

Volume I Section 5.6 QUALITY CONTROL PROGRAM

5.6.1 PURPOSE

This document describes activities for personnel who are involved with the Florida Department of Transportation (Department) Quality Control (QC) Program, which establishes QC and process control standards for production and construction operations. The QC Program requires producers and contractors to have an accepted QC plan; and may also require an accreditation or certification to ensure compliance with industry standards.

Other requirements to administer the Producer QC Program for certain materials may be described in other sections of the *Materials Manual*, in addition to the requirements in this section.

Requirements for administering the Contractor QC Program are described in the *Construction Project Administration Manual Section 3.3*.

5.6.2 AUTHORITY

Sections 20.23(4)(a) and 334.048(3) Florida Statutes

5.6.3 SCOPE

The primary offices affected by this procedure include the State Materials Office (SMO), State Construction Office (SCO), District Construction Offices (DCO), District Materials and Research Offices (DMRO) and Resident Construction Offices/Operations Centers.

5.6.4 REFERENCES

Code Of Federal Regulations (CFR), Federal-Aid Policy Guide (FAPG), Subchapter G - Engineering and Traffic Operations, Part 637 - Construction Inspection and Approval, Subpart B - Quality Assurance Procedures for Construction

5.6.5 DISTRICT MATERIALS OFFICE RESPONSIBILITIES

The DMRO manage the acceptance of Producer QC Plans for hot mix asphalt, structural concrete, precast prestressed concrete products, incidental precast concrete products, precast concrete drainage structures and box culverts, precast concrete pipe.

The DMRO is responsible for uploading the latest accepted Producer QC Plans and addendums and updating the status of these QC Plans in the Production Facilities section of the Materials Acceptance and Certification system (MAC). The DMRO reviews QC Plans for facilities located within their District, accepting or rejecting each proposed QC Plan based upon the criteria listed in the *Specifications* for the facility type. QC Plans uploaded into MAC are

automatically maintained in the FDOT Electronic Document Management System (EDMS).

5.6.6 STATE MATERIALS OFFICE RESPONSIBILITIES

The SMO manages the acceptance of Producer QC Plans for cementitious materials, structural steel, miscellaneous metals, timber, flexible pipe, fiber reinforced polymer (FRP) products, and liquid asphalts. The SMO technical units review the proposed QC Plan and accept or reject the plans based upon the criteria listed in the **Specifications** for the facility type. The SMO technical units upload the accepted QC Plans to the MAC production facility.

5.6.7 ACCEPTANCE OF PRODUCER'S QC PLAN

When a Producer QC Plan is received for a new facility that has never been entered into MAC, an entry should be added for the new facility and should be numbered in accordance with **Table 5.6-1**.

NOTE: See **Appendix A** for the Producer QC Acceptance Process flowchart.

Table 5.6-1 Facility Numbering Criteria					
Material	MAC Material Type	Prefix	1 st numbers	2 nd numbers (if applicable)	Example
Hot Mix Asphalt	Asphalt	A	Facility Number	N/A	A0799
Structural Concrete	Structural Concrete	For in-state facilities: County Numbers (2) with dash. For out-of-state facilities: State abbreviation (2 letters) with dash	Facility Number	N/A	01-099 AL-099
Cementitious Materials	Cement	CMT no dash	Facility Number (sequential number)	N/A	CMT99
	Calcined Clay	CC no dash			CC99
	Fly Ash	FA no dash			FA99
	Ground Glass	GG no dash			GG99
	GGBF Slag	SLAG no dash			SLAG99
	Metakaolin	MK no dash			MK99
	Silica Fume	SF no dash			SF99
	Ultra Fine Fly Ash	UFFA no dash			UFFA99
Timber	Timber	T no dash	Facility Number	N/A	T099
Steel and Miscellaneous	Aluminum Light Poles, Railing or J-	AF with dash	2 letter State abbreviation	Facility	AF-FL-099

