APEX

DRAFT

February 14, 2025

Erin McDonnell
Oregon Department of Environmental Quality
700 NE Multnomah, Suite 600
Portland, Oregon 97232

Subject: **Willamette Cove Upland Facility**
Riverbank Soil Reuse Characterization and Upland Receptor Screening
ECSI No. 2066

Dear Erin:

The purpose of this letter is to describe the collection of riverbank soil samples to evaluate potential reuse of bank layback excavated soil as cap material on the Willamette Cove Upland Facility (Facility). The soil samples will be collected during the riverbank characterization being conducted by the Willamette Cove In-Water Remedial Design Group (WC Group).

Background

It is currently estimated that approximately 50,000 cubic yards of general backfill material will be needed to complete the selected remedial action at the Facility. Two areas of potential onsite borrow material have been identified: soil beneath the concrete slabs on the East Parcel; and soil removed as part of riverbank layback activities associated with the WC Group remediation. Further evaluation of the soil beneath the concrete slabs will be conducted in a future effort. This Work Plan focuses on collection of additional soil samples for the Upland Facility evaluation during the WC Group's riverbank layback characterization activities.

WC Group Final Riverbank Characterization Work Plan

The WC Group submitted a *Final Riverbank Characterization Work Plan* (RB Work Plan, Maul Foster Alongi [MFA], 2025) to the United States Environmental Protection Agency (EPA). The EPA has granted conditional approval of the RB Work Plan and field activities are scheduled to commence the week of February 10, 2025. In general, the proposed riverbank characterization activities include the following:

- Advancing two to three borings along 23 transects (one transect every approximately 150 feet along the length of the riverbank), using sonic drilling methods, and collection of soil samples within three zones: Removal Layer (excluding the upper three feet of material that was characterized during the Facility Remedial Design Investigation); Leave Surface; and Sub-Leave Surface. Each transect will consist of two vertical borings and one angle boring (with the exception of a few transects where space is limited and only two borings will be advanced).
- Collection of soil samples from the three zones is summarized below:

  - Removal Layer — At each transect, increments from the removal layer (excluding the upper 3 feet of material already characterized) will be collected and composited (removal layer increments from all three borings will be composited into one sample representing the removal layer at that transect) for waste characterization purposes.
  - Leave Surface — At each boring, composite samples will be collected over the 5-foot leave surface zone for a total of three composite samples per transect. In addition, discrete soil samples will be collected at 1-foot intervals within the 5-foot leave surface zone from each boring and archived at the laboratory for potential follow-up analyses pending the composite sample results.
  - Sub-Leave Surface — Composite and discrete samples will be collected from the sub-leave surface zone using the same approach as the leave surface zone.

- Analyze soil samples in accordance with Tables 4-2 and 4-3 of the RB Work Plan and summarized below:
  - Removal Layer Samples –
    - PCB Aroclors by EPA Method 8082A
    - PAHs (including dibenzofuran) by EPA Method 8270E
    - PCDD/Fs by EPA Method 1613B
    - DDx (DDD, DDE, and DDT) by EPA Method 8270E
    - Metals (antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc) by EPA Method 6020B.
  - Leave Surface and Sub-Leave Surface Samples –
    - PCB Aroclors by EPA Method 8082A
    - PAHs (including dibenzofuran) by EPA Method 8270E
    - PCDD/Fs by EPA Method 1613B
    - DDx (DDD, DDE, and DDT) by EPA Method 8270E
    - Metals (antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc) by EPA Method 6020B
    - Additional chemical analysis may include total petroleum hydrocarbons by Northwest Total Petroleum Hydrocarbon Method and tributyltin by Krone.
    - Physical, geotechnical, and soil nutrient parameters.

The results of the RB Work Plan implementation will be presented in a *Riverbank Characterization Evaluation Report* prepared by MFA and submitted to EPA.

Upland Facility Proposed Soil Sampling for Potential Reuse

As described above, the riverbank layback removal layer represents a significant volume of soil, some of which may be suitable for reuse as general fill material in the upland. Specifically, the riverbank layback prism in the eastern portion of the East Parcel (transects T13 through T18) could represent viable borrow material (based on fill history, prior data, and proposed removal volume).

Site Health and Safety Plan. A Site-specific health and safety plan (HASP) has been prepared for the proposed activities and is included as Attachment A. The HASP was prepared in general accordance with the Occupational Safety and Health Administration (OSHA) and the Oregon Administrative Rules (OAR). Job Safety Analysis (JSAs) for each task (including working over water) are included as attachments to the HASP. A copy of the HASP will be maintained on-site during the field activities.

Coordination with the WC Group. The RB Work Plan implementation is scheduled to commence the week of February 10, 2024. Apex will coordinate with the WC Group on scheduling Apex staff to be on site to collect discrete soil samples from the removal layer in the mid-point and bottom borings of transects T13 through T18. Discrete soil samples will be collected by MFA staff from the leave surface and sub-leave surface.

Soil Sampling. As MFA will not be collecting discrete soil samples from the removal layer, Apex staff will be on site to collect discrete soil samples from the removal layer in the mid-point and bottom borings in transects T13 through T18. The soil samples will be collected from one-foot intervals directly from the sonic drill core and placed in laboratory-supplied 4-ounce glass jars. Each sample will be labeled with the boring number, depth and date of collection. The samples will be placed directly into a chilled ice chest and recorded on a chain of custody.

To prevent cross-contamination between samples, clean, dedicated sampling equipment will be used when possible for each sample and will be discarded after use. Cleaning of non-disposable items will consist of washing in a detergent (Alconox®) solution, rinsing with tap water, then rinsing with deionized (DI) water. Decontamination water will be managed in accordance with the RB Work Plan.

Laboratory Analytical Program. The discrete samples collected from the removal layer will be delivered to Apex Laboratory located in Tigard, Oregon for archiving pending evaluation of the results of the composite samples analyzed by the WC Group.

Given the time required for the WC Group to complete chemical analyses and to evaluate the results, follow-up analyses of discrete samples for some analytes will be outside of standard hold times. Archived samples will be frozen pending chemical analysis to extend holding times. Recognizing that hold times are conservative, results from the archived samples will be suitable for evaluating soil for potential re-use.

In consultation with DEQ, analysis of the archived soil samples will be assigned based on review of the WC Group results. Samples will be analyzed for the following:

- PCB Aroclors by EPA Method 8082A
- PAHs (including dibenzofuran) by EPA Method 8270E
- PCDD/Fs by EPA Method 1613B
- Metals (antimony, arsenic, chromium, copper, lead, mercury, nickel, selenium, and zinc) by EPA Method 6020B.

