

SECTION 013543

ENVIRONMENTAL PROTECTION PROCEDURES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 – GENERAL REQUIREMENTS that are hereby made a part of this Section of the Specifications.

1.2 SUMMARY

- A. Furnishing all labor, materials, and equipment and perform all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operation under this Contract. For the purpose of this Section, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.
- B. The control of environmental pollution requires consideration of air, water, and land, and involves management of runoff, dust, noise, and solid waste, as well as other pollutants. Work shall include installing, maintaining, and removing sedimentation and erosion control components within the Limits of Work.

1.3 SECTION INCLUDES

- A. Applicable Regulations.
- B. Notifications
- C. Protection of Groundwater
- D. Protection of Streams And Wetlands
- E. Protection of Land Resources
- F. Protection of Air Quality
- G. Maintenance of Pollution Control Facilities During Construction
- H. Noise Control
- I. Diesel Equipment Emission Controls
- J. Spill And Discharge Control

1.4 RELATED SECTIONS

- A. Section 015000 - TEMPORARY FACILITIES AND CONTROLS:
- B. Section 024100 - DEMOLITION:
- C. Section 312000 - EARTH MOVING:

1.5 APPLICABLE REGULATIONS

- A. The General Contractor shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.
- B. Fines and related costs resulting from failure to provide adequate protection against any environmentally objectionable acts and corrective action to be taken are the obligations of the General Contractor.

PART 2 - PRODUCTS

2.1 WATER

- A. Water used for dust control and equipment washes shall be clean and free of salt, oil, and other injurious materials. The General Contractor shall provide all necessary water.

2.2 ONSITE SPILL KIT

- A. The General Contractor shall provide the following minimum equipment to be kept onsite at all times during site work activities for any unexpected spills or discharges:
  - 1. Sand, clean fill and absorbent pillows,
  - 2. Four drums (55 gallon, U.S. DOT 17-E or 17-H),
  - 3. Shovels, and
  - 4. Steam cleaner for decontamination of tools and equipment.

PART 3 - EXECUTION

3.1 PROTECTION OF GROUNDWATER

- A. Care shall be taken to prevent, or reduce to a minimum, any discharges to the ground of liquids that may infiltrate to the underlying groundwater or enter on-site waterways. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the groundwater or waterway shall not be discharged from the Site. Such waters shall be collected and disposed of by the General Contractor in accordance with all applicable Federal, State and local regulations.

### 3.2 PROTECTION OF STREAMS AND WETLANDS

- A. Care shall be taken to prevent, or reduce to a minimum, any damage to any wetland from pollution by debris, sediment, or other material. Manipulation of equipment and/or materials in delineated wetland areas is prohibited. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the water in downstream waters of the State, shall not be discharged from the Site. Such waters shall be collected and disposed of by the General Contractor in accordance with all applicable Federal, State and local regulations.

### 3.3 PROTECTION OF AIR QUALITY

- A. Burning – The use of burning at the project site for the disposal of refuse and debris will not be permitted.
- B. Dust Control – Maintain all demolition excavations, stockpiles, waste areas, and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded (MADEP 310 CMR 7.09.-7.10) and which would cause a hazard or nuisance to others.
- C. The General Contractor shall provide adequate means for the purpose of preventing dust and odor caused by construction operations throughout the period of the construction contract. If the Owner or the Designer indicates that the level of dust or odors is unacceptable, the General Contractor shall employ measures necessary to reduce dust or odors to an acceptable level.
- D. The General Contractor shall implement engineering controls (e.g. watering, misting) to control dust whenever required by the Designer or the Owner.

### 3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION

- A. During the life of this Contract, maintain all facilities constructed for pollution, erosion, and sedimentation control as long as the operations creating the particular pollutant area being carried out.

