

APPENDIX G

Quality Control Plan

M. J. Electric, LLC

Quality Assurance & Quality Control Program



Transmission Lines & Substations



MJE QA/QC Plan - Table of Contents

1. Contractor Quality Program and Plan
2. QA-QC Organization, Staffing, and Responsibilities
3. Document Control Procedure - QSP730-3-1 and QSP730-3-2
4. Receiving, Handling, Storage; Control of Materials - QSP743-2
5. Subcontractor - QSP743-3
6. Control of Construction Process - QSP751-1
7. Control of Measuring and Testing Equipment - QSP760-1
8. In-Process and Final Inspection Plan - QSP824-1, QSP824-2, and QSP824-4
9. Contractor Audits and Accountability - QSP822-2
10. Quality Field Inspection Form - QF822-2-1 and QF822-2-2



Quality Policy Statement & Objectives

MJE Quality Manual

QUALITY POLICY STATEMENT

M. J. Electric, LLC (MJE) performs construction services for utility, electrical and instrumentation planned installations, maintenance and repair to the requirements as specified and to customer's satisfaction. M. J. Electric will ensure that service provided is completed within the Safety, Quality, Schedule, Cost, and Financial Reporting requirements.

It is M. J. Electric's company policy to meet project quality requirements as defined by the contract documents and to adhere to corporate quality objectives. Our principal quality objectives are to meet or exceed owner's expectations and to eliminate rework by performing our work to "Build it Right the First Time". We will monitor our performance against these objectives and our program and plan will foster and require a process of continuous quality management improvement.

QUALITY OBJECTIVES

1. Safety/Quality - M. J. Electric will maintain the Safety and Quality Program with the industry best practice approach to Operations. Performance will be measured through annual goals including OSHA Recordable Rates compared to Industry Top Quartile performance.
2. Schedule/Cost - M. J. Electric will establish schedule and cost targets for each project with the customer. Frequent reporting of results will be established with the customer to ensure project decisions are made with the optimum balance of cost and schedule.
3. Financial - M. J. Electric will provide financial reporting that meets the customer's needs for forecasts, accruals, invoicing, and estimates at completion as required.
4. Customer Service - M. J. Electric will communicate frequently with the customer to understand the customer's view of MJE's performance and will take comprehensive action to ensure continuous improvement. For some customers, MJE will track a customer service scorecard.
5. Environmental - M. J. Electric shall comply with all regulatory requirements, applicable environmental laws, regulations, permits and requirements as specified to the customer's satisfaction. MJE will minimize the impact of construction activities on the existing natural resource base in the vicinity of project sites and will reduce or eliminate environmental impacts when performing construction services.



QA/QC Plan for Transmission Lines & Substations

MJE Quality Manual

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SECTION 1 Contractors Project Quality Program and Goals

Project Quality Policy

The goal of this Contractor's Project Quality Program is to provide the owner with a quality product that meets or exceeds the requirements of the contract documents and to "Build it Right the First Time". It is the policy of MJE to meet this goal through Quality Work Plans, with quality workmanship, products and services. Implementation and enforcement of the procedures, inspections and controls in this Project Quality Program are supported by MJE Senior Management, Regional Vice Presidents, Program Managers and Project Management.

Organization

Personnel assigned to perform work and inspections shall be qualified and trained for the work to which they are assigned. They shall perform their assignments under the supervision of the Project Manager, Construction Manager and the Customer. The Superintendent and or General Foreman shall have the responsibility and authority to identify "quality" problems by making routine inspections and verify acceptable quality of the manufacture, fabrication and construction of all materials required by the project specifications. MJE will perform Quality Audits and Inspections as required.

Quality System Procedures

The project team will ensure that work is performed in accordance with the contract documents by the following means:

1. MJE Document Control Procedure-QSP730-3-1-QSP730-3-2 (Alliances)
2. MJE Verification of Purchased Product-QSP743-2
3. MJE Subcontract-Subcontractor Procedure-QSP743-3
4. MJE Construction Control Procedure-QSP751-1
5. MJE Control of Calibration Equipment-QSP760-1
6. MJE Transmission Line In-Process Inspection Procedure and Forms-QSP824-1
7. MJE Substation In-Process Inspection Procedure and Forms-QSP824-2
8. MJE Final Inspection Process Construction Field Markup Procedure-QSP824-4
9. MJE QA-QC Field Construction Audit Procedure QSP822-2
10. MJE Internal and External Audit Procedure-QSP822-1



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QA/QC Plan for Transmission Lines & Substations

MJE Quality Manual

SECTION 2 Organization, Staffing, and Responsibilities

Project Organization

The key project and onsite personnel, construction and quality staff members within the project team are presented below.

MJE Senior Vice President:

MJE Regional Vice President:

Project Manager:

Construction Manager:

Superintendent:

General Foreman:

The MJE Project Managers (PM) report directly to the MJE Regional Vice President and function as off-site managers with overall authority and accountability of quality for the project. It is their responsibility to visit the site regularly to ensure compliance with this program and to visit with the Customer/Owner to assure MJE is meeting their quality expectations.

The Superintendent and General Foreman are located at the job site and report directly to the Construction Manager or Project Manager on issues related to quality. The PM has overall project responsibility to manage the resources necessary to meet the requirements of this quality program at the project level.

The Superintendent reports directly to the Construction Manager who is responsible for communicating all quality issues to the PM. The PM will report all quality issues to the MJE Regional Vice President. The PM will communicate and review quality matters with the Customer Representative.

The Superintendent, General Foreman, Construction Manager and Project Manager are responsible for ensuring all work plans and operations are completed safely and "Built Right the First Time". All crew Foremen report to the Superintendent or the General Foreman.