Laboratory Quality Assurance/Quality Control. The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries, and blank spike duplicate recoveries to evaluate the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods.

Screening

Cleanup Levels. Soil cleanup levels (CULs) are defined as the soil concentration corresponding to the acceptable risk level (or the background concentration if the acceptable risk level is less than background) for the corresponding contaminant of concern (COC), receptor, and exposure area. Development of the CUL values and the use of CULs used in the remedial design are discussed in detail in Section 3.2.2 of the *Basis of Design Report* (BODR, Apex, 2024). Table 3 of the BODR provides a summary of the CULs and is included as Attachment B of this letter.

Soil Re-Use Screening. Results from soil samples collected from the removal layer will be compared to the CULs.

Bank Layback Leave Surface Screening. Results from soil samples collected from the leave surface and sub-leave surface will be compared to the CULs to assess potential risks to upland receptors following bank layback.

Reporting

The sample results and results of the screening will be submitted to DEQ in a brief report for review. The report will include recommendations for soil reuse and/or further sampling, if appropriate. Ultimately, this information will be used to inform the development of the 60% design.

Please call me at (503) 348-3906 if you have any questions.

Sincerely,

Steve Misner, R.G.
Project Manager

cc: David Lacey, DEQ
Eva DeMaria, US Environmental Protection Agency
Laura Hanna, US Environmental Protection Agency
Dwight Leisle, Port
Alison Clements, Metro
Crystal Chase, Port
Daniel Read, Port
Kerry Gallagher, Port
LWP File

Attachments

A Health and Safety Plan
B Table 3 from *Basis of Design Report*

References

Apex Companies, LLC, 2024. *Basis of Design Report, Willamette Cove Upland Facility*. September 27, 2024.

Maul Foster Alongi, 2025. *Final Riverbank Characterization Work Plan*. January 16, 2025

Attachment A

Health and Safety Plan

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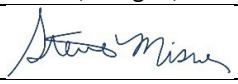
Section 1.0 - Project information

Project Number	23011207	
Site Number	Willamette Cove Upland Facility	
Site Owner/Representative: Port of Portland		Contact Information: Dwight Leisle
Site Address/Location: South end of North Edgewater Street, Portland, Oregon		
Starting Work Date: Winter 2025		Ending Work Date: Winter 2025
HASP Prepared By: Steve Misner		HASP Reviewed By: Steve Misner

Site Description: Willamette Cove Natural Area – Vacant, Vegetated
Site History: Former Industrial Site, Primarily Wood Products Manufacturing
Proposed Onsite Activities: Collect soil samples from selected soil borings for potential laboratory analysis. Sampling will consist of collecting soil samples from one-foot increments from soil cores generated using sonic drilling methods.

Section 2.0 - EMERGENCY INFORMATION AND TELEPHONE NUMBERS

Ambulance Company or Public EMS	Portland Fire Department
Hospital/Emergency Room Name and Address	Legacy Emanuel Hospital 2801 N. Gantenbein Portland, Oregon, 97227
Signature from individual who verified Hospital Services	
Local Police Number	911
Local Fire Dept Number	911
Poison Control Center	1-800-222-1222
WorkCare	1-888-449-7787

2.1 Hospital Directions

See attached figure. Hospital is approximately a 17 minute drive southeast of the Site.

2.2 Emergency Procedures

The following standard emergency procedures will be used by onsite personnel. While onsite, the site health and safety coordinator shall be notified of any onsite emergency and shall be responsible for ensuring that the appropriate procedures are followed. If a medical emergency occurs, Apex field staff will call 911, WorkCare, and the Apex project manager. If another Site emergency is observed (such as fire, flood, etc.), field staff will evacuate the Site and call the Apex project manager (and 911, if necessary) once at a safe location.

2.3 Active Facility Emergency Action Plan

If the site is an active facility, Apex will follow established onsite evacuation procedures. Facility evacuation procedures have been reviewed (if applicable)

☐ Reviewed

☒ Not Applicable

Verification initials (by a person assigned to the project): HG

(No review means no work can be conducted)

The Site is inactive; therefore, it is the sole responsibility of Apex Management to have an evacuation procedure/plan in place and cover it daily during the Tailgate Safety Meetings.

In the event an emergency evacuation should take place Apex Management can use the daily Tailgate Safety Meeting for a headcount.

2.4 Air Release or Fire/Explosion

On notification of an air release or a fire/explosion, all personnel will travel in the upwind direction. The site health and safety officer will then account for all personnel and notify the proper emergency

agencies. If the site health and safety officer is not available, the task manager or appropriate field personnel will assume these responsibilities.

In the event an emergency evacuation should take place Apex Management can use the daily Tailgate Safety Meeting for a headcount.

Section 3.0 - First Aid/CPR

ALL FIELD STAFF WORKING UNDER THIS HASP WILL HAVE THE FOLLOWING TRAINING BEFORE CONDUCTING FIELD ASSIGNMENTS	▪ First-aid/CPR

3.1 First Aid Kit Components:

At least 1 Apex employee on site must have a First Aid Kit	Minimum Contents: • 1 Absorbent compress, 32 square inches (sq. in.) (81.3 sq. centimeters [cm]) with no side smaller than 4 in. (10 cm) • 16 Adhesive bandages, 1 in. x 3 in. (2.5 cm x 7.5 cm) • 1 Adhesive tape, 5 yd. (457.2 cm) total • 10 Antiseptic, 0.5g (0.14 fluid ounce [fl oz.]) applications • 6 Burn treatment, 0.5 g (0.14 fl. oz.) applications • 4 Sterile pads, 3 in. x 3 in. (7.5 x 7.5 cm) • 1 Triangular bandage, 40 in. x 40 in. x 56 in. (101 cmx 101 cm x 142 cm)

3.2 Basic First Aid Procedures:

Skin Contact	Remove any contaminated clothing. Wash immediately with water for at least 15 minutes. If needed call 911
Inhalation	Remove from contaminated atmosphere. Call 911
Ingestion	Never induce vomiting on an unconscious person. Never induce vomiting when acids, alkalis, or petroleum products are suspected. Call 911

Section 4.0 - Personnel and Responsibility

Personnel	Responsibility
Herb Clough	Program Manager
Steve Misner	Project Manager
Steve Misner	Site Health and Safety Coordinator (SHSC)
Dave Kolpacki	Field Supervisor
To Be Determined	Field Staff
TBD	Field Staff
TBD	Field Staff
TBD	Field Staff

4.1 Personnel and Responsibility Roles

See Appendix A for full description of Personnel and Responsibility Roles.