Metals	Arms		with dash	Number	
	Bridge Machinery	BM with dash			BM-FL-099
	Steel Bridges, Steel Decking, Bridge Bearings	BR with dash			BR-FL-099
	Bridge Castings, Bridge Forgings	CA with dash			CA-FL-099
	Coated Steel Fencing	FE with dash			FE-FL-099
	Hot Dip Galvanizing	GA with dash			GA-FL-099
	Guardrail	GR with dash			GR-FL-099
	Bearing Pads, Cast and Welded Drainage, Stay In-Place Forms, Modular Joints	MM with dash			MM-FL-099
	Shop Painting, Shop Metalizing	PA with dash			PA-FL-099
	Powder Coating	PC with dash			PC-FL-099
Cantilevers, Span/Truss, Toll Gantry, Monotube, Mast Arm, Strain Poles, CCTV Pole, High Mast Lighting	SS with dash	SS-FL-099			
Prestressed Concrete Products	Prestressed Concrete Products	PCP with dash (after first numbers)	Concrete Production Facility Number for concrete production facility at the Prestressed facility	N/A	PCP01-999 PCPMS-999

Precast Concrete Products	Incidental Precast Products	IPC with dash	Facility Number	NA	IPC-99
	Precast Drainage Structures	PC with dash	Facility Number	N/A	PC-99
	Precast Pipe	PI with dash	Facility Number	N/A	PI-99
Drainage Products	Metal Pipe	FPP with dash	Facility Number	N/A	FPP-99
	Plastic Pipe				
Fiber Reinforced Polymer Products	Fiber Reinforced Polymers	FRP with dash	Facility Number	N/A	FRP-99
Aggregate*	Aggregate	For in-state facilities: County Numbers (2) No dash. For out-of-state facilities: State abbreviation (2 letters) with no dash	Facility Number	N/A	01999 AL999
	Terminal	TM no dash	Facility Number	N/A	TM999
Liquid asphalt*	Asphalt Binder	LA no dash	Facility Number (3 digits)	N/A	LA999
	Asphalt Emulsions				
Ground tire rubber*	Ground Tire Rubber	RU no dash	Facility Number (3 digits)	N/A	RU999
Non-Structural concrete*	Non Structural Concrete	For in-state facilities: County Numbers (2) No dash. For out-of-state facilities: State abbreviation (2 letters) with no dash	Facility Number	N/A	01-999 AL-999

Numbering format for production facility entries is included for consistency purposes. Requirements for these materials are not part of the QC Program as defined in **FDOT Specifications Section 105. These facilities may or may not require a QC Plan and may have different production facility statuses than are described in this Section. Please refer to the specific program requirements for aggregates, liquid asphalt and ground tire rubber. Non-structural concrete plants are included in MAC for reporting purposes only and do not have specific requirements documented, they are not a material under the QC Program. Each Department group will decide if a production facility will need a facility number for each approved material type or may classify multiple material types under the same facility number.*

The QC Plan should be reviewed using the applicable checklist provided at the following link.

<https://www.fdot.gov/materials/quality/programs/qualitycontrol/checklists/index.s>

[htm](#)

Documents required to be submitted by the Producer can be found **Specification Section 105** and in the appropriate Section of the **Materials Manual**. Once the review is complete, the producer should be notified of the proposed QC Plan status within twenty-one (21) calendar days from the date of submittal. If an existing QC Plan addendum is reviewed, the producer should be notified of the revision status within fourteen (14) calendar days.

If the QC Plan is unacceptable, a list of deficiencies should be returned to the producer along with any actions expected to be taken and an anticipated time for completion. Document the process in MAC following instructions provided at the following link.

<https://www.fdot.gov/materials/mac/training/pmu.shtm>

If necessary, a production facility inspection should also be scheduled to determine if the production facility complies with the requirements of the **Specifications** and the QC Plan. If the QC Plan is acceptable, the qualification status should be changed to *Accepted* in MAC.

5.6.7.1 ROUTINE EVALUATIONS AND QC PROGRAM MAINTENANCE

Periodic evaluations of the production facility shall be performed to ensure compliance with the requirements of the **Specifications** and the QC Plan. The production facility should be inspected annually or at the frequency specified in the appropriate section of the **Materials Manual**.

The routine periodic evaluations of the production facilities can be performed either by onsite inspection of the facilities or by remote audit. The remote audit process will be administered at the discretion of the Department and is restricted to producers that have not produced for Department projects for more than a year. A remote audit shall be of sufficient scope and depth to provide evidence of compliance with the **Specifications** and the accepted QC Plan.

Contact information is updated by the production facility profile manager with the exception of non-structural concrete production facilities, which are maintained by DMRO concrete personnel.

