



Asphalt Binder Inspection and Sampling Guidance

May 2020

Asphalt Binder Branch, Materials and Tests Division

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SECTION 1 – INTRODUCTION

- 1.1 Check the Quality Monitoring (QM) lab number to make sure it's current (not expired), using SiteManager or LIMS Flyover.

NOTE 1 – A QM lab number is an MTD lab number for certifying a certain material grade from a certain supplier for a specific period (a calendar month for an example.) The lab number format is CXX37YYYY, where XX is the current calendar year and YYYY is the numerical number of the sample. The QM lab number SM ID follows the following format QM301CXX37YYYY. Example: MTD lab number C20375555, SM ID will be QM301C20375555.

- 1.2 Take samples once per day or lot. Select proper sample containers ([Section 4.1](#)) and label the containers with proper information. At least one sample, per project is sent to MTD, while additional daily storage samples are stored.
 - 1.2.1 TxDOT should maintain the custody of the samples at all times.
- 1.3 Log the samples, sent to MTD, in SiteManager and be sure to include all required information. Bar code and ship the samples to MTD.
- 1.4 Associate stored samples to the project and send in stored samples when needed.

SECTION 2 – CHECKING THE QM LAB NUMBER

- 2.1. Verify the lab number, assigned by MTD on the ticket from the transport, is current by comparing the lab number on the ticket with the lab number listed in SiteManager ([Section 2.4](#)) or LIMS Flyover ([Section 2.5](#)).
- 2.2. If the lab number from MTD is not current (has expired), an advanced lab number has not been issued, or if the lab number does not match (e.g. producer or grade does not match the shipping ticket), reject the load.
 - 2.2.1. On rare occasions, MTD may issue an “Advance” lab number, which is approval for the material given in advance of MTD’s complete testing. In this case, the lab number on the shipping ticket may not yet be in SiteManager, but will be in LIMS Flyover.
 - 2.2.2. Once the lab number has been found in LIMS Flyover, double click on it.
 - 2.2.3. On the screen showing the sample details, look for the “Advance Lab#” check box. A check here indicates that this is an advanced lab number.

Sample & Tests Data

File

Sample No: C19372128 Other ID: SPG 73-19

Sitemanager Sample?

SM ID: QM301C19372128

SM test no: 001

Mat Grade: Sp. PG

Date Sampled: 05/14/19

Date Received: 05/21/19

Date Completed: 00/00/00

Advance Lab# : Qty rep.:

logged by: CIGLEHA

Contact :

Sample Status

Not Completed

by:

Status

Not Received In Progress

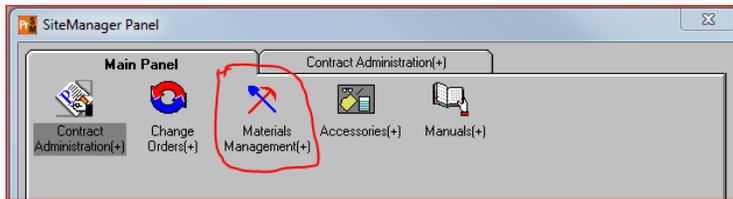
On Hold

- 2.2.4. If necessary, contact MTD regarding the status and estimated completion time for the sample.
- 2.3. Record the lab number, producer, grade, and effective dates for future quick reference.

NOTE 2 – The lab numbers are usually valid for a calendar month, so it will likely be used repeatedly on a given project. Having a list on hand of previously verified numbers makes it easy to verify more loads when they arrive with the same number.

