CHAPTER 1

AUTHORITY AND RESPONSIBILITY OF THE QUALITY CONTROL COMPLIANCE SPECIALIST (QCCS)

The ODOT QCCS position was created as part of the Quality Assurance (QA) Program, and each Project Manager's (PM) office has a person in this position to manage the QA Program as it applies to all of the construction contracts administered in their office. Due to a variety of factors (including office size, work load, experience of office staff, etc) each PM office has assigned slightly different duties to the QCCS, in addition to managing the QA Program.

This guideline is put together to provide information to all QCCSs, regardless of whether they are responsible for field tested material only, for the quality of all materials (field tested and non-field-tested), or they have some combination of these and other duties as well. No two offices are organized exactly the same, and there is no intent to say one model works better than another does.

The QCCS is responsible for ensuring incorporated materials on construction projects are in compliance with the plans and specifications.

Roles, Responsibilities, and Authority of the QCCS

The Roles and Responsibilities of the QCCS may be accomplished by one or more persons who are trained and certified according to ODOT's Quality Assurance Program. Certification in Aggregate (CAgT), Embankment (CEBT), Density (CDT), Asphalt (CAT I) and Concrete (QCT) are required of the person(s) fulfilling this role on ODOT and Federally Funded Local Agency projects for all roles and responsibilities shown in this Chapter as requiring certification. Additional Roles and Responsibilities are identified as not requiring these specific certifications and may be accomplished using un-certified staff based upon the needs of the specific project office.

Refer to Section 00150.02, which specifies the authority and duties of an Inspector. They are also discussed in the Responsibilities of Project Manager Section (9) of the ODOT Construction Manual. These duties are pertinent for the QCCS.

The QCCS is the representative of the PM, for matters related to materials. The QCCS may have a variety of duties, responsibilities, and authority, including:

- Those specified in 00150.02
- Those specified in the Manual of Field Test Procedures (MFTP).
- Those discussed in the Construction Manual.
- Those discussed in the Inspector's Manual.
- Those specifically assigned by the PM.

Generally, the duties, responsibilities, and certification requirements of the QCCS include:

- Assuring that material(s) to be incorporated in the work meets contract requirements and the Contractor has properly performed all required testing. Additionally, assuring that ODOT has inspected material at manufacturer facilities and has performed verification testing as needed.

  Require Technician certification

  - Review QC and QA test reports
  - Investigate and resolve verification and Independent Assurance test result differences. Document on appropriate forms.

  Do not require Technician certification

  - Set up, organize, and update Field Tested Materials Summary (B Summary)
  - Coordinate with the Region QAC for Verification and Independent Assurance testing
  - Verify the certification of quality control technicians and laboratories
  - Receive and submit product compliance samples to the materials laboratory
  - Receive and submit HMAC and PCC mix designs for approval

- Assuring, by visual observation, that material testing and processing of materials is being performed according to the contract.

  Require Technician certification

  - Observe testing of field tested materials
  - Perform a minimum of 1 daily production report (Forms 2401 & 2043) for HMAC per project
  - Witness Concrete trial batches

  Do not require Technician certification

  - Assure appropriate testing is completed
  - Review Quality Control plan
  - Visually accept quality for certain types of aggregate such as stone embankment

- Assuring that the Contractor performs its work as required by contract and the work is producing a product with the qualities required by contract.

  Require Technician certification

- Monitor field tested materials during construction operations
- Verify daily HMAC plant recordation as required by MFTP

Do not require Technician certification

- Create and report the statistical analysis (StatSpec) for HMAC
- Calculate bonus payment for HMAC related items
- Assure appropriate testing is completed
- Witness calibration of profilograph equipment and smoothness testing
- Review statistical analysis (StatSpec) quality control during aggregate production

- Acting as the representative, of the PM for material related items, in communication with the Contractor, the public, or other interested parties. This involves responding to questions or concerns from the Contractor and others.