4.2 Onsite Control

Tailgate safety meetings will be conducted at the start of each working day and recorded on the Daily Tailgate Safety Meeting form in Appendix B. Forecasted wind and weather conditions should be discussed during the Tailgate Safety Meeting.

All Apex employees are responsible for onsite control. During work activities, the following zones will be established:

Field staff will place cones and/or construction tape as needed to delineate the work zone. A 10-foot exclusion zone will be formed around subcontractors operating heavy equipment, if applicable. Apex will intercept any visitors and direct them away from the exclusion zone.

Decontamination procedures will generally be conducted near each sample unit, before moving to the next sample unit.

Generally, the support zone will be near the work vehicle. In addition, a job site trailer may be employed as part of the support zone.

The Site is secured, and Apex will be provided a key or code for the security gate. In addition, temporary fencing will be erected surrounding the job trailer.

Section 5.0 - Safety Training

ALL FIELD STAFF WORKING UNDER THIS HASP WILL HAVE THE FOLLOWING MINIMUM TRAINING BEFORE CONDUCTING FIELD ASSIGNMENTS:

- First-aid/CPR
- Hearing conservation
- PPE
- Utility clearance
- Recognition and Prevention of Slips Trips and Falls

Review and mark the following additional training required for the tasks included in this site-specific HASP.

Training	Req*	Rec*	NA*	Training	Req*	Rec*	NA*
40 Hour Hazwoper	☒	☐	☐	Lead Exposure	☐	☒	☐
Current 8 Hour Hazwoper	☒	☐	☐	Benzene Exposure	☐	☐	☒
24 Hour Hazwoper	☐	☐	☒	Hydrogen Sulfide Exposure	☐	☐	☒
10 Hour Construction	☐	☐	☒	Fall Protection	☐	☐	☒
Respiratory Protection	☐	☐	☒	LOTO/Electrical	☐	☐	☒
Confined Space Entry	☐	☐	☒	Hand/Power Tools	☐	☐	☒
Cold/Heat Stress	☒	☐	☐	Other	☐	☐	☒
Bloodborne Pathogens	☐	☒	☐	Other	☐	☐	☐

At no time will employees or Work Directed Subs (WDS) perform activities that they have not been properly trained to perform. It is the Hiring Managers responsibility to ensure that the appropriate training has been provided to new employees and WDSs prior to the start of their roles. It is the Project/Program/Field Manager's responsibility to ensure new hires and WDS are performing their job duties according to the training requirements.

Section 6.0 - Personal Protective Equipment (PPE)

The level of PPE selected for a task is based on the following:

- Administrative and engineering controls currently in place
- Potential physical hazards that may be encountered while completing the task
- Type and measured concentration of the chemical substance in the ambient atmosphere and its toxicity
- Potential for exposure to substances in air, splashes of liquids, or other direct contact with material due to work being done
- Knowledge of chemicals on-site along with properties such as toxicity, route of exposure, and contaminant matrix.

In situations where the type of chemical, concentration, and possibilities of contact are not known, the appropriate level of protection must be selected based on professional experience and judgment until the hazards can be better identified.

PPE	Req*	Rec*	NA*	PPE	Req*	Rec*	NA*
Steel Toed Boots	☒	☐	☐	Work Gloves (mechanical/leather gloves)	☒	☐	☐
Safety Glasses	☒	☐	☐	Indirect Vented Goggles	☐	☐	☒
Face Shield	☐	☐	☒	Fire Resistant Clothing (FRC)	☐	☐	☒
Hard Hat	☒	☐	☐	Outer Chemical Resistant Gloves	☐	☐	☒
Hi Vis Vest/Shirt	☒	☐	☐	Chemical Resistant Suit	☐	☐	☒
Hearing Protection	☒	☐	☐	Tyvek Suit	☐	☐	☒
Respiratory Protection	☐	☐	☒	Poly-Coated Tyvek	☐	☐	☒
Work Gloves (Nitrile gloves)	☒	☐	☐	Fire Extinguisher	☒	☐	☐
Dust Mask	☐	☒	☐	Other: Tecnu skin cleanser, face mask, hand sanitizer	☒	☐	☐
Half-Face Respirator	☐	☐	☒	Long pants and long sleeves	☒	☐	☐
Full-Face Respirator	☐	☐	☒	Other	☐	☐	☒

6.1 PERSONAL PROTECTIVE EQUIPMENT PRECAUTIONS

The following work practices **must be observed** during Site activities:

- Avoid contact with debris of unknown origins.
- Wear appropriate personal protective equipment (PPE); gloves, ear plugs, disposable boot covers, Tyvek, etc., in specified areas and during specified tasks as defined in this HASP and the JSAs.
- Practice hazardous material avoidance - soil and liquid samples should be collected in such a manner as to minimize contact with the material.

- Exercise caution when handling sample bottles, as the lids may not be properly sealed.
- Chemicals of Concern can be listed on chart found in Appendix C*

6.2 Personal Protective Equipment Failure

If any worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his or her buddy shall immediately leave the exclusion zone. Reentry shall not be permitted until the equipment has been replaced or repaired.

6.3 Monitoring Requirements

Air monitoring is not required during the proposed Site activities, as field staff are not expected to encounter volatile dust or volatile chemicals. Potentially encountered materials in soil include petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), dioxins/furans, and polychlorinated biphenyls (PCBs) (see Appendix C).

6.4 Decontamination Procedures

In the event that an exposure/contamination should occur, follow the guidelines below. Level D contamination procedures will be used at the Site during the sampling event.

PPE	Detergent and water will be used as the decontamination solution unless otherwise specified. Decontamination procedures will include the following (describe onsite decon procedures for PPE and personnel; for example [e.g., boot wash]):
Equipment	Decontamination Procedures will be conducted in accordance with Apex's Standard Operating Procedures

Section 7.0 - Site Conditions/Additional Factors

Although this list is not all encompassing the purpose to help identify hazards present on the job site(s).