2.4. Verifying the lab number using SiteManager.

2.4.1. Log in to SiteManager and double click on “Materials Management,” then “XiteManager.”

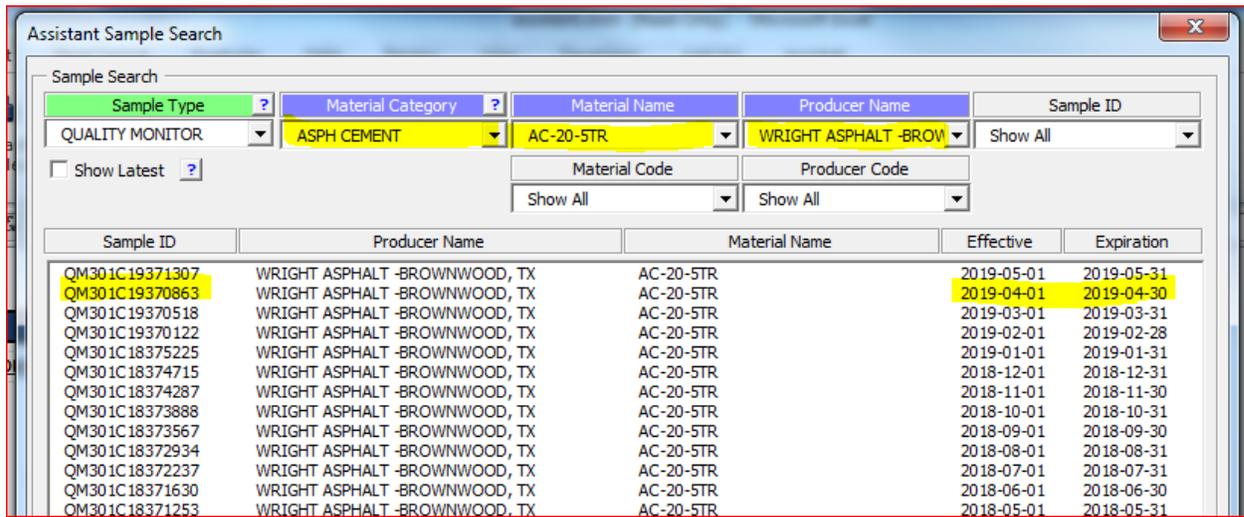


2.4.2. Double click on “Assistant.”

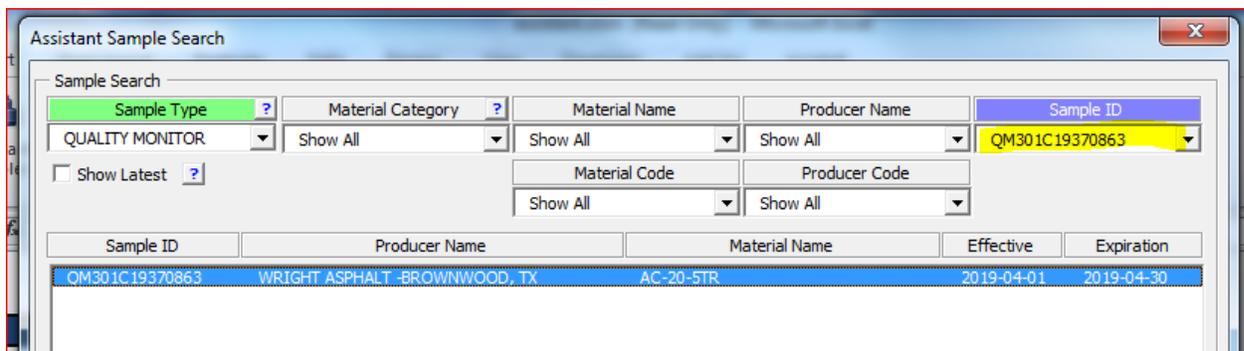
| Name | Type | Description | Autorun |
|-----------------|------|---|-------------------------------------|
| XiteManager | Plug | Double Click to view | <input type="checkbox"/> |
| Assistant | Plug | Double Click to view | <input type="checkbox"/> |
| MSL | Plug | Material Sourcing Letter (CIS 36) | <input checked="" type="checkbox"/> |
| Central S&T Pop | Plug | Materials Sampling & Testing role required. | <input type="checkbox"/> |
| XiteReport ALL | Plug | Double Click to view - All environments | <input type="checkbox"/> |
| DWR Summary | Plug | Double Click to View | <input type="checkbox"/> |

2.4.3. Select the following information:

- the type of asphalt used on the project (Example: “ASPH CEMENT”) under “Material Category,”
- the grade of asphalt (Example: “AC-20-5TR”) under “Material Name,” and
- the producer name (Example: “WRIGHT ASPHALT–BROWNWOOD, TX”) under “Producer Name.”



- 2.4.4. If you have trouble finding the lab number through this method, or you do not know some of the information, type in the SiteManager ID under “Sample ID.” The SiteManager ID will be “QM301” followed by the lab number from the shipping ticket. (Example: QM301C19370863)

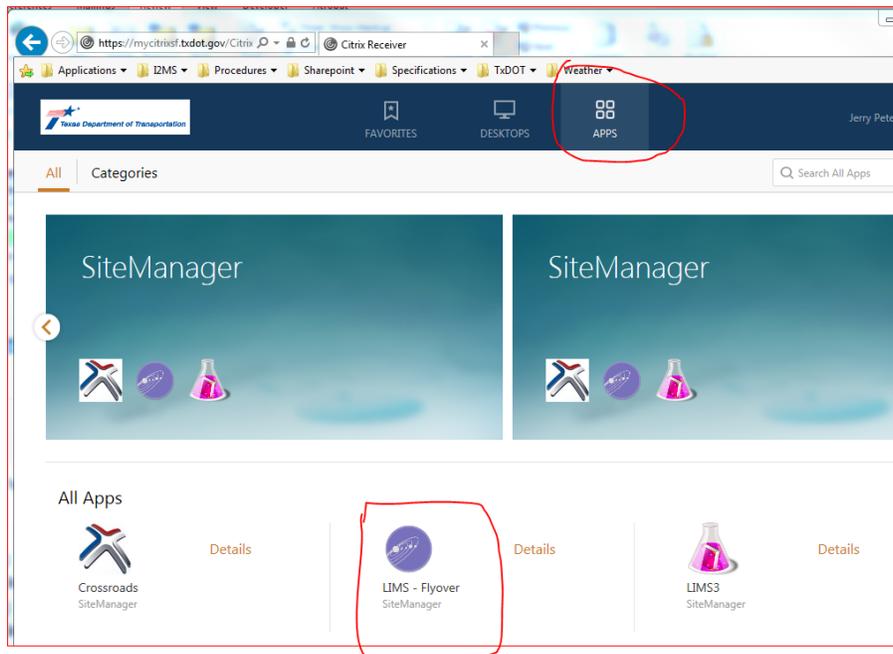


- 2.4.5. Find the SiteManager ID that matches the lab number from the shipping ticket (the SiteManager ID will start with “QM301” followed by the lab number) and check to make sure the date of the shipment is within the valid dates for the SiteManager ID. (Example: QM301C19370863 with valid dates from April 1, 2019 to April 30, 2019)

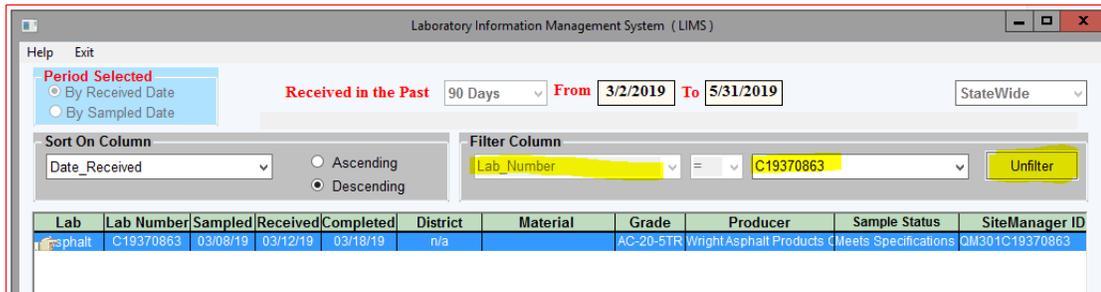
2.5. Verifying the QM lab number using LIMS Flyover.

2.5.1. Use Citrix or SiteManager Terminal Server to access:

- Log in to Terminal Server and select “Additional Apps” from the Launch pad. Then double click “LIMS Flyover Database,” or
- Log in to MyCitrix (mycitrix.txdot.gov) and select “Apps” at the top of the screen. Then double click “LIMS Flyover.”



