

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

2DESCRIPTION:

Field test, excavate, stockpile, sample and analyze, transport, reuse, construct embankment or otherwise use on site when designated on the plans, and/or dispose of soil off-site and complete any other handling required for proper management and disposal of contaminated soil. The materials covered by this specification are soils that are contaminated but do not meet the criteria for definition as a hazardous waste or petroleum contaminated soil. Petroleum contaminated soils/sediments are covered under Item 04203.970X M.

This specification includes items for excavation and disposal of contaminated soil by:

- A. Reuse within the project limits as embankment, fill or other use, hereafter termed “Disposal as Embankment of Fill”; and**
- B. Disposal at off-project facilities or by other methods as described below, hereafter termed as “Disposal at Other than Embankment or Fill”.**

Disposal options under B above include:

- Transport and disposal at a permitted off-site treatment or disposal facility.

Conduct all tasks associated with these items in accordance with all Federal, State, County, and local regulations.

MATERIALS:

Furnish all materials required by the Contractor’s approved Material Handling Plan at a minimum, furnish:

- 20 mil minimum plastic sheeting for base of any stockpiles;
- 6 mil plastic sheeting for covering of contaminated soil in any stockpiles; and
- Waterproof tarpaulins for covering of trucks/roll-offs.

CONSTRUCTION DETAILS:

I Advance Preparation:

- A. Material Handling Plan:** At least 30 days prior to commencing work in the potentially contaminated areas, prepare and submit a Material Handling Plan (the Plan) to the Engineer-in-Charge (EIC) and to the Regional Environmental Unit for review and approval. The Plan must be approved by the EIC prior to the commencement of work within the defined areas as specified on the Plans and/or in the Special Notes. Include, as a minimum, written procedures detailing the operations to be used to field test, excavate, stockpile, transport, sample and

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

analyze, and dispose of contaminated soil. Procedures must include construction personnel and public safety and health as well as environmental protection considerations. Also include in the Plan the following specific information:

1. The specific model and manufacturer of intended organic vapor monitoring equipment, and procedures including calibration to conduct the field testing of soil. Include training and experience of the personnel who will operate the equipment.
2. All staging/stockpiling areas: Note: *Any soil moved off-site or transported through an active lane must be in NYSDEC Part 364 permitted vehicles.*
3. Name, address, ELAP status and telephone number of the proposed laboratory for analysis of representative soil samples. The laboratory must be approved by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) for the intended analyses. Include training and experience of the personnel who will collect samples.
4. The method(s) of treatment/disposal that will be used.
5. For off-site treatment/disposal, identification of and information on the proposed permitted treatment/disposal facilities to include: Facility name; address; contact person; signed letter of agreement from the facility of intent to accept the waste as specified by the contractor; and a listing of all permits, licenses, letters of approval authorizing the disposal of wastes of this description at the designated facility as they pertain to this Contract.
6. For off-site treatment/disposal or movements through an active lane, identification of and information on the proposed waste transporter to include: Name; address; telephone number; contact person; EPA and NYS Transporter ID number; and any and all necessary permit authorizations for the waste to be necessary permit authorizations for the waste to be transported from the site to treatment/storage/disposal facilities.

B. Notifications: At least 10 days prior to beginning the work, provide the EIC with the anticipated scheduled rates and work locations for removal/treatment of all contaminated materials. Also at least 10 days prior to beginning the work, contact the applicable regional NYSDEC Spill Office and local fire department in writing and provide them with the scheduled dates for testing, removal, treatment and disposal of all contaminated materials and excavation and stockpile locations. Provide a copy of this correspondence to the EIC.

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

II Material Handling:

A. Field Testing of Contaminated Soil:

The locations where contaminated soils are present and will require field testing are as indicated in the contract documents and plans. Supplemental instructions may be furnished by the EIC in the field.

