

**SECTION 01 45 00 - ENVIRONMENTAL TESTING OF IMPORTED FILL MATERIALS****PART 1 - GENERAL**

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes the requirements for sampling, testing, and certification of imported fill material to District sites.
- B. Related Requirements:
  - 1. Section 01 40 02 "Quality Requirements / Design-Build Entity Laboratory" for testing related costs, scheduling, and other requirements.
  - 2. Section 31 20 00 "Earth Moving."

## 1.3 DEFINITIONS

- A. Borrow Site(s): The source location(s) of the imported fill material.
- B. DTSC: California Department of Toxic Substances Control Information Advisory, Clean Imported Fill Material, dated October 2001.
- C. Environmental Professional: A licensed California Professional Engineer (PE) or Professional Geologist (PG) hired by the Design-Build Entity.
- D. Imported Fill Material: Any earth or soil brought to the District site for which the source location is not located within the property boundary of that same District site. This term does not include gravel, rock, earth, or soil generated from within the property boundary of the District site.
- E. Obvious Contamination: Indicators of possible contamination, include, but are not limited to discoloration, odors, debris, or other man-made materials.
- F. Testing Agency: The testing agency hired by the Design-Build Entity to perform all tests described herein.

## 1.4 ACTION SUBMITTALS

- A. Sampling and Analysis Plan (SAP) prepared and signed by the Design-Build Entity's Environmental Professional. At a minimum the SAP shall include:
  - 1. Scaled maps showing the location of the Borrow Site(s) and the locations of the stockpiles or in-place soil.
  - 2. The volumes of the stockpiles or in-place soil proposed for import.
  - 3. The depth of excavation for the removal of in-place soil.

4. A sampling rationale and approach, including the proposed sampling protocol, number of samples, and the analytical testing suite.
  5. Contact information for the Borrow Site(s) and a proposed sampling schedule.
  6. If available, the SAP should include detailed information on the current and previous use of the Borrow Site(s) (i.e., for at least the last 50 years) and information from any environmental site assessments or clean ups performed at the Borrow Site, including laboratory analytical testing reports. This information should be utilized to support the proposed sampling rationale and approach. It is the responsibility of the Design-Build Entity to request this information from the Borrow Site(s) or obtain the information from readily available public resources. If sufficient information regarding the previous land use is not available to support a specific sampling rationale or approach, samples shall be analyzed as described in Paragraph 3.1, C. of this Section. Guidance for the sampling frequency and recommended target analytes for previous and current Borrow Site(s) land uses are provided in Table 1 and 2 at the end of this Section.
- B. Import Fill Material Certification Report (IFMCR) prepared and signed by the Design-Build Entity's Environmental Professional. At a minimum, the draft IFMCR shall include:
1. Scaled maps showing the location of the Borrow Site(s), the locations of the stockpiles or in-place soil, the soil sample locations, and the area at the District site where the import fill material will be placed.
  2. Description of soil sampling activities, including sampling methodology and procedures.
  3. Summary of laboratory analytical results, including data summarized in a tabular format.
  4. Discussion and evaluation of laboratory analytical results as it relates to potential risks to human health and the environment, which must include an evaluation of potential risks to workers, schoolchildren, and District employees utilizing the current DTSC model.
  5. Recommendations for additional steps, if any.
  6. Copies of laboratory analytical testing reports with chain of custody and quality assurance and quality control documentation.
  7. A copy of the Import Fill Material Certification Form (at the end of this Section) signed by the Design-Build Entity's Environmental Professional and the Design-Build Entity. Request a copy from the District.
- 1.5 INFORMATIONAL SUBMITTALS
- A. Qualification Data: For Environmental Professional and testing agency.
  - B. Written documentation prior to import activities verifying that the proposed import fill material from the Borrow Site(s) meets the geotechnical requirements specified in the Contract Documents.
  - C. Written documentation from the Design-Build Entity prior to import activities verifying that the hauling contract specifies the use of only clean trucks and that the actual trucks utilized for import activities will be clean of obvious contamination and deleterious materials.
  - D. Written documentation from the Design-Build Entity that the haul trucks traveled directly from the Borrow Site(s) to the District site without stopping at other locations and that short loads were not augmented with soil or materials not tested as part of the SAP. It is the Design-Build Entity's responsibility to provide this documentation within 5 days of the completion of import activities. All transportation activities shall be conducted in accordance with applicable local, State, and Federal rules and regulations.
  - E. Copies of haul tickets and/or bills of lading documenting all import activities. The haul tickets and/or bills of lading shall contain the following information:

1. Date and time of departure from the Borrow Site(s).
2. Date and time of arrival at the District site.
3. Address of Borrow Site and District site.
4. Load volume and/or weight.
5. Signature of the receiving site representative as designated by the Design-Build Entity.

- F. Statement signed by Design-Build Entity and Environmental Professional verifying compliance with requirements of the SAP.

**1.6 QUALITY ASSURANCE**

- A. Testing Agency Qualifications: An analytical testing laboratory accredited by the California Department of Health Services (DHS) to perform analysis of imported fill materials.
- B. Environmental Professional Qualifications: A licensed California Professional Engineer (PE) or Professional Geologist (PG) knowledgeable of, and experienced in, environmental site assessment, waste classification, disposal requirements, and environmental regulations pertaining to school projects, and who has had recent environmental experience performing soil sampling and waste characterization (i.e., within one year).

**PART 2 - PRODUCTS (Not used.)**

**PART 3 - EXECUTION**

**3.1 TEST AND INSPECTION LOG**

- A. In addition to the requirements of Section 01 40 02 "Quality Requirements / Design-Build Entity Laboratory," maintain a separate three-ring binder containing all information required for this Section. Update the binder weekly. Bring the binder to all Progress Meetings and Monthly Schedule Review Meetings until earth moving is complete.

**3.2 COORDINATION**

- A. Limit the length of time between sampling of soil and delivery of imported soil to site to no more than **21** calendar days.
- B. Import no earth or fill materials without the prior written consent of the District.

**3.3 SAMPLING AND TESTING**

- A. All import fill material shall be tested at the point of origin, unless prior written approval is obtained from the District. The import fill material testing and certification process shall include the following:
  1. Select a Borrow Site(s) for the imported fill material.
  2. Submit a SAP to the District for review and comment.
  3. If necessary, submit a revised SAP after incorporating revisions requested by the District, and receive approval from the District.
  4. Collect and analyze samples in accordance with the District approved SAP.

5. Submit an IFMCR and a signed copy of the Import Fill Material Certification Form to the District for review and comment.
  6. If necessary, submit a revised IFMCR after incorporating revisions requested by the District, and receive approval from the District.
  7. Prior to import activities, submit written documentation verifying that the import fill material tested meets the geotechnical requirements specified in the Contract Documents.
  8. Prior to import activities, submit written documentation that only clean trucks without obvious contamination or deleterious materials will be utilized to haul import fill material from the Borrow Site(s) to the District site.
  9. After import activities, submit written documentation that the haul trucks traveled directly from the Borrow Site(s) to the District site without stopping at other locations and that short loads were not augmented with soil or materials not tested as part of the SAP and copies of haul tickets and/or bills of lading documenting all import activities.
  10. After import activities, submit haul tickets and/or bills of lading as specified above.
  11. After import activities, submit a statement signed by Design-Build Entity and Environmental Professional verifying compliance with requirements of the SAP, as specified above.
- B. Import fill material is deemed approved for import only when it has been documented to the satisfaction of the District that the fill material meets the requirements of this Section. District reserves the right to refuse any fill material proposed for use at a District site.
- C. Samples shall be analyzed in accordance with the applicable portion of Table 2 based on information regarding the previous land use. If sufficient information regarding the previous land use is not available to support a specific sampling rationale or approach, all samples shall be analyzed as described below. The detection limits and quality assurance/quality control methods shall meet the requirements of the standard reporting limits and best laboratory practices for the United States Environmental Protection Agency (USEPA) test method requested below:
1. California Code of Regulations Title 22 (CAM 17) Metals by USEPA test method 6010B/7471A.
  2. Total petroleum hydrocarbons as gasoline, diesel, and motor oil by United States Environmental Protection Agency (USEPA) test method 8015(B)M.
  3. Volatile Organic Compounds by USEPA test method 8260B/5035.
  4. Semi-Volatile Organic Compounds by USEPA test method 8270C.
  5. Organochlorine Pesticides by USEPA test method 8081A.
  6. Organophosphorus Pesticides by USEPA test method 8141A.
  7. Chlorinated Herbicides by USEPA test method 8151A.
  8. Polychlorinated Biphenyls by USEPA test method 8082.
- D. Import fill material may be deemed unacceptable for use on a District site by the District if any of the following analytical testing results are obtained:
1. Total Petroleum hydrocarbons are present at concentrations exceeding 100 milligrams per kilogram (mg/kg) for gasoline and 1,000 mg/kg for diesel/motor oil.
  2. Volatile organic compounds are present at concentrations meeting or exceeding the laboratory reporting limit.
  3. Semi-volatile organic compounds are present at concentrations meeting or exceeding the laboratory reporting limit.
  4. Organochlorine or organophosphorus pesticides are present at concentrations meeting or exceeding the laboratory reporting limit.
  5. Chlorinated herbicides are present at concentrations meeting or exceeding the laboratory reporting limit.
  6. Arsenic is present in any sample at a concentration at or above 12 mg/kg.

