



Florida Department of TRANSPORTATION



Materials Acceptance and Certification (MAC) QC Program Maintenance User Product Management

October 1, 2016



Contents

Introduction	3
Chapter 1 – Creating a Product on a Production Facility	4
Chapter 2 – Product Details.....	5
A. Updating an Existing Product.....	5
B. Pushing a Product to another Production Facility	6
C. Updating a Product Status	7
D. Deleting a Product	8
E. Updating the Product Reset Clock Date	8
F. Pulling a Product from a Source Facility to a Distribution Facility.....	9
Chapter 3 – Products Tabs.....	10
A. Transferred to Productions Facilities.....	10
B. Product Extensions	10
C. Targets and Limits.....	11
D. Mix Design Product Sieve Values.....	14
Chapter 4 - Documents and Comments on a Product	15
A. Adding Documents to a Product.....	15
B. Viewing a Document on a Product	16
C. Updating a Document on a Product	16
D. Deleting a Document from a Product	17
E. Adding a Comment to a Product	18
F. Responding to a Comment on a Product.....	18
G. Updating a Comment or Response	19
H. Deleting a Comment or Response from the Product	20
Chapter 5 – Status History.....	21

Introduction

Who is the FDOT Independent Assurance Program Maintenance User?

What are products in MAC?

In MAC products can be generic products or producer specific products. A generic product is a material that is defined as a product on the MAC Spec like a coarse aggregate. A producer specific product is that same generic product that has been assigned to a specific production facility. The producer specific product may have additional information that a generic product does not have, like product specific targets and limits or a brand name.

What materials have products?

Not all materials have products. Most product assignment and management is handled by the State Materials Office (SMO). A few are managed by the District Materials and Research Offices (DMRO). The SMO and DMRO technical units that assign products are as follows:

Material	Products	Managed By
Aggregate	Coarse Aggregate, Fine Aggregate, Base Materials, Riprap, etc.	SMO Aggregate Control Program Maintenance Users
Cementitious Materials	Cement, Fly Ash, Slag, etc.	SMO QC Program Maintenance Users
Liquid Asphalt	Asphalt Binder, Emulsions, Asphalt Rubber, etc.	SMO QC Program Maintenance Users
Flexible Pipe	PVC, Corrugated Steel Pipe, HDPE, etc.	SMO QC Program Maintenance Users
Fiber Reinforced Polymers	Fender Piles, Splice Plates, etc.	SMO QC Program Maintenance Users
Asphalt	Crushed RAP, Milled Material, Local Sand, Shingles, etc.	DMRO QC Program Maintenance Users

These instructions describe the process for managing products on production facilities in MAC. It is a supplement to the **QC Program Maintenance User Manual**. Additional QC Program Maintenance user functions associated with the production facility profile can be found in that manual.

Chapter 1 – Creating a Product on a Production Facility

In order to assign the product, an SMO Technical Unit user must first have established:

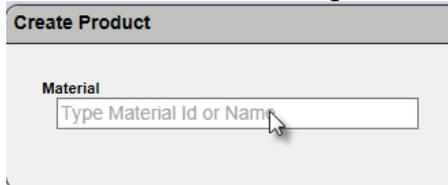
- The Material
 - For example - 901 Coarse Aggregates
- A MAC Spec with the material associated to it
 - For example - Program MAC Spec 901 Coarse Aggregates
- The generic products on the MAC Spec designated as a product
 - For example, C10, C12, C17
- Or the generic products created in the Product Definition table

These instructions assume those assignments have already been made in the system and you are ready to add a new product to a production facility:

[Create Product](#) [Request Product](#) [Pull Product](#)

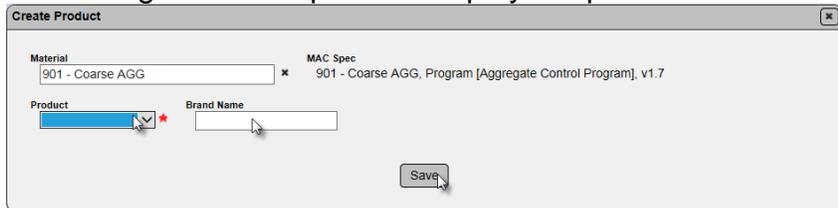
1. Under the Products tab, select the Create Product option.

A Create Product dialog box will appear.



2. Enter the Material to begin, for example 901.

The dialog box will expand to display the products that have been associated to that material.



3. Select the product from the Product dropdown list. This list is built from the Material Selected.

4. If the product has a brand name, enter the brand name in the Brand Name field.

NOTE: Most products do not have brand names. Examples of products with brand names are silica fume and some liquid asphalt products.

5. Select the Save option to add the product to the production facility.

You will receive a message that the product was added successfully.

