



Quality Control Plan

Case 18-T-0604

April 2021

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**South Fork
Wind**

Powered by
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QUALITY CONTROL PLAN

April 2021

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Abbreviations

CAR	corrective action reporting
Certificate	Certificate of Environmental Compatibility and Public Need
EM&CP	Environmental Management and Construction Plan
kV	kilovolt
MRR	materials receiving report
NCR	non-conformance reporting
NYS	New York State
OS&D	overages, shortages, or damages
QA	quality assurance
QAI	Quality Assurance Inspector
QC	quality control
QCP	Quality Control Plan
QM	quality management
SFEC	South Fork Export Cable
SFW	South Fork Wind, LLC
SQAL	Supplier Quality Assurance Log
SQAP	Supplier Quality Assurance Plan



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1.0 INTRODUCTION

South Fork Wind, LLC (SFW), will construct, operate, and maintain the South Fork Export Cable (SFEC) in support of the South Fork Wind Farm which will be constructed 35 miles (30 nautical miles, 56 kilometers) east of Montauk Point. The SFEC will be an alternating current electric cable (138 kilovolts [kV]) that will extend from the South Fork Wind Farm in federal offshore waters to coastal New York State (NYS) waters and inland to the existing mainland electric grid located in the Town of East Hampton, New York. This Quality Control Plan (QCP) is part of the Environmental Management and Construction Plan (EM&CP) for the SFEC components subject to Article VII of the New York Public Service Law, including the following, hereafter referred to as “the Project”:

- SFEC-NYS: the submarine segment of the export cable buried beneath the seabed from the boundary of NYS waters (3 nautical miles offshore) to a sea-to-shore transition vault located in the Town of East Hampton on Long Island, Suffolk County, New York. The SFEC-NYS includes the sea-to-shore transition via horizontal directional drilling.
- SFEC-Onshore: the terrestrial underground segment of the export cable from the sea-to-shore transition vault to the SFEC-Interconnection Facility where the SFEC will interconnect with the Long Island Power Authority electric transmission and distribution system in the Town of East Hampton, New York.
- SFEC-Interconnection Facility: a new onshore facility, primarily consisting of a transformer and a 69-kV interconnection cable that will connect to the 69-kV bus in the existing Long Island Power Authority East Hampton Substation in the Town of East Hampton, New York.

This QCP describes the quality management (QM), quality control (QC), and quality assurance (QA) responsibilities for the Project.

Quality verifications, inspections, audits, and reporting are intended to verify compliance with the Certificate of Environmental Compatibility and Public Need (Certificate), the approved EM&CP, and the high-quality standards of SFW. The processes described in this QCP will also result in identifying where quality is not being achieved on isolated and repetitive tasks. Repetitive issues require a heightened vigilance with training, greater management, improved execution, and verification of the work specific to the recurring issue.



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2.0 QUALITY ORGANIZATION

The Project will implement a three-level Quality Program, which includes QM, QA, and QC. Each organizational level is detailed as follows:

- QM is a set of activities for verifying the quality processes and construction procedures. QM involves continually assessing the effectiveness of the Quality Program and the Quality Assurance Inspectors (QAIs). QM determines the specific inspections and inspectors to be implemented. Any construction or manufacturing procedures that are not consistent with the Project's quality goals will be elevated to the Project Manager for review. Personnel responsible for QM (described below in Section 3.1) will report directly to the Project Manager and will have no obligations related to production.
- QA is a set of activities for ongoing monitoring of delivered materials and construction deliverables for compliance to the Project requirements. QA will involve completing QA checklists as required by the QCP and as directed by the QM process.
- QC is a set of activities to verify the conditions, measures, tests and/or procedures required to be documented for design, construction and material activities.