  Do not require Technician certification

  - Be the primary point of contact for quality control technicians
  - Organize and schedule Project QA meeting. Discuss expectations and requirements, before a work process starts, to verify that the Contractor understands the contract requirements for the work process as well as other expectations.
  - Notify QC and QA technicians in regards to the disposal of back up samples
  - Assist with RAS reviews of project folders; correct deficiencies in the DRR
  - Review changes to the MFTP
  - Review project plans and specifications during project development

- Recording information about the project and its happenings in the Project Diary, Daily Progress Report, or other appropriate document as approved by your PM.

The QCCS must utilize good communication skills in order to:

- Develop and maintain a good working relationship with the Contractor.
- Assure that the Contractor plans to, and actually utilizes and incorporates, acceptable quality of materials, processes, and workmanship in the project work.
- Convey project concerns to the PM, Project Coordinator and to the Project Inspector.

In relations with the Contractor, the QCCS must:

- Inspect work as needed and required by being aware of the project schedule, discussing the planned work with the Contractor, and openly communicating with the Contractor.
- Utilize good communication skills in order to develop and maintain a good working relationship.
- Discuss expectations and requirements, before a work process starts, to verify that the Contractor understands the contract requirements for the work process as well as other expectations.
- Act in a courteous, but firm, manner.
- Not assume responsibility for the Contractor's operations, even though ODOT may be directing the work of the Contractor when it is performing force account work or some emergency work.
- Not operate or adjust the Contractor's equipment.
- Communicate only through the Contractor's appointed representative.
- Assure that all communications are productive and will result in timely responses and actions.
- Respond in a timely manner to all requests, commitments, and needs.

The QCCS must be able to read and understand contract documents, including plans and specifications. If assistance is needed, contact the PM for questions on contract documents, interpretations or administration of the contract requirements.

The QCCS must properly record information to document quality of materials. Strive to use proper grammar and correct spelling in all communications and writing.

If and when the QCCS has a question about contract documents or contract administration or about recording information, seek assistance from the PM. If the QCCS feels that the working relationship on the project has deteriorated, involve the PM to resolve or improve the situation.

If, at any time during the project, the Contractor is not performing the work as required by contract, the QCCS must take the necessary action, including suspending the work, to have the Contractor correct its operation. The QCCS **must** involve the Project Manager, Project Coordinator and the Project Inspector in these matters.

Familiarity with Project and Contract Documents and Requirements

The QCCS must become familiar with many documents for the project. Those include, but are not limited to:

- Project plans.
- Project special provisions and supplemental standard specifications.
- Standard specifications that relate to the project.
- Changes to the contract documents, including plans and specifications.
- Manual of Field Test Procedures.

(The above mentioned items comprise the “contract” for the project).

Become familiar with all contract requirements before any project work starts, preferably prior to the pre-construction conference. The contract requirements include restrictions needed to protect the environment, as well as restrictions specified by statute, law, or ordinance. If you have questions or need assistance, ask the PM.

It is also very helpful to discuss, with the Contractor’s Quality Control Supervisor, the work of each pay item or contract operation, just before work starts on that item or operation, to assure that the Contractor:

- Is familiar with the contract requirements for the item or operation.
- Performs the required testing and/or provides proper quality documents for materials.
- Properly weighs delivered materials, if needed.

Communications With The Contractor

It is extremely important that ODOT or the representing entity and the Contractor develop and maintain a good working relationship on each project. A key element of a good working relationship is that the parties must maintain good, effective communication.

The QCCS has a key role in maintaining good, effective communication and a good working relationship with the Contractor to ensure a successful project.

When communicating with the Contractor, assure that you are communicating with the correct person. Also, determine whether written communication is needed to document an issue or to assure that the other party has the same understanding. If undecided about whether an issue needs to be documented in writing, document it in writing with copies to appropriate persons.

Also, for verbal communications:

- If you are requested to do something, verify that you understand what is requested, that you know the timeframe needed to respond, and that you respond in a timely manner.
- If you are requesting someone to do something, verify that the other person knows and understands what you expect them to do, including the timeframe for response.
- Ask questions, paraphrase responses, or use other processes to assure that both parties understand the communication, needs, and timeframes for response. It is often helpful to courteously remind the responsible party of an upcoming response timeline.