Slips, Trips, Falls☒	Cold Stress☐	Heat Stress ☒	Buried or Overhead Utilities ☒
Biological ☒	Organic/Inorganic Chemicals ☒	High Noise ☒	Aerial Lift ☐
Vehicular Traffic ☐	Respirable Particles☐	Excavations ☐	Construction ☐
Non-Ionizing Radiation☐	Security ☒	UTVs/Side by Sides☐	Chemical Mixing ☐
Work Over 6ft High☐	Hand/Portable Power Tools☒	Oxygen Deficiency ☐	Drone Operation ☐
Blasting Agents☐	Confined Space☐	Welding/Hot Work ☐	Other ☐
Lock Out Tag Out☐	Forklifts☐	Extreme Weather ☒	Other☐
Scaffolding ☐	Portable Ladders ☐	Construction Traffic ☐	Other☐

Due to the nature of the Site, Apex field staff may encounter poison oak or other poisonous plants at the Site. Workers can prevent contact with poisonous plants by taking the following steps:

- Wear long sleeves, long pants, boots, and gloves.
- Wash exposed clothing separately in hot water with detergent.
- Barrier skin creams, such as a lotion containing bentoquatum, may offer some protection before contact.
- Barrier creams should be washed off and reapplied twice a day.

- After use, clean tools with rubbing alcohol (isopropanol or isopropyl alcohol) or soap and lots of water. Urushiol can remain active on the surface of objects for up to 5 years.
- Wear disposable gloves during this process.

Workers who have come in contact with poisonous plants should:

- Immediately rinse skin with rubbing alcohol, specialized poison plant washes, degreasing soap (such as dishwashing soap or Technu) or detergent, and lots of water.
- Rinse frequently so that wash solutions do not dry on the skin and further spread the urushiol.
- Scrub under nails with a brush.

In addition, thick vegetation may have ticks. Workers will take precautions to prevent tick bite by wearing long sleeves and long pants, and using insect spray or cream. Workers may also consider wearing Tyvek if vegetation is thick, and/or taping sleeves and pants down around the wrists and ankles to prevent entry to the skin via clothing openings. Following fieldwork, all workers will inspect their person for ticks.

Section 8.0 - Communication Procedures

All onsite personnel will practice constant communication with other Apex personnel, subcontractors, and facility personnel during active work. Generally, verbal and/or cellular telephone communication will be used while onsite. Additional communication devices such as air horns can be used in loud environments or when confined space entry is being conducted.

Under special circumstances it is permissible to use Special Communication Procedures (e.g., two-way radios for large sites with multiple workers).

Field staff will check in with the project manager daily by 11:00 and again by 16:00 (or before leaving the Site). If the project manager does not hear from field staff by the designated times, the project manager will call the field staff. In the case of no answer, project manager will consult with the Division Health and Safety Contact and may elect to travel to the Site.

8.1 Lone Working Communication Procedures

No lone working will be permitted at the Site due to the isolated nature of the Site and the potential to encounter persons experiencing homelessness at the Site. A minimum of two field staff is required at all times. Apex staff will not approach camps or singular living spaces of persons experiencing homelessness. This may mean re-locating a sample position or abandoning a sampling area. If a camp is prohibiting access to locations on the other side of the camp, Apex will attempt to find an alternative safe access route. If no other route is identified, Apex field staff will contact the project manager to discuss the situation. This may mean abandoning a sampling area.

8.2 Emergency Hand Signals

The following standard hand signals will be used in case injury or circumstance does not allow for verbal or other communication:

- Hand gripping throat = Out of air, can't breathe
- Grip partner's wrist or both hands around waist = Leave area immediately
- Hands on top of head = Need assistance
- Thumbs up = Ok, I'm all right, I understand
- Thumbs down = No, negative

Section 9.0 - Standard Operating Procedures

- Whenever possible, use the buddy system.
- Conduct a daily tailgate meeting before beginning site activities each day and record in field book
- Practice good work practice controls:
    - Never sit down or kneel in contaminated areas
    - Never lay equipment on the ground where contaminated groundwater or soil may be present
    - Avoid unnecessary contact with onsite contaminated objects.
- Do not eat, drink, or use tobacco products outside the designated support zone(s).
- Whenever possible, do not use contact lenses while onsite.
- Thoroughly wash hands and face before eating, drinking, etc.
- Keep copies of the HASP available in the support zone.
- In the event PPE is ripped or torn, stop work and remove and replace PPE as soon as possible.
- In the event of direct skin contact, immediately wash the affected area with soap and water.
- If contaminated media comes in contact with eyes flush with clean water for 15 minutes.
- Ensure that all subcontractors have their own site-specific HASP that is maintained onsite
- Report all accidents, injuries, and environmental releases to the project/program manager.

Specific Job Safety Analysis are included in Appendix D.

Section 10.0 - Personal Injury in the Work/Exclusion Zone with Buddy System/Onsite Contractor

Only persons directly involved with the soil sampling work will be permitted to enter the Exclusion Zone.

If onsite personnel require emergency medical treatment, and the buddy system is used, the following steps will be taken:

- Evaluate the nature of the injury and obtain the onsite copy of this HASP
- Contact local emergency service
- Decontaminate to the extent possible before administration of first aid
- Stay with the injured person.

All work-related incidents must be reported. For all medical emergencies, call 911 or the local emergency number. For non-emergency incidents, you must:

- Give appropriate first aid care to the injured or ill individual and secure the scene.
- Immediately call WorkCare at (888) 449-7787 (available 24 hours/7 days per week) if the injured person is an Apex employee.
- Notify the Project Manager and/or SSO after calling WorkCare.

- Enter the safety incident into the Apex Incident Report and submit to incidents@apexcos.com within 24 hours.

In the event of an emergency that necessitates evacuation of the work task area or the entire site, the following procedures shall occur:

- The Apex site supervisor or Project Manager will contact all nearby personnel using the onsite communications system to advise of the emergency.
- Personnel will proceed along site roads to a safe distance upwind from the hazard source to a pre-determined assembly area.
- Call 911
- Personnel will remain in that area until the site supervisor or Project Manager or other authorized individual provides further instruction.

In the event of a severe spill or leak, site personnel will follow the procedures listed below:

- Evacuate the affected area and relocate personnel to an upwind, pre-determined assembly area.
- Inform the Apex site supervisor or Project Manager, an Apex office, and a site representative immediately.
- Locate the source of the spill or leak and stop the source if it is safe to do so until appropriately trained personnel are onsite to do so.
- Begin containment of spilled or leaked materials. If a spill is 1 gallon or less Apex employees can contain and clean up the spill. If spill is larger a contractor may be called in to conduct containment and clean up services. If a contractor is on site containment and clean-up is their responsibility. If there is no contractor on site it will be the responsibility of Apex management to call in a contractor to provide containment and clean up services.
- Notify appropriate local, state, and federal agencies after obtaining client consent to do so.

