Construction Services Providers
Approach to QA/QC
October 3, 2012
Today’s Presenters & Agenda

Anthony Bond
Director - Civil & Utility Division, CT
Topics:
- About BOND
- Core Work & Capabilities
- Clients
- Geographic Reach

Sean McAuliffe
Director of Operations - Civil & Utility Division, CT
Topics:
- QA / QC Project Process

Steven Massey
Director of Safety - MA & CT Offices
Topics:
- BOND’s Company Safety Standards

Edward Azzari
Superintendent
Topics:
- QA / QC Project Process
Construction Services Providers Approach to QA/QC

BOND's Office Locations

Everett, MA Office
New Haven, CT Office

BOND

Agenda

- BOND History & Clients
- Development of BOND’s QMS
- Field Management
About **BOND**

- **105th Business Year**
- **Fourth generation leadership**
- **Total staff: 300+**
- **Operating throughout Northeast**
- **Range of sizes of projects**
  - <$100,000 to >$250M+
- **Insurance**
  - **Auto / WC / QL**
  - **Excess $25M / $50M**
  - **Pollution / Professional**
- **Bonding capacity**
  - **Single $500-million / Total $1-billion**
Gas Clients

- Spectra Energy
  New England, NY, NJ, PA
- National Grid Gas
- El Paso Pipeline, NY, NJ
- Iroquois Gas, CT, NJ
- Yankee Gas, Pipeline
- Columbia Gas Transmission
Safety
Safety Today

- Core Value
- Daily Focus
- Clear Communications
- Employee Involvement
- Employee Accountability
- Don’t Walk By
- Safety Committee
Focusing on Today

Our safety program is built around focusing on today’s work.

Hazards of today:

- Appropriate Steps
- Equipment and Materials
- Emergency Response
- For Shift work the process needs to take place whenever new employees come on the job
Construction Services Providers Approach to QA/QC

Job Hazard Analysis and Pre-Task Planning

- **JHA:** outlines an activity or procedure throughout its entire operation and potential risk factors and mitigation tools.

- **PTP:** daily checklist of the activities to be performed that day and is intended to review only the steps of the JHA performed that day.

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**BOND**

- **Pre-Task Analysis (PTA):**
  - **Supervisor:**
    - **Company Name:**
    - **Job Name:**
    - **Task Description:**
  - **Procedures/Programs Required**
    - **Hot Work**
    - **Trenching/Excavating**
    - **Confined Spaces**
    - **Crane/Critical Lift**
    - **Line Breaking**
    - **Hot Tapping**
    - **FFI:**
  - **Personal Protective Equipment Required**
    - **Fall Protection**
    - **Eye/Wear**
    - **Respirator**
    - **Foot Protection**
    - **Hard Hat Protection**
    - **Clothing**
  - List all hazards associated with this task:
  - **Involved Crew Members:**
    - **Name**
    - **Signature**
  - **Supervisor’s Signature**
  - **Supervision’s Signature**

- **General Information**
  - **Was the Safety Department involved in the planning of this job?**
  - **Have the weather conditions been considered for this task?**
  - **Has anyone been trained on the activity?**
  - **Are flammable/combustible materials stored, separated, inspected, and secured per procedure?**
  - **Have any hazards been identified that require fall protection systems? (i.e., barricades, static lines, hole covers, etc.)**
  - **Are fall protection systems installed?**
  - **Are housekeeping practices in place?**
  - **Safety Department/Supervisor Review:**
    - **Date:**
    - **Initials:**

- **Dig Safe #**
  - **Exp Date #**
  - **Trench Inspection Performed:**
    - **Yes**
    - **No**
  - **N/A**
  - **Temperature:**
Vela Systems/Autodesk Field Management

- Tracks both positive and at risk behaviors.
- Analyze behaviors for root causes.
- Keeps running statistics on the project.
- Assists in the subcontractor/vendor selection process.

“Everyone has a safety program but not everyone has a quality management system.” - Steve Massey
<table>
<thead>
<tr>
<th>No.</th>
<th>Checkpoint</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Identify all known project &quot;pit falls&quot;, and communicate these &quot;pit falls&quot; to all workers on site.</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>12</td>
<td>Inspect all supports of excavation on a daily basis.</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>13</td>
<td>Inspect all equipment being used on site for conformance to safety requirements.</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>14</td>
<td>Inspect all pipe (and materials) delivered to the job site for cleanliness.</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>15</td>
<td>All pipe ends have been covered at completion of work day.</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>16</td>
<td>Inspect pipe at beginning of each work shift after end caps have been removed, to ensure cleanliness of pipe during installation operations.</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>17</td>
<td>Ensure proper lock out / tag out has been performed prior to commencing of welding on existing piping system.</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Quality Management System

- Corporate Manual & Policies
- Project Specific Quality Manual / Project Quality Plan
- VELA Systems / Autodesk Field Management
- Lessons Learned / Trends / Best Practices
- BOND Bulletin (Intranet)
- Company Wide Training
- QA/QC Committee
- QUALITY INDIVIDUALS
Construction Services Providers Approach to QA/QC

- Distribution & Service
- Pipelines
- Interstate Transmission Lines
- Lateral Pipelines
- City Gate (support work)
- Power Generation Facilities
- LNG Facilities (support work)
- BOND Work
- Compressor Station (upgrades to date)
- Anomaly/Maintenance Work
- Meter Stations
- Launcher / Receiver
- Residential Distribution (Others)
- Processing Plant Gathering Lines

BOND
Stages of Quality Control

• Pre-Job Planning

• Track & Report

• Owner Documentation

• Punch List

• Project Turnover

• Internal Review
Stages of Quality Control

Pre-Job Planning

- Strategy for success
- Identify responsibilities
- Specifications
- Schedule
Launcher / Receivers

- Excavation
- Shoring
- Welding
- Concrete
- Restoration
Stages of Quality Control

Pre-Job Planning

- Strategy for success
- Identify responsibilities
- Specifications
- Schedule

Track & Report

- VELA / Field Management
- Progress updates
Direct Assessment Digs
Stages of Quality Control

Pre-Job Planning
- Strategy for success
- Identify responsibilities
- Specifications
- Schedule

Track & Report
- VELA / Field Management
- Progress updates

Owner Documentation
- Conformance reports
- Weekly updates
Pressure Testing
Construction Services Providers Approach to QA/QC

Stages of Quality Control

Pre-Job Planning
- Strategy for Success
- Identify Responsibilities
- Specifications
- Schedule

Track & Report
- VELA / Field Management
- Progress Updates

Owner Documentation
- Conformance Reports
- Weekly Updates

Punch List
- Quality Assurance
- Project Compliance
- Owner Acceptance
Meter Station
Stages of Quality Control

Pre-Job Planning
- Strategy for success
- Identify responsibilities
- Specifications
- Schedule

Track & Report
- VELA / Field Management
- Progress updates

Owner Documentation
- Conformance reports
- Weekly updates

Punch List
- Quality assurance
- Project compliance
- Owner acceptance

Project Turnover
- Data book
- Project records
As-Built Conditions
Stages of Quality Control

Pre-Job Planning
- Strategy for Success
- Identify Responsibilities
- Specifications
- Schedule

Track & Report
- VELA / Field Management
- Progress Updates

Owner Documentation
- Conformance Reports
- Weekly Updates

Punch List
- Quality Assurance
- Project Compliance
- Owner Acceptance

Project Turnover
- Data Book
- Project Records

Internal Review
- Lessons Learned / Trends
- Best Practices
Construction Services Providers Approach to QA/QC

Questions & Answers

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