For written communications to the Contractor or others, assure that:

- If needed, the communication was discussed with persons of the proper authority before the communication was sent to the Contractor.
- The communication is timely.
- The communication is understandable, is easy to read, and uses correct spelling, grammar, and punctuation.
- Communication to the Contractor is addressed to the field office of the Contractor with a copy to its home office.
- Copies of the communication are sent to others, including other agencies or persons and others in ODOT, as appropriate.
- The ODOT person of proper authority has signed the document.

Respond in a timely manner to all requests, commitments, or needs. "Timely" is described as:

- The timeframe specified in the contract or statute.
- The timeframe agreed to by the parties making and receiving the request.
- If, by chance, no timeframe meets those circumstances, the timeframe needed for a response in order to allow affected work or processes to occur without delay.

If the QCCS feels that project communication or the working relationship is deteriorating and the QCCS cannot resurrect good, effective project communication, the QCCS must ask the PM to assist or take actions necessary to restore good, effective communication and working relationship. That may involve discussions with the Contractor's Superintendent or its home office personnel and may involve the Area Manager or others.

Key discussions should be recorded in a project diary or daily report. Confirm agreements or verbal direction with a written memo when helpful or needed. Seek the guidance and advice of the PM on questions. Keep the PM appraised of project progress and happenings.

Daily Reports

Working with multiple projects, talking daily with many different people, juggling priorities during construction season, makes it imperative that you have some means of recording your activities.

It will be up to your PM whether you, as a QCCS, need to fill out daily reports of one kind or another when you visit projects in the field. There are a number of ways to keep track of significant occurrences that you are involved with when you visit a project. Filling out General Dailies, keeping a project diary, a personal diary, or even writing memos to the file can do this.

Dailies have the advantage of being a tool to inform the PM and others in the office of what occurred on the project because they are routed to others on a daily basis. But they are time consuming to fill out, and designed for the inspector who is there daily. One way, is to only fill out the first three lines at the top of the form and the section under remarks and the last line of the report. This way none of your information will conflict with the Inspectors about weather, personal, location, etc.

Project Diaries

Project diaries are much quicker to make a note in – but you also must somehow keep your PM informed. A project diary for large projects that have a significant amount of QA work can be a big help. Entries would be made only as necessary, but when looking for notes you made regarding that project, they will be easy to find. The amount of interaction you will have on a large project with testers, contractor supervisors, the ODOT QA group, and your own project inspectors will warrant repeated notes. This is also a good spot to record what samples were taken and when they were turned in, or shipped, to the central lab.

An alternative to filling out dailies or project diaries is keeping a personal diary. A few notes at the end of the day, or periodically throughout the day, if convenient, is an easy routine to establish. Projects visited, purpose of visit (if other than routine), significant conversations, materials rejected, resolution of problems, etc, all need to be noted relative to field work. In the office you should similarly note the projects being worked on; phone calls made or received, resolution of problems, etc. Important directions from your PM should also be recorded.

The importance of recording significant events you are involved with during the project is that those records are used to resolve disputes and claims brought by the contractor. Claims usually hinge on our ability to recreate the events surrounding the dispute. The lack of improper documentation results in ODOT paying out significant sums of money because we couldn't adequately support our side of the story. As QCCS you play an important role on the project. It is better to start by erring on the side of documenting too much, than to document too little, and get caught having to say, "I don't remember" at a critical time. Regardless of how you keep your records, keep the entries to the point and professional, all reports you generate are or can be made public record.

The Daily Reports/Diaries section (12-A) of the Construction Manual discusses daily reports. The QCCS should use some of the same methods as inspectors to record materials information.

Some points to remember:

- Complete reports daily if required.
- When appropriate, record information in the project diary.
- Assure that others are completing reports, as required.
- Strive to use proper grammar, spelling, and punctuation in those reports, as well as all other writings.

Project Schedule

As required by Section 00180.41 of the contract and as discussed in the Before On-Site Work Can Begin section (11) of the Construction Manual, the Contractor must submit a project schedule that meets the requirements of the contract and reflects the Contractor's plans for the project work.