Perform field testing 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.*

Organic vapor screening will be used to establish worker health and safety protection levels, and segregate potentially highly contaminated excavated materials, based on volatile vapor readings, from materials with low to no volatile vapor readings. The level that shall be used to separate these materials will be 25 ppm. All materials exhibiting sustained readings of 25 ppm or greater will be stockpiled separately from those exhibiting vapor readings of less than 25 ppm while awaiting sampling and laboratory analysis. **All excavated materials, regardless of volatile organic vapor readings shall be considered contaminated.** To conduct organic vapor monitoring, provide and operate field organic vapor test equipment: a photo ionization detector (PID) or a flame ionization detector (FID) capable of detection of 0.2 ppm general organic vapor levels. Calibrate the PID/FID daily, just before starting field work. The PID/FID must be operated by just before starting field work. The PID/FID must be operated by a person thoroughly trained in sampling protocols, organic vapor monitoring procedures, and equipment calibration procedures.

Testing shall be at sufficient intervals to continuously observe and monitor soil excavations for volatile contamination. Maintain and provide legible field notes to the EIC indicating weather conditions, PID/FID readings, visual and odor observations, and quantities of soil excavated at each location.

B. Stockpiling and Segregation:

Segregate/stockpile soil as follows or as indicated by the EIC:

1. Segregate into contaminated or contaminated and exhibiting high volatile vapor reading piles as determined by preliminary field testing as outlined in Field Testing of Contaminated Soil, above. All excavated soil shall be considered

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

contaminated and shall be handled in accordance with the Special Specification 203, Excavation of Contaminated (Non-Hazardous) Soils With Reuse As Embankment, Fill or Site Use Within Project Limits or Excavation of Contaminated (Non-Hazardous) Soils With Disposal Other Than As On-Project Embankment Or Fill. **Assume all excavated materials will undergo disposal other than as on-project embankment or fill.**

2. Contaminated Soil with High Volatile Vapor Readings - Excavated materials exhibiting volatile vapor readings exceeding 25 ppm shall be segregated into a separate pile until sampling and laboratory analysis is conducted and a determination can be made by the EIC in consultation with the NYS DOT Environmental Unit and/or NYSDEC regarding their classification and disposition.
3. Excavate contaminated material and place in stockpiles, or directly into trucks or rollofs. However, in no case will the material be transported off site before laboratory analysis has been received and excavated materials have been characterized for disposal.

If placed in stockpiles, prepare the stockpile area by removing all large stones, roots, or other debris which may puncture the liner. Place stockpile on a minimum 20 mil or equivalent plastic ground cloth and cover by 6 mil minimum polyethylene sheeting or equivalent to protect against leaching or runoff of contaminants into or equivalent to protect against leaching or runoff of contaminants into groundwater or stormwater. Weight or secure the sheeting by appropriate means and seal seams as approved by the EIC to prevent tearing or removal by weather. Grade surrounding surface to provide for positive drainage away from the pile. Maintain covering and grading for as long as stockpile exists. Storage must not exceed 30 days, unless approval is obtained from the EIC.

If soil is placed in trucks or rollofs, cover with waterproof tarpaulins. Secure the tarpaulin and maintain the cover throughout storage and transport. *Note: Any soil moved offsite or transported through an active lane must be in NYSDEC Part 364 permitted vehicles.*

4. Institute appropriate procedures and security measures to ensure the protection of site personnel and the public from contaminated soils as described in the approved Materials Handling Plan.
5. Notify the EIC immediately of soil that appears to contain unknown contaminants (based on visual, odor, or PID/FID testing), or contains sustained elevated volatile vapor readings above 25 ppm in the soil, or in the breathing zone. Elevated

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

volatile vapor readings within the breathing zone shall require respiratory protection.