7. Lead is present in any sample at a concentration at or above 80 mg/kg.
  8. The cumulative health risk for all detected Title 22 metals except lead and arsenic indicates a significant health risk to workers, schoolchildren, and District employees as described in Section 1.5.F.4.
  9. The soil would be classified as waste as defined by California Code of Regulations Title 22 or Code of Federal Regulations Title 40.
- E. Import fill material with concentrations of contaminants above the screening levels identified in this document may be deemed suitable by the District for use on a District site if supported by a site-specific human health risk assessment, which may require final approval from the DTSC.
- F. Approvals of analytical testing results by the District are valid for a period of 21 days from the date of testing unless a written variance is obtained from the District.
- G. A variance to this Specification may be obtained by submitting a written request to the District 5 days in advance of the need for approval. The request must be accompanied by the laboratory analytical testing report and a justification to support the request. The District will review the request and provide an initial determination within 5 days. Request may require an additional final approval from the DTSC.

**END OF SECTION 01 45 00**

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Section Version April 2015

**Table 1 - Recommended Fill Soil Sampling Schedule**

Area of Individual Borrow Area/Stockpile	Sampling Requirements
<b>Borrow Area/In-Place Material</b>	
2 acres or less	Minimum of 4 samples
2 to 4 acres	Minimum of 1 sample per every 1/2 acre
4 to 10 acres	Minimum of 8 samples
Greater than 10 acres	Minimum of 8 locations with 4 subsamples per location
<b>Stockpiled Material</b>	
1,000 cubic yards or less	1 sample per 250 cubic yards or portion thereof (minimum of 4 samples)
1,001 to 5,000 cubic yards	4 samples for the first 1,000 cubic yards, plus one sample per each additional 500 cubic yards or portion thereof
Greater than 5,000 cubic yards	12 samples for the first 5,000 cubic yards, plus one sample per each additional 1,000 cubic yards or portion thereof

**Note:**

Information obtained from the DTSC's Information Advisory, Clean Imported Fill Material (October 2001)

**Table 2 - Potential Contaminants Based on the Borrow Site Land Use**

Borrow Site Current or Historical Land Use	Target Compounds
Land near and existing freeway	Lead (USEPA Method 6010B) Polynuclear Aromatic Hydrocarbons (USEPA 8310)
Land near a mining area or rock quarry	Title 22 (CAM 17) Metals (USEPA 6010B/7471A) pH
Agricultural Land	Organochlorine Pesticides (USEPA 8081A) Organophosphorus Pesticides (USEPA 8141A) Chlorinated Herbicides (USEPA 8151A) Title 22 (CAM 17) Metals (USEPA 6010B/7471A)
Residential/Commercial Land	Volatile Organic Compounds (USEPA 8206B/5035) Semi-Volatile Organic Compounds (USEPA 8270C) Total Petroleum Hydrocarbons (USEPA 8015(B)M) Polychlorinated Biphenyls (USEPA 8082) Title 22 (CAM 17) Metals (USEPA 6010B/7471A) Organochlorine Pesticides (USEPA 8081A) Asbestos (OSHA Method ID-191)