The QCCS must be knowledgeable about the project schedule so the QCCS may:

- Plan work needed by the Project Manager's office.
- Schedule Region Staff for Verification Tests.

The QCCS must apprise the PM of any delays to the project and record necessary information that is needed to analyze those delays.

Pre-Work Conferences

The contract requires key personnel of the PM and Contractor to meet prior to some specified operations, including production of aggregates, paving, or bridge deck placement. The QCCS **should** be involved in those conferences. (See Chapter 3 for details)

Quality of Materials and Work

Refer to the Quality section (12-B) of the Construction Manual, Section 00165 of the contract, and the Quality Assurance Program in the Manual of Field Test Procedures, (MFTP). Also refer to the requirements for materials and workmanship that are included in the specification for each work item.

All material and workmanship that the Contractor incorporates into the project must comply with applicable contract requirements, except as allowed under Section 00150.25.

The Contractor must perform testing and/or provide quality documentation as required.

That information is specified in one or more of the following:

- Supplemental or Standard Specifications or Special Provisions for the particular work item.
- The Manual of Field Test Procedures.
- The Non-Field Tested Materials Acceptance Guide.
- The “Blue” and “Green” sheets for traffic signals and other electrical work also help to identify the quality requirements for those items.
- Contract Change Orders for the particular work item.

For field-tested materials, refer to the QA Program included in the MFTP. Under the QA Program:

- The Contractor:
    - ♦ Must utilize certified testing technicians and laboratories to test materials and processes, and to perform other quality control processes, to assure that the materials, processes, and the resulting products comply with contract requirements.
    - ♦ Must perform, and is fully responsible for, all quality control needed to assure that its materials and processes will provide a final product that complies with contract requirements.

To do this:

- The Contractor's supervisor, workers, and testing technician must develop a work process; including required quality control testing that will produce the specified product. This is the responsibility of the contractor.
- The Contractor's testing technician must perform testing, early in the process, to determine and assure that the process will produce a product that meets contract requirements.
- If the product does not meet contract requirements, the supervisor, workers, and testing technician must modify the work process, do further quality control testing, and re-process or remove the earlier work until the process produces an acceptable product. The Inspector, the QCCS, or a member of the Region QA Team may be involved.
- As the work progresses, the supervisor, workers, and testing technician perform other visual observation or testing, in addition to the minimum required by contract, to assure that an acceptable product is being produced. If any party detects unacceptable process or results, the Contractor must modify and correct the process and product.

ODOT or the contracting representative (normally just the QCCS, but may also involve the PM and members of the Region QA Team):

- May be involved with the Contractor in defining its original work process and quality control measures.
- Reviews (inspects) the work process and resulting product to verify that an acceptable product is being produced.
- Reviews the quality control testing and the test results and product to assure compliance with requirements; if any defects or errors are found, requires the Contractor to correct them and the affected product; returns incomplete or incorrect worksheets to the Quality Control manager or the technician.
- Reserves the right at any time. To request samples of the materials or products to verify that the Contractor's test results represent the material, process, or product and that the material and the resulting product comply with contract requirements. *The QCCS should assure that the Region QA team performs a verification test early in the work process to check the validity of the Contractor's testing and work.*

If the Contractor has supplied or incorporated material that does not conform to contract requirements, but that ODOT has determined to be acceptable to remain in place, refer to the Quality Price Adjustments section of this handbook (Chapter 5) and section 12-C of the Construction Manual. Some items require ODOT or the contracting representative to pay a bonus payment for material or work that consistently meets or exceeds the contract requirements.

The requirements for quality of the material and final product, (including workmanship) are specified in the specification for each work item. The Contractor may be responsible to perform testing or other verification to show quality of work. The

Inspector must assure that the Contractor performs the testing or verification and that the work quality conforms to contract requirements.

