PART 1 - GENERAL

1.01 SCOPE OF WORK

A. This Section provides procedures and requirements for handling soils excavated during construction activities and includes furnishing all labor, equipment, materials, transportation, and incidentals for performing the following work, to the lines, grades, and elevations as specified and shown and as directed by the Engineer:

1. Contractor shall excavate, load, haul, and offsite place Unrestricted Export Soil outside the Harbor District per the Contract Documents.

2. Contractor shall excavate, load, haul, and place Reusable Soil at a designated stockpile location within the Harbor District per the Contract Documents.

3. Excavate, load, haul, and dispose Soil classified as Non-Hazardous Waste per the Contract Documents at approved offsite recycling and/or disposal facilities.

4. Contractor shall excavate, load, haul and dispose soil classified as Designated Waste per the Contract Documents at approved offsite disposal facility or facilities.

5. Contractor shall excavate, load, haul and dispose soil classified as Non-RCRA (California-Hazardous) Waste per the Contract Documents at approved offsite disposal facilities.

6. Contractor shall excavate, load, haul and dispose soil classified as RCRA-Hazardous Waste per the Contract Documents at approved offsite disposal facilities.

7. Contractor shall excavate, load, haul and dispose soil classified as TSCA-Hazardous Waste per the Contract Documents at approved offsite disposal facilities.

8. Contractor shall handle excavated soil and perform environmental testing prior to loading into transport trucks per the requirements of this Section.

B. Excavation of waste identified in this Section shall be performed by the Contractor only to the extent necessary to facilitate site grading and construction activities as shown on the Contract Documents.

C. Contractor shall dispose of surplus (excess) soil from utility trench excavations as
Non-Hazardous Waste per the requirements of this Section.

1.02 RELATED SECTIONS

Not Used.

1.03 DEFINITIONS

A. Soil: Soil or other solid material (e.g., gravel or rock) serving as subsurface fill within the work area below the ground surface, asphalt, or concrete section excluding any crushed miscellaneous base layer.

B. Unrestricted Export Soil: Soil characterized as inert or non-hazardous waste and approved for unrestricted export outside the Harbor District per the specifications and soil characterization screening protocol (per Paragraph 3.09).

C. Reusable Soil: Soil characterized as non-hazardous waste and approved for reuse within the Harbor District, per the specifications and soil characterization screening protocol (per Paragraph 3.09), and excluding soil originating from dredged material.

D. Non-Hazardous Waste: Soil or aqueous liquid not characterized as a Resource Conservation and Recovery Act (RCRA) hazardous waste, per 40 CFR Parts 260 – 265, a Toxic Substances Control Act (TSCA) Polychlorinated Biphenyl (PCB) hazardous waste, per 40 CFR Part 761, or a non-RCRA (California-hazardous) waste per 22 CCR Section 66261.

E. Designated Waste: Non-hazardous waste as defined in California Water Code Section 13173 that consists of, or contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan.

F. Hazardous Waste: Soil or aqueous liquid characterized as a Resource Conservation and Recovery Act (RCRA) hazardous waste, per 40 CFR Parts 260 – 265, a Toxic Substances Control Act (TSCA) Polychlorinated Biphenyl (PCB) hazardous waste, per 40 CFR Part 761, or a non-RCRA, California-hazardous waste per 22 CCR Section 66261.

G. Non-RCRA (California-Hazardous) Waste: Soil or aqueous liquid characterized as a Non-Resource Conservation and Recovery Act (non-RCRA), California-hazardous waste per 22 CCR Section 66261.

H. Exclusion Zone: Defined and secured work area required for removal of Hazardous Waste per 29 CFR 1910.120.

J. VOC-Impacted Soil: Excavated soil with VOC vapor concentrations greater than 50 ppmv (per SCAQMD Rule 1166).

K. PCB: Polychlorinated Biphenyl.

L. ppmv: parts per million by volume

M. TTLC: Total Threshold Limit Concentrations - Concentrations of an organic or inorganic contaminant in a solid waste that characterizes that waste as hazardous per 22 CCR Section 66261.

N. STLC: Soluble Threshold Limit Concentration – Concentrations of an organic or inorganic contaminant in a liquid extract that characterizes that waste as hazardous per 22 CCR Section 66261.

O. TCLP: Toxicity Characteristic Leaching Procedure - USEPA procedure (USEPA Method 1311) to determine mobility of organic and inorganic contaminants to determine whether waste is hazardous per 40 CFR 261.24.

P. CCR: California Code of Regulations.


T. USEPA: U.S. Environmental Protection Agency.

U. Cal/EPA: California Environmental Protection Agency.

V. OSHA: U.S. Occupational Safety and Health Administration.

W. Cal/OSHA: California Division of Occupational Health and Safety.

X. SCAQMD: South Coast Air Quality Management District.


Z. COPC: Chemical of Potential Concern - A substance detected at a waste site that has the potential to affect human receptors adversely due to its concentration, distribution, and mode of toxicity (USEPA).

AA. Waste: Solid, liquid, or gaseous material that is not needed or not suitable for its
original intended purpose or a material classified as waste by a regulatory authority.