Note: Updating the MAC database with current producer information, including status, is essential to the success of the QC Program. The information is used to generate the QC Program Key Performance Measures found in **Section 5.6.12**.

5.6.7.2 QUALIFICATION STATUS CODES FOR QCPLANS IN MAC

- A) **In Progress** = QC Plan has been received and is being reviewed by the Materials Office.
- B) **Accepted** = QC Plan has been accepted.
- C) **Suspended** = QC Plan is suspended. Choose the correct suspension criteria from the drop-down list in MAC in accordance with **FDOT Specification Section 105** to identify why the QC Plan was

suspended.

- D) **Inactive** = A facility had an accepted QC Plan but is currently inactive. This status is for production facilities that have notified the Department that they do not wish to be inspected because, until further notice, they will no longer be producing for Department projects. The inactive notification from the producer shall be submitted in writing and uploaded into MAC. The facility will notify the Department when they wish to resume inspection and may have to submit a new or revised QC Plan at that time.
- E) **Expired** = A facility has been disassembled or shut down completely. Facilities that are denoted with an "Expired" status will remain in the database for historical purpose but will not be shown on the ***Production Facility Listing***.

5.6.8 QC PLAN REVISIONS

QC Plan revisions may be proposed by the producer or requested by the Department. Upon satisfactory review the producer's QC Manager shall be advised by phone and officially notified by e-mail. If the proposed revision is unsatisfactory the Department shall provide a list of deficiencies along with any actions expected from the producer. An anticipated time frame for completion should also be included in the notification. Document the date the notification was provided in MAC as the "Information Requested Date." When the response is received, document the date the response was received in MAC as the "Information Received Date."

If the revision is due to the suspension of the QC Plan, the proposed corrective action must be reviewed. Department personnel must follow up with a certified letter addressed to the QC Manager. A copy of this letter shall also be uploaded into MAC.

5.6.9 SUSPENSION OF ACCEPTED STATUS

When an existing QC Plan is suspended, Department personnel shall notify the producer of a suspension status within one (1) working day of the decision.

If the notification to the producer is made by telephone, Department personnel must follow up with a written communication within three (3) working days. All District Construction Engineers (DCE) and the SMO QC Program Coordinator should be copied on all written communications. A list of QC Program Coordinators can be found at the following link:

<https://www.fdot.gov/materials/quality/programs/qualitycontrol/qcoverview.shtm>

The applicable suspension criteria should be detailed as noted in ***Specification Section 105***. The details should include: a list of the specific deficiencies, the expected course of action, the anticipated time for completion, and whether or not an inspection will be necessary for re-instatement of the production facility's QC Program. When finalized, the status should be changed to *Suspended* in MAC. When necessary, a certified letter, addressed to the producer's contact

person, should also be sent and a copy uploaded into MAC. If the QC Plan has been provided, an executive officer for the company should also be copied. Document the date the notification was provided in MAC as the *Information Requested Date*. When the response is received, document the date the response was received in MAC as the *Information Received Date*.

When a production facility QC Plan is suspended, if the production facility is designated on a Contractor QC Plan entry, the entry on the Contractor QC Plan will be automatically updated in MAC to identify that the production facility QC Plan is suspended. The Project Administrator and QC Manager will be notified by way of the Contractor QC Plan entry, or through the available MAC notification system, if the user is subscribed. For production facilities that are not listed on a Contractor QC Plan, the SMO or DMRO must notify the Project Administrator if the production facility is producing for an FDOT contract.

5.6.10 DISPOSITION OF MATERIALS WHEN THE PRODUCTION FACILITY IS SUSPENDED

Products that were produced prior to a suspension may be subject to review by the Department to ensure compliance with the **Specifications**.

Department inspections will take place prior to a product being shipped to a project site.

5.6.11 MATERIALS OFFICE REVIEW OF CONTRACTOR QUALITY CONTROL PLANS

QC Plan entries require the DMRO concrete personnel to review the structural concrete production facilities listed along with the structural concrete mix designs proposed to be used on the contract. The DMRO concrete personnel should review the proposed mix designs to determine if the structural concrete production facility has the available materials to produce the proposed structural concrete mixes.

5.6.12 QUALITY CONTROL PROGRAM KEY PERFORMANCE MEASURES

Key performance measures for the QC Program are:

- (A) Reduce the number of quality related suspensions.
- (B) Increase the number of quality related asphalt bonuses.

