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**Section 9
Supplemental Guidance for
Select Contaminants of Concern**

APPENDIX 9-D

**GUIDANCE FACT SHEET FOR USE WHEN PETROLEUM
CONTAMINATION IS ENCOUNTERED DURING SUBSURFACE
SOIL EXCAVATION**

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GUIDANCE FACT SHEET FOR USE WHEN PETROLEUM CONTAMINATION IS ENCOUNTERED DURING SUBSURFACE SOIL EXCAVATION

PURPOSE: The purpose of this Guidance Fact Sheet is to provide guidance for construction projects when petroleum or petroleum contaminated soil (PCS) is encountered. These guidelines apply to construction projects that involve soil excavation, except associated with underground storage tank (UST) removal. These guidelines are consistent with Hawaii Revises Statutes Chapter 128D, Hawaii Environmental Response Law. Administrative procedures must be in place within your organization, so that project managers, contract workers, field workers, health and safety personnel, and essentially anyone who might be involved in construction and the excavation of soils follow these basic guidelines:

When must notification to the HEER Office be made?

The reportable quantity for petroleum is one of the following:

- a) Any amount of oil which when released into the environment causes a sheen to appear on surface water, or any navigable water of the State.
- b) Any free product that appears on groundwater.
- c) Any amount of oil released to the environment greater than 25 gallons.
- d) Any amount of oil released to the environment, which is not contained and remediated within 72 hours. Note: The HEER Office interprets this criteria to require petroleum-stained soil encountered during excavation work to be reported.

Who must notify?

Any person who has any knowledge of a release of a reportable quantity must immediately notify the HEER Office. Failure to notify the HEER Office of a release is subject to a civil penalty not to exceed \$10,000 for each day of failure to report.

What is the number to call?

Hawaii State Department of Health, Hazard Evaluation and Emergency Response Office (HEER Office):

(808) 586-4249 during working hours, Monday – Friday, 7:45 a.m. – 4:30 p.m.

or

(808) 247-2191 during non-working hours including holidays.

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What information is required to be provided to the HEER Office?

The information gathered should be sufficient to answer the following, but notification shall not be delayed due to incomplete notification:

1. Name of the observed chemical released
2. Approximate quantity observed
3. The location and an address of the release. The location may be determined by either surveying by a licensed surveyor or the use of a Global Positioning System (GPS) unit, which provides latitude and longitude. The latitude and longitude of the contaminated area should be accurate to within 25 feet of the actual position. A detailed map should be submitted to the HEER Office at a later date
4. The name, address, and telephone number of the caller
5. The name, address, and telephone number of the owner/operator of the site where the release has occurred
6. The name, address, and telephone number of the contact person at the site where the release has occurred
7. Measures taken or proposed to be taken in response to the release at the time of the notification
8. Any other information, including but not limited to, potential on-site worker and public or environmental impacts

Who else should be notified?

If a party other than the landowner is conducting the project, then a separate notification needs to be made to the landowner to allow them to determine their liability and the next course of action.

What additional steps must be taken?

1. When petroleum or PCS is discovered during construction activities, an immediate determination is needed as to whether they may be a threat to the health and welfare of on-site workers or the nearby public.

If a combustible hazard is identified, an Emergency Response Plan should be put into effect. No work may continue until the area is determined to be safe.

[Note: A Combustible Gas Indicator may be used to determine if there is a flammable or explosive potential. Each combustible gas has its own Lower Explosive Level (LEL) and its Upper Explosive Level (UEL). For example,

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methane gas has a LEL of 5 percent (%) by volume and an UEL of 15% by volume. Between 5 to 15% by volume, a spark could cause an explosion. If the atmosphere has less than 5% methane, an explosion cannot occur even if a source of ignition is present. Likewise, if the atmosphere has greater than 15% methane, the air-fuel mixture is too rich to burn. Gasoline has a LEL of 1.4% by volume and an UEL of 7.4% by volume.

2. The project may continue with implementation of a Health and Safety Plan in accordance with applicable occupational safety and health regulations. This plan should address exposure issues and include appropriate air monitoring.
3. If free-floating petroleum product is encountered during the project, the product is to be recovered and either re-used or disposed of appropriately.
4. Petroleum-contaminated water encountered during dewatering projects must be tested and treated as necessary prior to discharge into a storm drain or other pathway that leads to surface water bodies. At a minimum, this will usually require that the water be passed through an oil/water separator. The water should also be tested for dissolved-phase petroleum contaminants prior to discharge (at least initially). The water should be treated to meet HDOH Environmental Action Levels for discharges to surface waters or a more site-specific assessment of potential impacts to aquatic habitats carried out. The HEER Office Environmental Hazard Evaluation (EHE) guidance can be consulted for applicable surface water environmental action levels, or call the HEER Office (808) 586-4249 during business hours for assistance.
5. Petroleum contaminated soil is to be excavated and segregated from clean soils. Excavated contaminated soil must be placed under a liner and covered. Contaminated soil must be treated or disposed of in accordance with all applicable local, state and federal requirements.

On-Site Management of Contaminated Soils

When deciding whether to re-deposit contaminated soil, the time saved by proceeding with the project immediately should be weighed against the possible increase in cost caused by deferring remedial action to a later date. If re-deposition is chosen, be advised that this does not absolve any party from liability should the actions taken exacerbate potential health and environmental impacts. If the option of re-depositing is chosen, excavated soils should be stored under cover before re-deposit into the excavation. Excavated soil that is contaminated should not be placed into an excavation that is clean, i.e., an excavation other than that from which the soil was removed, otherwise the soil should be treated as in No. 5 above. Excavated soil with petroleum contamination that is re-deposited into the excavation should be provided with a cover of clean soil or a cap of asphalt or concrete once the work has been completed.

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6. Detailed records of the investigation and any clean-up activities are to be maintained and submitted to the HEER Office.
7. In cases where a site assessment and evaluation is to be conducted, the HEER Office Technical Guidance Manual, Environmental Hazard Evaluation (EHE) Guidance, and the State Contingency Plan are accessible through the HEER Office website:

hawaii.gov/health/environmental/hazard/index.html

If uncertain of the action to take, call the HEER Office at 808-586-4249