3.0 ROLES AND RESPONSIBILITIES

QM, QA, and QC are divided into multiple areas of responsibility within the life cycle of the Project. QM is divided into Design, Construction and Materials. QA is divided into Construction, Materials, and Manufacturer Facility Inspection (when applicable). QC is divided into Construction and Reporting. The following sections outline these areas of responsibility as they pertain to QM, QA, and QC. Responsible parties for the implementation of QM, QA, and QC include the Construction Supervisor and the QAI, in coordination with the Project Manager. Additional discussion on the roles and responsibilities of the Construction Supervisor and QAI are included in Section 3, *Project Personnel and Procedures* of the EM&CP.

3.1 QUALITY MANAGEMENT

As previously described, the Construction Supervisor and QAI will oversee the processes and procedures implemented for the Project as they relate to QM. Ongoing work will be continually assessed, and any inconsistencies with the Certificate or EM&CP will be reported to the Construction Supervisor or Project Manager who will have stop work authority over aspects of the Project that could violate the Certificate or the EM&CP, as outlined in Section 3, *Project Personnel and Procedures* of the EM&CP. The Construction Supervisor and QAI responsibilities for the implementation of QM are further detailed as follows:

- Design
 - Field confirmation of correct design implementation during construction;
 - Establish check points upon award of construction contracts and where appropriate, hold points for signoff; and
 - Track approved revisions to Project design and produce final as-built drawings.
- Construction
 - Manage and execute the Quality Program for all construction activities to verify that installations comply with the applicable plans, codes, standards, specifications, and industry standard construction practices, including the timely completion and collection of inspection and test reports as required;
 - Perform audits of the construction quality documents and spot checks of the installations to assess the effectiveness of the quality personnel;
 - Train and onboard construction quality personnel;
 - Manage construction QA personnel and verify they are performing the quality checks;
 - Complete QC documentation required;



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- Provide construction drawing interpretation support;
- Provide technical input as necessary to support construction operations, the procurement process and design activities;
- Track and manage the preparation and process through resolution of non-conformance reporting (NCR) and corrective action reporting (CAR) in order to support appropriate and timely resolution for construction activities;
- Support construction planning with input on the quality aspects of this QCP;
- Enforce the timely and accurate receipt of subcontractor submittals and for providing review and comments;
- Interface with testing services representatives in the field;
- Organize construction quality records in the Quality Record Library; and
- Review and approval of all subcontractor quality assurance requirements.
- Materials
 - Manage and execute the Quality Program for all engineered materials to verify received materials comply with the requirements of the Purchase Order agreement with the supplier, applicable plans, specifications, and industry standards including the timely completion and collection of inspection and test reports as required;
 - Perform audits of the material quality documents and spot check delivered components to assess the effectiveness of the quality personnel;
 - Train and orient of material quality personnel;
 - Directly manage material QA personnel and verify they are performing the quality checks and completing the quality control documentation required;
 - Provide technical assistance to the construction crews as required;
 - Track and manage the preparation and process through resolution of NCR and CAR in order to support appropriate and timely resolution for engineered materials;
 - Support delivery planning with input on the quality aspects of this QCP;
 - Interpretation support for supplier shop drawings;
 - Provide technical input as necessary on Requests for Change; and
 - Organize engineered materials quality records in the Quality Record Library.
- The Construction Supervisor will have sole responsibility to perform the following Materials QM:



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- Enforce the timely and accurate receipt of supplier submittals and for providing review and comments;
- Interface with manufacturer's technical service representatives in the field;
- Perform audits of the engineered materials quality documents to assess the effectiveness of the quality personnel;
- Support scheduling requirements, notifications, and changes with respect to deliveries;
- Maintain an up-to-date inventory of equipment and materials in the receiving yards;
- Provide review and comment as requested on supplier invoices for payment;
- Verify the Material Tracking Spreadsheet is updated daily;
- Communicates daily to the Project Manager on any equipment or material issues; and
- Develop spare parts list and track storage and turnover.