SECTION 3 Managing Submittals, Document Control, and Document Changes

MJE has established procedures (QSP730-3) for controlling documentation on each project. This procedure outlines the responsibility for receiving, logging in, and distributing all documents. Document control will ensure that invalid or obsolete documents are promptly removed from points of issue or use. An up-to-date master set of project specifications and project drawings will be maintained in good condition and filed in document control at the construction site and at MJE's office. All quality records, including documents and inspection reports will also be filed in the MJE Master Project Files.

Submittal Management

The Submittal Management Plan utilizes a master submittal log for tracking all submittals required by the project documents. The log is tied into the project schedule to ensure that submittals are completed in advance, allowing time for a review process, securing permits, procurement, and scheduling deliveries. The log is updated as documents are submitted and reviewed.



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QA/QC Plan for Transmission Lines & Substations

MJE Quality Manual

Shop drawings that are required by specification and will be submitted for approval and consist of the number of copies required by the specifications. Other shop or working drawings not requiring submittal will be checked and verified by MJE and made available for the project personnel to review.

Document Control

All documents on the project will be processed, distributed and filed by the Project Manager. A complete set of project documents will be maintained in document control and at the project site and will be available for the Project Management's review.

SECTION 4 Receiving, Handling, Storage; Control of Materials (QSP743-2)

Verification of Received Material

Upon delivery, MJE's Field Personnel will verify the Packing List and match up with the items listed on the purchase order. An immediate inspection will be made to see if any damage has occurred before the materials are accepted at the jobsite and before they are offloaded from the delivery truck. If damaged material is found, the damage will be noted on the Bill of Lading or shipping ticket. **The damaged material will be marked to prevent its use on the project.**

The receiving ticket will be dated and signed off by the Project Management designated personnel. The Customer/Owner representative shall be notified of material receipt per customer requirements, when applicable.

Handling and Storage of Materials

MJE is responsible for the receiving and storing permanent materials on the project site. Since materials are supplied and delivered in various shapes, sizes, weights, and trucks, care must be taken to handle materials in accordance with the manufacturer's recommendations to prevent damage, to protect the material, and to use the appropriate equipment for transporting to specific construction locations and/or lay down areas.

All materials must be stored in an acceptable environment to preclude damage or deterioration of the material that could affect its performance, warranty, or longevity of operation. General storage requirements include the following depending on the type of material. All materials received will be stored for quality verification and distribution to the appropriate Foreman by the Superintendent and/or General Foreman.

1. Provide protection from the elements if applicable (rain, sun, wind, moisture)
2. Store on supports raised off the ground
3. Provide proper moisture control, including environmental controls as required
4. Provide supports to prevent material at bottom from being crushed
5. Store in secure area if available
6. Store materials a safe distance from operations (prevent accidental damage)
7. Store equipment in accordance with MJE Policy and manufacturer's recommendations

SECTION 5 Subcontractor and Supplier Quality Plans (QSP743-3)

Subcontractor's Quality Plan

If required, all subcontractors and material suppliers will submit their Quality Plan to MJE. MJE will manage and require its subcontractors work to comply with construction specifications as required by the Customer/Owner. MJE will ensure that the subcontractor performs inspections and completes the required documents relating to inspections as required.



A QUANTA SERVICES COMPANY

QA/QC Plan for Transmission Lines & Substations

MJE Quality Manual

Subcontractor Documentation & Insurance Requirements

If a subcontractor has not submitted the appropriate insurance requirements or MJE does not have a signed Subcontract Agreement on file, the subcontractor's will not be permitted to perform services on customer property until all the required documents are on file. The Risk Management personnel will keep track of the status of the documents in the CGC computer system.

SECTION 6 Controls of Construction Processes (QSP751-1)

Control of Construction Processes

A MJE Project Schedule and routine inspections will be completed for each project to ensure all work conforms to the requirements of the project construction specifications. All reports and documentation will be filed by the Project Management Team designee as required. The four phases of control will be implemented to ensure compliance are:

1. Master Schedule Preparation
2. Initial Operation Start Up
3. In-Process Construction
4. Close of Operation

A detailed procedure for Controlling the Construction Process is attached (QSP751-1 MJE Construction Control Procedure).

SECTION 7 Controls of Measuring and Testing Equipment

Calibration

All precision tools or testing equipment used to determine an item's conformance to specified requirements will be verified and calibrated. No precision tool or testing equipment shall be used without a valid calibration certification. MJE's Tool Control Department is responsible for maintaining and managing calibration control records.

Records

Quality records will be maintained identifying each item of measurement as well as testing equipment and data from each instance of calibration, citing measurements, and adjustments.

The Superintendent and/or General Foreman will ensure that any tool or testing equipment that is out of calibration is tagged-out from use on the project until the calibration has been recertified.

SECTION 8 In-Process and Final Inspection Plan (QSP824-1, QSP824-2, QSP824-4)

Inspection Requirements, Qualifications and Control Procedures

All inspection requirements, qualifications and inspection control procedures are defined in three procedures; MJE In-Process Inspection Transmission Lines (QSP824-1), In-Process Inspection Substations (QSP824-1-1) and Final Inspection Process Construction Field Markup Procedure (QSP824-2). The procedures and associated inspection forms are provided as separate attachments to the MJE QA-QC Quality Plan.



A QUANTA SERVICES COMPANY

QA/QC Plan for Transmission Lines & Substations

MJE Quality Manual

MJE Project Preparation

1. Review Construction Requirements
2. Check to assure all materials and equipment have been inspected or tested, submitted and approved, if necessary.
3. Establish the Quality Inspection Forms and Job-Site Quality Audit Form to be used for the project.
4. The MJE Inspection Requirements, Qualifications and Control Procedures are to be reviewed at a Pre-Activity Construction Meeting. The Owner's representative may be invited to attend such meetings.

Initial Operation Start Up

1. The MJE Project Schedule will be created based on MJE's Graded Approach to Project Controls.
2. Resolution of discrepancies, if any.