**Notes:**

OSHA - Occupational Safety and Health Administration

PLM - polarized light microscopy

USEPA - United States Environmental Protection Agency

Information obtained from the DTSC's Information Advisory, Clean Imported Fill Material (October 2001)

**SAMPLE FORM**

### Import Fill Material Certification Form

**I. Contractor Information**

Company Name: \_\_\_\_\_  
Company Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_

**II. Environmental Professional Information**

Company Name: \_\_\_\_\_  
Company Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Type of License/Registration: \_\_\_\_\_ License/Registration Number: \_\_\_\_\_

**III. Borrow Site Information**

Site Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Property Owner Name: \_\_\_\_\_  
Property Owner Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Current Land Use: \_\_\_\_\_  
Historical/Previous Land Use(s): \_\_\_\_\_  
Estimated Volume of Soil for Export: \_\_\_\_\_

### Import Fill Material Certification Form

**IV. School/Facility Information**

School/Facility Name: \_\_\_\_\_  
 School/Facility Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

**V. Representative Sample Certification**

Is/Are the representative sample(s) collected to prepare this certification form and the laboratory analysis performed in accordance with Section 014500 of the Specifications, the approved Sampling and Analysis Plan, and the Contract Documents? Yes      No

Was the soil sampled in-place or in a stockpile(s)? In-Place      Stockpile(s)

Sample Collection Date(s): \_\_\_\_\_  
 Sample ID Number(s): \_\_\_\_\_  
 Sampler's Name: \_\_\_\_\_

**VI. Import Soil Characteristics**

Were any indicators of contamination or deleterious materials observed?	Yes	No
Does the import soil meet the requirements of Section 014500 of the Specifications and the Contract Documents?	Yes	No
Does the import soil meet the geotechnical requirements specified in the Contract Documents?	Yes	No

**VII. Certification**

I/We further certify that by utilizing this soil certification form, neither I/we nor any other employee of the company(ies) or agent for company(ies) will deliver for import or attempt to deliver for import any material that does not meet with the requirements of Section 014500 of the Specifications or the Contract Documents or that has not been approved in writing for import to a San Diego Unified School District site. I/We shall immediately provide written notice of any change or condition pertaining to the import fill soil not provided herein. Our company(ies) hereby agree(s) to fully indemnify and defend the San Diego Unified School District against any damages resulting from this certification being inaccurate or untrue.



SAMPLE FORM

**Import Fill Material Certification Form**

I/We, certify that the above is true and correct, and that the source site does not appear on any state, local, or federal hazardous sites list, including but not limited to the federal "superfund list." To the best of my knowledge, fill to be imported to the project site also meets with applicable local, state, and federal standards, and has never been utilized for industrial and/or commercial use where hazardous materials were used, handled, or stored as part of the business operation or as an unpaved parking area. To the best of my knowledge, the fill to be imported meets with applicable requirements of California Department of Toxic Substances Control (DTSC), which administers both state and federal hazardous waste programs including but not limited to the Resource Conservation and Recovery Act (RCRA) the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 U.S.C. §§9601-9675), the Toxic Substances Control Act (TSC, 42 U.S.C §§2601-2692) and a number of other State and Federal bodies of law dealing with hazardous materials and the environment.

I/We agree to provide true, correct copies of any documentation relating to the import fill or the source site, within 5 days of written request by San Diego Unified School District.

\_\_\_\_\_  
Contractor Authorized Representative Name/Title  
(type or print)

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Contractor Authorized Representative Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Environmental Professional Authorized  
Representative Name/Title (type or print)

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Environmental Professional Authorized  
Representative Signature

\_\_\_\_\_  
Date

This form shall be submitted as an attachment to the Import Fill Material Certification Report described in Section 014500, Part 1.5 F.