1.04 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

A. Cal/EPA Regulations per CCR Title 22.

B. Cal/OSHA: Regulations per CCR Title 8


D. SCAQMD Rule 403 – Fugitive Dust.

E. SCAQMD Rule 402 – Nuisance.

F. HAZWOPER: OSHA Regulations per 29 CFR 1910.120.


H. TSCA Regulations per 40 CFR Part 761.


1.05 REGULATIONS

A. Contractor shall comply with current federal, state, and local regulations and guidelines controlling work, and perform all related work in accordance with such regulations.

B. Contractor shall comply with the specific permit and waste acceptance criteria of each individual offsite facility used by the Contractor for recycling or disposal of excavated soils.

C. Contractor shall comply with the provisions specified above for the work of this Section, which includes obtaining all necessary permits and providing all necessary notifications and approvals.

D. 

E. Contractor shall provide and comply with a SCAQMD Rule 1166 Various Locations Permit for the project.

1.06 HEALTH AND SAFETY REQUIREMENT
A.

1.07 QUALITY ASSURANCE

A. Training
1. Contractor shall ensure that all employees managing soils are properly trained and certified in the use of personal protective equipment (PPE) and the proper handling, storage, and transportation of soils waste under applicable OSHA, Cal/OSHA, USEPA, and Cal/EPA regulations.

B. Health and Safety Officer
1. Contractor shall provide the services of a Health and Safety Officer who shall be responsible for employee training and respiratory fit tests and the preparation of the Contractor's detailed job-specific Health and Safety Plan (HASP), including determination of the need for PPE in performing soil removal work.

C. Site Safety Officer (SSO)
1. Contractor shall provide the services of an on-site Site Safety Officer (SSO) to implement the approved job-specific HASP. The SSO shall have the authority to halt site operations in the event of an emergency or to correct unsafe work practices or conditions.

D. Regulation Documents
1. Contractor shall maintain at all times one copy each at the office and one copy in view at the Site, of the approved Contractor's Removal, Storage, Transportation and Disposal Work Plan and the SCAQMD Rule 1166 Permits as specified in this Section, including addenda and revisions.

E. Access by Engineer
1. The Engineer or Engineer's representatives may enter Exclusion Zones for brief periods of time provided they have documentation of proper training and utilize appropriate PPE. Contractor shall provide all required PPE and safety briefings for the Engineer as required for safe entry and visual inspection in impacted areas.

F. Independent Testing Laboratory
1. Contractor shall obtain the services of an independent testing laboratory certified by the California Department of Public Health’s Environmental Laboratory Accreditation Program (ELAP). The Contractor’s independent testing laboratory shall analyze all soil samples submitted for chemical characterization.
G. Licensed Environmental Professional (Civil Engineer or Geologist)

1. Contractor shall obtain the services of a civil engineer or geologist licensed in good standing by the California Board of Professional Engineer and Land Surveyors with environmental experience in soil sampling and waste classification associated with construction-related soil handling operations. The Contractor’s licensed professional shall provide full-time onsite supervision of the soil sampling and waste classification associated with construction-related soil handling and disposition, and provide recommendations regarding the waste classification of such soils for review and approval by the Engineer.

1.08 SUBMITTALS

A. Contractor shall prepare and submit the following to Engineer a minimum of 21 calendar days (unless otherwise noted) before any earthwork proceeds that pertains to this Section:

1. Training Certification of Employees (Health and Safety).
   a. Contractor shall submit current training certificates and a letter, signed and dated by the Health and Safety Officer stating that the employees have received required training under OSHA and Cal/OSHA regulations (as applicable) to perform the work specified.

2. Notifications, Permits, and Approvals:
   a. Contractor shall notify the Engineer a minimum of two (2) weeks prior to the start of removal of soils.
   b. Contractor shall provide copies of required regulatory permits or approvals and appropriate regulatory agency notifications in accordance with permit requirements.

   a. Contractor shall submit a detailed job-specific HASP including safe work practices and emergency procedures approved by the Health and Safety Officer. Identify all emergency phone numbers. Maintain a copy of the HASP on site at all times of the work.

   a. Contractor shall submit a respiratory protection plan, which conforms to 28 CFR 1910.134 and ANSI Z88.2-69, including current respiratory fit tests for employees involved in VOC-impacted soil removal and an authorization signed by the Health and Safety Officer that employees are fit for use of respiratory protection equipment.

5. Contractor’s Removal, Storage, Transportation, and Disposal Work Plan
a. Contractor shall prepare and submit a Removal, Storage, Transportation and Disposal Work Plan that details the following:

1) Sequencing of the soil removal work by location, estimated volume/tonnage, and type and classification of soils.

2) Locations, means, and methods for storing excavated soils prior to transportation in accordance with applicable permits and this Section.

3) Methodology for characterizing excavated soils for export, reuse, recycling or offsite disposal in accordance with this Section.

4) Methodology for setting up Exclusion Zones around work areas and decontamination areas at designated egress locations.

5) Procedures for decontamination of equipment used within Exclusion Zones.

6) Plan for groundwater and stormwater management within excavation(s) including characterization and lawful disposition of accumulated standing water as aqueous waste.

7) Transportation plans, route maps, haul permits, hauling companies, and certifications to be utilized for the transportation of soils removed during the Work.

8) Names, locations, and approvals for proposed designated facilities for final disposition.

9) Methods and equipment associated with soil excavation including excavation methodology, sequence, and initial PPE anticipated and required upgrades, in accordance with the Contractor’s HASP.

10) Method for segregation of soils

11) Methods, equipment, and materials for vapor, dust, and odor suppression.