In-Process Construction

1. Verify conformance with the MJE Project Schedule.
2. Verify compliance with Job Site Quality Audit Forms.

Close of Operation and Project

1. Perform final inspection of the work with the Customer/Owner.
2. Establish Best Practice and Lessons Learned with the Project Management Team to be used for future reference on current and future projects.

SECTION 9 Contractor Audits and Accountability

Internal Quality Project Construction Audits will be performed to ensure compliance with the requirements of the Project Construction Specifications as required. MJE designated, qualified Field Personnel will perform at least two quality audits per month. MJE Project and Construction Managers will perform quality audits as required.

If required, an MJE X-Number (Cost Code) will be established to track the cost of rework associated with quality incidents.

SECTION 10 Corrective and Preventive Action & Control of Non-Conforming Conditions (QSP852-1)

Conditions adverse to quality shall be promptly identified, investigated, and corrected. Corrective action and related information shall be documented on the applicable form and reported to appropriate levels of management.



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QA/QC Plan for Transmission Lines & Substations

MJE Quality Manual

SECTION 11 Documentation of Quality Records

Quality Records will be maintained for each project per the project contract requirements. Quality Records shall be retained for a period of two (2) years after project completion. At a minimum, the Records will include:

1. MJE Project Schedules
2. Completed Quality Inspection Forms and Job Site Quality Audit Forms
3. Packing Slips
4. Approved Drawings/Submittals/Submittal Log
5. Final Copy of As-Built Drawings

SECTION 12 Training

Employees affecting quality will be introduced to the Project's Quality Plan through the Project Pre-Construction Meeting (QSP751-1). Quality Awareness training will be conducted through the use of Pre-Activity Construction Meetings, Quality Inspection Forms, Job Site Quality Audit Forms, and Daily Tailgate Project Site Meetings held by the Project personnel and the employees that affect quality.



Responsibilities

- Oversee the operations and projects for the Eastern Region Office
- Supervise office operations, personnel, and contracts within the region
- Interface with owners, engineers, and subcontractors
- Assist with contract negotiations, asset management, sales, and marketing
- P&L responsibilities for the Eastern Region

MJE Project Experience

Director of Operations – Shoemakersville Office

- Oversee the operations of the Northeast Region, Shoemakersville Office in the New England area and all over the country on emergent storm work
- Estimate and manage the construction of substations, transmission lines, distribution projects, storm work, highway lighting, parking lot lighting, and street light maintenance projects.
- Administer contract drawings, specifications, and change orders
- Oversee billings, costs, productivity, schedules, material, tools, and equipment
- Supervise field office staff and labor disciplines on construction activities
- Maintain a safe work atmosphere through continuing education and monitoring of work site
- Interface with owners, engineers, contractors, and subcontractors
- Serve on a storm committee for the company and coordinate storm response

Director of Operations - Hurricane Sandy Storm Restoration

PECO/PPL/First Energy/National Grid/PHI - NJ, NY, MA, PA, RI, DE

- Mobilized crews from around the country before Sandy hit to be in place as soon as recovery efforts could begin
- Over 400 full-time employees, including crews from Michigan, Iowa, Wisconsin, Illinois, Massachusetts and Pennsylvania, restored power safely and efficiently in New Jersey, Long Island, Massachusetts, Pennsylvania, Rhode Island, and Delaware

Contract With: PECO/PPL/First Energy/National Grid/PHI

Contract Amount: \$20,000,000

Operations Manager - Hurricane Irene Storm Restoration

Northeast Utilities/Connecticut Light & Power - Hartford, CT

- Performed storm restoration services after Hurricane Irene in Connecticut

Contract With: Northeast Utilities - Hartford, CT

Contract Amount: \$1,450,000

Operations Manager - Emergent Storm Work for Various Utilities

- Coordinate storm work for the Chicago region for utilities across the U.S.
- Assemble crews, arrange for equipment, coordinate work with the local utilities, work together with other subcontractors, and interface with the public
- Contracts With: Commonwealth Edison (ComEd), Philadelphia Electric Company (PECO), E.ON U.S., National Grid, We Energies, Princeton Electric, Mid American Energy, Central Hudson, Mor-Gran-Sou, Slope Electric, Ameren Illinois, and Entergy

Contract Amount: \$20,000,000

Job No. 89300/88321/88324/80301/80303/80305/80306/ 80308/80309/80302/89303/88108 /89108/80108

Construction Manager - Storm Work for Hurricane Gustav & Hurricane Ike

Entergy & Center Point Energy - Louisiana & Texas

- Supervised 90-100 linemen on storm work to restore power after Hurricane Gustav in Donaldson, Louisiana, and Hurricane Ike in Houston, Texas



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William Shaw

Vice President Eastern Operations

Contract With: Entergy & Center Point Energy

Contract Amount: \$7,900,000

Job No. 78910-001/78911-001

Project Manager - Bethel to Norwalk 345 kV/115 kV Transmission Line

Connecticut Light & Power - Hartford, CT

- Construction on 10 miles of the 345/115 kV transmission line, which included surveying, right-of-way clearing/access road construction, foundation installation, and commissioning support
- Included both new and reconstructed line installation and pole replacements

Contract With: Connecticut Light & Power - Hartford, CT

Contract Amount: \$15,000,000

Job No. 63705-107

Project Manager - Hurricanes Dennis, Katrina & Rita Storm Work

Alabama Power, Mississippi Power, Pearl River REA, & Entergy

- Supervised 140 linemen performing distribution storm work after Hurricane Dennis in Alabama, Hurricane Katrina in Mississippi, and Hurricane Rita in Texas, receiving high praise for our performance from the power companies

Contract With: Alabama Power, Mississippi Power, Pearl River REA, & Entergy

Contract Amount: \$7,100,000

Job No. 65719/65740/65742/65745

Project Manager - PECO 2005 Summer Critical Projects - Southeast, PA

Exelon Corporation/Philadelphia Electric Company - Philadelphia, PA

- Engineering, construction, and procurement of materials for over 30 summer critical projects in southeastern Pennsylvania
- Built new distribution lines and upgraded existing lines
- Upgraded substations to increase capacity, made some "mobile-ready" to hook up mobile transformers, and allow for automatic switching of power

