ITEM 07203.9790 M - WATER QUALITY MONITORING (TURBIDITY)

Description

This work shall consist of field sampling, testing and documenting the turbidity levels of the river during all in-river work activities, including discharge activities (if applicable), throughout the duration of the contract.

Due to the presence of contaminants in the sediments of the River, the Contractor shall conduct all operations to avoid or minimize disturbances to the river bottom.

This specification provides a method to verify that the conditions of the New York State Department of Environmental Conservation (NYSDEC) SPDES permit and the United States Environmental Protection Agency (USEPA) monitoring requirements are met.

The Contractor shall conduct activities in compliance with the State Pollution Discharge Elimination System Permit (SPDES) and the conditions outlined in the 401 Water Quality Certificate. In addition, the USEPA requirements stipulate that the differential turbidity levels, taken upstream and downstream from the source, shall not exceed 28 NTU's (Nephelometric Turbidity Units).

This specification is part of the Water Quality Monitoring Plan and is used in conjunction with the ***Hazardous/Contaminated Liquid*** *disposal work* and the ***Potentially Hazardous Waste*** *disposal work*. All work in the river must follow the stipulations of the ***Hazardous Materials Safe Operating Procedures*** item. All costs associated with any delays due to failure to meet the SPDES Permit, 401 WQC conditions or obtain timely and valid analytical results shall be borne by the Contractor.

Materials

The materials shall be appropriate and sufficient to complete the activities as described herein.

The type of turbidimeter shall be a factory standardized unit with permanent calibration features and it shall be meet the official standards of the USEPA. The Contractor shall make a turbidimeter available for use as requested by the Engineer.

Construction Details

1. In-Stream Turbidity Monitoring

   The Contractor shall monitor turbidity during all in-river work activities, particularly during pier construction at the cofferdams/caissons, dewatering and water discharge operations (if applicable) and as ordered by the Engineer (AOBE).

   The frequency of testing shall be at least twice a day (once in the am and once in the pm) during in-river operations or AOBE.

Additional tests will be required whenever there is; a significant change in the Contractor's operations, an observed increase in the turbidity of the river water, water discharge operations, or AOBE.

Test results will be made available to the Engineer as soon as practicable, but no later than one hour after the test. However, if the turbidity levels exceed the limits set forth, the Engineer shall be notified immediately.

As a component of the Water Quality Monitoring for turbidity, the Contractor shall keep a daily log or journal which references the weather conditions, date, time, location and results of the turbidity tests throughout the duration of the contract. The Contractor shall make the log available to the Engineer during the term of project and shall provide the original log or journal to the Engineer at the conclusion of the project.

2. Locations For Monitoring Turbidity

The Contractor will monitor the in-river turbidity with a portable turbidimeter by sampling within 30m upstream and 30m downstream from the limits of the in-river work, discharge points or AOBE. The Contractor shall obtain measurements (water samples) at a depth of 1m from the bottom of the river. The upstream and downstream tests are considered one sample set (event).

3. Turbidity Monitoring Action Levels

If the turbidity levels exceed the limits set forth by the SPDES permit or the USEPA monitoring requirement (a differential turbidity level over 28 NTU's), then all in-river work activities and water discharges (if applicable) shall cease. The Contractor shall evaluate the situation and make corrective measures to the satisfaction of the Engineer.

Method of Measurement

The quantity for payment shall be the total number of turbidity sampling events (each pair of tests). Each sampling event shall consist of two measurements, one upstream and the other downstream from the source.

Basis of Payment

The unit bid price for each sample event shall include the costs of all labor, materials and equipment to sample in the river, test the turbidity level, record data and notify the Engineer, as described in this specification. The costs to access the river at the sample locations and provide safety and health protection (decontamination, etc.), are included in the unit costs. Payment for each sampling event (pair) will be made when the test results are received by the Engineer.

Payments will be made under:

ITEM NO.	DESCRIPTION	PAY UNIT
07203.9790 M	Water Quality Monitoring (Turbidity)	Each