6. Field Screening Results and Reports.

a. For field screening (air monitoring) performed by Contractor, provide all field notes and results associated with screening potentially contaminated materials for VOCs, odor, and dust on a weekly basis. In addition, all VOC monitoring and reporting shall be conducted by the Contractor in accordance with the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan.

7. Independent Testing Laboratory.

a. Contractor shall submit a qualifications package that shall include the name of analytical laboratory certified by the California
Department of Public Health with its ELAP Certification Number and the laboratory’s QA/QC manual.

8. Licensed Environmental Professional.
   a. Contractor shall submit a qualifications package that shall include the resume of the licensed professional civil engineer or geologist, a description of three (3) representative projects completed within the last three (3) years by the proposed professional, and copy of license certificate.

9. Health and Safety Officer.
   a. Contractor shall submit a qualifications package that shall include the resume of the Health and Safety Officer documenting minimum three (3) years experience managing corporate health and safety programs (including training and respiratory fit testing) and the preparation of HASPs for implementation at impacted soil sites.
   b. Contractor’s Health and Safety Office shall be an industrial hygienist certified by the American Board of Industrial Hygiene (ABIH) to certify training and respiratory fit tests and to review and approve the Contractor's detailed job-specific Health and Safety Plan (HASP), including determination of the need for PPE in performing hazardous waste removal work. Contractor shall submit proper documentation that the hygienist is ABIH certified, including certification number and date of certification/re-certification.

10. Site Safety Officer.
    a. Contractor shall submit a qualifications package that shall include the resume of the Site Safety Officer documenting minimum three (3) years experience in implementing HASPs at impacted soil sites, and copies of current 40-Hours HAZWOPER, First Aid, and CPR certifications.

11. Disposal Facilities
    a. Contractor shall submit a qualifications package that shall include the name(s) of the offsite designated facilities to be used by the Contractor for final disposition of soil and aqueous waste and copies of all applicable permits and material acceptance criteria.

12. Waste Profiles
    a. Contractor shall submit waste profiles for approval by the City a minimum of 14 calendar days prior to transport of waste (both soil and aqueous) to designated facilities for final disposition.
   a. Contractor shall submit completed sample manifest(s) for final disposition of waste at designated facilities.

1.09 EQUIPMENT

   A. Contractor shall provide all equipment necessary to perform the work described in this Section.

1.10 PROJECT CONDITIONS

   A. Information in the geotechnical and environmental reports in Appendices XX do not constitute a guarantee of accuracy or uniformity of soil conditions within the project area. Information provided in Appendices XX is solely for pre-characterization of subsurface soils for bidding and health and safety considerations; Contractor shall comply with the requirements of this Section to lawfully characterize and dispose of identified soils at no additional cost to the City. [PROVIDE MORE DETAILED SUMMARY IF REPORTS NOT PROVIDED IN SPECIFICATIONS]

1.11 ENVIRONMENTAL REQUIREMENTS

   A. Underground Utilities: Not Used.

   B. Offsite Precautions: Equipment which has contacted waste shall not be allowed to pass outside the Exclusion Zone, over existing onsite access roads, offsite public roads, or other public and private property without decontamination and protection as approved by the Engineer in the Removal, Storage, Transportation and Disposal Work Plan. Any such roads or property which are damaged or contaminated with hazardous waste as a result of Contractor's operations shall be restored to original condition by the Contractor at Contractor’s own expense and at no additional cost to the City.

   C. Vapor and Odor Control: Vapor and odors shall be controlled by the Contractor in accordance the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan. Any damage caused by the vapor or odor nuisance is exclusively the responsibility of the Contractor and shall be immediately repaired by the Contractor at Contractor’s own expense and at no additional cost to the City.

   D. Dust and Noise Control: Dust and noise shall be controlled by the Contractor. Any damage caused by the dust or noise is exclusively the responsibility of the Contractor and shall be immediately repaired by the Contractor at Contractor’s own expense and at no additional cost to the City.
E. Stormwater Runoff Management: Stormwater shall be managed by the Contractor. Any damage caused by stormwater is exclusively the responsibility of the Contractor and shall be immediately repaired by the Contractor at Contractor’s own expense and at no additional cost to the City.

F. Temporary Drainage: All designated Stockpile Areas shall be kept free of standing water at all times by the Contractor. Residual water from the stockpile of excavated soils too wet for offsite disposal shall be removed, containerized, tested, and disposed or recycled as an aqueous waste at an appropriate offsite facility by the Contractor at the Contractor’s own expense and at no additional cost to the City. Designated facilities for final disposition of aqueous waste and waste profiles shall be approved by the City prior to disposal. Any damage caused by the temporary drainage is exclusively the responsibility of the Contractor and shall be immediately repaired by the Contractor at Contractor’s own expense and at no additional cost to the City.

1.12 PROTECTION

A. Air Quality: During the execution of the work, the Contractor shall adopt, implement and conform to the regulatory of the SCAQMD Rule 1166 Various Locations Permit and SCAQMD Rule 1166 Contaminated Soil Mitigation Plan. Mitigation measures stipulated by the SCAQMD Plan are exclusively the responsibility of the Contractor and shall be immediately implemented by the Contractor at Contractor’s own expense and at no additional cost to the City.