2.5.2. In the Flyover Application, select “Lab Number” as the filter column and type in the lab number. (No “QM301” for this application; just the “C” number.) **Make sure that the upper right drop down menu is set to StateWide not your district.**



SECTION 3 – SAMPLING FREQUENCIES

- 3.1. Collect, or witness collection of, one sample, per day or per lot from the project, in accordance with [Tex-500-C](#). Additional instructions for sampling and labelling are in the next section.
- 3.2. Submit at least one sample of each grade and source, per project to MTD for testing, in accordance with the [DBB Guide Schedule](#). Instructions for creating the sample in SiteManager and preparing it for shipping are in [Section 5](#).
- 3.3. Log and label the rest of the samples for storage. Instructions for this process are in [Section 6](#).

NOTE 3 – Samples should be collected after the first load is shot through the distributor to obtain a representative sample.

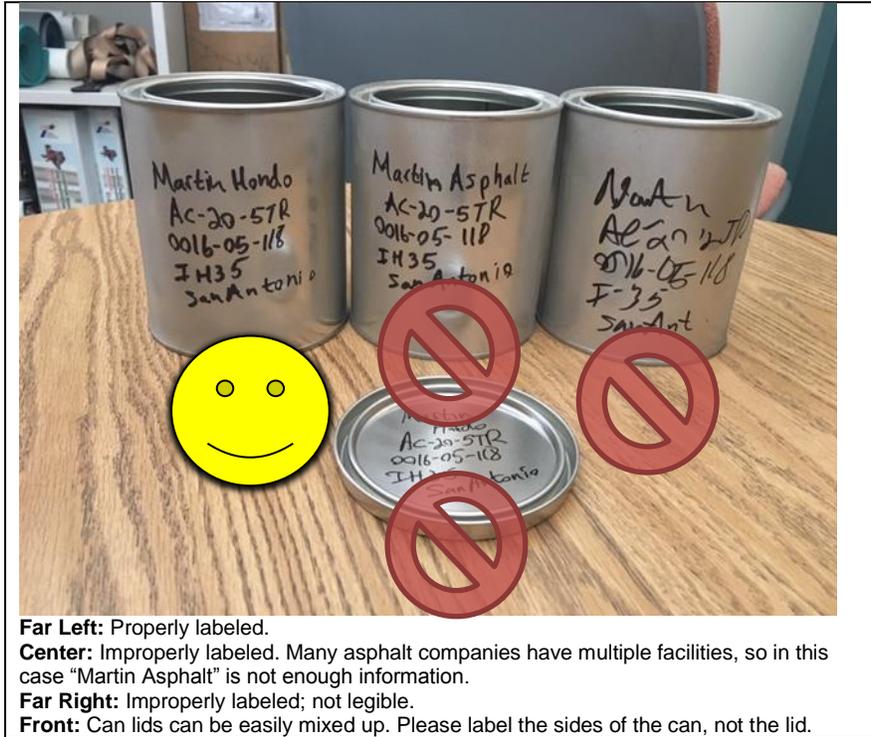
SECTION 4 – SAMPLING PROCESS

- 4.1. Use a new, clean **unlined** 1-quart can for hot applied asphalt and cutbacks, or a wide mouth plastic jar for emulsions. **TxDOT will furnish all sampling containers, unless otherwise specified in the contract.**



Left: Screw top metal can (for cutbacks)
Right: Friction lid metal can (for AC and PG)
Center: Wide mouth plastic jar (for emulsions)

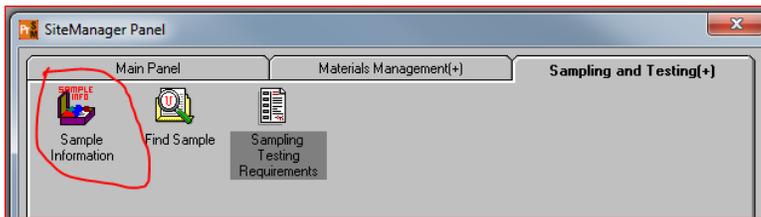
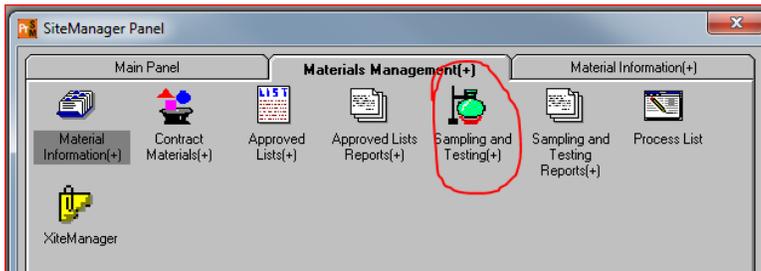
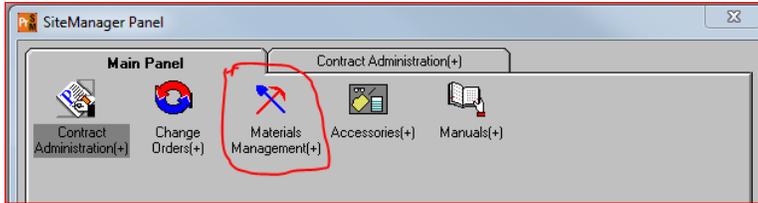
- 4.2. Collect samples at the frequency in accordance with the specification and as outlined in [Tex-500-C](#) with witness by the Engineer.
- 4.3. Mark the samples with the producer, producer facility location, grade, district, date sampled, and project information including highway and CSJ.



- 4.4. Allow sample to cool before placing lid on the sample. After cooling, seal the container with the lid.
- 4.5. If sample is to be sent in to MTD for testing, proceed to [Section 5](#).
- 4.6. If sample is not being sent to MTD, proceed to [Section 6](#).

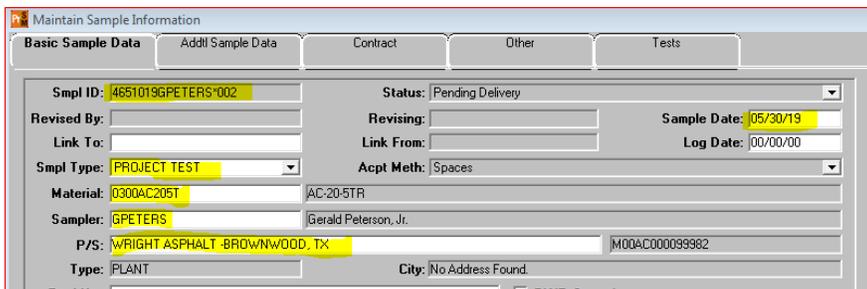
SECTION 5 – LOGGING AND LABELING SAMPLES FOR SUBMISSION TO MTD

- 5.1. Log in to SiteManager and double click on “Materials Management,” then “Sampling and Testing,” and finally “Sample Information.”



