

### **1. Description.**

The work conducted under this specification will consist of the prevention and/or mitigation of impacts from pollution, during construction. This specification sets forth the requirement for sediment and erosion control during the project. The work will prevent or minimize the production of sediment and other pollutants to the water and air during construction operations.

### **2. Materials**

All materials furnished shall meet the requirements as set forth in each of the following subsections. All materials and/or supplies furnished for the purpose of pollution control shall be of new or good condition.

### **3. Sediment & Erosion Control Measures**

Control of sediment production, and its introduction to the water course shall be prevented or minimized during all operations to complete the work under this contract. The following items set forth some, but not necessarily all, techniques which may be required under this contract.

#### **3.1 Project Staging**

- a. Soil disturbance during construction will be staged to minimize the area of disturbance at any given point in the construction process.
- b. Requirements for staging of work is set forth in Section 11: Special Conditions, of this specification.

#### **3.2 Temporary Mulching**

- a. Temporary mulching may be required when permanent vegetated stabilization of the disturbed areas will be delayed. Temporary mulching will be required when stockpiles of topsoil and fill will not be used for an extended period of time. Temporary mulch will be required as shown on the Project Drawings, Specifications, Construction Notes and Section: 11 Special Conditions of this specification.
- b. Temporary Mulching will be accomplished by the application of cellulose hydro-mulch, chopped straw/hay, tackifiers, burlap, cellulose mat or another acceptable erosion control material. Specific requirements for this project are set forth in Section 11: Special Conditions, to this specification.

- c. Materials such as cellulose mats, burlap and other products manufactured for erosion control, shall be installed in accordance with the manufacturers specifications and instructions. The Contractor shall provide the Contracting Officer copies of installation instructions and shop drawings as provided by the products manufacturer.
- d. Temporary mulch provided by cellulose hydro-mulch and hay/straw will be completed as set forth in construction specification **VS-05** Seeding & Mulching

### **3.3 Diversions**

- a. During construction, temporary diversions (de-watering) may be required to minimize the flow of runoff through the work site. Diversions shall be constructed as shown on the Project Drawings and as set forth in construction specification **CS-04** De-watering.
- b. Diversions to collect and divert stream and/or drainageway flow around the work area are temporary unless other wise noted in these specifications. All diversions will be regraded, seeded and mulched upon completion of the project. Diversions which are to become permanent features of the project, will be stabilized as set forth in construction specification **VS-05** Seeding and Mulching.

### **3.4 In-Channel Sediment Control**

- a. Sediment produced within the stream channel during construction will be retained in the work area, Sediment retention will be accomplished by using a temporary, excavated sediment trap and/or a barrier constructed of geotextile and hay bales.
- b. Turbid water in the retention area shall be pumped to a well vegetated area away from the immediate creek. The vegetation will serve to filter the sediments before the flow return to the creek.
- c. Discharge areas from all pump hoses shall be stabilized. At no time shall the pump discharge be allowed to cause erosion at the discharge point. The Contractor shall use rock, geotextile, a concrete energy dispersion device or another suitable method to protect the pump discharge point. Stabilization of hose discharge areas shall be completed as set forth in the Contractors approved de-watering plan as set forth in construction specification **CS-04** De-watering.
- d. If there is inadequate filter areas in the project area, the Contractor shall

construct a geotextile and hay bale sediment basin, or will use a suitable sediment trap product (i.e. Dirt-Bag) to allow for filtration of the sediment laden water.

- e. Changes to the Contractors sediment control measures can be required by the Contracting Officer upon observation of inadequate filtration of the sediments or upon request of applicable regulating agencies.

#### **4. Equipment Fuels & Lubricants**

The Contractor shall take all necessary precautions to prevent the spill of chemical pollutants. Chemical pollutants may include, but are not limited to, fuel, oil, grease, hydraulic fluid.

##### **4.1 Equipment Leaks**

- a. All equipment used on the project shall be free of leaks and excessive deposits of materials such as fuel, hydraulic fluid, oil and other lubricants.
- b. At the start of each workday, the Contractor shall perform a visual inspection of each piece of equipment to check for leaks. During equipment operations, the Contractor shall watch for leaks which may develop.
- c. In the event a piece of equipment develops a leak during the construction work, the Contractor shall immediately remove the machine from the stream channel area and shall repair the leak. All excess fluids will be cleaned from the machine prior to its return to the work area. Any spillage of fluids during repairs shall be cleaned up, with contaminated soil removed from the project area and disposed of in an approved location for the type of materials.

##### **4.2 Equipment Fueling**

- a. The Contractor shall provide for safe fueling of all equipment within the work area. Contractor must be aware that the work is being performed in the new York City Watershed area.
- b. Under no circumstances shall equipment be fueled within the stream channel area.
- c. The Contractor shall carefully fuel all equipment with special attention not to overflow the tank and create spillage. All fuel tanks shall have tight, leak proof caps.
- d. All equipment re-fueling must be completed under the observation of the person conducting the fueling operations. At no time, will fueling be conducted using automatic shut-offs on the pump, and with out an observer

present.