### 3.5 NOISE CONTROL

- A. The General Contractor shall develop and maintain a noise-abatement program and enforce strict discipline over all personnel to keep noise to a minimum. Local noise ordinances shall govern.
- B. The General Contractor shall execute construction work by methods and by use of equipment which will reduce excess noise.
- C. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with Federal and State regulations.
- D. The General Contractor shall manage vehicular traffic and scheduling to reduce noise.

### 3.6 DIESEL EQUIPMENT EMISSION CONTROLS

- A. All motor vehicles and construction equipment shall comply with all pertinent local, state, and federal regulations covering exhaust emission controls and safety.

- B. All General Contractor and Subcontractor diesel-powered non-road construction equipment with engine horsepower (HP) ratings of 50HP and above, which are used on the Project Site for a period in excess of 30 calendar days over the course of the construction period on the Project Site, shall be retrofitted with Emission Control Devices in order to reduce diesel emissions.
- C. The reduction of emissions of volatile organic compounds (VOCs); carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment shall be accomplished by installing Retrofit Emission Control Devices.
- D. Acceptable Retrofit Emission Control Devices for the Project shall consist of oxidation catalysts or other comparable technologies that are (1) included on the US Environmental Protection Agency (EPA) *Verified Retrofit Technology List* and/or the California Air Resources Board *Currently Verified Technologies List*; and (2) are verified by EPA or CARB, to provide a minimum emissions reduction of 50 percent for VOCs, 40 percent for CO and 20 percent for PM. Attainment of the required reduction in PM emissions can also be accomplished by using less polluting Clean Fuels. Verified technologies can be identified on the following websites:

EPA: <http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm>

CARB: <http://www.arb.ca.gov/diesel/verdev/verifiedtechnologies/cvt.htm>

- E. The emission control equipment can be procured through the Statewide Contract #VEH71 that has fixed costs associated with retrofitting of diesel emission control devices. The following are the vendors listed on the State-wide Contract:
  - 1) Cummins Northeast, Inc.  
Contact: Scot Lengel  
Telephone Number: 781-329-1750  
E-Mail Address: Scot.L.Lengel@cummins.com
  - 2) Patriot International Trucks, LLC/Anderson International Trucks of Boston  
Contact: John Anderson, Jr.  
Telephone Number: 800-277-4777  
E-Mail Address: john@andersonmotors.com
  - 3) Clean Diesel Technologies, Inc.  
Contact: Glen Reid  
Telephone Number: 203-327-7050  
E-Mail Address: greid@cdti.com
- F. Construction shall not proceed until the General Contractor has submitted a certified list of the non-road diesel-powered construction equipment subject to this specification which either are or will be retrofitted with emission control devices. The list shall include (1) the equipment number, type, make, and General Contractor/Subcontractor name; and the emission control device make, model, and EPA verification number. General Contractors shall also submit a receipt or other documentation from a manufacturer or installer that verifies that appropriate equipment has been installed. The General Contractor shall also identify any vehicles that will use Clean Fuels. Equipment that has been retrofitted with an emission control device shall be stenciled or otherwise clearly marked as "Low Emission Equipment".

- G. The General Contractor shall submit monthly reports, updating the same information stated in Paragraph F above, including the quantity of Clean Fuel utilized. The addition or deletion of non-road diesel equipment shall be indicated in the report.
- H. The General Contractor shall use methods to control nuisance odors associated with diesel emissions from construction equipment including but not limited to the following: (1) turning off diesel combustion engines on construction equipment not in active use and on trucks that are idling for five minutes or more; and (2) locating diesel equipment away from the general public and sensitive receptors.
- I. All costs associated with implementation of the diesel equipment emissions control shall be borne by the respective General Contractor or Subcontractor and included in their cost for performing the work of the Contract.

### 3.7 SPILL AND DISCHARGE CONTROL

- A. The General Contractor shall provide equipment and personnel to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage. The collected spill material shall be properly disposed of at the General Contractor's expense.
- B. Costs to provide the above spill and discharge control materials shall be included in the contract base bid price.

END OF SECTION