- 5.2. Enter the following required information, as a minimum, on the “Basic Sample Data” tab:

- sample type (should almost always be “Project Test” for project samples),
- material code,
- sampler,
- producer or supplier,
- sample date, and
- the “Smpl ID” field should be automatically populated.

A screenshot of the "Maintain Sample Information" form in SiteManager. The "Basic Sample Data" tab is selected. The form contains the following fields:

- Smpl ID: 4651019GPETERS*002
- Status: Pending Delivery
- Revised By: (empty)
- Revising: (empty)
- Sample Date: 05/30/19
- Link To: (empty)
- Link From: (empty)
- Log Date: 00/00/00
- Smpl Type: PROJECT TEST
- Acpt Meth: Spaces
- Material: 0300AC205T
- AC: 20-5TR
- Sampler: GPETERS
- Gerald Peterson, Jr.
- P/S: WRIGHT ASPHALT - BROWNWOOD, TX
- M00AC000099982
- Type: PLANT
- City: No Address Found.

Then save the sample and proceed to the “Addtl Sample Data” tab.

- 5.3. Enter the QM sample number (the “C” number from the asphalt lab) into the “Seal Number” field.

Maintain Sample Information

Basic Sample Data **Addtl Sample Data** Contract Other Tests

Smpl ID: 4651019GPETERS*002 Buy American: Spaces

Reqst By: _____ Witnessed By: _____

Smpl Size: _____ Spaces

Dist from Grade: _____ Spaces

Station: _____ Offset: _____ Reference: _____

Smpld From: _____

Smpl Origin: _____

Control Type: Spaces Cntrl Number: _____ Seal Number: C19370863

Design Type: Not Noted Mix ID: _____

Then save the data and go to the “Contract” tab.

- 5.4. Click on the “New” icon in the button bar and then type in the CCSJ to find the contract information. Select OK.

AASHTO SiteManager - (20190313) CST-751610-L

File Edit Services Window Help

Maintain Sample Information

Basic Sample Data Addtl Sample Data **Contract**

Sample 4651019GPETERS*002

| Contract ID | Project | Line Item | Proposal Line Number | Item Code |
|-------------|---------|-----------|----------------------|-----------|
|-------------|---------|-----------|----------------------|-----------|

Select Contract/Material Information

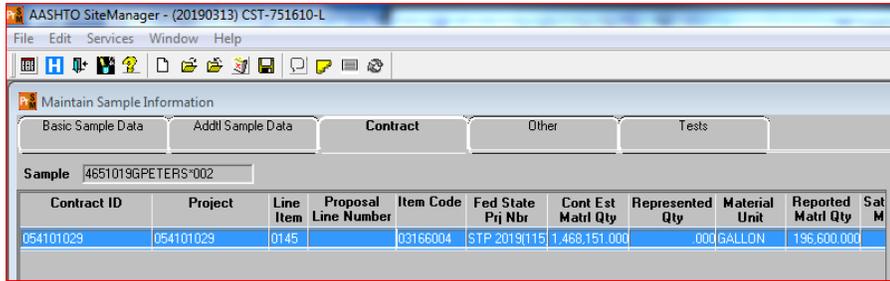
Please tab out of the field to retrieve the Line Item select list

Contract ID: 054101029 2019 DISTRICT WIDE SEALCOAT

| Project Number | Line Item Number | Proposal Line Number | Item Code | Line Item Desc | Supplemental Description 1 |
|----------------|------------------|----------------------|---------------|----------------|----------------------------|
| 054101029 | 0145 | 0316204 | ASPH (TIER I) | | |

OK Cancel

5.5. The contract information should now be shown in the “Contract” tab.

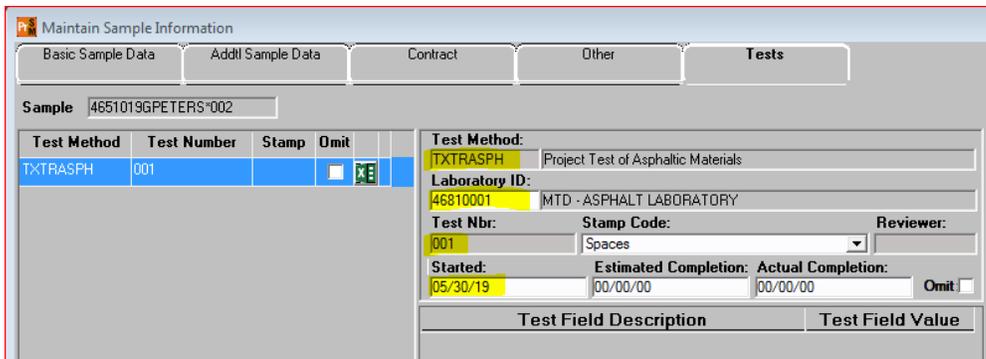


Save and proceed to the “Tests” tab.

5.6. Enter the following information:

- “TXTRASPH” as the test method,
- “46810001” as the Lab ID,
- any short descriptor or a number in the “Test Nbr” field, and
- the current date in the “Started” field.

Then save.



NOTE 4 –The information entered in steps 5.2-5.6 should not be changed after the material is shipped to MTD. Asphalt LIMS will capture SM fields when the sample is entered into LIMS and will not automatically update afterward.

5.7. Generate and print out Form 202 by selecting “Services” ⇒ “Lab Report” ⇒ “Print Form 202” from the menu. Print a hard copy of the Form 202.

5.8. Print out barcode labels and affix them to the sample containers. Instructions for generating and printing the barcodes are in [Section 7](#).

5.9. Place the samples in the shipping box along with a copy of the Form 202. Attach a bar code label for each sample to the outside of the box.

