SUBMITTAL FOR:

CSXT GENESEE RIVER SITE

ROCHESTER, NY

CONTRACTOR'S CONSTRUCTION QUALITY CONTROL PLAN (CQCP)

SUBMITTED TO:

AMEC EARTH & ENVIRONMENTAL, INC.
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SUBMITTED BY:

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A Proud Member of the D.A. Collins Companies

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1.0 Organization of CQC Team

The CQC team shall be organized as depicted in Figure 1 (below). Descriptions and duties of the various personnel are as follows:

1.1 Project Engineer

The Project Engineer, David MacDougall of D.A. Collins (DAC), shall be responsible for the following tasks and duties:

- Development and implementation of the CQC Plan.
- Management and oversight of the CQC Manager, Project Superintendent, and DAC Subcontractors.
- Review and delivery of project submittals related to the CQC Plan.

1.2 Project Superintendent

The Project Superintendent, Mike Landon of DAC, shall be responsible for the following tasks and duties:

- Coordination with the Project Engineer and CQC Team in order to schedule CQC inspections and testing.
- Compliance with any CQC requirements that may govern project construction activities.
- Monitoring of dredge depth and QA/QC activities in conjunction with dredge operator using hydrographic software package, GPS sensors and telemetry gauges.

1.3 CQC Manager

The CQC Manager will be Scott Serviss of DAC. The CQC Manager shall be responsible for the following tasks and duties:

- Managing and documenting activities related to CQC at the CSXT Genesee River site in accordance with this CQC Plan.
- Directing the CQC inspection staff, D.A. Collins employees, subcontractors, and laboratories in the execution of the CQC Plan.
- Reporting directly to DAC's Project Engineer, David MacDougall.
- Responsible for receipt and review of field-testing results, laboratory results, and related CQC data from the field inspection staff.
- Submission of Daily Activity Reports (DAR), and Quality Control Summary Reports to the Client.
- Construction water discharge quality and turbidity monitoring.

A copy of this CQC Plan has been provided to the CQC Manager and Superintendent in order to fully describe their responsibilities and authority.

1.4 CQC Inspectors

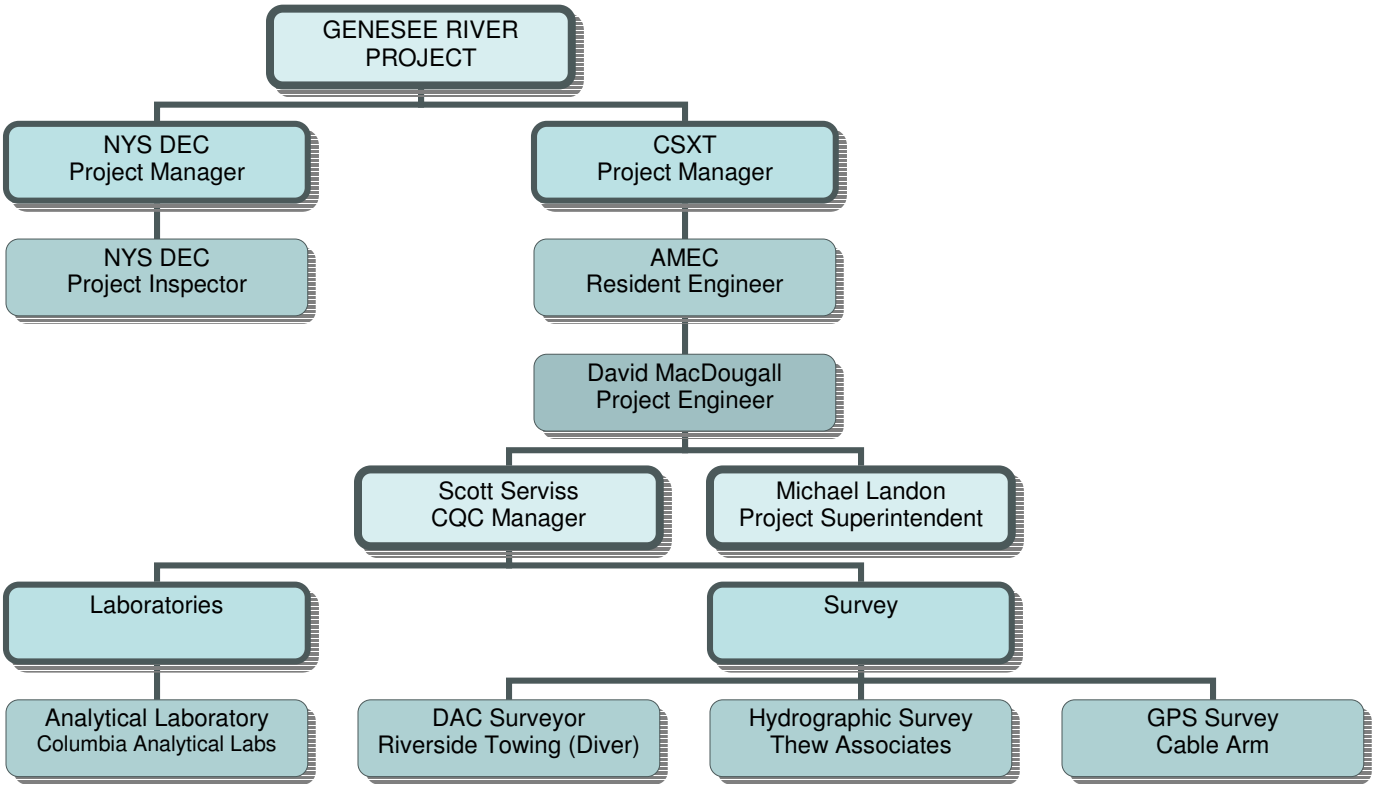
The CQC Inspectors shall include the following personnel:

- Thew Associates (Hydrographic and land survey, qualifications submitted under separate cover)
- Cable Arm (Dredging QC specialist, qualifications submitted under separate cover)
- Riverside Towing (Commercial diver)

Field inspection activities to be performed or supervised by the CQC Inspectors include the following. Refer to the summary chart attached to this plan for a detailed list of inspection tasks and specifications.

- Construction dewatering samples of treated water, sampled at the frequencies specified in accordance with discharge criteria provided by NYS DEC for the CWMP.
- Inspection of the Turbidity Control Barrier and documentation including deployment configuration(s), inspection logs, repair documentation, and related operational notes.
- Inspection of sediment excavation (dredging) limits, and verification of waste transportation and disposal.
- Inspection of sediment solidification and handling. Performance of Resistance to Penetration testing and paint filter sampling.
- Inspections during installation of subaqueous cap.
- Underwater inspection of dredging activities to provide verification of excavation upon completion.

FIGURE 1 – CQC ORGANIZATION CHART



2.0 Submittals

Submittal procedures shall be managed and directed by the Project Engineer. In general submittal procedures and schedules shall include the following:

- The Project Engineer shall request subcontractor, manufacturer, and fabricator submittals prior to delivery of materials or site services. This information shall be submitted to the Engineer as soon as it is available.
- The CQC Manager shall collect laboratory test reports and field inspection reports and submit them to the Project Engineer. The Project Engineer shall review all submittals prior to submission to the Engineer.

3.0 Construction Deficiencies

Upon identification of a deficiency, the Engineer and Contractor will be informed verbally, and where necessary the verbal notification is immediately confirmed in writing. Additionally the CQC Manager will mark a descriptive entry on the daily CQC report. A Deficiency Log will be maintained to track corrective actions and to confirm that the deficiencies have been satisfactorily resolved. Also, a Deficiency Report Form will be completed which will document the corrective action, change in procedure, work practices, or other actions taken to prevent reoccurrence. The Deficiency Log and Report Form are attached to the CQCP.

4.0 Laboratories

The following laboratories shall be utilized in implementation of this CQC Plan

TYPE OF SERVICE	LABORATORY
Analytical Laboratory	Columbia Analytical (Rochester, NY)

5.0 Turbidity Control Barrier

The outer deflection barrier and inner containment barrier will be maintained and inspected in accordance with the manufacturer's SOP. Daily surface inspections will be performed by the CQC Manager. Turbidity curtain inspections will also be performed after every stormy/windy day. All observations will be recorded using the Turbidity Control Barrier Inspection Logs (attached).