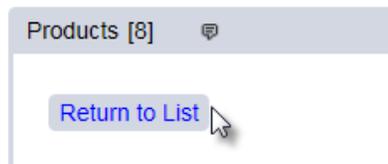
Create Product was successful

Chapter 2 – Product Details

Once a product is associated to a production facility, there are maintenance functions related to the specific product under the Product Details option. This section will describe each function under the Product Details.

Material	Current Status	Status Date	
1 - Coarse AGG	In Progress	9/17/2015	Details

All of these instructions begin after the user has selected the Details option next to the product.



To return from the Product Details to the Products list, select the Return to List option.

A. Updating an Existing Product

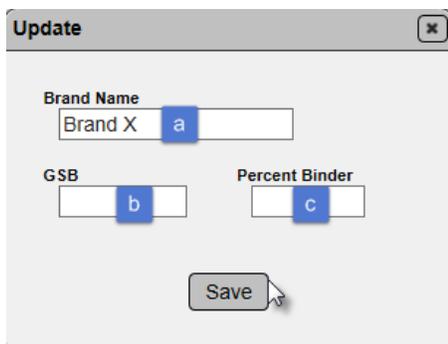
An existing product can only be updated while it is in the "In Progress" status. Once a product has been approved, the Update option is not available unless you revise the status to "In Progress". To update the information about an existing product:



1. Select the Update option.

An Update dialog box will appear.

NOTE: Some fields available here are not available when the product is originally added. For products that these fields apply to, this dialog box needs to be updated as soon as the product is added.

A screenshot of an 'Update' dialog box. It contains three input fields: 'Brand Name' with the value 'Brand X' and a blue square labeled 'a' next to it; 'GSB' with a blue square labeled 'b' next to it; and 'Percent Binder' with a blue square labeled 'c' next to it. A 'Save' button is at the bottom.

2. Enter the information as appropriate.

- Revise the brand name, if needed.
- Enter the GSB (bulk specific gravity), if applicable.
- Enter the percent binder, if applicable.

3. Select the Save option to update the product information.

You will receive a message that the product was successfully updated.

Update Product was successful

B. Pushing a Product to another Production Facility

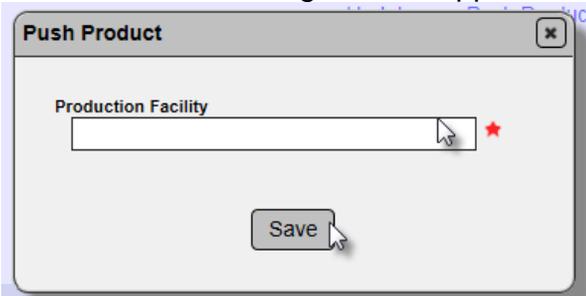
Products from a source can be assigned to a terminal or in some cases, another production facility, by using the Push Product Option.

To assign an existing product from one production facility (source facility) to another (distribution facility):



1. Select the Push Product option.

A Push Product dialog box will appear.



2. Enter the Production Facility the product will be pushed to.

3. Select the Save option to save the product on the distribution production facility's profile.

You will receive a message that the product was transferred successfully.

Transfer Product was successful

The product will appear on the distribution production facility product tab with an indicator that it was pushed from the source production facility.

Source Facility	Transfer Type	Product	Brand Name	Material	Current Status	Status Date	
01011 - Coral Rock, Inc.	Push	2227: C10 - 57 Stone - Process 1		2227 - Material Title by Lani	In Progress	9/17/2015	Details

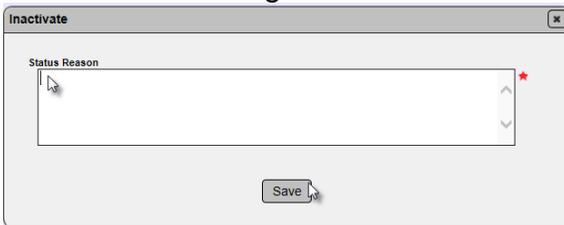
C. Updating a Product Status

For production facilities with products, the products have a status independent of the production facility status. Each product status can be designated as follows:



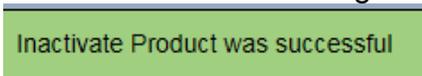
1. Select the Update Status option.
2. Select the appropriate product status.
 - a. Approve – the product is approved to be produced for FDOT contracts
 - b. Suspend – the product is suspended from being produced or supplied to FDOT contracts.
 - c. Deplete – a stockpile has been used up and the no additional material is allowed to be added to that stockpile.
 - d. Inactivate – the production facility requests to temporarily stop shipment of the product to FDOT contracts and performing QC testing.

After selecting one of the statuses, a dialog box will appear. There is a dialog box for each status. Not all status dialog boxes are shown because the basic functionality is the same.



3. Provide a reason for the status change. This field is not required for all statuses.
4. Select the Save option to change the status.

You will receive a message that the product status change was successful.



The product status will be updated.