NOTE 5 – Do not include any other materials (e.g. aggregates, HMA, etc.) in the same box used for shipping asphalt samples.

NOTE 6 – Use crumpled newspaper as packing material in the box. Avoid packing materials such as packing peanuts, shredded paper, etc.

- 5.10. Obtain the FedEx or other shipping tracking number and add it to the “Intd Use” field. If the district uses the “Intd Use” field for other project related information, the tracking number can be typed in the remarks “bubble”.

The screenshot shows a software window titled "Maintain Sample Information" with several tabs: "Basic Sample Data", "Addtl Sample Data", "Contract", "Other", and "Tests". The "Basic Sample Data" tab is active. The form contains the following fields and values:

- Smpl ID: 4651019GPETERS1002
- Status: Pending Delivery
- Revised By: [Empty]
- Revising: [Empty]
- Sample Date: 05/30/19
- Link To: [Empty]
- Link From: [Empty]
- Log Date: 00/00/00
- Smpl Type: PROJECT TEST
- Acpt Meth: Spaces
- Material: 0300AC205T AC-20-5TR
- Sampler: GPETERS Gerald Peterson, Jr.
- P/S: WRIGHT ASPHALT - BROWNWOOD, TX M00AC000099982
- Type: PLANT
- City: [No Address Found]
- Prod Nm: [Empty]
- Mnfrct: [Empty]
- Town: [Empty]
- Geog Area: Spaces
- Intd Use: Fedex Track no XXXXXXXXXXXXXXXXXXXX
- Repr Qty: .000 GALLON
- Lab Control Number: [Empty]
- Auth By: [Empty]
- Auth Date: 00/00/00
- Lab Reference Number: [Empty]
- Lock Type: [Empty]
- Locked By: [Empty]
- Lock Date: [Empty]
- Send Notice to Central Lab: [Empty]

- 5.11. Ship the sample, within three days of collection, to the following address:
Texas Department of Transportation
Materials and Tests Division/Asphalt Binder Lab
Cedar Park Campus, Building 51
9500 N Lake Creek Parkway
Austin, TX 78717

- 5.12. MTD will email test reports to the District and the asphalt supplier. The District should forward all test reports to the contractor. Failing test reports should be shared with the contractor immediately after becoming aware of the report.

SECTION 6 – LOGGING SAMPLES FOR STORAGE

- 6.1. Transport the samples to the designated storage area in the district laboratory, area office, or other TxDOT location approved by the district laboratory.
- 6.2. In SiteManager, associate the sample with the QM sample and project, and document the number of transports received for each day. Follow the instructions in [Section 8](#) to associate the sample.
- 6.3. Write the new SiteManager ID on the side of the sample.
- 6.4. **Optional:** Print out two bar codes of the new SiteManager ID, provided by the Assistant, for the sample. To do this, follow the instructions in [Section 7](#).
- 6.5. Store the samples in a designated area as discussed in [6.1](#) in the district laboratory or area office for one year of hot-applied binders and cutback asphalts or for two months for emulsified asphalts. Organize the samples by sample date and project.

NOTE 7 – MTD may request these samples for additional testing later [Section 9](#).

NOTE 8 – Disposal and recycling options of asphalt samples:

Asphalt binder: solid at room temperature. – Based on industry and academic studies, asphaltic highway pavements do not leach hazardous materials into the environment at levels that would be of environmental concern; therefore, solid samples of asphalt binder may be disposed as non-hazardous municipal solid waste. Disposal of the samples in relatively small quantities at a time, along with other dumpster waste from the facility, would be appropriate. Alternately, if MTD or the District deems the material suitable, any opportunities for reuse of the samples as recycled asphalt should be considered.

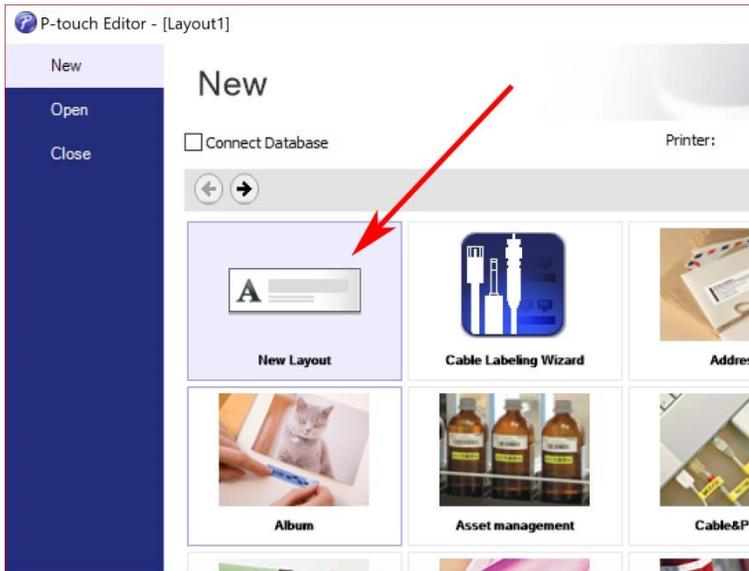
Emulsions: liquid. – While asphalt emulsions are generally considered a non-hazardous waste, many landfills are prohibited from receiving liquid wastes in any significant quantity; therefore, these wastes will need to be accumulated and disposed separately. The liquid waste should be characterized based on the Safety Data Sheet information or testing and disposed appropriately. A waste recycling or disposal company (such as Safety-Kleen or similar provider) should be able to collect the material under a recycling program. Contact ENV Division for assistance with waste characterization and disposal options, as needed.

Emulsions: solid if the material “broke.” – Disposal as non-hazardous municipal waste is appropriate for small quantities of solidified asphalt materials. See “Asphalt binder” above for disposal guidance.

