experience and all accidents/incidents.

5. Each worker and authorized visitor shall remove disposable clothing (e.g., booties and gloves) and place it into an impermeable bag or container prior to leaving the building. Disposable wipes and/or a soap and water solution should be available for hand, glove, and boot cleaning. Clean other garments using a HEPA-filtered vacuum.

10.0 Equipment Decontamination

Where equipment (e.g., trucks) are visibly dirty (stained, soiled, dusted) from contact with contaminated soils, all such vehicles and equipment must be decontaminated in the contamination reduction zone before leaving the site.

If respiratory protection is worn, each employee will use his or her respirator exclusively and is responsible for inspecting it prior to use and for cleaning it after use. Respirators will be stored on site in a way to prevent contamination (i.e., plastic bag in accordance with 29 CFR 1910.134). Respirators will be field-cleaned in the Contamination Reduction Zone, if applicable, after each use. Respirators will be washed and sanitized at the end of each week.

11.0 Logs, Reports, and RecordKeeping

Titan Earthwork will maintain logs and reports covering the implementation of this HASP. Record keeping shall include daily logs, weekly reports, audits, and a close out report.

Daily safety logs shall include, at a minimum, the following:

1. Date
2. Area (site specific) checked
3. Employees in particular area
4. Equipment being utilized by employees
5. Protective clothing being worn by employees
6. Protective devices being used by Contractor’s personnel, visitors, and Designated State and Federal representatives
7. Air monitoring equipment and data
8. Work activities for the day and associated health and safety issues discussed during the daily health and safety meeting
9. Safety Officer signature and date

Weekly logs shall include pertinent information from the daily logs. This report should be a summary of the daily reports filed during that workweek. Health and safety audits of the work area and procedure shall be conducted periodically. An audit report/checklist shall be prepared and attached to the weekly report.

A health and safety closeout report shall be prepared at the completion of the project. This report should summarize the health and safety issues and associated procedures and resolution for the project. Comply with Federal and State laws such as OSHA (29 CFR) which require the retention of chemical exposure records and medical records for a specified length of time after the termination of the job.

12.0 Hazard Communication

1. Personnel shall comply with the following:

2. Be informed of the means for normal site and emergency communication.

3. Be informed of appropriate work practices and engineering controls that will reduce risk of exposure to site hazards.

4. Be informed of specific hazards related to the site and site operations, such as health hazards of site chemicals and specific safety hazards of process equipment.

5. Understand the lines of authority regarding health and safety and site personnel roles and responsibilities.

6. Be trained in the proper use of PPE.

7. Be informed of the frequency and types of air monitoring, personnel monitoring, and sampling techniques to be used on site.

13.0 Safety Data Sheets (SDS)

Any hazardous materials that will be brought on site to facilitate this project (e.g., decontamination solutions, fuel for equipment operation) will require a material safety data sheet (SDS), labeling, and approval for use by Titan Earthworks. SDSs must be available on site and maintained by Titan Earthworks.

14.0 Accident Prevention Plan

Refer to Titan Earthworks's Accident Prevention Plan and Site Safety Plan.

15.0 References

Krazan & Associates, Phase II Environmental Site Assessment, JSCEE Kitchen Subsurface Sampling , July 10, 2023

Route to Nearest Medical Facility

Harborview Medical Center
325 9th Ave
Seattle, WA 98104

from Parking lot, 2445 3rd Ave S, Seattle, WA 98134
to Harborview Medical Center | Seattle Hospital

8 min (2.3 miles)