5.6.13 TRAINING

Training for Quality Control Program administration in MAC is covered by the Quality Control Program Maintenance User Manual, found at the following link.

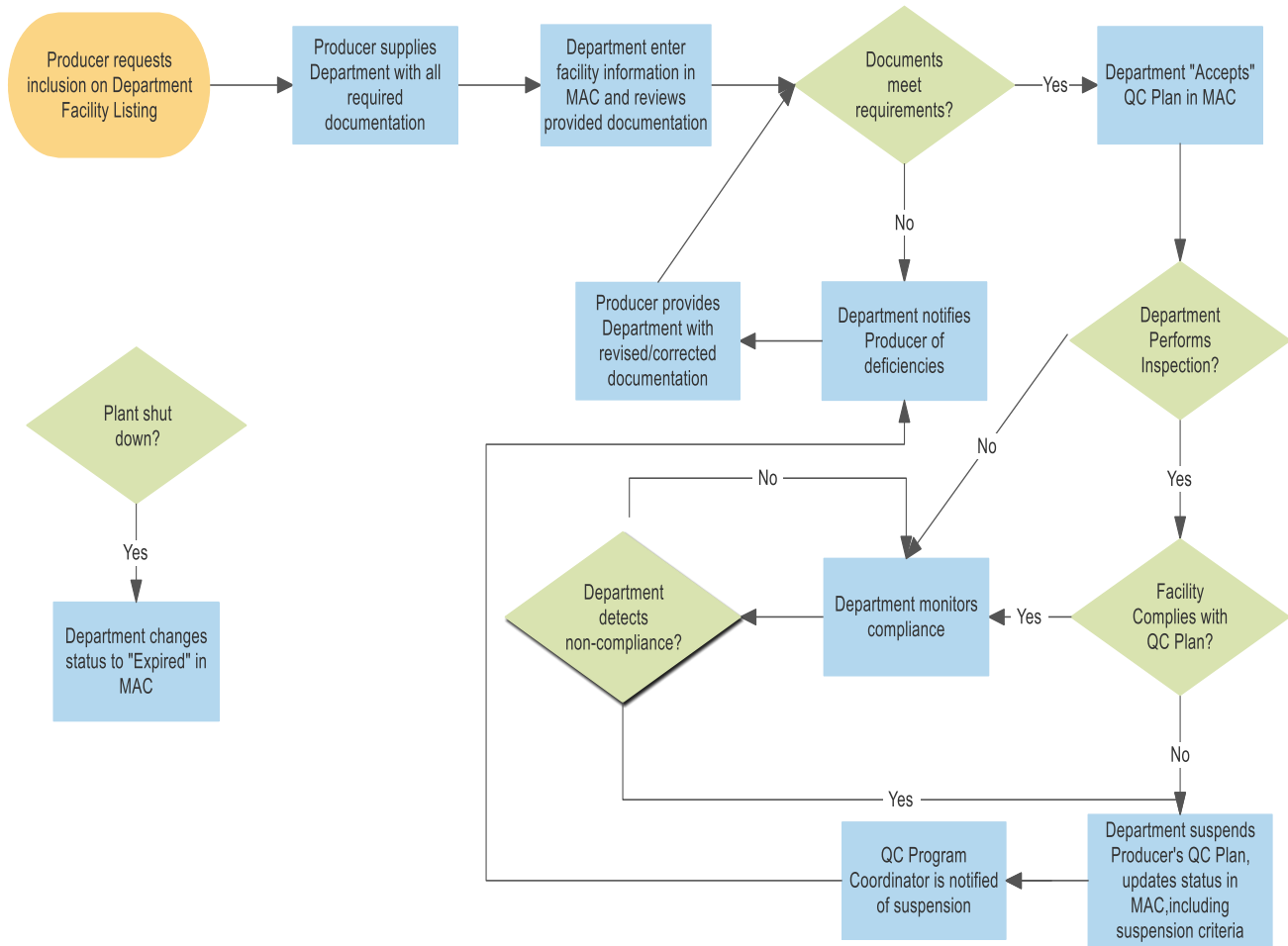
<https://www.fdot.gov/materials/mac/training/pmu.shtml>

5.6.14 FORMS

None required.

APPENDIX A

Producer's Quality Control Program Approval Process



The Department reserves the right to perform an inspection at any time.