B. Standing Water Quality: During the execution of the work the Contractor shall adopt, implement and conform to all regulatory requirements (including the SWPPP). Water entering excavations shall be removed, containerized, tested, and disposed or recycled as an aqueous waste at an appropriate offsite facility by the Contractor at the Contractor’s own expense and at no additional cost to the City. Designated facilities for final disposition of aqueous waste and waste profiles shall be approved by the City prior to disposal. Any stormwater quality mitigation measure required due to the Contractor's work is exclusively the responsibility of the Contractor and shall be immediately implemented by the Contractor at Contractor’s own expense and at no additional cost to the City.

C. Worker Health and Safety: The Contractor shall implement health and safety monitoring for the Contractor’s workers and equipment. The level of protection shall be in accordance with the Contractor’s approved job-specific HASP and the type of PPE shall be adjusted (upgraded or downgraded) as necessary in order to complete the work, at Contractor’s own expense, and at no additional cost to the City.

D.
1.13 EXCAVATION SUPPORT SYSTEMS

A. If excavation support systems are necessary to protect workers and existing facilities during soil excavation and backfilling, the Contractor shall design, furnish, construct, maintain, and remove excavation support systems.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Plastic Sheeting: 10-mil thickness polyethylene sheeting to cover stockpiled material and line the bottom of the excavated soil Stockpile Areas.

B. Construction fencing shall be provided for definition of Exclusion Zones and Stockpile Areas. Fencing shall be temporary chain link or plastic safety, minimum 6-feet in height, and set on free-standing bases secured by sand bags or equal for stability and wind resistance. Fencing for Exclusion Zones shall also include the installation of wind screen on the entirety of the fence.

C. In accordance with the SWPPP, berms, dikes, and/or silt fence shall be placed around the Work Area and soil Stockpile Area to control stormwater runoff from the project area. Specific materials shall comply with the SWPPP requirements.

D. Storage containers for hazardous waste shall comply with 40 CFR Part 265.

E. Suppressants and Foams: Dust/vapor control watering and commercial suppressants and foams shall be provided to control VOC vapors, odors, and dust particulates. Specifications of commercial suppressants and foams shall be provided in the Removal, Storage, Transportation, and Disposal Work Plan.

2.02 EQUIPMENT

A. All trucks transporting soil or waste shall comply with 22 CCR Part 66263.16 regarding design and construction to contain soil and hazardous waste under conditions normally incident to transportation.

PART 3 - EXECUTION

3.01 REQUIREMENTS

A. Furnish
1. Contractor shall furnish all labor, materials, and equipment necessary to properly handle, manage, characterize, stockpile, load, transport, and dispose of excavated soils identified in this Section.

B. Tracking

1. Contractor shall submit completed manifests to the Engineer for signature by a City representative a minimum of three (3) calendar days before transport of non-hazardous and/or hazardous waste. Contractor is responsible to ensure that each manifest, from point of origin to the point of disposal, is filled out completely and accurately for complete tracking of non-hazardous and/or hazardous waste.

C. Exclusion Zones

1. As required by the Removal, Storage, Transportation and Disposal Work Plan, Exclusion Zones shall be established by the Contractor when excavating and stockpiling soil characterized as hazardous waste (or VOC-impacted soil per SCAQMD Rule 1166). Temporary construction fencing shall be located around the Exclusion Zones by the Contractor to restrict unauthorized persons from entering the areas.

2. Contractor shall provide engineering measures for odor, vapor, and dust control. Contractor shall spray the excavation surfaces and work area with water and/or an approved dust/odor suppressants to control odor, vapor, and dust. Contractor shall adhere to SCAQMD Rule 402 (odor and nuisance), Rule 403 (fugitive dust), and Rule 1166 (per SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan).

D. Personnel Training

1. When removing or managing designated waste or hazardous waste, Contractor’s personnel shall have documented 40 hours of initial training per 29 CFR Part 1910 (HAZWOPER) and current 8-hour annual HAZWOPER refresher training.

E. Personal Protective Equipment

1. Contractor’s workers shall wear and use appropriate PPE as specified in the Contractor’s job-specific HASP.

F. Caution Labels

1. Contractor shall affix labels to all waste containers (including drums and roll-off bins). Contractor shall provide label with sufficient print size to be clearly legible, with bold print on a contrasting background, displaying the
following:

CAUTION: CONTAINS (type of non-hazardous or hazardous waste)
DATE: _______________ SOURCE: ____________________________
Contractor Name: ______________________ Phone No.: _____________
USEPA ID No.: _________ (if applicable) ___________________________
California ID No.: ________(if applicable) __________________________

3.02 CHEMICAL HAZARDS
A. Not Used.

3.03 ACTIONABLE LEVELS
A. Contractor’s HASP shall establish Action Levels for VOCs identified as COPCs. Contractor shall perform air monitoring with a photo-ionization detector (PID) or similar equipment during excavation to ensure that Action Limits for VOCs are not exceeded. The Action Limits shall be based on current NIOSH standards, specific to the VOCs anticipated at the project site. The Contractor’s job-specific HASP shall include provisions for ‘Personal Sampling’ and appropriate PPE requirements to ensure that site personnel are not exposed to VOC-Impacted Soils that pose a significant human health risk.