The QCCS must:

- Assure that the Contractor's testing processes and results are acceptable by proper paperwork reviews and direct visual observations.
- Assure that ODOT's QA staff performs verification and Independent Assurance testing as required including a verification test early in the work process to help assure that the process is appropriate.
- If unacceptable material is delivered to the project, notify the Contractor that it is unacceptable.
- Assure that the submitted quality documentation fulfills contract requirements.
- Inspect the material, either visually or by other appropriate methods, to detect damage or contamination and assure that the material is acceptable for use.
- Verify that the quality of the material and work product meets contract requirements. If the quality is not acceptable, require the Contractor to modify its processes such that the product meets contract requirements and require the Contractor to repair deficient work or remove and replace it. Involve the PM.
- Identify areas of deficient work or material. Work with the Project Inspector, Project Coordinator and PM to determine whether the work or material must be removed and replaced or whether it may remain with an adjustment in price. Assist the PM by calculating the adjustment in price.
- Identify work or material that is eligible for a bonus payment, calculate the bonus payment, and notify the PM.

Material Sources

Refer to the Sources of Materials section (22) of the Construction Manual and Section 4A of the MFTP.

The QCCS with Inspector assistance as appropriate must:

- If the Contractor will use a prospective source, assure that the PM or Project staff notifies the Region Geologist of the planned use.
- Assure that Product Compliance testing is current, or that a new sample is tested at the ODOT Central Materials Lab, and that the test results indicate that the source is acceptable for use.
- For manufacture of steel or other fabricated material, assure that the material will be inspected at the fabrication site.
- Assure that the testing is being properly performed, that the test results are acceptable, and that verification testing will also be performed by ODOT.
- If there is any indication that material does not meet contract requirements, take necessary action to assure that corrective action occurs. Involve the PM.

Quantities of Materials to Be Produced

Refer to the Quantities of Materials to Be Produced section (23) of the Construction Manual.

The QCCS may be asked to assist the Inspector to:

- Before production starts, calculate and check the quantities needed to perform the project work. The Contractor should also be checking quantities before it starts production and comparing its calculations with those of ODOT or the contracting representative. Work with the PM and Contractor to resolve any disagreements on the needed quantities.
- Assure that the qualities of the produced materials are acceptable.
- If the Contractor requests payment for material on hand, assure that quantities are measured and calculated and paid on the Progress Estimate. The Inspector may also be involved in calculating the cost to be paid for the material. Also refer to the Materials Stored or On Hand section (12-F) of the Construction Manual.
- If material is left over after contract work is complete and the Contractor requests payment for it, refer to the Materials Left Over or Produced for a Third Party section (33) of the Construction Manual.

Quantities of Work Performed (includes both Progress Estimate and Final)

Refer to the Quantities section (12-D) of the Construction Manual.

The QCCS must work with the Inspector to assure:

- All required quality documentation is provided before material is incorporated into the project.
- Check, or assist in checking, Source Documents that have been prepared by others.

Disagreements

Refer to Section 00199 of the contract and the Disagreements, Disputes, and Claims section (27) of the Construction Manual.

The QCCS, as well as keeping the PM informed, must:

- Be aware of issues or concerns that could result in disagreements.
- When the Contractor raises new issues or concerns, address the issues or concerns.
- Attempt to resolve the Contractor's issues or concerns, within the authority and capability of the Inspector.
- Seek advice and guidance from the PM, as needed, to try to resolve the disagreement.

If the disagreement is not resolved immediately between the Inspector and Contractor, work with the PM to:

- If work involving the disagreement is progressing, record resources and information about the work under disagreement, while the parties attempt to resolve the issue.
- If needed, request further information from the Contractor to be better able to understand the disagreement.
- Perform needed analysis of the disagreement.

Resolve all issues as soon as possible.

Safety

This is discussed in the Safety section (17) of the Construction Manual.

Refer to the Construction Manual for actions to assure that the project area is safe for workers, ODOT or contract representatives and other project employees, and the public.

The QCCS and others may be exposed to a degree of risk by being in close proximity to particular materials as they are delivered, used, constructed, removed, etc. Before becoming exposed to new or unfamiliar materials:

- Seek input from the Contractor.
- Review the Material Safety Data Sheet (MSDS) for the material, as appropriate.
- Request guidance and advice from the PM.
- Check your safety program's Hazard Assessment Worksheets for Personal Protective Equipment Policy.
- Seek other information to determine potential hazards and if protective clothing or other devices are needed.

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