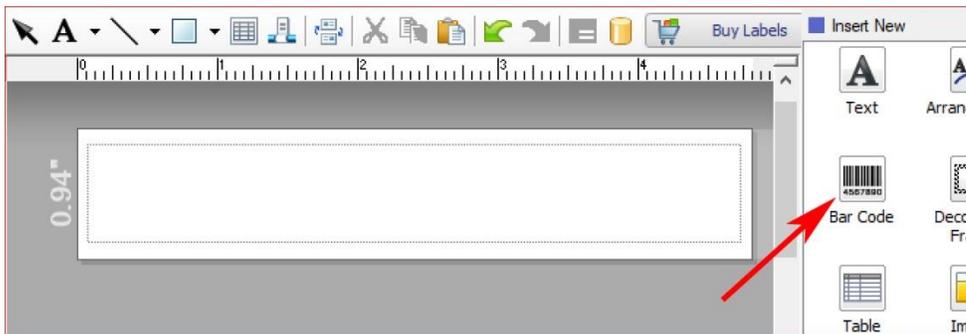
Cutbacks. Contact MTD for disposal of cutbacks.

SECTION 7 – LABELING THE CONTAINERS WITH BARCODES

7.1. Open the P-touch software and select “New Layout.”

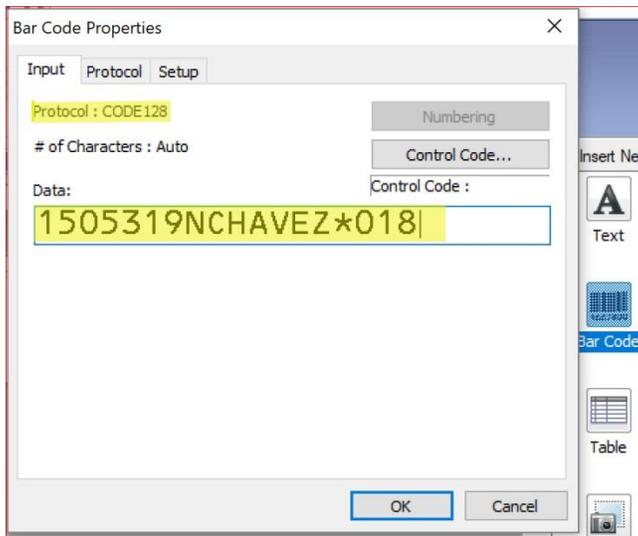


7.2. Select the “Barcode” Option.

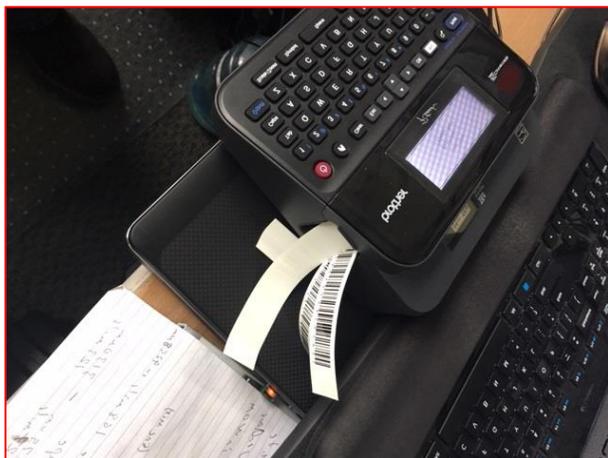
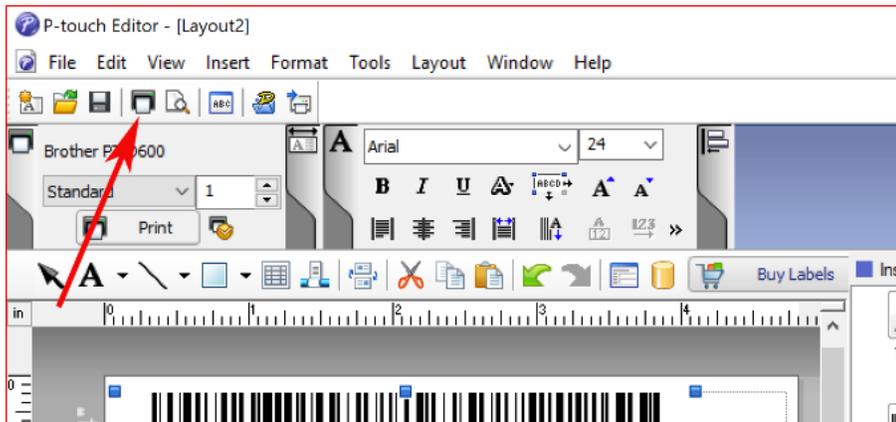


7.3. Copy and paste the SiteManager ID into the “Data” box and ensure bar code option “Code 128” is selected. (If “Code128” is not selected, click on the “Protocol” and select it.)

NOTE 9 – It is possible to change the size of the bar code label by dragging the corners of the box where it’s shown. If any resizing is necessary, make sure the bar code itself is 3/4 in. to 1 in. high and 4 in. to 4-1/2 in. long.



7.4. Print 4 copies of the bar code.



7.5. Attach 2 bar codes to the sides of the container in the vertical orientation.

7.6. Attach a barcode to the sample 202 printed form.



Far left: Improperly labeled; no bar code.

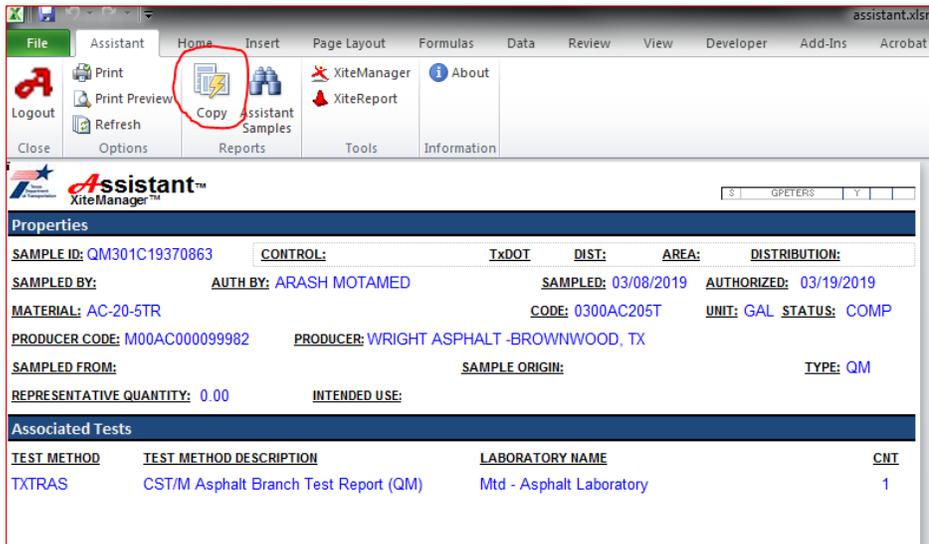
Far Right: Improperly labeled; bar codes in the horizontal orientation can't be read because they are not flat.