In the event of severe weather, site personnel will follow the procedures listed below:

- Site work shall not be conducted during severe weather, including high winds and lightning.
- In the event of severe weather, stop work, lower any equipment (drill rigs), and evacuate the affected area.
- Monitor internet or other sources for sever weather alerts before resuming work.
- In the event of lightning, outdoor work must be halted for a minimum of 30 minutes from the last lightening observation.
- Ensure cell phones have Alert Media install along with an additional weather app

Apex personnel will also follow the Employee Incident Intervention Procedures in Appendix E.

10.1 Personal Injury in the Work/Exclusion Zone

The following steps will be taken before beginning work each day:

- The following communication procedures MUST BE COMPLETED
- The employee MUST always keep a cellular telephone with them (before starting work, ensure that there is emergency service at a minimum)
- Inform an onsite contact (if they will be present throughout all active work activities) or senior member of Apex of your plans for the day and your expected active work schedule.

If an injury has occurred:

- Evaluate the injury and decide whether emergency services are required
- Contact emergency services, if necessary, with cell phone
- If emergency services are not necessary, attempt first aid alone or contact an onsite contact or Apex contact for assistance.
- Contact supervisor to determine need to contact WorkCare

Section 11.0 - Medical Surveillance

All employees, regardless of the exposure involved, are required to participate in the medical monitoring program established by Apex. OSHA regulations state that employees involved in certain activities that may expose them to hazardous materials at or above permissible exposure limits (PELs) or above the published exposure limit for greater than 30 days per year, or all employees who wear a respirator are required to participate in the monitoring program. The purposes of the medical monitoring program are to identify any illness or condition that might be aggravated by exposure to hazardous materials or work conditions; to certify that each employee can use negative-pressure respirators as required by OSHA and withstand heat or cold stress; to ensure that employees are able to physically perform their assigned tasks and to establish and maintain a medical record to monitor for abnormalities that may be related to work exposure that could increase injury risk for the employee. Apex's medical monitoring program includes the following:

- a baseline physical examination
- annual physical examination
- a medical determination of fitness for duty, including work restrictions after any injury or illness that may affect employee safety
- a review of potential exposures to determine the need for specific biological and medical monitoring

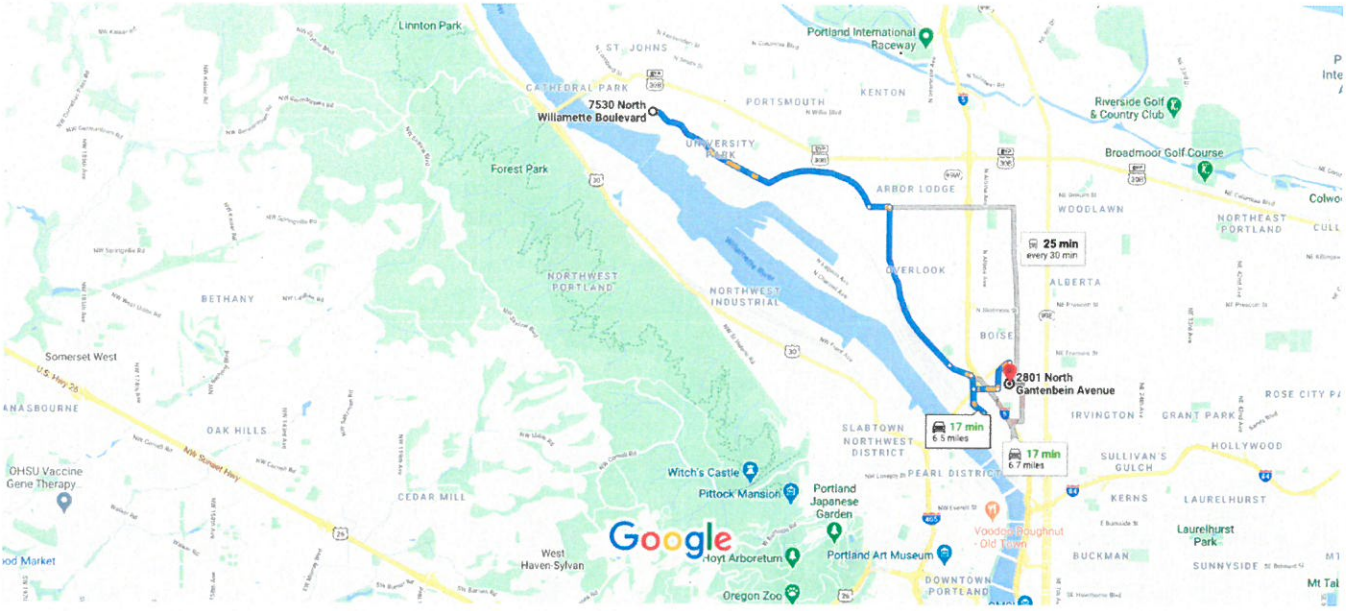
Section 12.0 - Certification and Signatures

All site personnel MUST sign this page to acknowledge the requirements of this HASP.

Signature	Date	Print Name	Title/Project Role

Google Maps

7530 N Willamette Blvd, Portland, OR 97203 Drive 6.5 miles, 17 min
to 2801 North Gantenbein Avenue, Portland, OR



Map data ©2020 Google 5000 ft

7530 N Willamette Blvd

Portland, OR 97203

Take N Willamette Blvd and N Greeley Ave to N Graham St

13 min (5.7 mi)

1. Head southeast on N Willamette Blvd toward N Buchanan Ave

2.7 mi

2. N Willamette Blvd turns slightly left and becomes N Rosa Parks Way

0.2 mi

3. Turn right onto N Greeley Ave

1.8 mi

4. Keep left to stay on N Greeley Ave

0.2 mi

5. Turn right onto N Interstate Ave/Pacific Hwy W

0.4 mi

6. Make a U-turn at N Albina Ave

0.3 mi

Continue on N Graham St to your destination

4 min (0.8 mi)

7. Turn right onto N Graham St

0.2 mi

8. Turn left onto N Kerby Ave

0.3 mi

9. Turn right onto N Gantenbein Ave

0.2 mi

10. Turn right at N Stanton St

Destination will be on the right

102 ft

2801 N Gantenbein Ave

Portland, OR 97227

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Appendix A – Personnel and Responsibility Roles

OSHA requires that a chain of command with lines of authority, responsibility, and communication is established for each project with a HASP. Therefore, APEX will establish a chain of command that ensures that all site operations will be conducted safely.