Table 1 - CQC Summary Table

Section	Task Description	Method	Frequency	Inspector	Laboratory	Notes
1500	Construction Dewatering	pH, Oil & Grease, TSS, EPA 8260	In accordance with CWMP.	D.A. Collins	Columbia Analytical	Certify permit compliance
2921	Turbidity Control Barriers	Record	Post installation Daily surface check	D.A. Collins	Field	Deployed configuration, daily inspection logs (attached)
		Turbidity Monitor	Daily, Real Time	Cable Arm	Field	Work area turbidity monitoring for early warning. Engineer to perform perimeter turbidity monitoring.
		Acetone and Methylene Chloride Analysis (Method 8260)	One sample per day	AMEC	Columbia Analytical	As determined by Engineer.
1640	Sediment Processing	Paint filter test	One test per 100CY	DAC	Columbia Analytical	Required for landfill disposal (US only)
		Resistance to Penetration test	One test per 100CY	DAC	Field	Required for landfill disposal (Canada only)
		Acetone and Methylene Chloride Analysis (Method 8260)	One sample per 100CY	AMEC	Columbia Analytical	Required for waste characterization and landfill selection.
2900	Dredging	Hydrographic Surveys	Off-shore surveys to verify pre- and post dredging elevations	Thew Assoc. & CableArm	Field	For record drawings & volume calculations.
		Underwater Observation	As needed.	Riverside Towing (Diver)	Field	As needed to inspect turbidity controls, locate debris, & verify dredging activities.
		Confirmatory - Chemical Analysis	Post final backfill	AMEC	Columbia Analytical	Verify the acetone and methylene chloride cleanup levels.

Appendix 1 - Construction Deficiencies Forms

Project No.:_____

Project Title and Location:_____

Deficiency and Corrective Action Log

Deficiency	Deficiency Report Number	Date Deficiency Noted	Corrective Action	Date Corrective Action Taken	Comments

DEFICIENCY REPORT FORM

Contractor:_____

Date:_____ Contract Number:_____

Location:_____

Reference Specification Paragraph:_____

Reference Contract Drawing Sheet No.:_____

Deficiency:_____
_____
_____
_____

Responsible Personnel to Identify Corrective Action:_____

Corrective Action:_____
_____
_____
_____

Responsible Personnel to Implement Corrective Action:_____

Schedule for Corrective Action:_____

CQC Manager:_____

AMEC Inspector:_____

Appendix 2 - Turbidity Curtain Inspection Logs

Turbidity Control Barrier - Surface Inspection Log

Weather Conditions	Tide / Current Conditions	Date
		Time
Work Activities:		

Status	DEFLECTION CURTAIN						
	Turbidity	Floatation Segments	Anchors & Lines	Beacon Lights & Markers	Curtains Free from Debris	Rips or Tears	Oil Boom
Pass							
Fail							

Status	CONTAINMENT CURTAIN						
	Turbidity	Floatation Segments	Anchors & Lines	Beacon Lights & Markers	Curtains Free from Debris	Rips or Tears	Oil Boom
Pass							
Fail							

Observations / Notes	Corrective Actions

CQC Inspector	
Engineer	

Turbidity Control Barrier - Underwater Inspection Log

Weather Conditions	Tide / Current Conditions	Date
		Time
Work Activities:		

	DEFLECTION CURTAIN						
Status	Turbidity Levels	Ballast Chains	Tension Cables	Grommets & Fasteners	Curtains Free from Debris	Rips or Tears	Anchors & Lines
Pass							
Fail							

	CONTAINMENT CURTAIN						
Status	Turbidity Levels	Ballast Chains	Tension Cables	Grommets & Fasteners	Curtains Free from Debris	Rips or Tears	Anchors & Lines
Pass							
Fail							

Observations / Notes	Corrective Actions

CQC Inspector	
Engineer	

Appendix 3 – Daily Activity Report

DAILY CONSTRUCTION QUALITY CONTROL REPORT **DA COLLINS ENVIRONMENTAL**

DATE:_____

WEEK NO.:	HOURS ON SITE:	WRITTEN BY:	REVIEWED BY:	PROJECT NUMBER

WEATHER/TEMPERATURE:

LOCATION OF WORK

DAC PERSONNEL:		EQUIPMENT:	VISITORS/AFFILIATION:
NAME:	TRADE:		

SUBCONTRACTORS:
(1)_____
(2)_____
(3)_____
(4)

MATERIALS DELIVERED (indicate size, type, and condition):

WORKED PERFORMED BY DAC	LEVEL OF PPE

WORK COMPLETED BY DAC SUBCONTRACTORS

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, speed memos, phone records, and/or logbooks for details)

DAILY CONSTRUCTION QUALITY CONTROL REPORT **DA COLLINS ENVIRONMENTAL**

DATE:_____

SAMPLING PERFORMED:	SAMPLERS NAME:

CQC FINDINGS (Satisfactory Work Completed and Deficiencies)

RECOMMENDED CORRECTIVE ACTIONS

CALIBRATION OF FIELD EQUIPMENT

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

SUBMITTALS REVIEWED

CQC MANAGER (Print Name): _____ CQC MANAGER SIGNATURE: _____