B. Contractor’s HASP shall establish Action Levels for soils with reported concentrations of VOCs, PCBs, PAHs, pesticides and/or metals (metals concentration in excess of federal or state hazardous waste criteria). The Contractor’s job-specific HASP shall include a PPE requirement and dust monitoring plan to ensure that site personnel are not exposed to hazardous soils directly or through inhalation of dust at concentrations that pose a significant human health risk.

C. Contractor shall notify the Engineer when subsurface soils with a condition other than disclosed are encountered.

3.04 PERMITTING AND NOTIFICATIONS
A. Contractor shall provide all notifications to applicable regulatory agencies and other authorities and pay all required fees prior to excavation and removal of soil, including but not limited to SCAQMD, Cal/OSHA and Underground Service Alert.

B. Contractor shall provide a SCAQMD Rule 1166 Various Locations Permit to initiate work at the project site. Contractor shall comply with the requirements of the SCAQMD Rule 1166 Various Locations Permit and/or
Contaminated Soil Mitigation Plan for the project.

D. Contractor shall provide all notifications and reports in accordance with the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan

3.05 DEMOLITION, CLEARING AND GRUBBING

A. Not Used.

3.06 EXCAVATION

A. Contractor shall perform excavation of VOC-impacted soil in accordance with the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan including limiting the size of the excavation work face and quantity of VOC-impacted stockpiles required for staging of the loading operation. If air monitoring results indicate VOC emissions greater than the regulatory threshold stipulated in the Plan, mitigation measures for VOC emissions shall be immediately employed by the Contractor in accordance with the Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan conditions in order to continue the soil excavation activities.

B. Contractor shall construct and maintain Exclusion Zones when excavating soils characterized as hazardous waste (or VOC-impacted soil per SCAQMD Rule 1166) in accordance with the Removal, Storage, Transportation and Disposal Work Plan, Exclusion Zones shall be offset from the excavation limits a minimum of 10 feet on all sides and shall consist of temporary fencing with a decontamination station established at each egress point.

3.07 SOIL MANAGEMENT

A. Contractor shall manage excavated soil in a safe manner in accordance with federal, state, and local requirements.

B. Contractor shall not mix or comingle soils of different waste classifications during excavation.

C. In accordance with this Section, the Contractor shall characterize excavated soil identified in this Section for disposition.

D. The Contractor shall not contaminate (i.e., spill or spread soil or waste onto) haul routes during performance of the work.

3.08 STOCKPILE CONSTRUCTION
A. Contractor shall establish separate stockpiles for each type of waste classification. Soil with different classifications shall be segregated by the Contractor without mixing or comingling with adjacent stockpiles.

B. Contractor shall construct stockpile(s) on a level surface that is geotechnically and structurally competent. All stockpile locations shall be approved by the Engineer. Each completed stockpile shall be finished to a uniform shape and the top shall be sloped at a minimum grade of two (2%) percent to provide drainage.

C. Contractor shall remove residual water from the stockpile of excavated soils. No residual water shall be allowed to drain onto the ground. Contractor shall manage, store, test, and dispose of any accumulated water in compliance with all federal, state, and local regulations and requirements. Disposal facilities and waste profiles shall be approved by the City prior to disposal.

D. The 10-mil plastic sheeting shall be placed by the Contractor on the prepared subgrade with minimum 18” overlap of individual sheets. Any damage to the liner shall be repaired promptly by the Contractor. The damaged area shall not be covered before the repair is inspected and approved by the Engineer.

E. The Contractor shall conduct SCAQMD Rule 1166 air monitoring at the stockpiles. The Contractor shall maintain the stockpiles and provide mitigation measures in accordance with the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan, and as directed by the Engineer based on the air monitoring results.

F. Excavated VOC-impacted soils shall be segregated and stockpiled separately from all other materials by the Contractor. The total quantity of stockpiled VOC-impacted soil shall not exceed the limit stipulated by the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan/. Soils with VOC concentration greater than 1,000 ppmv shall be segregated from other VOC-impacted soils, immediately placed and sealed within DOT-approved containers, and disposed at a licensed offsite disposal facility by the Contractor per direction from the Engineer, in accordance with the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan. Soil stockpiles for classifications other than VOC-impacted soil shall not exceed 2,000 cubic yards each. Stockpiles shall be clearly demarcated, tracked, and labeled by the Contractor to correspond with representative samples submitted for laboratory testing for soil characterization purposes as presented in this Section.

G. Stormwater shall be managed in accordance with the SWPPP by the Contractor. The Stockpile Area shall be surrounded by a secondary containment perimeter barrier (i.e., berm or dike) approved by the Engineer to preclude storm water runoff from the stockpile to surrounding areas of the project site.

3.09 SOIL CHARACTERIZATION FOR DISPOSITION
A. Contractor shall characterize the soil to determine disposition.

B. Under the supervision of the Contractor’s Licensed Environmental Professional, the Contractor shall collect soil samples from stockpiled soils in accordance with the frequency provided in the table below. These sampling frequencies shall apply to the total soil volume for each of the preliminary waste classifications. Total stockpiled soil volume may include multiple individual stockpiles.