3.2 QUALITY ASSURANCE

The QA process will work in support of the QM previously described. QA will involve monitoring of the received materials and construction installations throughout the Project. The Construction Supervisor and QAI will be responsible for discovering any problems or issues before they are incorporated into the work or before subsequent activities progress. Construction Supervisor and QAI responsibilities for the implementation of QA are detailed as follows:

- Construction
 - Examine installations to validate that the work conforms to the contract specifications and drawings;
 - Complete QA documents;
 - Inspect construction installations quality of workmanship, dimensional accuracy on installations, and the use of approved material;
 - Identify non-conforming work by the contractor;
 - Report non-conforming components expeditiously to the Construction Supervisor and QAI for investigation and resolution;
 - Support the Construction Supervisor and QAI with any NCRs or CARs as required; and
 - Continually update the Project files with progress photos of construction.



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- **Materials**
 - Monitor materials receive in the materials yard for the engineered equipment and materials;
 - Inspect deliveries to check for visible non-conformities including manufacturing deficiencies, damages or quantity discrepancies;
 - Complete materials receiving reports (MRRs) for all deliveries;
 - Track any overages, shortages, or damages for delivered materials;
 - Apply a hold tag to any nonconforming components and alert the QM;
 - Verify that the MRRs and overages, shortages, or damages are correct and recorded;
 - Verify that the MRR information is recorded in the material tracking spreadsheet to support progress assessment, supplier payments and inventory control;
 - Match all MRRs to the corresponding purchase order to support supplier invoice assessment;
 - Verify that MRRs and the material tracking spreadsheet is updated daily and available for review;
 - Collect all packing slips, load tickets, bills of lading, product manuals, drawings, and any other manufacturers or shipping documentation and verify these documents are recorded; and
 - Verify that hold tags are only removed by the Construction Supervisor, QAI, or their designee.

3.3 QUALITY CONTROL

QC will be performed on the Project for all construction installations. QC for manufacturing occurs off site and varies depending upon the material and supplier. The approved Inspection and Test Plan defines the deliverables to verify manufacturing QC. As previously described, QC on the Project is the responsibility of the Construction Supervisor and the QAI. The responsibilities of the Construction Supervisor and QAI as they relate to QC include:

- **Construction**
 - Verify QA and QC documentation is complete for previous phases of construction performed at the worksite prior to authorizing construction crews to begin work on subsequent phases;
 - Verify the QC documentation is completed for all construction installations and submitted correctly into contract management software;



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- Manage construction activities in accordance with the Project plans and specifications;
 - Observe construction activities;
 - Verify the quality of workmanship, dimensional accuracy on installations, and the use of approved material;
 - Report any non-conforming components of the work along with a suggested mitigation solution;
 - Report irregularities and discrepancies for inspection and resolution;
 - Support the QA and QM with any NCRs or CARs as requested;
 - Verify the compliance of technical execution for specialty tooling required during construction, such as welding;
 - Review and coordinate test results (such as concrete testing) for electronic submittal into contract management software; and
 - Continually update the Project files with progress photos of construction.
- Reporting
 - QC reporting will happen on a daily basis. QC audits will be conducted bi-weekly.
 - Within 10 business days following completion of each QC audit, a report will be provided to NYS Department of Public Service Staff that includes the following: (i) a description of the results of the audit, particularly with respect to results that identify that one or more structures or components SFW purchased for installation in the Project did not conform to the specifications for structures or components described in this approved EM&CP; and (ii) any notes pertinent to the subject matter of such audit which were made at audit meetings by SFW personnel and/or contractors who performed the audit.
 - If any QC audit conducted by SFW identifies that one or more structures or components SFW purchased for installation in the Project did not conform to the specification for structures and components described in the approved EM&CP, SFW will: (i) provide written notification to NYS Department of Public Service Staff within not more than 72 hours of the discovery of such non-conformity; and (ii) describe the steps SFW will take to correct the non-conformity, including whether any components must be dismantled and returned to the manufacturer.