Product C10 - 57 Stone	Brand Name	Material 2227 - Material Title by Lani	Current Status Inactive	Status Date 9/17/2015
Process Number 1	Geological Type Andesite			

D. Deleting a Product

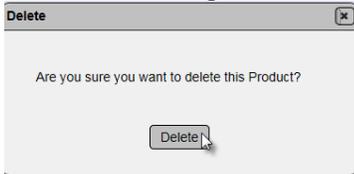
A product that is "In Progress" status can be deleted from the production facility. Once a product has been revised from "In Progress" to any other status, it cannot be deleted.

To delete an "In Progress" product:

Update Update Status Delete Update Product Reset Clock Date

1. Select the Delete option.

A Delete dialog box will appear.



2. Select the Delete option on the dialog box to delete the product.

You will receive a message that the product was successfully deleted.

Delete Product was successful

E. Updating the Product Reset Clock Date

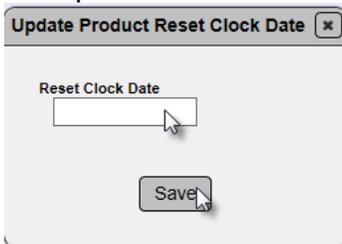
For **aggregate products only**, the product clock date can be reset. The product reset clock date initiates a new start date, before which no Quality Control data is used in the determination of compliance or the comparison package. QC data is analyzed using the last running 30 results, but never goes back more than one calendar year. If a producer encounters a problem for which QC result(s) would show a non-compliance in the running 30 and if the producer takes immediate action to solve the non-compliance issue, the product reset clock date reset the start time for the count of the running 30.

To reset the product clock.

Update Status Update Product Reset Clock Date

1. Select the Update Product Reset Clock Date option.

An Update Product Reset Clock Date dialog box will appear.



2. Enter the Reset Clock Date.
3. Select the Save option to reset the clock date.

You will receive a message that the reset clock date was successful.

Update Product Reset Clock Date was successful

The Reset Clock Date will appear on the product record.

Product	Brand Name	Material	Current Status	Status Date	Reset Clock Date
C10 - 57 Stone		2227 - Material Title by Lani	Inactive	9/17/2015	9/4/2015

F. Pulling a Product from a Source Facility to a Distribution Facility

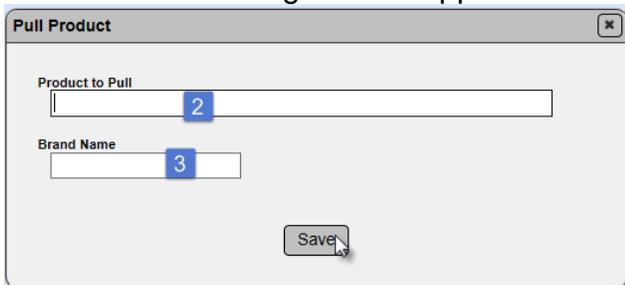
When you are on a production facility, you can pull products from another production facility (source facility) to the current facility that will act as a distribution facility for the source production facility.

To pull a product from one facility to another:

Create Product Pull Product

1. Select the Pull Product option.

A Pull Product dialog box will appear.



2. Enter the product to be pulled.
3. Enter the brand name of the product at the distribution facility, if applicable.
4. Select Save to add the product to the distribution facility.

Chapter 3 – Products Tabs

Once the Details option is selected, additional tabs appear for further functions related to products. This chapter will describe the functions under these tabs.

A. Transferred to Productions Facilities

When a product is pulled from another facility or pushed to from facility (the original source), it will appear under this tab. It tells you the product's distribution source information.

The screenshot displays the 'Production Facility NS315 - Martin Marietta Aggregates' interface. It features several tabs: 'Profile Managers [0]', 'Contacts [1]', 'Locations', 'QC Plans [0]', 'Products [19]', and 'Transferred to Production Facilities [1]'. The 'Products [19]' tab is active, showing a table with columns: Product, Brand Name, Material, Current Status, Status Date, Process Number, Geological Type, and GSB. Below this, the 'Transferred to Production Facilities [1]' tab is active, showing a table with columns: Product, Facility, Transfer/Brand Name Type, Process Number, Geological Type, APL Number, Current Status, Status Date, and Detail. Callouts point to 'Original Source' (top left), 'Product' (middle left), and 'Distribution Source' (bottom left).

Product	Brand Name	Material	Current Status	Status Date
CS5 - S1B Stone	S1B Stone	901 - Coarse Aggregate	Approved	9/19/2015

Process Number	Geological Type	GSB	Percent Binder
1	Granite	2.622	

Product	Facility	Transfer/Brand Name Type	Process Number	Geological Type	APL Number	Current Status	Status Date	Detail
1	TM322 - Martin Marietta Aggregates - Terminal/Aggregate	Pull	S1B Stone	Granite		Approved	9/19/2015	Detail

B. Product Extensions

This tab appears for all products, but it is only applicable to aggregate mines with a single product. If an aggregate production facility with a single product does not ship the product to a Department project in one year, the production facility automatically expires, unless the producer requests a one year extension. If the producer request a one year extension, use this option to enter that date as a trigger for action. If after two years have gone by, nothing was shipped in the second year then the production facility is expired.