<table>
<thead>
<tr>
<th>Tier</th>
<th>Total Volume per Waste Classification (cy)</th>
<th>Number of Primary Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0 – 500</td>
<td>3 samples</td>
</tr>
<tr>
<td>II</td>
<td>501 – 10,000</td>
<td>3 samples for the first 500 cy and 1 sample per 500 cy thereafter</td>
</tr>
<tr>
<td>III</td>
<td>&gt;10,001</td>
<td>3 samples for the first 500 cy, 1 sample per 500 cy for next 9,500 cy, and 1 sample per 1,000 cy thereafter.</td>
</tr>
</tbody>
</table>

C. Each soil sample submitted for testing shall be collected by the Contractor at approximately 3 feet below the surface of stockpile or at the mid-point of stockpile height, whichever is less. Each sample shall be collected at a randomly selected point on the stockpile surface. For VOC analysis (USEPA Method 8260B), the soil sample collected shall be sub-sampled in the field in accordance with USEPA Method 5035 and submitted separately for VOC analysis.

D. For quality control purposes, duplicate soil samples shall be collected and analyzed by the Contractor at a frequency of 10% of the number of primary samples. Duplicate soil samples shall be represented by collection of an additional sample immediately below the primary sample and analyzed by the same USEPA methods conducted for the primary samples; for VOC analysis, a subsample of the soil immediately below the sample shall be collected in accordance with USEPA Method 5035 and analyzed. The number of duplicate soil samples shall be rounded up to the next whole number; a minimum of one duplicate is required. For VOC analysis, trip blanks shall be analyzed for each sampling event.

E. Contractor’s soil sampling and handling procedures shall be in accordance with USEPA’s “Test Methods for Evaluating Solid Waste - Physical/Chemical Methods” (SW-846; Revision 6). Soil samples shall be transferred to laboratory-quality sample containers and preserved by the Contractor in accordance with SW-846. Each soil sample shall be recorded and transported using an approved chain-of-custody form.

F. Contractor shall request laboratory turn-around time sufficient to meet its
contractual schedule; however the maximum turn-around time shall be seven (7) calendar days. If required, Contractor shall expedite laboratory analysis at no cost to City.

G. Laboratory analysis of each soil sample shall be performed by the Contractor’s Independent Testing Laboratory in accordance with table below:

<table>
<thead>
<tr>
<th>Analysis Type</th>
<th>Method Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Petroleum Hydrocarbons (TPH) as carbon chain</td>
<td>USEPA Method 8015M</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOCs)</td>
<td>USEPA Method 8260B/5035</td>
</tr>
<tr>
<td>Polychlorinated Biphenyls (PCBs)</td>
<td>USEPA Method 8082</td>
</tr>
<tr>
<td>Polycyclic Aromatic Hydrocarbons (PAHs)</td>
<td>USEPA Method 8310</td>
</tr>
<tr>
<td>Organochlorine Pesticides</td>
<td>USEPA Method 8081A</td>
</tr>
<tr>
<td>California Code of Regulations, Title 22 Metals (17 metals)</td>
<td>USEPA Method 6010B/7470A</td>
</tr>
</tbody>
</table>

Note: If reported Total Threshold Limit Concentrations (TTLC) for an analyte exceeds 10 times the regulatory maximum for the enforceable California Soluble Threshold Limit Concentration (STLC) and/or 20 times the regulatory maximum for the enforceable Federal soluble concentration per Toxicity Characteristic Leaching Procedure (TCLP), the appropriate leachability test(s) shall be conducted.

H. Contractor’s Licensed Environmental Professional shall review the environmental testing laboratory reports and prepare a summary report including recommendations for soil classification and disposition for review and approval by the Engineer prior to transport of any soils. The report shall include soil sampling procedures, a scaled map of sample locations, summary tables of analytical results, certified laboratory reports, and chain-of-custody documentation. Contractor shall utilize applicable State of California regulations (CCR Title 22) to classify the soil.

3.10 SOIL DISPOSITION

A. The preliminary disposal waste designations for excavated soils, per the Contact Drawings, to be disposed of at approved offsite disposal facilities by the Contractor are as follows:

1. Excavation area 1: Unrestricted Export Soil

2. Excavation Area 2: Reusable Soil for placement at a designated stockpile location within the Harbor District

3. Excavation Area 3: Reusable Soil for placement and compaction at a designated location within the Harbor District
4. Excavation Area 4: Non-Hazardous Waste
5. Excavation Area 5: Designated Waste
6. Excavation Area 6: Non-RCRA Hazardous Waste
7. Excavation Area 7: RCRA-Hazardous Waste
8. Excavation Area 8: TSCA-Hazardous Waste

B. Contractor shall identify facilities or sites from the list shown in Paragraph 3.11 for final disposition of all soils identified in this Section. The Engineer shall have approval authority for the final disposition of soils. As part of the approval process, the Contractor shall submit completed sample manifests and waste profile applications from the disposal/recycling facility for review and approval by the Engineer.

C. Contractor shall submit current licenses, certifications, and contact information for any facilities proposed for recycling or disposal of soil classified as Non-Hazardous Waste, Designated Waste, non-RCRA (California-hazardous) Waste or VOC-Impacted Soil. The proposed facilities shall be fully licensed and permitted at the time of use and not subject to regulatory investigation or undergoing review for renewal of its license. Contractor shall not propose any disposal facilities located outside the contiguous United States. Should the proposed facilities be found to be unacceptable to the City in its exclusive discretion, an alternate facility or facilities shall be substituted at no additional cost to the City.

