	<p>Office of Construction Code Compliance Department</p>	<p>Guidance for Contaminated or Impacted Soils 10/02/2020</p>
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Contaminated or Impacted Soils Guidance

- A. The purpose of this internal guidance is to provide DASNY staff with guidance when suspected soil contamination or spills are encountered during project design, or during the course of excavations.

- B. This guidance covers petroleum and hazardous materials contaminated soils, up to and including soils that become hazardous waste as a result of spills or releases. If underground tanks, drums, asbestos debris, or other hazardous debris are found during excavation, contact the Code Compliance Unit immediately.

- C. DASNY staff members may encounter petroleum spills, suspected contamination or impacted soils including “historic fill” during investigations completed as part of the project design or encountered during construction work in the excavation phase.
 - 1. Historic (sometimes called “Urban”) Fill Material Definition: Non-indigenous or non-native material, historically deposited or disposed in the general area of, or on, a site to create useable land by filling water bodies, wetlands or topographic depressions, which is in no way connected with the subsequent operations at the location of the emplacement, and which was contaminated prior to emplacement. Historic fill may be solid waste including, but not limited to, coal ash, wood ash, municipal solid waste incinerator ash, construction and demolition debris, dredged sediments, railroad ballast, refuse and land clearing debris, which was used prior to October 10, 1962. Any soil or soil-like wastes from any area which was operated by a municipality or other entity as a landfill is not considered historic fill. If historic fill is encountered on a DASNY site, contact Code Compliance


- D. Potentially contaminated soils situations usually fall into several categories:

Contaminated Soils Categories

- 1. A site is known beforehand to be potentially contaminated, based on knowledge of existing conditions. This could be a Phase I/Phase II report, spill history, owner or staff knowledge or other sources. Unexpected contamination may still be encountered.

- 2. Petroleum product is encountered unexpectedly during excavation, i.e. soil is wet with product, fuel odors are present or rainbow sheen is visible in the excavation in standing water.

- 3. Stains and/or odors are encountered during soils excavation that are not clearly petroleum product but may be caused by other hazardous contaminants.

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- E. Actions to establish and report spills, and address the issue preferably using a DASNY environmental term consultant:

Likely/Expected Soil Contamination

1. In case D.1, the specification should have been written to address the contamination. If petroleum product (“free product”) is encountered, the NYSDEC spill hotline (518-457-7362) must be called within 2 hours of discovery, and the Code Compliance Unit must also be notified. A tank pull is one such situation (in that case, the NYSDEC should have been notified 30 days before the commencement of the project).
 - a. The NYSDEC Regional Spill Engineer may or may not elect to visit the site; if free product is in surface or ground water, a site visit is likely. This usually occurs within a few hours.
 - b. Depending on the amount of free product and water present, a vacuum truck may be required to remove contaminated water, or an on-site treatment process may be required.
 - c. Petroleum contaminated soil removed from the excavation must be segregated from clean soil, and stockpiled on 6 mil polyethylene sheeting, with appropriate protective measures, or may be returned to the excavation (see discussion in Item E.2 below).
 - d. Soil sampling and procedures in accordance with NYSDEC CP-51 Guidance would then be used for soil disposition, in conjunction with NYSDEC DER-10 and other relevant NYSDEC regulations and guidance.
 - e. Water samples would also be taken for appropriate disposition of wastewater.
 - f. If contamination is not petroleum, other procedures need to be developed in conjunction with the NYSDEC and the Code Compliance Unit to address the contamination.

Soil Contamination and Possible Free Product Discovered During Excavation

2. In case D.2, if “Free Product” is encountered unexpectedly during excavation, and it is recognizable as petroleum product by odor, wetness, sheen on the water in the excavation, or a source such as an old fuel tank is observed, again the **NYSDEC spill hotline must be called within 2 hours of discovery**, and notify the Code Compliance Unit.
 - a. The NYSDEC Regional Spill Engineer may or may not elect to visit the site, but free product in surface or ground water usually warrants a site visit.
 - b. Note: guidance formalized in the 6 NYCRR 360 – 1.15(b)(8) Solid Waste Regulations allows replacement of such soil back in the excavation or another excavation within the site exhibiting the same characteristics, without further consultation with the NYSDEC. In some cases, this may not be appropriate and the Spill Engineer would then provide input.
 - c. Soil sampling and disposition would otherwise proceed as in item E.1 above.
 - d. Contaminated water would also be sampled as in item E.1.

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- e. Once again, non-petroleum contamination requires additional consultation with the NYSDEC. Examples might include perchloroethylene (PCE, PERC) discovered near a former dry cleaner, other chlorinated solvents trichloroethylene, dichloroethylene, vinyl chloride (TCE, DCE, VC) discovered near electronic manufacturing facilities, coal tar by-products in or near an old manufactured gas plant (MGP) site, or debris from “urban fill.” These possibilities are usually known prior to the work and planned for.