1. Select the Request Extension option to indicate a product extension is needed.



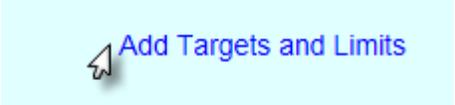
The 'Request Extension' dialog box contains two input fields: 'Extension Date' and 'Reason'. The 'Extension Date' field has a blue '2' and a red star. The 'Reason' field has a blue '3' and a red star. A 'Save' button is located at the bottom center.

2. Enter the Extension Date.
3. Enter a reason for the extension.
4. Select the Save option to apply the extension.

C. Targets and Limits

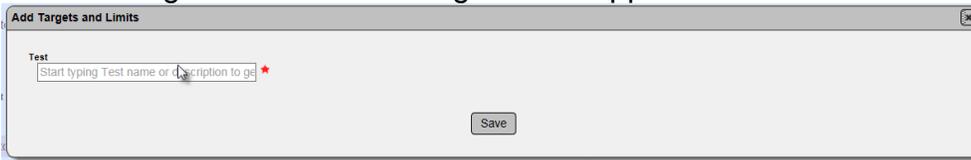
Some products have product specific targets and limits. When this occurs, the targets and limits associated with the product take precedence over any targets and limits assigned in the MAC Spec for the product.

To assign a product specific target:



1. Select the Add Targets and Limits option.

An Add Targets and Limits dialog box will appear.



The 'Add Targets and Limits' dialog box has a 'Test' input field with the placeholder text 'Start typing Test name or description to get' and a red star. A 'Save' button is at the bottom center.

2. Enter the test name that the targets and limits will be applied to.

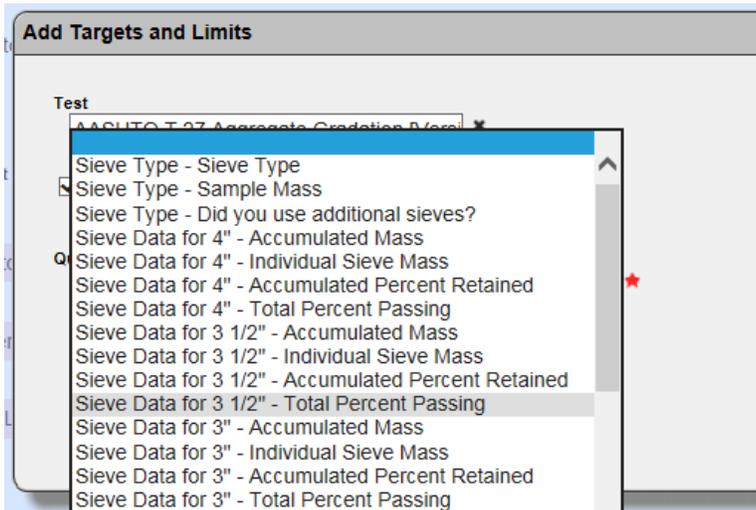
NOTE: In MAC, targets and limits are always applied to a specific test definition.

When you select a test definition, more fields will appear.

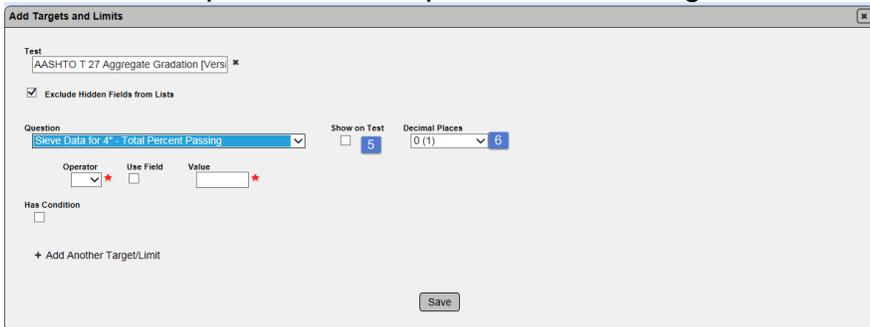


The 'Add Targets and Limits' dialog box now shows more fields. The 'Test' field contains 'AASHTO T 27 Aggregate Gradation [Vers]' with a dropdown arrow. Below it is a checkbox labeled 'Exclude Hidden Fields from Lists' with a blue '3'. The 'Question' field is a dropdown menu with a red star and a blue '4'. At the bottom, there is a '+ Add Another Target/Limit' link and a 'Save' button.

3. Select the Excluded Hidden Fields from Lists option if you don't want to see hidden fields on the Question drop down list. A hidden field is one that is in the background of the test that does not appear to the end user. For example, a field that was created to hold an interim calculation value is a hidden field.