D. The City shall obtain California Hazardous Waste ID Numbers from the California Department of Toxic Substances Control and provide the ID Numbers to the Contractor for use by the Contractor for lawful waste management when transporting and disposing of non-RCRA California-hazardous waste. California ID Numbers are not needed for disposal of non-hazardous waste. Contractor shall comply with Cal/EPA requirements of hazardous waste generation, temporary onsite storage, transportation, and disposal.

E. The City shall obtain USEPA ID numbers and provide the ID Numbers to the Contractor for use by the Contractor for lawful waste management when transporting and disposing of RCRA or TSCA hazardous waste. USEPA ID Numbers are not needed for disposal of non-hazardous or non-RCRA (California-hazardous) waste. Contractor shall comply with USEPA requirements of hazardous waste generation, temporary onsite storage, transportation, and disposal.

F. Contractor shall submit manifests for the designated facilities for final disposition (completely filled out except for signatures and hauler truck license numbers) to the
Engineer a minimum of three (3) calendar days prior to transporting non-hazardous waste, hazardous waste or VOC-Impacted Soil. Sufficient numbers of the manifests shall be provided by the Contractor for the transport of all soils to the offsite facility(ies). The Engineer will obtain the authorized signatures of the City representative on the manifests provided and will retain all copies of the manifests until the Contractor is authorized to dispose of the soils. Signed manifests shall be provided to the Contractor for each load prior to the load being transported offsite. The City will not be responsible for additional costs incurred by the Contractor should the Contractor fail to provide sufficient manifest forms for all soils to be transported and disposed of offsite.

F. All Hazardous Waste shall be properly managed, manifested and transported by a hazardous waste hauler registered by the Cal/EPA Department of Toxic Substances Control to a proper waste management facility.

G. After approval of a waste profile by the Contractor’s recycling or disposal facility, random sampling of the waste stream by the facility upon delivery may indicate that the waste exceeds approved profile criteria. Contractor shall immediately notify the Engineer if the facility will not accept any waste that was previously approved for acceptance.

3.11 DISPOSAL FACILITIES

A. Contractor shall transport and dispose of all waste (both soil and aqueous) to designated and approved licensed facilities for final disposition.

B. Contractor shall submit waste profile applications for one or more licensed facilities that accept soil characterized as Non-Hazardous or Designated Waste for review and approval by the Engineer. Should the proposed facility or facilities be found to be unacceptable to the City in its exclusive discretion, an alternate facility or facilities shall be submitted by the Contractor for approval as a substitute at no additional cost to the City.

The following table presents approved facilities for lawful recycling and/or disposal of soil characterized as Non-Hazardous or Designated Waste.

<table>
<thead>
<tr>
<th>Approved Landfills and Recycling Facilities for Soil Characterized as Non-Hazardous or Designated Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Remediation Solutions</td>
</tr>
<tr>
<td>1211 W. Gladstone Street</td>
</tr>
<tr>
<td>Azusa, California 91702</td>
</tr>
<tr>
<td>Phone: (626) 815-0233</td>
</tr>
</tbody>
</table>
C. Contractor shall submit waste profile applications for one or more licensed facilities that accept soil characterized as Non-RCRA California Hazardous Waste for review and approval by the Engineer. Should the proposed facility or facilities be found to be unacceptable to the City in its exclusive discretion, an alternate facility or facilities shall be submitted by the Contractor for approval as a substitute at no additional cost to the City.
The following table presents approved facilities for lawful recycling and/or disposal of soil characterized as Non-RCRA California Hazardous Waste.

### Approved Landfills and Recycling Facilities for Soil Characterized as Non-RCRA California Hazardous Waste

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Waste Management</td>
<td>35251 Old Skyline Road</td>
<td>(559) 386-9711</td>
</tr>
<tr>
<td></td>
<td>Kettleman, California 93239</td>
<td></td>
</tr>
<tr>
<td>Butterfield Station Landfill</td>
<td>40404 South 99th Avenue</td>
<td>(602) 437-3165</td>
</tr>
<tr>
<td></td>
<td>Mobile, Arizona 85239</td>
<td></td>
</tr>
<tr>
<td>Clean Harbors Buttonwillow</td>
<td>P.O. Box 787</td>
<td>(661) 762-6200</td>
</tr>
<tr>
<td></td>
<td>2500 West Lokern Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Buttonwillow, California 93206</td>
<td></td>
</tr>
<tr>
<td>U.S.Ecology—Beatty Facility</td>
<td>P.O. Box 578</td>
<td>(775) 553-2203</td>
</tr>
<tr>
<td></td>
<td>Beatty, Nevada 89003</td>
<td></td>
</tr>
</tbody>
</table>

D. Contractor shall submit waste profile applications for one or more licensed facilities that accept soil characterized as RCRA- or TSCA-Hazardous Waste for review and approval by the Engineer. Should the proposed facility or facilities be found to be unacceptable to the City in its exclusive discretion, an alternate facility or facilities shall be submitted by the Contractor for approval as a substitute at no additional cost to the City.

The following table presents approved facilities for lawful recycling and/or disposal of soil characterized as RCRA- or TSCA-Hazardous Waste.