Project/Task Manager: (also referred to as the General Supervisor). This person is the project director who is ultimately responsible for the overall implementation of the project. This individual is responsible for the proper implementation of the comprehensive work plan. In all cases, the project director will ensure that the site work is staffed appropriately to safely and effectively implement the work plan. They will also ensure that company funds are available for the site project/task manager to provide appropriate personal protective equipment (PPE) and monitoring equipment to safely implement this HASP. The Site project/task manager will be responsible for the safe and proper implementation of the work plan. They will have the authority to expend company resources to ensure that PPE and other safety equipment are available and in good working order. They will communicate with the Program Manager regarding implementation of the work plan

Site Health and Safety Coordinator: (SHSC) has the responsibility and authority to implement the site HASP and verify compliance with the plan. Additionally, other personnel that are needed to conduct the proposed work will be assigned. The site health and safety coordinator (SHSC) is responsible for the implementation of this HASP. The SHSC will communicate any issues with changing site conditions, upgrades in PPE, decontamination procedures and needs for monitoring equipment with the site project/task manager. The SHSC will ensure that other workers assigned to the project are following the HASP. It is expected that all other employees assigned to the project will follow the HASP and report any and all potential safety concerns to the SHSC.

Visitors: **Authorized visitors** (e.g., client representatives, regulators, management or subcontractor management staff, etc.) requiring entry to any work location on the site will be briefed by the PM on the hazards present at that location. Visitors will be escorted at all times at the work location and will be responsible for compliance with their employer's health and safety policies. In addition, this HASP specifies the minimum acceptable qualifications, training and personal protective equipment which are required for entry to any controlled work area; visitors must comply with these requirements at all times. **Unauthorized visitors, and visitors not meeting the specified qualifications or not wearing the PPE outlined in the HASP, will not be permitted within established controlled work areas.**

Example of Authorized vs Unauthorized Worker:

Unauthorized Worker has completed OSHA 24 Hour Training which allows them to be on site conducting tasks that will not allow them to come directly in contact with hazardous materials.

Authorized Worker has completed the OSHA 40 Hour Training requirement which allows them to be on site conducting tasks where they may come in direct contact with hazardous materials.

Some site examples where this type of work may take place can be abandoned such as Superfund sites OR they could be at an existing facility where they fall under a RCRA Corrective Action.

Appendix B – Daily Tailgate Form

DAILY TAILGATE MEETING FORM

Instructions: *Field completion of a tailgate meeting form is required daily prior to starting ANY field activities. All field personnel, including work-directed subs and subcontractors, involved in the day's activities must be present for the meeting or presented with the information discussed in the meeting. Keep forms with the project files.*

DATE:	**TIME:**	**PROJECT NO:**	**CLIENT:**
PROJECT SITE:		**MEETING CONDUCTED BY:**	**SIGNATURE:**

LIST ALL PROJECT TASKS IN BOXES BELOW:

1.	3.	5.
2.	4.	6.

SUPPLIES AND MATERIALS NEEDED FOR PROJECT – ADD SPECIFICS		**EQUIPMENT NEEDED FOR PROJECT – ADD SPECIFICS**	
☐ Fuel:	☐ Contech Filter:	☐ Chain saw:	☐ String trimmer
☐ Cones:	☐ Catch Basin Box:	☐ Ride-on mower:	☐ Lid/Cover puller:
☐ Barricade:	☐ Other:	☐ Stand-on mower:	☐ Other:
☐ Fall Protection:	☐ Other:	☐ Slope mower:	☒ Other:

Apex Companies COVID-19 AHA Notice

- If you are sick, you must stay home. Avoid close contact with people who are sick. If you were in contact with a confirmed or suspected COVID-19 individual, you must immediately report it to your supervisor.
- If you become ill while on the jobsite, you will immediately contact your supervisor who will then notify the project supervisor. The employee will also immediately provide any potential staff and equipment exposures to his supervisor.
- Frequently wash your hands with soap and water for at least 20 seconds. When soap and running water are unavailable, use an alcohol-based hand rub with at least 60% alcohol. Always wash hands that are visibly soiled.
- Ensure that you have, hand sanitizer, soap/water, wipes, etc, so it will available onsite where the hand washing stations are not present.
- Wear nitrile gloves when operating any equipment and wipe down equipment with sanitizing towels at the beginning and end of every shift. This includes hand tools, power tools, etc. The key is to avoid multiple use of the single hand tool by others when it hasn't been cleaned first.
- Use proper hygiene practices: keep your hands clean, do not touch your face, and if you must use your cell phone, two-way radio or other devices, please sanitize and sterilize them as frequently as possible. Avoid touching your eyes, nose, or mouth with unwashed hands.
- Personnel in job trailers will be restricted.
- JSAs and Stretch and Flex exercises will be conducted outside.
- No handshaking. Please avoid any personal contact and be aware of the 6-foot separation rule.
- Food preparation will require extra cleaning and sanitizing of surfaces and appliances.

If you need anything or have any questions, don't hesitate to reach out to me, John Strecker, at (703)-898-0825.

MANDATORY SAFETY TOPICS – ALL PROJECTS	**SWPs / PERMITS / PLANS REQUIRED**		**DAILY WEATHER CONDITIONS**
☐ Emergency Contacts & Procedures (muster points)	☐ JSA Review		☐ Current temperature: __ °F
☐ GOAL – Get Out And Look	☐ HASP Review		☐ Forecast high temperature:__ °F
☐ Stop Work Authority	☐ Site-specific PPE	☐ NA	☐ Heat Index/Feels like high:__ °F
☐ 4Sigtht 4Safety	☐ Manual lifting plan	☐ NA	☐ Relative humidity:__ %
☐ Incident Intervention Procedures (WorkCare)	☐ Housekeeping	☐ NA	☐ Forecast Precipitation/Storms: _____

☐ First Aid Kit & Eye Wash / Station Location	☐ Noise	☐ NA
☐ Heat/cold stress	☐ Utility Clearance/GDP	☐ NA
☐ Fire Extinguisher Location	☐ Fall protection plan	☐ NA
☐ Safety Data Sheets (SDSs) and chemical hazards	☐ Silica Exposure Control Plan	☐ NA
☐ Minimum PPE (safety boots, safety glasses)	☐ LOTO/machine-specific	☐ NA
☐ Medical & Training Requirements	☐ Hot Work Permit	☐ NA
	☐ Confined space entry permit	☐ NA
	☐ Excavation/trenching plan	☐ NA
	☐ Traffic control plan	☐ NA
	☐ Breathing zone monitoring plan	☐ NA