4. Select the specific test component that the target and or limit will be assigned to.



5. Select the Show on Test option if you want the target and limit to be visible on the test on a sample during test result entry.

6. Select the appropriate decimal places to display the target and limit.

NOTE: The numeric values will be stored in the system to the lowest decimal place appropriate. This function ensures that when the target and limit is visible, it is consistently displayed as indicated. The decimal place display will depend on the test method requirements and the Specifications or other governing documents. For example, if a Specification says that the range for pass fail is 1.00 to 6.00, select the 2 (0.01) option. The system will store 1 to 6 in the background, but the label will show “1.00 to 6.00”.



7. Select the appropriate operator for the limit formula.

a. = – Test result must be equal to the value or use to set a target with limits.

b. != – Test result must NOT be equal to the value

c. > – Test result must be greater than value

d. >= – Test result must be greater than or equal to value

e. < – Test result must be less than value

f. <= – Test result must be less than or equal to value

8. Use field – Select this box to use another field on the test definition. This would mean that the test result must be whatever the operator indicates from the field, i.e., equal to, less than or equal to, etc.

9. If you don't select the Use Field option, you must supply a value. The value fields change depending on the operator.

NOTE: To enter a target with limits, the operator should be = and the target is input into the value field. The upper limit goes in the + field and the lower limit goes in the – field.

Operator	Use Field	Value			
=	<input type="checkbox"/>	3	+	1.5	- 1.5

NOTE: to enter a range, select the >= operator for the lower end of the range and enter the lower end in the value field. Select the <= operator for the upper end of the range and enter the upper in the second value field.

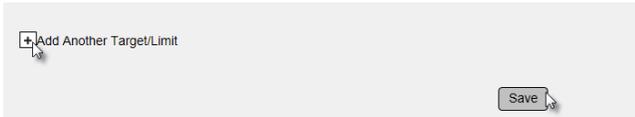
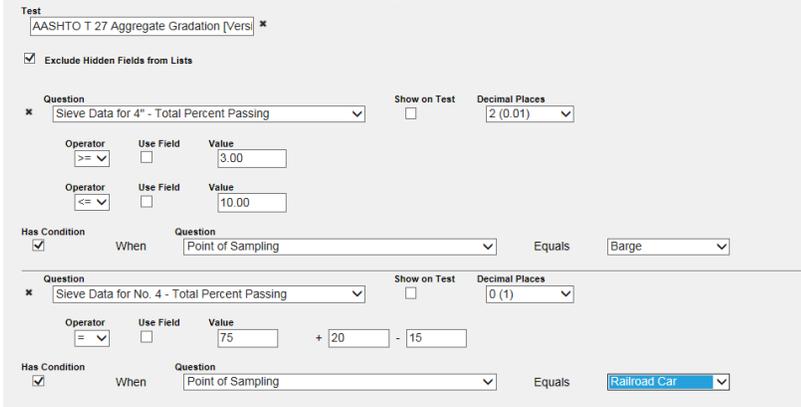
Operator	Use Field	Value
>=	<input type="checkbox"/>	3.00
<=	<input type="checkbox"/>	10.

Has Condition	When	Condition
<input checked="" type="checkbox"/>		Sieve Data for No. 60 - Individual Sieve Mass
		Sieve Data for No. 60 - Accumulated Percent Retained
		Sieve Data for No. 60 - Total Percent Passing
		Sieve Data for No. 80 - Accumulated Mass
		Sieve Data for No. 80 - Individual Sieve Mass
		Sieve Data for No. 80 - Accumulated Percent Retained
		Sieve Data for No. 80 - Total Percent Passing
		Sieve Data for No. 100 - Accumulated Mass
		Sieve Data for No. 100 - Individual Sieve Mass
		Sieve Data for No. 100 - Accumulated Percent Retained
		Sieve Data for No. 100 - Total Percent Passing
		Sieve Data for No. 200 - Accumulated Mass
		Sieve Data for No. 200 - Individual Sieve Mass
		Sieve Data for No. 200 - Accumulated Percent Retained
		Sieve Data for No. 200 - Total Percent Passing
		Final Gradation Mass - Accumulated Mass
		Fineness Modulus: - Fineness Module
		Fineness Modulus: - Mass Difference
		Mix Design: Hot Weather Flag
		Mix Design: Light Weight Aggregate
		Mix Design: Mass Concrete
		Mix Design: Mix Texture
		Mix Design: Environment Code
		Point of Sampling

10. There are some preprogrammed conditions for fields on tests, mix designs, login screens, etc. that can be used to set a condition on the target and limit. If you have conditions, select this option.

11. Select the appropriate condition from the When Question field to designate the condition.

Here is an example of a target with limits with two conditions.



12. Use the + to add another target and limit to the same test definition.
13. Select the Save option to save the target and limits.