#### **4.3 Fuel Storage**

- a. All fuel stored on site must be in a suitable container. Fuel storage in containers greater than five (5) gallons shall be in containment tank which meets or exceeds NFPA Standards or other applicable local, state and federal regulations.
- b. Pumps on fuel storage units must be in good working order and free of leaks, Hose and nozzles must also be free of leaks. The Contractor shall remove leaking fueling equipment from the work site upon direction of the Contracting Officer.
- c. Any fuel storage container used on site which has a capacity of greater than five (5) gallons, must be constructed of a double wall design, or must have a suitable containment structure as part of the tank. Tanks should meet NFPA standards.

#### **4.4 Equipment Service & Repair**

- a. In the event that the Contractor must service or repair equipment during construction, appropriate measures will be taken to prevent contamination of the soil and/or water during the service/repair operations.
- b. Under no circumstances will equipment be serviced in the stream channel area. All equipment must be removed from the channel to the flood plain area for servicing.
- c. All waste lubricants and other chemicals will be disposed of in sealed, water tight tanks. No more than five (5) gallons of waste lubricants will be retained on site. All waste fluids, filters, parts and other items related to machinery service and repair shall be removed from the work area and disposed of in an appropriate manner.

### **5. Sanitary Facilities**

The Contractor shall be required to provide adequate sanitary facilities for their work force as well as for use by the Project Observers. Chemical toilets shall be provided in a quantity that is consistent with the requirements of state and/or federal regulations. Chemical toilets will be placed no closer than one hundred (100) feet from the stream edge. The Contractor will provide for routine maintenance and cleaning of the sanitary facilities.

## **6. Other Chemicals**

In the event the work requires the use of other chemicals (i.e. herbicides), the Contractor will use the chemicals in a manner that is consistent with the chemicals labeled use and the manufacturers instructions.

## **7. Air Pollution**

### **7.1 Debris Burning**

The burning of trash, brush or other debris shall be done in accordance with local, state and federal regulations. Fire prevention measures shall be taken to prevent the start or spread of wildfires. The Contractor shall have available adequate equipment to control the fire, and fire breaks or guards may be required. All fire will be extinguished or buried when the Contractors forces leave the work site for the evening. Under no circumstances shall garbage, plastics, cloths, geo-textiles or fluid soaked rags be burned. Burning is limited to woody and brush debris only.

### **7.2 Dust Control**

The Contractor shall be responsible for the control of excessive dust on both public roads and project access roads, Contractors shall be prepared, at the request of the Contracting Officer, to suppress dust. If chemical dust suppressants are used, the Contractor shall use a commercially available product specifically designed for dust control and shall follow the manufacturers recommended rates and methods of application. The Contractor shall obtain a copy of the Material Safety Data Sheet and present it to the Project Engineer for approval five (5) days prior to its use.

### **7.3 Equipment Emissions**

The Contractor shall be responsible to insure that all equipment has proper and functioning emissions control systems. All equipment will have mufflers and will be free of excessive smoke emissions. In the event a Contractors equipment is emitting excessive smoke, the equipment will be removed from the work area and repaired or a substitute piece of equipment will be brought to the project site. The Contractor will be solely responsible for the mobilization and demobilization costs associated with replacement of any equipment which is pulled from service.

## **8. Maintenance, Removal and Restoration.**

The Contractor shall maintain all pollution control measures in good operating form until such time that the measures are no longer needed. Upon completion of the work, the Contractor shall remove any temporary pollution control measures installed during construction and shall restore the site to original conditions as reasonably practical.

## **10. Measurement and Method of Payment**

### **10.1 Method 1 -Unit Prices**

For items of work, for which unit prices are established in the contract, each item will be measured to the nearest unit applicable. Payment for each item will be made at the contract unit price for that item. Payment for chemical dust suppression items shall not be made for applications that are excessive and unnecessary. Such payment shall constitute full compensation for the completion of the work.

### **10.2 Method 2 - Lump Sum**

For items of work, for which lump sum prices are established in the contract, payment will be made as the work proceeds, after presentation of adequate invoice documentation showing the Contractors costs. If the total of such payments is less than the lump sum contract price for this item, the unpaid balance will be included in the final contract payment. Payment of the lump sum contract price shall constitute full compensation for completion of the work.

### **10.3 Method 3 - Incidental Costs**

For items of work where a specific bid price is not requested, the costs shall be considered subsidiary to the total items of work and no payment shall be made separate and distinct for pollution control. Pollution control costs will be included in the costs of the other work items.

## **Section 11. Special Conditions**

- 11.1** The crossing of live streams with equipment is prohibited
- 11.2** The Contractor shall provide for stabilized construction entrances, which must be maintained so as to prevent tracking or flowing of sediments onto public roadways. All sediment spilled, dropped, washed or tracked onto public roadways shall be removed immediately.
- 11.3** The project site is located in the New York City Schoharie Reservoir watershed. All sediment and erosion controls as well as other pollution control activities are subject to inspection by New York City Department of Environmental Protection (NYCDEP) personnel.
- 11.4** No separate payment shall be made for pollution control. Payment Method 10.3 is applicable to this contract.
- 11.5** The contractor shall be prepared to construct temporary siltation basins using geotextiles and hay bales. Upon completion of the work, all temporary sedimentation ponds shall be dismantled and removed from the site for disposal