Contract With: Philadelphia Electric Company - Philadelphia, PA

Contract Amount: \$5,000,000

Job No. 64709

Project Manager - Marcus Hook 230 kV Switchyard - Marcus Hook, PA

Florida Power & Light - Juno Beach, FL

- Design/Build project with Black & Veatch which included the design and construction of two new 230 kV substations and 230 kV transmission line for the new CoGen plant at Sun Oil Refinery

Contract With: Dashiell Corporation - Houston, TX

Contract Amount: \$3,400,000

Job No. 62732

Project Manager - 500 kV Switchyard for Fayette Energy Facility - Ronco, PA

Duke Energy - Charlotte, NC

- Installed a 500 kV switchyard for a power plant at Fayette Energy Facility, including grading, grounding, fencing, foundations, buswork, and switches

Contract With: Black & Veatch - Overland Park, KS

Contract Amount: \$2,000,000

Job No. 62802

Education

M. J. Electric Project Excellence Management Course

MJE partnered with FMI to develop this 90-hour program to train personnel how to more effectively manage projects and meet customer expectations

Associate of Applied Science Degree - Electrical Engineering Technology

Pennsylvania State University - Reading, PA



William Shaw

Vice President Eastern Operations

Safety Training

360 Walk Around, CSA, Distracted Driving-Quanta, DOT Supervisor Reasonable Suspicion Training, Fire Extinguisher, Foreman Training, Forklift Complete, Grounding for Protection of Employee, Harassment Awareness, HAZCOM GHS, Insulating Gloves-Sleeves-Equipment, Medic Adult CPR-FA-AED-BBP, MJE IFPTB, On the Front Line-Supervisor Training, OSHA T&D 20-HR, OSHA T&D 10-HR, Quanta Safety Code of Conduct, QPM-Leadership in Performance and Safety, ZONAR



Responsibilities

- Installation and repair of electrical distribution lines and equipment for transmission and distribution lines and substations
- Administer new hire orientation
- Perform jobsite specific training & job hazard analysis
- Provide in-service training for field personnel
- Perform on-site inspections and evaluations
- Energized services lead
- Administer and maintain the energized services portion of MJE including candidate selection, training, estimating man hours, and hazard recognition

MJE Project Experience

Operations Manager - National Grid Contractor of Choice for Distribution - Massachusetts National Grid – Westborough, MA

- Performance of work on or related to the installation, construction, repair and maintenance of National Grid's electrical distribution and sub-transmission systems in various locations in New England and New York.

Contract With: National Grid – Westborough, MA

Job No. 70019800

Construction Manager - New Energy Alliance - National Grid Transmission Line & Substation Capital Works Delivery Services for the New England Area

National Grid - Westborough, MA

- Provide Engineering, Program Management, and Construction Services for National Grid's transmission system upgrade in Massachusetts, Rhode Island, New Hampshire, and Vermont
- The project is being executed by the New Energy Alliance (NEA), a joint venture formed by M. J. Electric, LLC and Balfour Beatty Infrastructure, Inc.
- Work includes both new construction and rebuilding of high voltage transmission lines and substations

Contract With: National Grid - Westborough, MA

Contract Amount: \$700,000,000 (2009-2013)

Job No. 49000

Construction Manager – T171/172/359 NEEWS Project – Smithfield, RI

National Grid – Westborough, MA

- Relocated 22 miles of 115 kV lines in the right-of-way and installed approximately 750 foundations to make way for a new 345 kV line

Contract With: National Grid - Westborough, MA

Contract Amount: \$700,000,000

Job No. 49000

Construction Manager - Hurricane Irene Storm Restoration

Philadelphia Electric Company - Philadelphia, PA

- Performed storm restoration services after Hurricane Irene in various locations in the Northeast

Contract With: Philadelphia Electric Company - Philadelphia, PA

Contract Amount: \$1,450,000

Job No. 81336-001

General Foreman/Safety - Storm Work for Hurricanes Gustav & Ike

Entergy & Center Point Energy - Louisiana & Texas

- Performed emergency storm work to restore power after Hurricane Gustav in Donaldson, Louisiana, and Hurricane Ike in northwest Houston, Texas

Contract With: Entergy & Center Point Energy

Contract Amount: \$7,900,000

Job No. 78910/78911



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Thomas Jones

Operations Manager – Utility Division

Construction Manager – E205E Project

National Grid – Sterling, MA

- Energized change out of 553 wooden H frame structures 50+ miles, through environmentally sensitive areas (Quabin Reservoir - water supply for Boston)

Contract With: National Grid - Westborough, MA

Contract Amount: \$65,000,000

Safety Supervisor

In charge of MJE field safety training for transmission, distribution, and substation construction projects for utility customers such as Northeast Utilities, Connectiv, PECO, and Niagara Mohawk

Other Work Experience

Apprentice Instructor (2001-2013)

Northeast Apprenticeship and Training

- Instruct apprentices in the electrical apprenticeship in the following courses: Basic and Advanced Climbing Techniques, Electrical Theory, Transformer Theory and Connections, CPR, AED, First Aid, Poletop, Buckets, Manholes, Pole Framing, Capacitors, and Regulators.