Center: properly labeled with two bar codes in the vertical orientation.

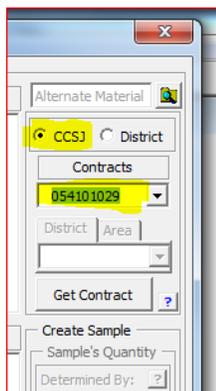
- 7.7. Save the last bar code label for the outside of the shipping container.

SECTION 8 – ASSOCIATING SAMPLES TO PROJECTS

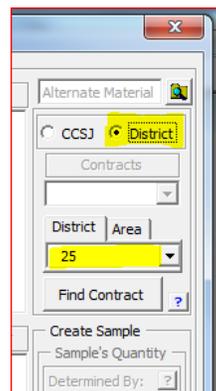
- 8.1. Follow the process described in [Section 2.4](#) to find the QM sample using SiteManager.
- 8.2. Double click on the QM sample to select it.
- 8.3. On the sample detail screen, click “Copy.”



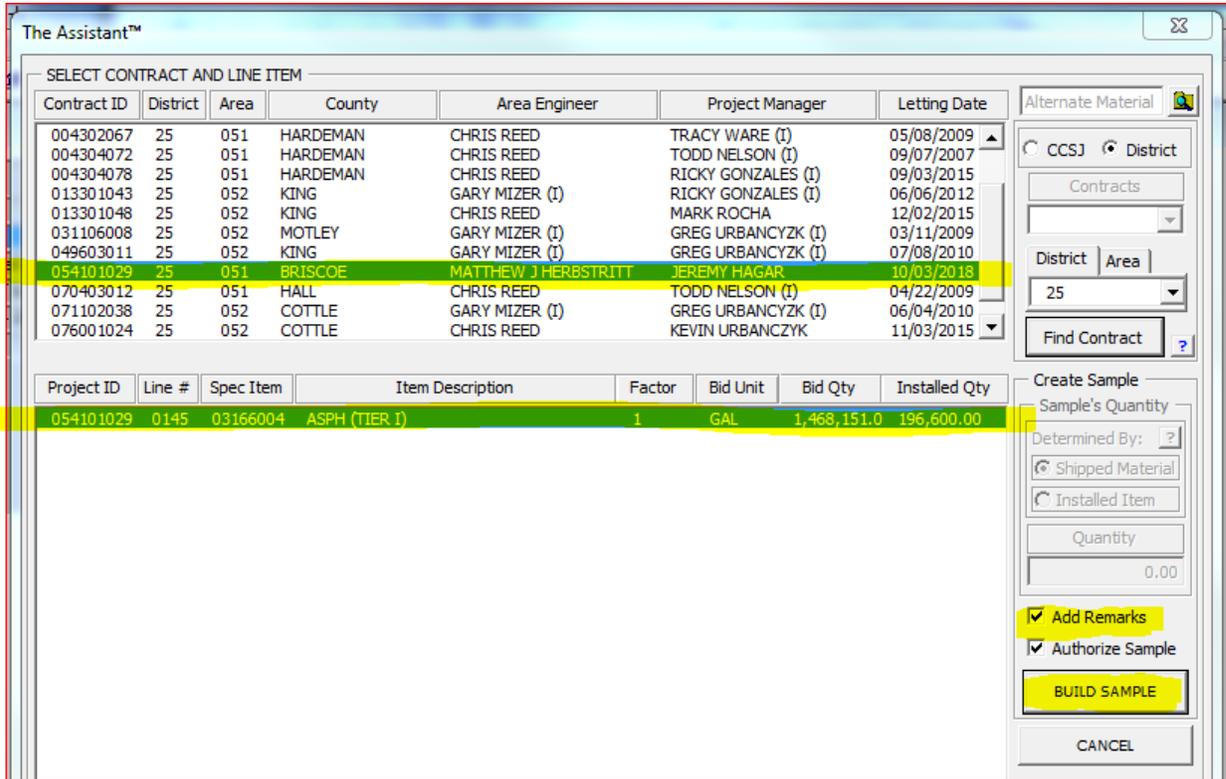
- 8.4. In the window that comes up, do one of the following:
 - Select the “CCSJ” button and type in the CCSJ number (the dropdown list may begin to populate once you get part of the CCSJ in) or
 - Select the “District” button and pick your district or area from the dropdown.Then click on “Get Contract” or “Find Contract.”



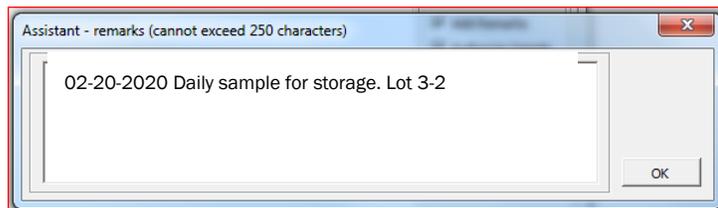
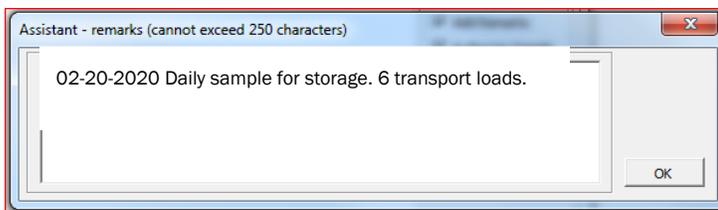
OR



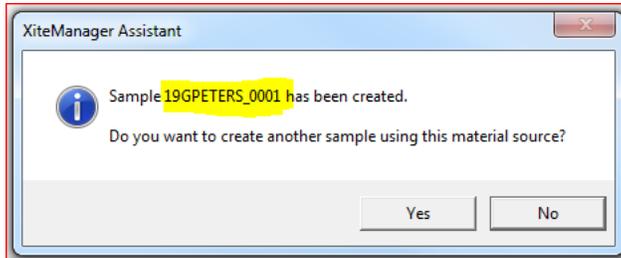
- 8.5. Select the correct project from the upper window, and the material line item from the lower window.
- 8.6. If you are associating a daily sample with the project for storage, check the “Add Remarks” box.
- 8.7. Click on “Build Sample.”