D. Mix Design Product Sieve Values

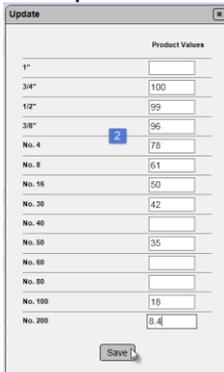
Mix Design Product Sieve Values are used by DMO Asphalt Program Maintenance Users to indicate the sieve values on asphalt products assigned to asphalt production facilities, such as recycled asphalt pavement. It is not used for any other products. The values assigned to the product are used in the MAC Mix Design Module to determine the job mix formula (JMF) of the mix design when the product is used as a component of a mix design.

To assign the sieve values on an asphalt product:



1. Select the Update option.

An Update dialog box will appear.



2. Enter the values for the sieves for this product.
3. Select Save to save the sieve values.

NOTE: The actual values for a given product may differ than the example given above.

Chapter 4 - Documents and Comments on a Product

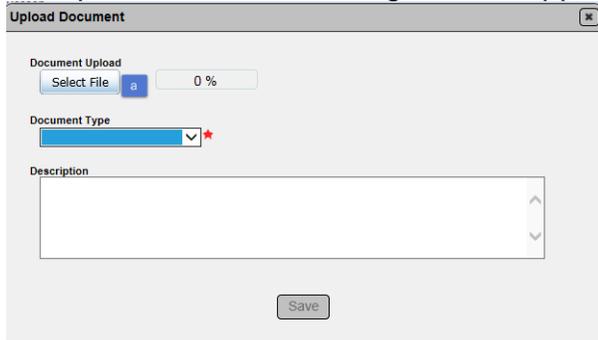
Documents and comments are standard features on every area in MAC. For products, the documents tab is not to be used for QC plan related documentation. Use the documents tab to store backup information on the specific product.

A. Adding Documents to a Product



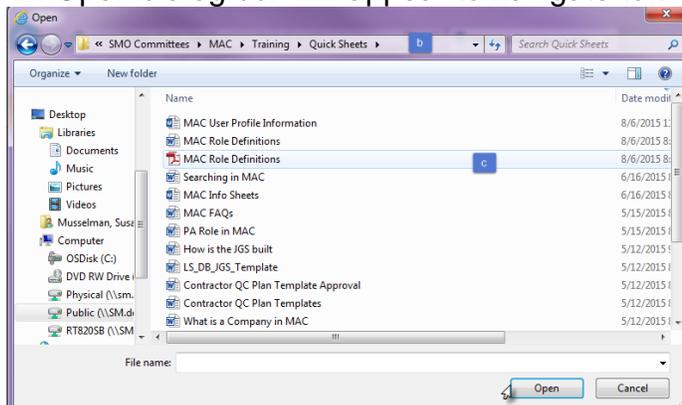
1. Click on the Upload Document option.

An Upload Document dialog box will appear.



a. Click on the Select File option.

An Open dialog box will appear to navigate to the file you wish to upload.

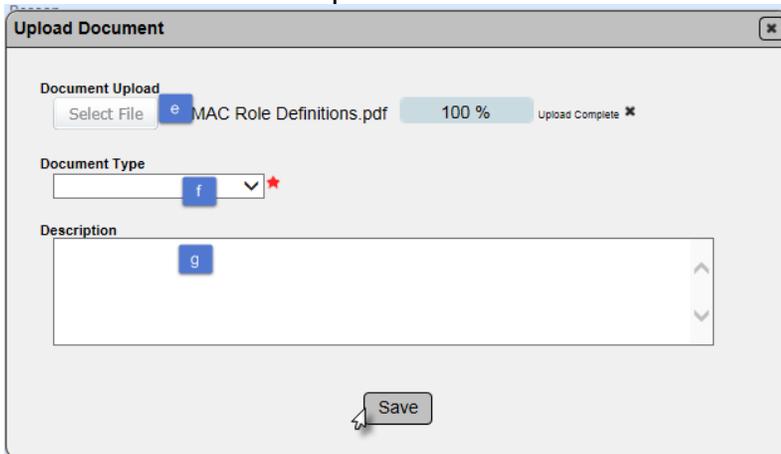


b. Navigate to the location where the file is stored.

c. Select the file you wish to upload.

d. Click on the Open option.

The document will be uploaded to MAC.



- e. The Select File option will be grayed out when the document upload is at 100%.
- f. Select the document type from the drop down list; Approval Letter, Correspondence, Supporting Documents or Suspension Letter.
- g. Enter a description, if applicable.
- h. Click on the Save option to complete the upload.

The system will notify you that the document was added successfully.

Add Document to Production Facility was successful

B. Viewing a Document on a Product

To view a document any user has uploaded to the production facility profile:

Name	Type	Description	Tests			
1 list.pdf	Accreditation	This is a document relate...	ASTM C39	View Document	Update	Delete

1. Select the View Document option.
MAC will download the document.



2. Select Save to continue the download and view the document.



3. Select Open to open the download.
The document will be opened in the file format in which is was saved; for example, pdf.