General Foreman (2003-2004)

Par Electrical Contractors

- Coordinated and devised work plans and safe work practices for approximately 40 men working on transmission and distribution jobs

Crew Foreman (2000-2003)

Harlan Electric

- Coordinated and devised work schedule for crews engaged in the installation of new and the maintenance of existing power lines

Crew Leader (1998-2000)

Welsbach Electric

- Worked and supervised a 5-man crew installing new and maintaining existing power lines located in inaccessible areas for bucket trucks

Education

NCCCO Practical Examiner for Hydraulic Cranes

Journeyman Lineman Apprenticeship Training

Graduate of the IBEW/NECA National Training Institute

Certified Crane Operator through the National CCO

Attended courses in and certified in teaching on Cable Splicing and Termination, Personal Protective Grounding, Insulate and Isolate Procedures, EquipPotential Grounding

Safety Training

Barehand Certification, Bucket Truck Performance Evaluation, Cargo Securement, CSA, Digger Derrick Performance Evaluation, DOT Supervisors Reasonable Suspicion Training, ELDT1-Driver Qualification, ELDT2-Hours of Service, ELDT3-Driver Wellness, ELDT4-Whistle Blower Protection, Grounding for Protection of Employee, Harassment Training, HAZCOM, Hydraulic Mobile Crane & Boom Truck Operator Certification, MJE IFPTB, New Hire Orientation, OSHA 10-HR, OSHA 20-HR Train the Trainer, OSHA 500, OSHA 5600-Disaster Site Worker Train the Trainer, Pole Climbing Performance Evaluation, QPM-Leadership in Performance and Safety, Qualified Rigger-Quanta, Quanta Hot Stick, Quanta Line Master-Level 1, Quanta Line Master Level 2, Stand Down-OSHA ET&D 9 Best Practices, Storm Work, ZONAR



Responsibilities

- Experienced in supply, contract management, construction, project management, and design
- Oversee billings, job costs, productivity, schedules, material, tools, and equipment
- Supervise field office staff and labor disciplines on construction activities
- Maintain a safe work atmosphere through continuing education and monitoring of work site
- Interface with owners, engineers, contractors, and subcontractors

MJE Project Experience

Project Manager - Brookfield By-Pass - Brookfield, CT Northeast Utilities - Hartford, CT

- The highway bypass included the removal of three existing double-circuit wood H-frames and replacement with four single-circuit steel poles with foundations
- The center structure was eliminated, and the conductor elevation was raised for higher clearance

Contract With: Northeast Utilities - Hartford, CT

Contract Amount: \$1,100,000

Job No. 67606-001

Project Manager - Bethel to Norwalk 345/115 kV Transmission Line - Bethel, CT Connecticut Light & Power - Hartford, CT

- Construction on 10 miles of the 345/115 kV transmission line, which included surveying, right-of-way clearing/access road construction, foundation installation, and commissioning support
- The work entailed both new and reconstructed line installation and pole replacements

Contract With: Connecticut Light & Power - Hartford, CT

Contract Amount: \$15,000,000

Job No. 63705-107

Project Manager/Purchasing - PECO 2005 Summer Critical Projects Exelon Corporation/Philadelphia Electric Company - Philadelphia, PA

- Engineering, construction, and procurement of materials for over 30 summer critical projects in southeastern Pennsylvania
- Built new distribution lines and upgraded existing lines
- Upgraded substations to increase capacity, made some "mobile-ready" to hook up mobile transformers, and allow for automatic switching of power

Contract With: Philadelphia Electric Company - Philadelphia, PA

Contract Amount: \$5,000,000

Job No. 64709

Other Work Experience

Engineer, Supervisor (2009-2014)

FirstEnergy – Reading, PA

- Substation project design, project cost estimates, equipment procurement, and construction support
- Projects varied from individual equipment replacements (breaker, transformer, CCVT), to large new 230 kV substation projects
- Supervisor responsibilities for team of engineers and designers, including workload planning and assignments, staff's project compliance with design standards and schedule requirements

Senior Engineer – Corporate Asset Management (2008-2009)

FirstEnergy – Reading, PA

- Compliance oversight area including the development of a program for the review of distribution, transmission, and substation projects



Keith Keeney

Senior Project Manager - Utility Division

- Evaluate system planning, estimating tools, and project management execution, with the objective of continuous process improvement after completion

Supervisor, Staff Administrator, Administrator & Senior Administrator (1986-2002)

GPU ENERGY - Reading, PA

- Procurement for capital equipment, services, engineering, generation facilities (such as York Haven Hydro Station), major projects, office facilities, construction and maintenance for the transmission and distribution business unit (\$100-200M annually)
- Consolidated all procurement requirements of three independent operating companies covering two states, working closely with technical functions on initiatives to standardize requirements and to increase purchasing power; involving long term agreements and strategic alliance agreements, resulting in significantly increased value and process improvements
- Contracting and field administration for the construction of a new 170 MW Combustion Turbine facility in Portland, PA
- Responsible for significant value complex projects, including several NOx reduction projects, a major combustion turbine overhaul program, and total controls replacement and upgrade projects
- Contract planning and contract administration for fossil and hydro generation facilities, including turbine and boiler maintenance outages, capital projects, new electrostatic precipitators, and waste treatment facilities

Planning/Scheduling Eng., Constr. Eng., Structural Eng. and Contract Administrator (1980-1985)

GILBERT COMMONWEALTH - Reading, PA

- Developed and updated engineering schedules, including pipe stress analysis, support design, and mechanical work for Perry Nuclear Power Plant
- Planning and scheduling on several fossil plants, including a new coal-fired plant, TECO's Big Bend Station
- Supervise civil construction of NYSEG's hydroelectric project
- Prepared contract documents and bid evaluations and evaluated claims and invoices for BG&E's Brandon Shores Fossil Station
- Layout and design of pipe supports at SCE&G V.C. Summer Nuclear Station
- Developed schedules, ordered materials, established design criteria, and designed anchor modifications of safety related electrical equipment at RG&E's Ginna Nuclear Power Station

Education

M. J. Electric Project Excellence Management Course

MJE partnered with FMI to develop this 90 hour program designed to train MJE personnel how to more effectively manage projects and meet customer expectations.