KEY REMINDERS:

- **WATER**:
  - **1 QT / employee / hr** & **increase by 1 GALLON** at **80°F**
  - Replenish when supply drops to 50%
- **SHADE**: required at **85°F** or hotter
- Review procedures & importance of rest breaks & water
  - Set alarms to take breaks & drink water
  - **NIOSH work**-rest tables
- Monitor employees for alertness, dizziness, nausea, weakness, clumsiness, unsteady walk, muscle cramps, headaches
- Record employees rest periods and water inta

STOP WORK AUTHORITY

I will **STOP** the job any time anyone is concerned or uncertain about safety.
I will **STOP** the project if anyone identifies a hazard or additional mitigation not already presented.
If it is necessary to **STOP WORK**, I will reassess the task, hazards, and mitigations, and amend documentation.

4SIGHT 4SAFETY

1. **What am I about to do?**
2. **What could go wrong?**
3. **What could be done to make it safe?**
4. **What have I done to communicate the hazard?**

PRINT NAME / COMPANY	SIGNATURE	PRINT NAME / COMPANY	SIGNATURE

RECORD ANY ADDITIONAL NOTES IN THIS SECTION (OR ADDITIONAL PAGES IF NECESSARY)

Appendix C – Hazardous Chemicals of Concern

Materials Present or Suspected at Site	Highest Reported Concentration (specify units and sample medium	Exposure Limit (specify ppm or mg/m3)	IDLH Level (specify ppm or mg/m3)	Primary Hazards of the Material (explosive, flammable, corrosive, toxic, volatile, radioactive, biohazard, oxidizer, or other)	Symptoms and Effects of Acute Exposure	Ionization Potential (eV)
Petroleum Hydrocarbons	1,340 mg/kg	PEL = 500 REL = 350 TLV = Skin Hazard☐	1,100 ppm	Flammable	Fatigue, headache, nausea, dizziness. Exposure to high levels can lead to coma or death	
PAHs (BaP Eq)	63.6 mg/kg	PEL = 0.2 mg/m3 REL = TLV = Skin Hazard☐		Flammable	Eye irritation, nausea and vomiting, diarrhea, confusion	
Dioxins/furans TEQ	0.0057 mg/kg	PEL = REL = TLV = Skin Hazard☐		Carcinogen	Skin irritation, red skin rashes or discoloration, liver damage, reproductive effects, organ failure	
PCBs	1.85 mg/kg	PEL = 0.5 mg/m3 REL = 0.001 TLV = 0.5 Skin Hazard☐	5 mg/m3	Toxic	Eye irritation, chloracne, liver damage, reproductive effects, potential occupational carcinogen	

Appendix D – Job Safety Analysis

APEX

Soil Sampling
Job Safety Analysis (JSA)

Project Number:	**23011207**	Project/Client Name:	**Riverbank Soil Sampling/Port of Portland**
Project Manager:	**Steve Misner**	Project Location:	**Willamette Cove**

Specific Task:	**Soil Sampling for Riverbank Soil Reuse Potential**
Minimum Required PPE for Task:	☑ Hard Hat ☑ Hearing Protection ☑ Hi-Vis Shirt ☐ Coverall ☐ Face Shield ☐ Other (specify): ☑ Safety Toed Boots ☐ Long Sleeved Shirt ☐ Hi-Vis Vests Class 2 ☑ Gloves Nitrile ☑ Safety Glasses ☑ Fire Resistant Clothing ☐ Hi-Vis Vests Class 3 ☐ Respirator <type and cartridge>

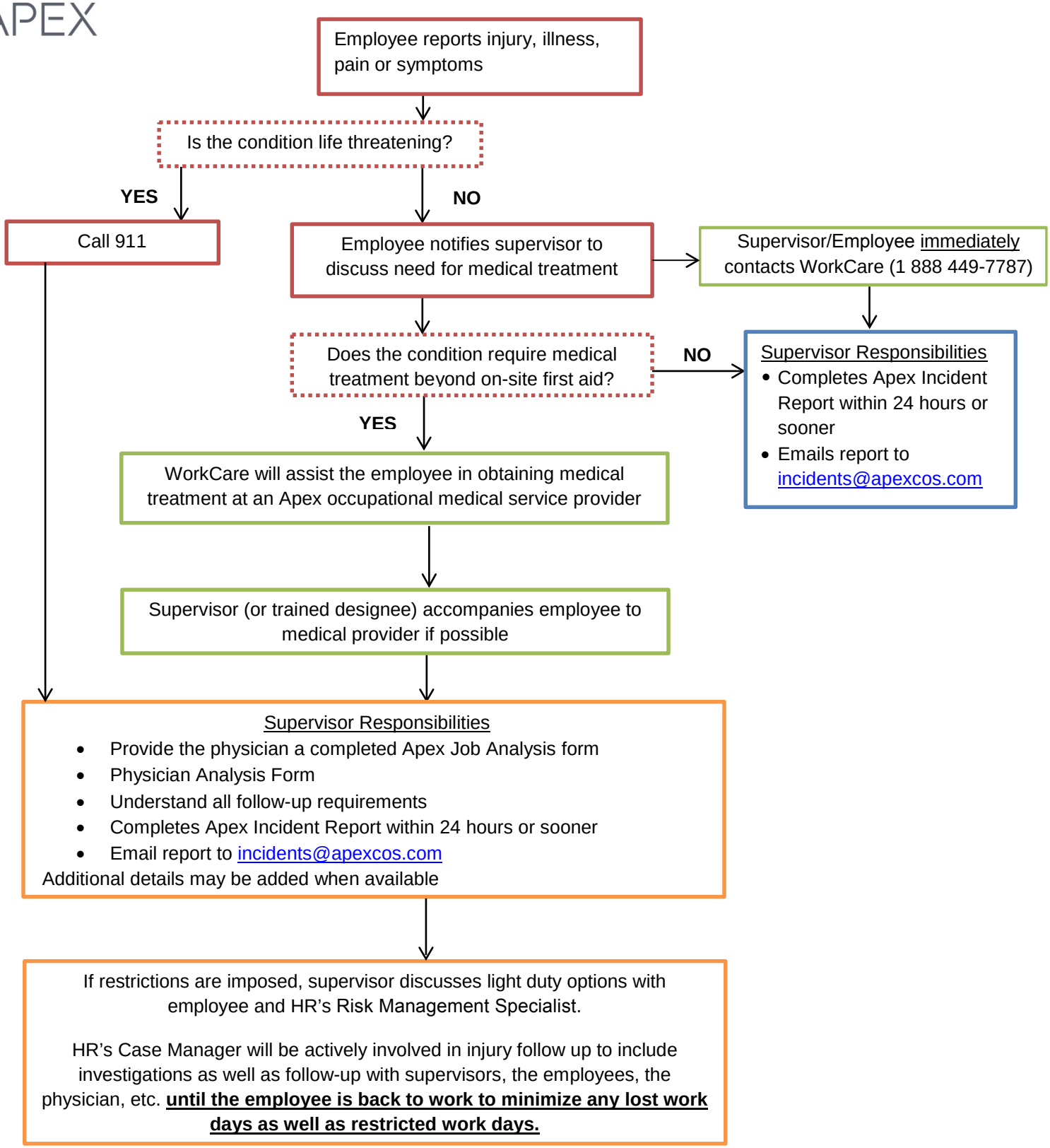
Additional Task-Step Specific PPE: (as indicated below under controls)		**Equipment/Tools Required:**	**Vehicle, drill rig, hand tools**
Training Required for this Task:	**HAZWOPER**	**Permits Required for this Task: (e.g. confined space, LOTO)**	
Forms Associated with this Task:			