C. Sampling and Laboratory Analysis of Soil Samples:

1. Sampling shall be conducted by a person thoroughly trained in sampling protocols using standard accepted sampling practices that are representative of the pile. Collect representative composite samples of the soil from each pile from a depth of greater than one foot within a stockpile. Include, at a minimum, four sample points for each composite sample and one composite sample for every 50 cubic meters of soil or as directed by the EIC.
2. Analyze all samples using USEPA SW-846 Methods for Target Compound List (TCL) parameters. Analyze volatile organic compounds by Method 8260 or equivalent, semivolatile organic compounds by Method 8270 or equivalent, PCBs by Method 8080 or equivalent, and the eight RCRA metals by Method 6010/7000 series. Complete all laboratory analyses within SW-846 holding time allowances from the time of sample collection. In addition, perform analyses and testing as required by the intended disposal/treatment facility and/or method. Disposal/treatment facilities may require laboratory testing for criteria of hazardous waste or other criteria. Many landfills require testing for ignitability, corrosivity, reactivity, total petroleum hydrocarbons, and the constituents of toxicity using the Toxicity Characteristic Leaching Procedure (TCLP) methodology. Perform all analyses at a laboratory approved by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) for the intended analyses.
3. Provide a copy of the analysis report to the EIC within 2 days of receipt. No removal of waste materials shall occur prior to the EIC's receipt and acceptance of the laboratory report.

D. General Description of Work:

1. The extent of soil handling is specified and shown on the Plans. Supplemental instructions may be furnished by the EIC in the field. The soils shall be excavated to the depths and area extent shown on the Plans, specified herein, and as directed by the EIC.
2. The CONTRACTOR shall submit a Materials Handling Plan detailing the planned operations to complete the work to the EIC for review and approval prior to the start of work.

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

3. The CONTRACTOR shall reduce the potential for cross-contamination of uncontaminated areas with contaminated soils by using staging areas and minimizing double moving of materials. All staging areas shall be constructed to prevent the spread of any contamination to surrounding uncontaminated soils, surfaces, and/or groundwater.
4. The staging area(s) shall be lined with a minimum 20 mil plastic ground cloth. The CONTRACTOR shall take sufficient precautions to ensure the integrity of the liner during its use. This liner shall be properly transported and disposed of by the CONTRACTOR when the staging area is no longer needed.
5. The CONTRACTOR shall provide a minimum 6-mil sealed, watertight sheeting to cover staged materials. Staged materials shall be covered at all times to prevent contaminated runoff.
6. Provide all sampling and analyses as may be required by disposal facilities for disposal of soils and other materials under this Contract. All sampling will be conducted with the EIC or his representative present.
7. Ensure that the waste meets the approved landfill's acceptance criteria, including the absence of free liquids. The CONTRACTOR shall be responsible for all costs involved in the handling of any wastes deemed unacceptable by the approved landfill.

III Transportation Off-Site:

A. Transportation:

1. Load and transport contaminated soil and materials in vehicles with a valid 6 NYCRR part 364 Waste Transporter Permit (and permits for any other states as applicable). Verify and document that the transporter has a current waste transporter's permit authorizing the transport of the project waste materials to the intended off-site facility. Coordinate all shipments and arrivals at the disposal facility to meet project schedule requirements. Complete any required shipping papers, placarding, and weighing/load measurements and provide documentation/copies to the EIC.
2. Cover roll-offs and trucks with waterproof tarpaulins to prevent runoff or evaporation of contaminants and blowing of soil.
3. Perform actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off site associated with this project.

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

4. Do not combine material from any other source with materials from the Project Site.

IV Disposal:

For Disposal As Project Embankment or Fill: Place contaminated soil/sediment as indicated by the EIC as embankment or fill in accordance with the requirements contained in Section 203 and/or other applicable sections of the Special Specifications.