Certified Purchasing Manager

Bachelor of Science Degree - Civil Engineering

Pennsylvania State University - State College, PA
Emphasis in construction management

Safety Training

OSHA 10-Hour T&D, Quanta Safety Code of Conduct, Grounding Protection, Intro to Crane Load Charts, Confined Space Awareness, Hazards of Electricity, Insulating Gloves, Sleeves, and Equipment, First Aid, CPR, and AED – Auto External Defibrillator

Responsibilities

- Responsible for jobsite safety training programs, new hire training, accident investigation, job hazard analysis, and safety meetings
- Work to resolve safety concerns at the jobsites
- Coordinate customer and contractor safety programs with ours
- Provide initial and ongoing safety training for MJ employees and subcontractors
- Perform field safety audits
- Ensure compliance with all applicable safety and health regulations
- Identify hazards within the workplace and apply controls to ensure compliance
- Conduct accident investigations and perform root cause analysis

MJE Work Experience

Tool Coordinator (2009-2015)

- Procures tools in support of field construction activities
- Performs financial analyses and modeling in determining the buy versus lease option for tooling.
- Provides support in the preparation and evaluation of capital budgets and the tracking of tool expenditures
- Provides oversight to the outsourcing of tool repairs and servicing
- Analyzes industry and company trends, costs, revenues, financial commitments, leases, contracts and obligations incurred to predict future tool revenues and expenses
- Manages and maintains tool maintenance program
- Offers suggestions about tool utilization, rates and future tool forecasts
- Oversees logistics for company owned and leased tools
- Provide Purchasing and Tool Control employees with information, leadership, development, and training opportunities
- Provides oversight to company-wide Tool Control facilities
- Assists with Fleet Management and Tool Control Departmental hiring and orientation needs
- Periodically conducts tool inventory audits, identifies critical gaps and actions plans to address identified areas
- Ensures that comprehensive cost effective small tool purchasing, ordering and inventory management systems are developed and implemented
- Track and report equipment and tool failures and repairs
- Manages and monitors the disposition of tools
- Cultivate and maintain relationships with key vendors
- Assist with the development and tracking of key tooling performance metrics
- Support the execution and communication of the company's Strategic Plan
- Supervises Tool Control staff
- Fills stock orders by selecting and pulling the proper tools from inventory. Assure that field operations receives all tools needed in a timely matter
- Arranges shipping of stock order to job sites over the phone and on-line
- Completes Tool Repair Work Orders
- Receive, Inspect and Process Consumable Materials
- Receive, Inspect and Process Rubber Gloves, Sleeves, Boots, Hose & Blankets

Shop Helper (2007-2009)

- Fill stock orders by selecting and pulling the proper tools from inventory
- Arrange shipping of stock order to job sites over the phone and on-line
- Check-in daily FedEx shipment
- Perform minor tool repairs



A QUANTA SERVICES COMPANY

Carson Perry

Safety, Health, & Environmental Representative

- Make sure tools in warehouse are organized and well maintained
- Perform daily mail and errand run
- Deliver materials and tools to job sites
- Perform heavy lifting of equipment or tools
- Scrap broken and or obsolete tools
- Perform Warehouse work such as unloading and loading trucks, stocking shelves, operating a Forklift and maintaining inventories
- Assist with the processing of annual inventory information

Other Experience

Assistant Manager (2006-2007)

Pipeline Petroleum – Sinking Spring, PA

Production Line Operator (2006)

F.M. Browns & Sons – Sinking Spring, PA

2004-2006 Fountain Manager (2004-2006)

Friendly's Ice Cream Corp. – Reading, PA

Education

General Education – Reading Area Community College

General Education – Millersville University

Safety Training/Skills

3-Way Communication – MJE, Aerial Classroom, Bucket Truck Set Up Training Review, Cargo Securement, CSA, Defensive Driving, Distracted Driving-Quanta, DOT General State Specific, DOT Supervisor Reasonable Suspicion, Dr. Jill – Save Your Spine, DVIR, ELDT1-Driver Qualification, ELDT2-Hours of Service, ELDT3-Driver Wellness, ELDT4-Whistle Blower Protection, Fall Protection, Forklift Complete, Grounding For Protection of Employee, Grounding Policy Rollout, Harassment Awareness, Hazards of Electricity, HAZCOM, HAZCOM GHS, HAZMAT General Awareness, HAZMAT Security Awareness, HAZMAT TRAIN-THE-TRAINER, Insulating Gloves, Sleeves, Equipment, JIB Training, Laddery Safety, Materials of Trade, MJE ECSS Book, MJE General Safety Guide – Craftworker Book, MJE Incident Free Performance Tool Book, New Hire Orientation, OSHA 510, OSHA ET&D 10-HR, OSHA ET&D 20-HR, QPM-Leadership in Performance and Safety, Quanta Foreman 4-Hr, Quanta Safety Code of Conduct, Safety Alert – Flame Resistant Clothing – September 2015, Safety Alert – Flashback Arrestors, Safety Alert – Rubber Gloves & Sleeves, Stand Down Aerial Lift/Fall Prot. & Prev., Stand-Down – Global Safety – June 2014, Stand-Down – Seatbelts & Hydration – August 2015, ZONAR



A QUANTA SERVICES COMPANY

Steven P. Kopp, CUSP

Sr. Safety & Environmental Representative – Utility Division

Responsibilities

- Provides oversight and directly supervises Eastern Operations Field Safety & Health Representatives
- Manages and leads employee recruitment efforts, new hire orientation, on-boarding, performance management, employee training and development, succession planning and staff development
- Works with the VP Eastern Operations, Operations Managers, Project Managers, Superintendents and Field Safety & Health Representatives to develop, implement and monitor annual comprehensive Eastern Operations Safety and DOT Compliance Plans
- Works with Operations and the Safety function to develop a detailed new hire safety orientation program
- Develops and monitors Eastern Region safety metrics and scorecards. Identifies deficiencies and takes appropriate corrective action
- Assists management in preparing safety policies and procedures; provides support in implementing these policies and procedures
- Ensures that federal, state, and local safety laws, regulations, codes, and rules are observed
- Promotes proactive and preventive safety activities by observing, analyzing, encouraging safe work behaviors and correcting unsafe conditions
- Monitors safety compliance, creating awareness and set priorities that focus on continuous safety and DOT improvement