JSA Developed/Reviewed By:			**Date and Revision Number:** 2/12/2025
Employee Name/Job Title	Employee Name/Job Title	Employee Name/Job Title	H&S Team Leader to ensure all personnel performing this task have reviewed JSA and agree to follow it. Site specific changes to this JSA have been made as warranted based on this review. H&S Team Leader Signature/Date:
Steve Misner			

Task Steps	Potential Hazards and Consequences	Likelihood	Severity	Risk	Controls to Eliminate/Reduce Risks
Load tools in truck	slips, trips, falls and back injuries	3	2	6	Proper lifting and pay attention while walking/loading
Travelling to/from the Site	Traffic accident - Injury	1	4	4	Follow posted speed limits and traffic signs. Stay alert to other vehicles, cyclists, pedestrians and be a defensive driver by maintaining a safe distance with other vehicles on the road.
Mobilize to sample location	Uneven terrain, trip hazards	3	2	6	Carry equipment in multiple small loads, wear a backpack for smaller equipment, move slowly, do not sample without sturdy footing
Mobilize to sample location	Encounters with transient populations	3	2	6	Apex will sample in teams of at least two people. If one of the sample locations is in the vicinity of a camp, Apex staff will relocate the sampling point and notify the proper people of the change in scope. Staff are not to engage or impede upon homeless camps.
Sample Collection Preparation	Striking underground lines or objects	1	4	4	A public and private locator will identify active utilities entering the site and the private locator will trace those utilities throughout the Site.
Sample Collection	Contact with potentially contaminated soil or with poison oak - Exposure	2	2	4	Wear disposable gloves and safety glasses when collecting samples to minimize contact with soil. Wash exposed skin thoroughly with Tecnu following sampling activities.
Sample Collection	Contact with broken sample containers - Hand laceration.	2	3	6	Wear gloves and check containers in cooler before grabbing them
Sample Collection	Working near drill rig and associated equipment	5	2	10	Be aware of and saty clear of drill rig operations
Load tools and samples in truck	Moving equipment or sample coolers - Back or muscle injury	3	2	6	Ensure proper lifting techniques. Do not attempt to bodily move large equipment. Use the buddy lift to move heavy coolers.
Site wide Activities	Slip/trips/falls - Injury	2	3	6	Maintain good housekeeping. Inspect the area of tripping hazards. Sturdy work boot required. Maintain 3-points of contact when using stairways.
Travelling to/from the Site	Traffic accident - Injury	1	4	4	Follow posted speed limits and traffic signs. Stay alert to other vehicles, cyclists, pedestrians and be a defensive driver by maintaining a safe distance with other vehicles on the road.
				0	

Appendix E – Employee Incident Intervention Procedures

Employee Incident Intervention Procedures



Contact Information

WorkCare 1-888-449-7787

Joe Schmids, Manager Corp. H&S: 610-722-9050 x5207 cell 484-467-9333

Attachment B

Table 3 from Basis of Design Report

Table 3
Cleanup Levels and Hot Spot Values for Soil
Willamette Cove Upland Facility

Analyte	Human Health		Ecological					
			Immobile			Mobile		
	Cleanup Level	Hot Spot	Cleanup Level	Hot Spot	Basis	Cleanup Level	Hot Spot	Basis
	Concentration in mg/kg							
Antimony	24	240	5	50	Plant	2.7	27	Mamm
Arsenic	8.8	140	18	180	Plant	83	830	Mamm
Chromium	--	--	39	39	Bkgd	87	870	Bird
Copper	11,000	110,000	70	700	Plant	82	820	Mamm
Lead	400	4,000	120	1200	Plant	33	330	Bird
Mercury	--	--	0.1	1	Invert	0.073	0.15	Bird
Nickel	--	--	38	380	Plant	23	200	Bkgd/Mamm
Selenium	--	--	0.52	5.2	Plant	1.1	11	Mamm
Zinc	--	--	120	1,200	Invert	201	2,010	Mamm
cPAHs	0.55	55	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	0.01	0.1	Mamm
Total HPAH	--	--	18	180	Invert	5.6	56	Mamm
Total LPAH	--	--	29	290	Invert	100	1,000	Mamm
Total PCBs	0.74	40	40	400	Plant	0.098	0.98	Mamm
Dioxin/Furan TEQ	1.50E-05	1.50E-03	--	--	--	6.10E-06	6.10E-05	Mamm

Notes:

mg/kg = milligrams per kilogram

cPAHs= carcinogenic polycyclic aromatic hydrocarbons

PCBs = polychlorinated biphenyls

Dioxin/Furan TEQ = 2,3,7,8-TCDD toxicity equivalent

Receptor Specific Cleanup Levels from the Record of Decision for Willamette Cove Upland Site, Oregon Department of Environmental Quality, March 2021 with the exception of arsenic: arsenic concentration is from the Residual Human Health Risk Assessment Willamette Cove Upland Facility, December 2013.

Immobile ecological endpoints include plants and invertebrates

Mobile ecological endpoints include birds and mammals