For Disposal Other than as Embankment or Fill: Dispose of contaminated material by the methods and procedures described in the Material Handling Plan as approved by the EIC. Dispose of all contaminated materials within 30 days of stockpiling or within 30 days of the results of laboratory analysis, whichever is later, unless additional time is approved by the EIC. Do not, however, dispose of any material prior to the receipt and acceptance of laboratory results by the EIC. *Note: If the EIC approves additional stockpiling time, the Contractor must also request approval from NYSDEC for any storage greater than 60 days.*

BASIS FOR ACCEPTANCE:

Submission of evidence that all soil has been tested, handled, sampled and analyzed, and disposed of in accordance with the approved Material Handling Plan will be the basis of acceptance for work completion.

METHOD OF MEASUREMENT:

Excavation of Contaminated (Non-Hazardous) Soils With Reuse as Embankment, Fill, or On-Site Within Project Limits: The quantity shall be measured in cubic meters as computed in the original position or, if appropriate and ordered by the EIC, in stockpiled position.

Excavation of Contaminated (Non-Hazardous) Soil with Disposal Other Than as On-Project Embankment or Fill: The quantity shall be measured by the number of metric tons of contaminated soil disposed of in accordance with the methods and procedures described in the approved Material Handling Plan. As appropriate and as ordered by the EIC, a conversion factor of cubic meters to metric tons may be determined.

Sampling and Laboratory Analysis of Soil Samples: The quantity shall be measured by the actual number of samples collected and analyzed as directed by the EIC.

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

: The quantity of contaminated soils field tested will be measured in cubic meters as computed in the original position.

BASIS OF PAYMENT:

Excavation of Contaminated (Non-Hazardous) Soils With Reuse as Embankment, Fill, or On-Site Within Project Limits: The unit price shall include the cost of furnishing all labor, materials, equipment, transportation, construction of embankment(s) or placement of fill, stockpiling, cleanup of spillage and any other incidentals necessary to complete the work. Note: Placement of contaminated soil will be paid for under this item and not under the standard item for placement of embankment.

Excavation of Contaminated (Non-Hazardous) Soil with Disposal Other Than as On-Project Embankment or Fill: The unit price shall include the cost of furnishing all labor, materials, equipment, transportation, off-site disposal, stockpiling, permits, shipping papers, documentation, cleanup of spillage and any other incidentals necessary to complete the work.

Sampling and Laboratory Analysis of Soil Samples: The unit price shall include the cost of furnishing all labor, materials, equipment, and documentation necessary to complete the work.

Field Testing of Contaminated Soil: The unit price shall include the cost of preparation of the Material Handling Plan and furnishing all labor, materials, instruments, equipment, and documentation to complete the work.

Progress Payments for Items will be made as Follows:

Twenty-five percent (25%) of the cost of these Items will be paid for upon excavation of the contaminated soil as approved by the Engineer.

Seventy-five (75%) of the cost of these Items will be paid for upon acceptable reuse or disposal, other than as on-project embankment or fill, as approved by the Engineer.

Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	PAY UNIT
04203.9715M	EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL OR ON SITE USE WITHIN PROJECT LIMITS	CUBIC METERS

ITEM 04203.9715 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH REUSE AS EMBANKMENT, FILL, OR ON SITE USE WITHIN PROJECT LIMITS

ITEM 04203.9716 M - EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL

ITEM 04203.9717 M - SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES

ITEM 04203.9718 M - FIELD TESTING OF CONTAMINATED SOIL

04203.9716M	EXCAVATION OF CONTAMINATED (NON-HAZARDOUS) SOILS WITH DISPOSAL OTHER THAN AS ON-PROJECT EMBANKMENT OR FILL	METRIC TON
04203.9717M	SAMPLING AND LABORATORY ANALYSIS OF SOIL SAMPLES	EACH
04203.9718M	FIELD TESTING OF CONTAMINATED SOIL	CUBIC METERS

SPECIAL NOTE - For Inclusion in Proposal

The Contractor's attention is directed to the fact that the quantities included for these items are estimates based best available information; the actual quantities will be determined during construction based on the excavation limits.

Any analytical results of previous investigations that NYSDOT has conducted are available to the Contractor by request.

DISAPPROVED BY E107-034