C. Updating a Document on a Product

You can update the description of a document you uploaded to a product. You cannot update the description of a document someone else uploaded.

tation	This is a document relate...	ASTM C39	View Document	Update	Delete
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1. Select the Update option.
An Update dialog box will appear.

Update

Document Name
LOGIN ALL OPTIONS.pdf

Document Type
Supporting Documents a

Description
b

Save c

- a. Revise the Document type, if applicable by clicking on the drop down list.
- b. Revise the description, if needed.
- c. Select Save to save the changes.

You will receive a message that the document was updated successfully.

Update Production Facility Document was successful

D. Deleting a Document from a Product

You can delete documents you added to a product. You cannot delete documents added to a product by others.

To delete a document:

Tests

... ASTM C39 [View Document](#) [Update](#) [Delete](#)

1. Select the Delete option.

A Delete Document dialog box will appear.

Delete

Are you sure you want to delete this document?

Delete

2. Select the Delete option to delete the document.

You will receive a message that the document was successfully deleted.

Delete Production Facility Document was successful

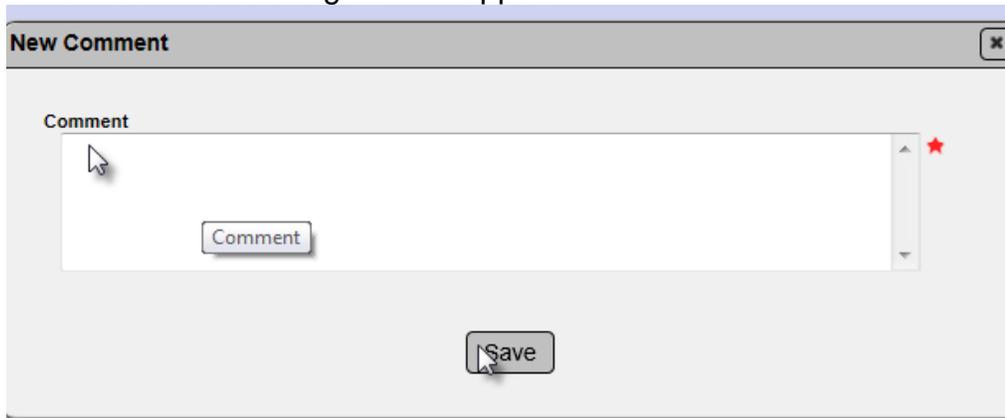
E. Adding a Comment to a Product

If you wish to add a comment to a product:



1. Click on the New Comment option.

A New Comment dialog box will appear.



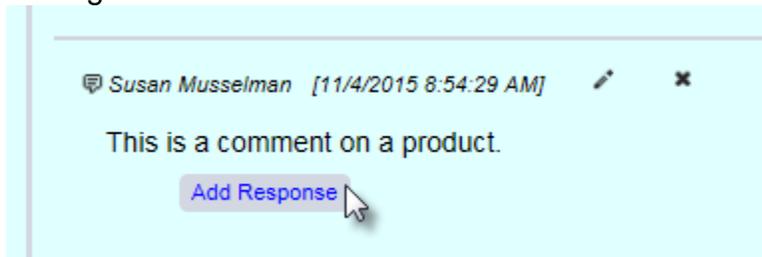
2. Type in your comment.
3. Click on the Save option to save the comment to the production facility profile.

The system will notify you that the comment was successfully added.

Create Production Facility Comment was successful

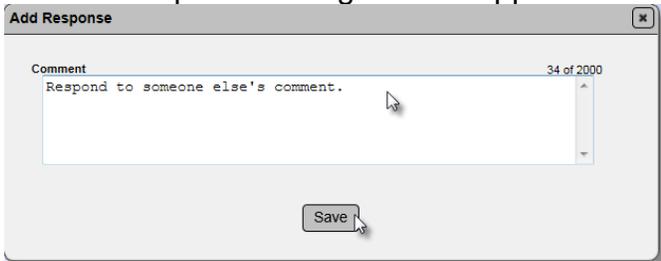
F. Responding to a Comment on a Product

You may need to respond to a comment on a product that was submitted by the Facility Profile Manager or others.



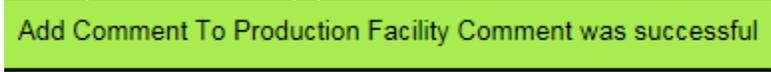
1. On the comment you wish to respond to, click on the Add Response option.

An Add Response dialog box will appear.

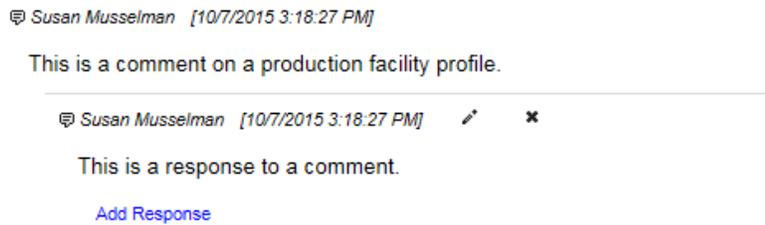


2. Enter your response to the original comment.
- 3 Click on the Save option to save the response to the record.

The system will notify you that the comment was successfully added.



