

ITEM 04203.991010 M - PID SCREENING AND SEGREGATION OF EXCAVATED SOIL

A. DESCRIPTION

This work shall include Photo Ionization Detector (PID) screening for volatile organics of soil excavated from areas where petroleum contamination has been identified or is suspected.

B. MATERIALS

None specified.

C. EQUIPMENT

The contractor shall provide a minimum of one (1) of the following or comparable models of PID:

- Hnu Model 101
- Photovac Model IS-3000

All instruments provided shall be supplied with a complete calibration equipment kit, a carrying case, operating instructions and all related equipment required for the operation of the selected units.

D. CONSTRUCTION DETAILS

All of the Contractor's operations shall be performed in accordance with all applicable Federal, State, County and local rules and regulations. The PID monitoring of suspect soil shall be performed as follows:

1. Vapor Monitoring Personnel

The Contractor shall hire an independent firm experienced in air vapor monitoring to provide trained personnel as necessary to perform organic vapor monitoring as described in this Specification.

2. Locations and Quantities

The locations where the existence of petroleum contaminated soil has been confirmed or is suspected to exist are identified in the contract documents. Other locations with visibly stained surface soils, subsurface soils surrounding leaking underground storage tanks, areas of past spill incidents, or exhibiting petroleum odors shall also be included as determined by the Engineer. The estimated quantities of non-hazardous petroleum contaminated soil are identified in the Special Note titled "Petroleum Contaminated Soil".

3. Pre-Excavation Activities

Prior to commencing excavation the contractor shall provide the following:

a. Organic Vapor Monitoring Work Plan

The Organic Vapor Monitoring Work Plan shall include a description of daily equipment calibration procedures, Organic Vapor Monitor (OVM) procedures, reporting protocols and a list of personnel and their qualifications. At a minimum the plan shall specify performing visual, odor and PID screening of every fifth bucket of excavated material.

Further, the plan shall specify that:

- 1.) Soil which has a soil vapor reading at or below the naturally occurring background levels at the specific work site (as established by the air monitoring

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personnel) plus 10 parts per million (ppm), and which is not stained, discolored or odorous, as determined by the Engineer, will be considered non-contaminated and shall be handled in accordance with the Standard Specifications Section 203-02, Unclassified Excavation and Disposal.

2.) Soil which has a soil vapor reading between the naturally occurring background level at the specific work site plus 10 ppm and the naturally occurring background level at the specific work site plus 1000 ppm will be considered non-hazardous petroleum contaminated soil and shall be handled in accordance with Special Specification Item 04203.991210 M.

3.) Soil which has a soil vapor reading in excess of the naturally occurring background level at the specific work site plus 1000 ppm shall be kept separate from soils of lower vapor readings. Additional work associated with this soil will be paid for under the appropriate Item(s).

Non-hazardous petroleum contaminated soil and hazardous petroleum contaminated soil are defined in NYSDEC's Petroleum Contaminated Soil Guidance Policy, detailed in Spill Technology And Remediation Series Memo #1 (STARS #1), issued August 1992.

A copy of the Organic Vapor Monitoring Work Plan shall be submitted to both the Engineer and the Regional Environmental Contact for review and approval.

b. Health and Safety Plan

The Health and Safety Plan (HASP) shall be prepared in accordance with Section 107-05A and shall include the following:

- i. Description of work
- ii. Site Description
- iii. Key Personnel
- iv. Hazardous Substance Evaluation (types of chemicals or substances)
- v. Hazard Assessment (physical and toxic effects)

- vi. Air Monitoring Procedures (personal and site, site requirements may be included by referencing the Organic Vapor Monitoring Work Plan)
- vii. Personal Protective Equipment (PPE)
- viii. Decontamination of Personnel, Disposal of PPE
- ix. Safety Rules
- x. Emergency Procedures
- xi. Emergency Contacts with Phone numbers
- xii. Route to Hospital

It is intended that a single HASP shall be prepared in accordance with and as required by this Special Specification, but that the HASP will be prepared to cover the work included in this Special Specification and the Special Specification for Item 04203.991210 M.

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A copy of this plan shall be submitted to both the Engineer and the Regional Environmental Contact for review and approval. Upon approval of the plan the Contractor shall contact the appropriate regional offices of the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Health (NYSDOH); and the local fire department and shall provide these offices with a schedule for excavation of petroleum contaminated soil.

4. Monitoring During Excavation

All organic vapor monitoring shall be conducted in accordance with the approved Organic Vapor Monitoring Work Plan.

5. Documentation

The Contractor shall provide the Engineer with a report letter or a legible copy of the Vapor Monitor's field notes. This documentation shall include: all PID readings and soil observations, the volume of each type of soil (non-contaminated and non-hazardous petroleum contaminated) excavated at each location, and a description of any unusual conditions encountered.

E. METHOD OF MEASUREMENT

This work will be measured as the total number of cubic meters of soil excavated from the areas identified in the contract documents, the Special Note titled "Petroleum Contaminated Soil" and as directed by the Engineer. All costs associated with excavating soil beyond the minimum practical needed to perform the roadway and drainage work, unless authorized by the Engineer, shall be the responsibility of the Contractor.

F. BASIS OF PAYMENT

The unit price bid per cubic meter for this item shall include the cost of all labor, equipment, and materials necessary to complete the work. Excavation will be paid for under the appropriate Item.