MJE Project Experience

Safety & Health Supervisor – M. J. Electric, LLC – National Grid Contractor of Choice for New England Distribution – Framingham, MA

Sr. Safety & Environmental Representative - New Energy Alliance - National Grid Transmission Line & Substation Capital Works Delivery Services for the New England Area
National Grid - Westborough, MA

- Provide Engineering, Program Management, and Construction Services for National Grid's transmission system upgrade in Massachusetts, Rhode Island, New Hampshire, and Vermont
- The project is being executed by the New Energy Alliance (NEA), a joint venture formed by M. J. Electric, LLC and Balfour Beatty Infrastructure, Inc
- Work includes both new construction and rebuilding of high voltage transmission lines and substations

Contract With: National Grid - Westborough, MA

Contract Amount: \$700,000,000 (2009-2013)

Job No. 49000

Other Work Experience

Safety Representative (Apr. 2010-Nov. 2010 & Jun. 2006-Aug. 2007)

Hawkeye, LLC. - Hauppauge, NY

- Performed safety observation tours
- Identify hazards within the workplace
- Development of safety training programs
- Providing safety and health training for employees
- Performing safety and risk assessments for natural gas operations



A QUANTA SERVICES COMPANY

Steven P. Kopp, CUSP

Sr. Safety & Environmental Representative – Utility Division

Safety & Loss Control Consultant (July 2008-April 2010)

Consolidated Risk Management, INC. - Garden City, NY

- Perform safety and health inspections for industry and construction projects
- Produced safety and health programs for client companies
- Development and implementation of safety training programs
- Conducting loss control surveys for client insurance companies

Education

Bachelor of Science in Safety Studies

Keene State College - Keene, NH

Certifications

- C.U.S.P. Certified Utility Safety Professional (CUSP Green)
- #510 30-Hour Occupational Safety & Health Standards for the Construction Industry
- #511 30-Hour Occupational Safety & Health Standards for General Industry
- #2250 Principles of Ergonomics
- 40-Hour OSHA Hazardous Waste Operations and Emergency Response Training (with 8-Hour Refresher)
- NIOSH Guidance: Avian and Pandemic Influenza Planning & Preparedness #14-288
- National Rifle Association: NRA, Range Safety Officer
- "ICS" Incident Command System (New Hampshire Fire Academy & National Fire Academy)
- "NIMS" National Incident Management System (FEMA & Department of Homeland Security)

Safety Training

3-Way Communication – MJE, Aerial Classroom, Aerial Work Platform Complete, CSA, Distracted Driving – Quanta, DOT General State Specific, DOT Supervisor Reasonable Suspicion, Fall Protection, Forklift Complete, Harassment Awareness, HAZCOM, HAZWOPER 8-Hr, Hydraulic Mobile Crane & Book Truck Operator Certificate, Ladder Safety, Materials of Trade, Medic – Adult CPR – FA – AED – BBP, MJE General Safety Guide – Craftworker Book, NEA – EHA (Electrical Hazard Awareness), NEW – SWAI (Substation Work Area ID), OSHA 20-Hr Train-the-Trainer, OSHA 500, OSHA ET&D 10-Hr, OSHA ET&D 20-Hr, QPM – Leadership in Performance and Safety, Qualified Rigger – Quanta, Qualified Rigger Train-the-Trainer, Qualified Signal Person – Quanta, Qualified Signal Person Train-the-Trainer, Quanta Foreman 4-Hr, Quanta Safety Code of Conduct, Stand-Down – Aerial Lift/Fall Protection & Prevention – May 2014, ZONAR



Responsibilities

- Monitor project costs against budget and create cost forecasts
- Develop and present early warnings and change orders to the client
- Review and approval of project invoices
- Develop and present monthly project status reports to upper management
- Chair regular construction meetings with project team and client
- Regularly attend morning safety briefings and review employee STAC cards
- Control documents and drawings that are issued to the field
- Develop as-built drawings for submission to the client
- Issue subcontractor RFQ's, review bids, let subcontracts and manage change orders
- Update Primavera project schedules
- Track and ensure that project milestones are achieved

MJE Project Experience

Project Manager – Aldridge NGRID Tewksbury-Wakefield 115 kV Project – Bridgewater, MA National Grid – Syracuse, NY

- (2) 115 kV wood Hframe structure replacement job under outage conditions in an environmentally sensitive area

Contract With: Aldridge Electric – Libertyville, IL

Contract Amount: \$133,000

Job No. 70054900

Project Manager – Eversource CT Storm Hardening – Windsor, CT Eversource Energy – Hartford, CT

- Construction included a 345 kV barehand (3) pole structure change out, replaced angled structures and re-connected the existing conductor and fiber. Changed wood (3) pole angled structures to a steel equivalent structure, performed under energized conditions. Responsible for managing a civil contractor to install direct embed cans; the work took place in close proximity to energized lines. This portion of the job was 8 structures

Contract With: Eversource Energy – Hartford, CT

Contract Amount: \$770,000

Job No. 70000866

Project Manager – Eversource MA Storm Hardening – Wilbraham, MA Eversource Energy – Hartford, CT

- Construction included a 345 kV barehand (3) pole structure change out, replaced angled structures and re-connected the existing conductor and fiber. Changed wood (3) pole angled structures to a steel equivalent structure, performed under energized conditions. Responsible for managing a civil contractor to install direct embed cans; the work took place in close proximity to energized lines. This portion of the job was 14 structures

Contract With: Eversource Energy – Hartford, CT

Contract Amount: \$2,000,000

Job No. 70047500

Project Manager – G-185S 115KV Transmission Reconductoring Project – Warwick, RI National Grid – Waltham, MA

- Reconductoring of the G185S 115 kV line from Kent County #22 Substation to the Davisville Tap line. MJE replaced 5.3 circuit miles of 795 kcmil ACSR conductor with 954 kcmil ACSS conductor

Contract With: National Grid – Waltham, MA

Contract Amount: \$3,900,000

Job No. 70047500



Project Manager – E20, G18/F19, G18/C2, S1 Shieldwire Replacement Project – Bridgewater, MA National Grid – Waltham, MA

- Replacement of existing, deteriorating shieldwire with 48-fiber OPGW and 3/8" EHS on the E20 (8.5 miles), G18/F19 (7 miles), G18/C2 (0.5 miles) and S1 (4 miles) circuits in West Bridgewater, Bridgewater, Brockton and Whitman, MA.