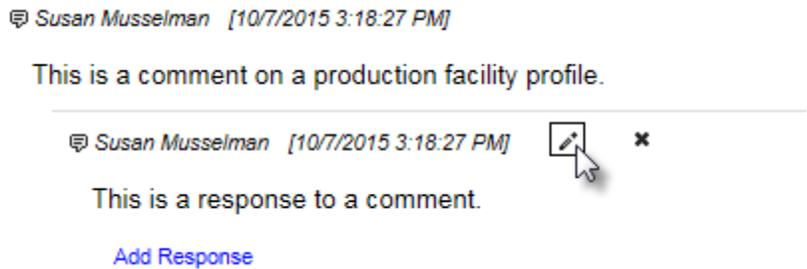
A response to a comment looks like this in MAC.



G. Updating a Comment or Response

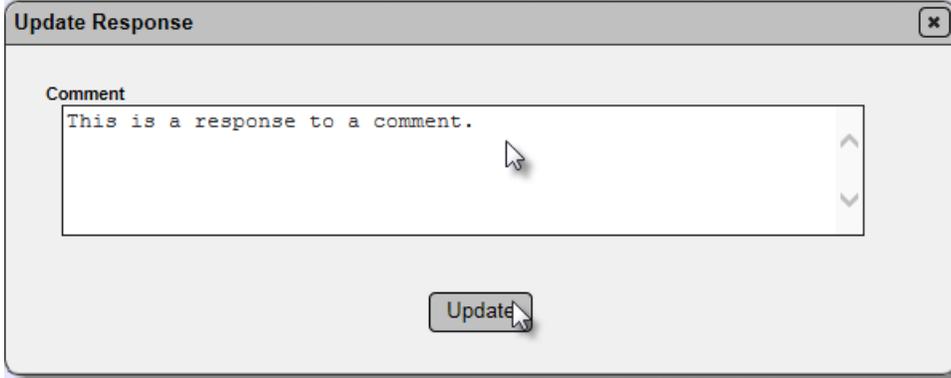
You can update a comment or response that you entered on a product. You cannot update comments and responses made by others.

To update a comment or response:



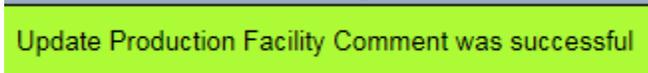
1. Click on the Update option () to select it.

An Update Comment (or Update Response) dialog box would appear.



2. Revise the comment or response, as needed.
3. Click on the Update option to update the comment or response.

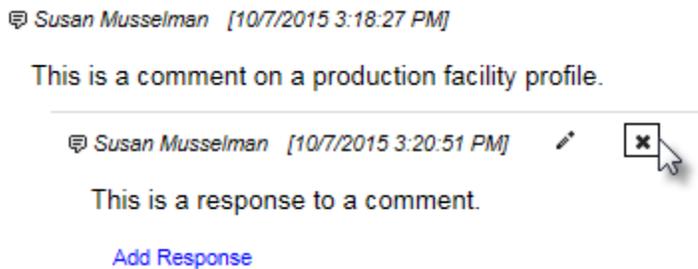
You will receive a message that the comment or response was updated successfully.



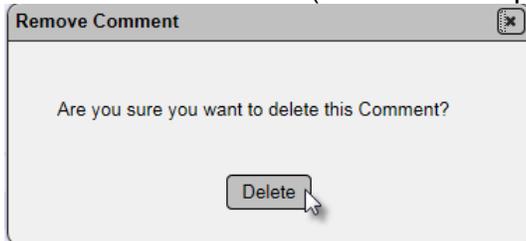
H. Deleting a Comment or Response from the Product

You can update a comment or response that you entered on a product. You cannot update comments and responses made by others. If a comment has a response, it cannot be deleted unless the response is deleted.

To delete a comment:

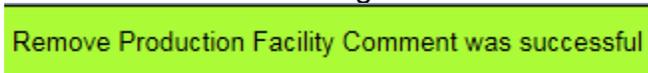


1. Click on the Delete option (*) to select it.
- A Remove Comment (or Delete Response) dialog box would appear.



2. Click on the Delete option to delete the comment.

You will receive a message that the comment or response was deleted successfully.



Chapter 5 – Status History

The Status History Tab gives you details about the history changes to the status of a product.

Status History [3]				
		Date	By	Reason
1	Approved	9/19/2015 6:55:06 PM	Data Transfer Process	
2	Inactive	11/4/2015 8:57:53 AM	Susan Musselman	testing
3	Approved	11/4/2015 8:58:01 AM	Susan Musselman	testing

Showing 1 to 3 of 3