

ITEM 01203.0102 M - FIELD ORGANIC VAPOR MONITORING OF CONTAMINATED SOIL

DESCRIPTION

Field monitor soil using observation and field organic vapor monitoring equipment soil as removed from project excavations for segregation of soil preliminarily contaminated with volatile organic compounds. Contamination may include, but is not limited to, flammable constituents, petroleum products (such as gasoline, heating oils, diesel fuel, kerosine, and jet fuels, lubricating oils, motor oils, and other fractions of crude oil), contaminants associated with past Manufactured Coal Gas Plant (MGP) operations and/or other volatile organic contaminants.

MATERIALS None Specified

CONSTRUCTION DETAILS

I. Advance Preparation

The lead times for submittals and notifications detailed in these Advance Preparation requirements are for work that is included in the original project contract where the potential for contamination is expected. For work that was not included in an original project contract resulting from unexpected encountering of contamination which does not allow for indicated lead times, the time frames for submittals and notifications will be negotiated at the time of the agreement for this work.

A. Field Monitoring Plan: The contractor shall hire an independent firm to perform the volatile organic field monitoring using organic vapor monitoring equipment. At least 30 days prior to commencing work, the contractor shall prepare and submit, two (2) copies of the following information to the Engineer-in-Charge (EIC) for review and acceptance:

- a. Name, address, experience and qualifications of independent firm performing the organic vapor monitoring.
- b. Name, address, experience and qualifications of individuals who will conduct the field monitoring. These individuals shall be thoroughly trained in sampling protocols, organic vapor monitoring procedures, and equipment calibration procedures.
- c. Type(s) of organic vapor monitoring equipment to be used - Model, manufacturer and details of the photo ionization detector (PID) or flame ionization detector (FID) that will be used to conduct organic vapor monitoring; and
- d. Field monitoring procedures to be used.

B. Health and Safety Considerations - Conduct all activities in accordance with health and safety procedures and requirements as outlined in the Material Handling Plan developed under other items of work in this project.

II. Field Activities

Field monitor soil as removed from project excavations for segregation of preliminarily contaminated soil. The locations where contaminated soils are potentially present and will require monitoring are as indicated in the contract documents. The monitoring shall be conducted by trained personnel of an independent firm experienced in organic vapor monitoring using photo ionization detectors (PIDs) or flame ionization detector (FIDs) as described in this Specification.

Perform monitoring consisting of visual and odor observation and organic vapor monitoring of the soil during excavation of the areas indicated in the contract documents or as indicated by the EIC. *Note: Odor determinations are intended to be observation of general odors of the excavated soil; For health and safety reasons, personnel should not directly smell grab samples.*

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To conduct organic vapor monitoring, provide and operate field organic vapor test equipment that is either a photo ionization detector (PID) with a 10.2 volt lamp or a flame ionization detector (FID). The PID/FID must be capable of detection of 0.2 ppm general organic vapor levels. Calibrate the PID/FID daily, just before starting field work. Test at sufficient intervals to continuously observe and monitor soil excavations for contamination. Maintain and provide legible field notes to the EIC indicating weather conditions, PID/FID readings, visual and odor observations, quantities of both contaminated and non-contaminated soils excavated at each location, stockpile locations for all contaminated soil and any unusual conditions encountered. The PID/FID must be operated by a person thoroughly trained in sampling protocols, organic vapor monitoring procedures, and equipment calibration procedures.

Notify the EIC immediately of any soil that appears to contain unknown contaminants (based on visual, odor, or PID/FID monitoring) or that varies significantly from the material originally identified.

Identify soil for segregation as follows:

- a. **Non-Contaminated Soil** - Soil with no visual or odor evidence of contamination for which PID/FID readings are under 5 ppm above background or as otherwise determined by the EIC shall be considered non-contaminated and shall be directed to a preliminarily non-contaminated pile;.
- b. **Contaminated Soil** - Soils determined by visual, odor, and/or with PID/FID testing values greater than 5 ppm above background or as determined by the EIC shall be directed to preliminarily contaminated pile(s). If general areas of apparently highly contaminated soil and apparently marginally contaminated soil exist, segregate the apparently highly contaminated soils from the marginally contaminated soils as feasible and as directed by the EIC.

The EIC has the final determination of the preliminary classification of specific soils.

Do not mix contaminated material with soils that are apparently non-contaminated.

METHOD OF MEASUREMENT

The quantity shall be measured by time in hours required for specialty monitoring services.

BASIS OF PAYMENT

The unit price shall include the cost of furnishing all labor, materials, instruments, equipment, and documentation to complete the work.

ITEM NO.	ITEM DESCRIPTION	PAY UNIT
01203.0102 M -	FIELD ORGANIC VAPOR MONITORING OF CONTAMINATED SOIL	HOURS