Contract With: National Grid – Waltham, MA

Contract Amount: \$4,000,000

Job No. 70050400

Testing & Commissioning Manager

Kent County Substation Project – Warwick, RI

Drumrock Substation Project – Warwick, RI

Carpenter Hill Substation Project – Charlton, MA

Bellows Falls Substation Project – Bellows Falls, VT

Berry Street Substation Project – Plainville, MA

Auburn Street Substation Project – Whitman, MA

National Grid – Waltham, MA

- Coordinate/manage all testing and commissioning activities at active utility substation during ongoing revitalization project
- Develop subcontractor RFP packages based on NGRID SMP testing and commissioning requirements
- Review and distribute test data results to NGRID Construction, PTO and O&M Services

Contract With: National Grid – Waltham, MA

Testing & Commissioning Manager / Construction Manager

Monroe Substation Project – Monroe, NH

Comerford 230kV Substation Project – Monroe, NH

National Grid – Waltham, MA

- Supervise and install primary & secondary electrical work, perform schematic and point to point circuit verifications; Develop/review Outage plans with Project Team
- Review contingency planning with site supervision and NGRID Construction in the event of weather delays or other coordination issues that may impact Outage durations
- Coordinate wiring checks with NGRID PTO for protection verification
- Coordinate/manage all testing and commissioning activities at active utility substation during ongoing revitalization project
- Develop subcontractor RFP packages based on NGRID SMP testing and commissioning requirements
- Review and distribute test data results to NGRID Construction, PTO and O&M Services

Contract With: National Grid – Waltham, MA

Other Experience

Commissioning Specialist – Fluor WRB Core Project – Roxana, IL (2008-2009)

- Turnover Coordinator Lead for the Main and North Units on Wood River Refinery CORE Project
- Responsible for the Turnover of Mechanically Complete Systems to the Client; Implementing Deviations in addition to Understanding the Specifications, Punch-List Origination and Verification as well as completing the sign off of Mechanical Completion prior to systems being released back into service
- Scoping Systems on P&ID drawings for System Boundary Limits and Classifications; Develop System Turnover and Tie-in Packages
- Communicate directly with Site Contractor Management and Conoco Phillips Pre-Operate Team throughout the Turnover Process Including Transfer of Care, Custody and Control



Associate Engineer – Cheniere Energy Spilling Cameron (2006-2008)

- Oversee EPC Contractor daily work routines working under owner lead engineer; primarily regarding Mechanical, Piping and Static Equipment. Installation of Centrifugal Blowers, Compressor Drivers for Generators, Reciprocating Gas Compressors, Submerged Combustion Vaporizers and Vertical Multistage Cryogenic LNG Pumps
- Attend Factory Acceptance & Performance Testing with Contractor at Vendor locations
- Review Construction Drawings, P&IDs, Installation and Operation Manuals, Data Sheets, Isometrics and Raw Test Data related to Machinery Testing
- Counterpart to Contractor Startup Team Mechanical Lead during Cool Down and Commissioning of the SPLNG Facility; Oversaw Activities regarding Initial Mechanical Equipment Start under owner mechanical lead
- Worked with Engineering and Project Team to Implement Lessons Learned and Advise on Execution and Construction of SPLNG Phase 2
- 2008 Hurricane IKE Response and Assessment Team for SPLNG Phase 2 Site and Construction Activities

Field/Project Engineer Intern – Suez LNG Distrigas – Everett, MA (2003-2005)

- Developed Structured Planning and Documentation of Schematics, Job Specifications, and Proposals for Cold Insulation Replacement Project
- Worked with Capital Projects Team in the Tank to Tower Connection Project; responsible for Site Inspections and Supervision of Small Technical Projects
- Reviewed working construction plans, shop drawings and P&ID documents with Electrical and Mechanical Contractors for facility upgrades and design changes

Grade Foreman – Alvin J. Coleman & Son, Inc. – Conway, NH (2002)

- Supervised Roadway Construction and Grading on US Route 302 Projects in Twin Mountain, NH
- Designed and revised the layout of Culvert Installation, along with Roadway Sub-Base Construction
- Responsible for Laser Level & Transit Operation for Trench & Super Elevation Grading
- Ability to read Construction Plans and Shop Drawings

Utility Operator - Suez Energy Pine tree Power - Bethlehem, NH (1999-2004)

- Supported Annual Plant Outages; 1999- 2004. During the Outages worked on Boiler Repairs, replacement of Turbine Parts, Feed-Water Pumps, and Fossil Fuel Handling Systems

Education

B.S. Electromechanical Engineering - Wentworth Institute of Technology - Boston, MA 2006

Safety Training

Aerial Work Platform Complete, CSA, Distracted Driving-Quanta, DOT Supervision Reasonable Suspicion, Dr. Jill – Save Your Spine, Harassment Awareness, HAZCOM GHS, MJE General Safety Guidebook for Craft Workers, OSHA ET&D 10-HR, OSHA ET&D 20-HR, Quanta Foreman 4-Hr, Quanta Safety Code of Conduct, Stand Down Aerial Lift/Fall Protection and Prevention, Storm Work, Trenching-Excavating Awareness, Trenching-Excavating Competent Person, ZONAR