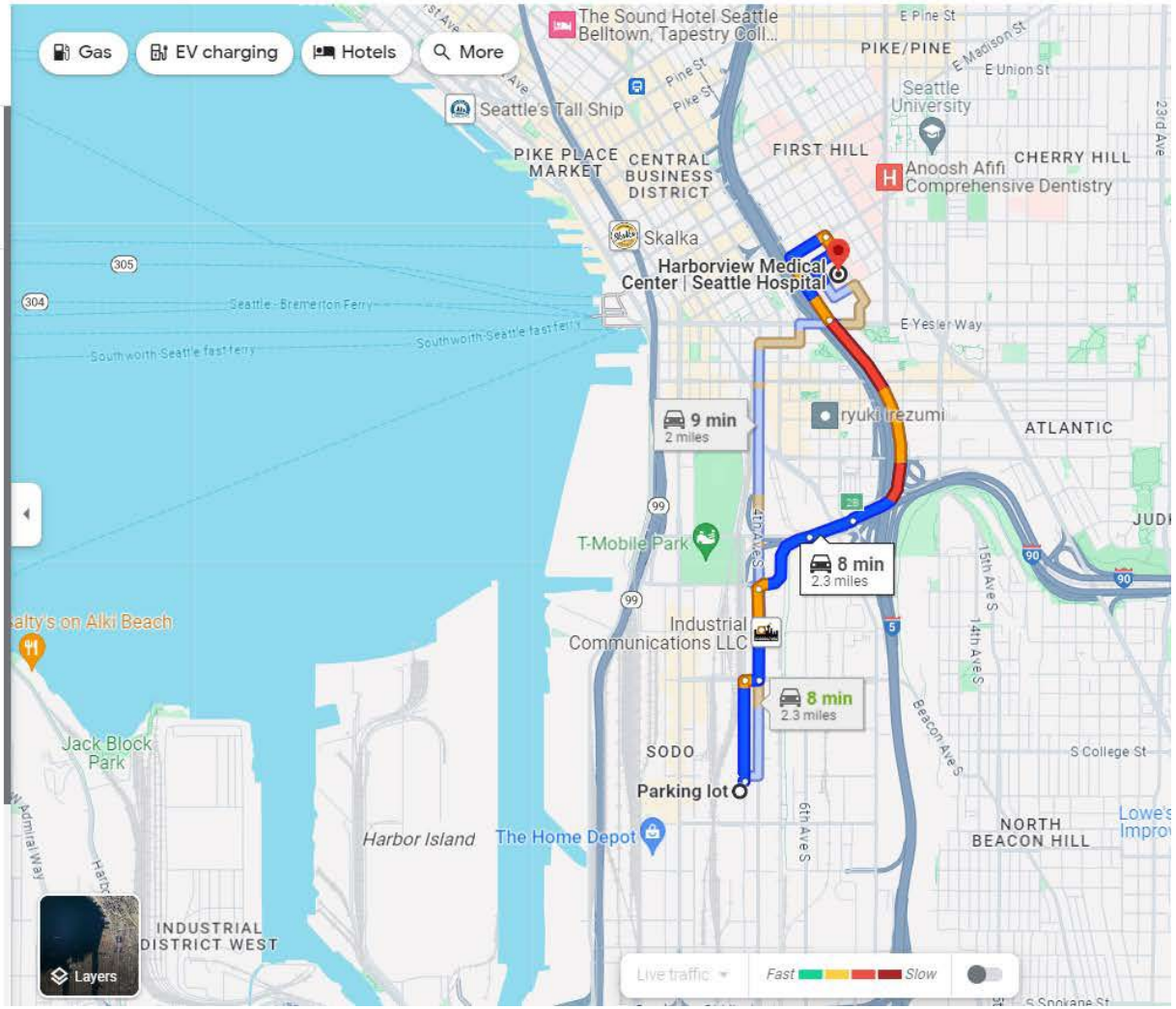
via 3rd Ave S

Best route now due to traffic conditions

Parking lot
2445 3rd Ave S, Seattle, WA 98134

- Follow 3rd Ave S to S Holgate St
  2 min (0.3 mi)
- Take Exit 2B to Jefferson St
  6 min (1.9 mi)
- Continue on Jefferson St. Drive to 8th Ave
  1 min (0.1 mi)

Harborview Medical Center | Seattle Hospital
Main Hospital, 325 9th Ave, Seattle, WA 98104



Site-Specific Health and Safety Plan
Acknowledgment Form

I have read the Site-Specific Health and Safety Plan pertaining to work to be performed at the JSCEE Central Kitchen Phase II Project, Washington. I understand the contents of this Site-Specific Health and Safety Plan and agree to abide by its provisions. Any questions I had regarding the plan have been satisfactorily answered.

Name (Print)	Signature	Company	Date