Potential Soil Contamination Encountered - Staining and/or Odors apparent

- 3. In case D.3, at many sites apparent soil staining and/or odor are encountered, frequently a fuel-oil or gasoline odor. Several steps can be taken to ascertain whether a “spill” exists. Call the Code Compliance Unit for assistance with this evaluation.
 - a. If the soil is wet with “product”, odor is pretty clearly fuel oil or gasoline and/or there is a sheen in water in the excavation, go to E.2 above. This is a reportable spill.
 - b. If the soil isn’t wet, put some in a jar or bucket of water and shake it; observe for sheen.
 - c. Obtain a Photo-Ionization Detector (PID) organic vapor analyzer or other appropriate instrument and check for organic vapors above background levels in the excavation (per NYSDEC DER-10).
 - d. If both are negative, then a “spill report” is not appropriate. If it’s questionable, a call to the NYSDEC Regional Spill Engineer may be appropriate. In New York City such discoveries are common and discovery of old releases or staining without free product is usually not reportable. On Long Island, with its vulnerable aquifers, the Spill Engineer may prefer to report it. Each NYSDEC Region may have sensitive aquifer or natural areas where reporting is desired. Again, the Code Compliance Unit will assist in this decision.
 - e. If no odor exists, the staining may be natural, or unrelated to petroleum products.
 - f. In any of these cases, if soil is to be disposed off site, soil samples may be necessary per NYSDEC CP-51 and NYDEC DER-10.

Re-use vs. Disposal of Contaminated Soils

- F. Re-use or disposal of excavated soils: once NYSDEC CP-51 analyses have been performed, the soil can generally be classified, in coordination with the Code Compliance Unit and NYSDEC, if required. Other standards such as 6 NYCRR 375 may also apply or will be used as guidance, but in general the soil will be found to be in one of four (4) conditions:

Hazardous Soil Waste

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1. Hazardous Waste : if the “Maximum Possible Contaminant Concentration” (MPCC) by calculation is exceeded, then a TCLP test is required prior to disposal of material at a landfill; or if contamination levels exceed those of 6 NYCRR 370 defining hazardous waste, then **the soil must be disposed as Hazardous Waste**. A new EPA ID No. is needed if the facility doesn’t have one, the quantity exceeds the limits for a conditionally exempt small quantity generator (CESQ) or the facility doesn’t wish to be the “generator”. If the soil is classified as Hazardous waste, it must go to a RCRA permitted TSDF facility.

Non-hazardous Petroleum Contaminated Soil


2. The soil may be non-hazardous, petroleum contaminated soil. In that case, it **can not be reused at the site** and must go to any NYS-permitted landfill that accepts such soil, or another permitted location. Petroleum contaminated soil may also be disposed/reused using one of the predetermined NYSDEC beneficial use determinations.

Non-hazardous Contaminated Soil

3. The soil may be determined to be above NYSDEC Unrestricted Soil Cleanup Objectives (USCOs), but below NYSDEC Restricted Soil Cleanup Objectives (RSCOs), and could potentially be reused at the project site, or disposed of as contaminated fill in accordance NYSDEC solid waste regulations.
 - a. **Reuse of this “contaminated” soil at the project site has limitations.** Fill material that is reused on-site in areas with similar physical characteristics is exempt from the regulations. If, however, fill is going to be reused on-site in a public place and exhibits evidence of contamination, it must be covered with a minimum of twelve (12) inches of soil and meet the requirements for general fill. The RSCOs are comprised of different categories, including the following:
 - (1) The NYS DEC Residential Land Use soil cleanup objectives (SCOs) are intended for sites used for residential purposes (usually single family housing), but not for raising livestock or producing animal products for human consumption.
 - (2) The NYS DEC Restricted Residential Land Use SCOs are intended primarily to be used for multi-family residential housing. This category does not account for exposures through the consumption of home-grown vegetable products or home-produced animal products. These activities are meant to be excluded from these sites.

Clean Excavated Soil

4. The soil may be determined to be below USCOs and considered “Clean,” and may be reused at the project site or disposed of as uncontaminated fill, in accordance with NYSDEC solid waste regulations.

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- a. Of the SCO values for different land uses, the USCOs are the lowest soil contaminant concentrations. These values were developed to be the most conservatively protective of human health, ecological resources, and groundwater for all land uses, and account for rural soil background concentrations.
- b. General fill is what regulators would refer to as “clean fill”. This material should not contain any non-soil constituents and is acceptable for any use. Only general fill may be used on residential properties or be amended with compost at a Part 360 facility for use as topsoil. In order to qualify as general fill, materials must be free from any non-soil constituents, pass analytical testing requirements, and be deemed as such by a Qualified Environmental Professional (QEP). The required testing of (1) sample per 1,000 cubic yards (CY) is applicable to all fill materials emanating from NYC or from authorized Part 360 facilities.

G. Tank Removals (use of DASNY Environmental Term Consultant is preferred for design and oversight):

1. If a tank is scheduled to be removed from a DASNY site, the NYSDEC must be informed 30 days prior to removal. The owner of the tank must comply with the requirements of 6 NYCRR 613.9(b), which may include registering the tank if the tank is unregistered, prior to removal. The tank must be cleaned and removed by a licensed tank testing, cleaning and removal professional. NYC has additional contractor requirements, such as a certificate of fitness, FDNY approval, etc.
 - a. The facility must transmit a copy of the records to the NYSDEC within 30 days after permanent closure or change in service.
 - b. Before permanent closure or a change in service is completed, the facility must measure for the presence of a release where contamination is most likely to be present at the UST system location.
 - In selecting sample types, sample locations, and measurement methods, the facility must consider the method of closure, the petroleum stored, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a release.