### Approved Landfills and Recycling Facilities for Soil Characterized as RCRA- or TSCA-Hazardous Waste

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Waste Management</td>
<td>35251 Old Skyline Road</td>
<td>(559) 386-9711</td>
</tr>
<tr>
<td></td>
<td>Kettleman, California 93239</td>
<td></td>
</tr>
<tr>
<td>Chemical Waste Management</td>
<td>17629 Cedar Springs Lane</td>
<td>(541) 454-2030</td>
</tr>
<tr>
<td></td>
<td>Arlington, Oregon 97812</td>
<td></td>
</tr>
<tr>
<td>Clean Harbors Aragonite Facility</td>
<td>P.O. Box 1339</td>
<td>(435) 884-8100</td>
</tr>
<tr>
<td></td>
<td>Grantsville, Utah 84029</td>
<td></td>
</tr>
<tr>
<td>U.S.Ecology—Beatty Facility</td>
<td>P.O. Box 578</td>
<td>(775) 553-2203</td>
</tr>
<tr>
<td></td>
<td>Beatty, Nevada 89003</td>
<td></td>
</tr>
</tbody>
</table>
E. Contractor shall submit waste profile applications for one or more licensed facilities that accept aqueous waste (water) characterized as non-hazardous or hazardous waste for review and approval by the Engineer. Should the proposed facility or facilities be found to be unacceptable to the City in its exclusive discretion, an alternate facility or facilities shall be submitted for approval as a substitute by the Contractor at no additional cost to the City.

The following table presents approved facilities for lawful recycling and/or disposal of aqueous waste (water) characterized as non-hazardous or hazardous aqueous waste.

**Approved Recycling/Disposal Facilities for Aqueous Waste Characterized as Non-Hazardous or Hazardous Waste**

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crosby &amp; Overton, Inc.</td>
<td>1630 W 16th Street</td>
<td>(562) 432-5445</td>
</tr>
<tr>
<td>DeMenno-Kerdoon</td>
<td>2000 N Alameda</td>
<td>(310) 537-7100</td>
</tr>
<tr>
<td>Siemens Water Technologies</td>
<td>5375 Boyle Ave</td>
<td>(323) 277-1500</td>
</tr>
<tr>
<td>Clean Harbors, Wilmington</td>
<td>1737 East Danni Street</td>
<td>(310) 835-9998</td>
</tr>
<tr>
<td>Lakeland Processing Company</td>
<td>12345 Lakeland Road</td>
<td>(562) 944-6111</td>
</tr>
</tbody>
</table>

[Note: Non-Hazardous waste only]

F. The City reserves the exclusive right to reject any of the approved facilities listed in Paragraph 3.11 as a disposal facility for any reason at its sole discretion.

**3.12 TRUCK LOADING AND HAULING**

A. While soils are being loaded into the trucks at a loadout area, the Contractor shall
perform vapor, odor, and dust suppression in accordance with the SCAQMD Rule 1166 Various Locations Permit and/or Contaminated Soil Mitigation Plan. After the soil is loaded into the transport trucks, the soil shall be covered and otherwise contained to prevent material from blowing or spilling out of the truck during transport to the designated facility for final disposition.

B. All vehicles shall be decontaminated by the Contractor prior to leaving the loadout areas. For track-out prevention and control, all truck exteriors shall be broom cleaned after loading. The dump truck or roll-off bin portion of the truck shall then be covered with a tarp to prevent soil and/or dust from spilling out of the truck during transport to the designated facility for final disposition.

C. Prior to leaving the loadout areas, each truck shall be inspected by the Contractor to ensure that the payloads are adequately covered, the trucks are cleaned of spilled material, and the shipment is properly manifested or documented. Proper hazardous waste placarding shall be required for transportation of hazardous waste.

3.13 RECORDS AND REPORTS

A. Contractor shall keep records of documents generated in the course of the work. These include field notes, laboratory reports, air monitoring data, chain-of-custody forms, daily soil volumes and weights, waste manifests, and reports of any spills or accidents. Copies of all records shall be organized by date and submitted to the Engineer at the completion of the work in both hardcopy and electronic format (PDF). All work, including but not limited to excavation and disposal, shall be performed within the schedule indicated and no additional time will be allowed.

B. Contractor shall maintain a field logbook during soil removal activities. The field logbook shall serve to document observations, onsite personnel, equipment arrival and departure times, and other vital project information. Logbook entries shall be complete and accurate enough to permit reconstruction of field activities. Logbooks shall be bound with consecutively numbered pages. Each page shall be dated and the time of entry noted. All entries shall be legible, written in black ink, and signed by the individual making the entries. Language shall be factual, objective, and free of personal opinions. If an error is made, corrections shall be made by crossing a single line through the error and entering the correct information. Corrections shall be dated and initialed.

C. Contractor shall track on Non-Hazardous Waste Manifests the movement, from point of generation to the designated location for final disposition, of soil classified as Non-Hazardous Waste, Designated Waste or VOC-Impacted Soil with VOC vapor concentrations less than 1,000 ppmv.

D. Contractor shall track on Hazardous Waste Manifests the movement, from point of generation to the designated location for final disposition, of soil classified as Non-
RCRA (California-Hazardous) Waste, RCRA Hazardous Waste, TSCA-Hazardous Waste, or VOC-Impacted Soil with VOC vapor concentrations greater than 1,000 ppmv.

E. A minimum of three (3) calendar days before transport, the Contractor shall submit completed manifests for the Engineer for signature by a City representative. The Contractor shall maintain one copy of the waste manifest onsite.

F. Before offloading its payload, the truck shall be weighed by the facility operator. Contractor shall provide weight tickets or bills of laden to the Engineer after the soils have been shipped offsite.

END OF SECTION