- 8.8. If you chose “Add Remarks,” a box will pop up for you to enter remarks. For stored samples, enter the sample date in the following format MM-DD-YYYY followed by “Daily Sample for Storage” and a minimal description. Then click “OK.” For example:

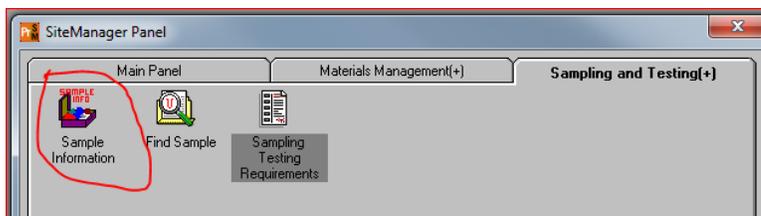
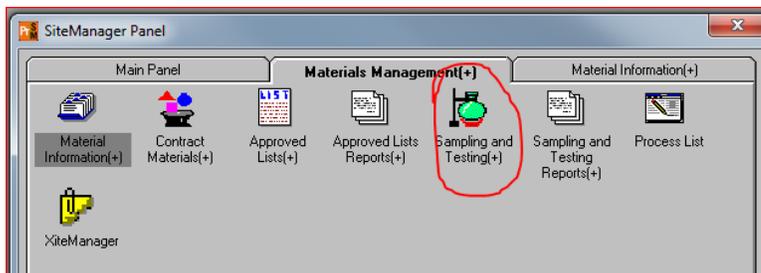
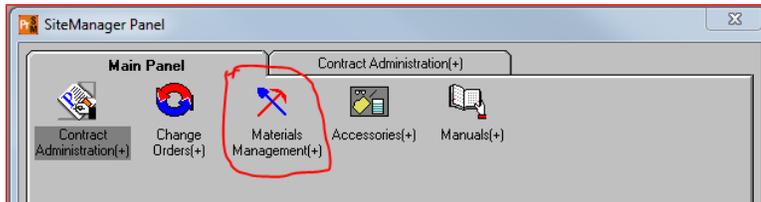


8.9. Write down the new SiteManager ID provided.



SECTION 9 – REACTIVATING STORED SAMPLES AND SUBMITTING TO MTD

- 9.1. Find the SiteManager ID of the sample to be submitted. This is easily done by reading it from the side of the sample.
- 9.2. Log in to SiteManager and double click on “Materials Management,” then “Sampling and Testing,” and finally “Sample Information.”



- 9.3. Enter the SiteManager ID in the “Smpl ID” field and press ENTER or TAB. This should bring up the sample information.
- 9.4. Select “Services” ⇒ “Copy Sample” ⇒ “Without Test Results” from the menu.
- 9.5. Copy or write down the new SiteManager ID.
- 9.6. Click on the “Tests” tab and follow the instructions for logging and shipping a sample, beginning with [Section 5.6 through 5.11](#).
- 9.6.1. Make sure to place the new barcode labels, so that they cover the old ones completely.
- 9.6.2. Mark out the old SiteManager ID and write the new one on the sample.

SECTION 10 – FREQUENTLY ASKED QUESTIONS

10.1. Q: Does a sample need to be taken and logged into Site Manager for Exempt mix?

A: If the mix is tested, then yes one sample per day, per source, per grade, per project will need to be collected. If less than 100 tons are produced, then a sample will not need to be taken since no testing is required.

10.2 Q: Does a sample need to be taken and logged into Site Manager for Item 340?

A: Yes as long as testing is required, and it is required for Items 341, 342, 344, 346, 347, and 348 and for SS3076 and SS3077. All seal coat projects as well.

10.3 Q: Do we need to take one sample per individual project if the same asphalt is coming from the same producer on the same day? For example, we may have 5 different projects (CSJs) that are using the same mix/oil from the same producer/manufacturer on a given day.

A: Yes, since its one sample per day, per source, per grade, and per project.

10.4. Q: What guidance can you provide to us on where we are supposed to store and dispose of all these samples?

A: The room needs to be climate controlled, all TxDOT offices and labs are climate control and suitable for storage purposes. Refer to Section 6.5 for disposal options

10.5. Q: Who is responsible for providing sample containers?

A: Unless it's part of the contract that the contractor or CEI is responsible for providing sampling containers, the district will provide the required sample containers.

10.6. Q: Do I need to sample daily for 8000 series materials?

A: No, daily storage samples are not required for 8000 series. Additionally, project testing is not required unless requested by the Engineer.

10.7. Q: Do I need to sample daily for tack coat?

A: No, daily storage samples are not required tack coat. However, a minimum on sample for project testing is required.

10.8. Q: I feel that a barcode on the sample is good enough; do I still need to attach a 202 and label the can?

A: A barcode by itself is not sufficient. The sample should be labelled with all relevant details as discussed in this guidance document, in addition to being labelled with a barcode. Below is an example of a stick on label that can be printed with a label marker. Email MTD_Aspphalt@txdot.gov for a copy of the editable PDF file.

Brownwood District - Asphalt Sample

Producer: _____

Producer Location: _____

Producer Cert. #: _____

CSJ: _____

Highway: _____

Station: _____

Asphalt Type: _____

Date Sampled: _____

Sampled by: _____

Sitemanager ID: _____

10.9. Q: Can a TxDOT representative, CEI for example, collect and store the daily storage samples?

A: It's recommended that TxDOT has direct oversight of the samples at all times. This includes the district storing the samples at designated TxDOT facilities or in field labs secured by TxDOT. However, the district could choose to utilize an external entity representing TxDOT to augment its operations. If a district decides to have a CEI firm store samples, it is the district's responsibility to ensure the scope of these services are well defined in terms of location, quality, security, environment, and documentation. The district should also have an established procedure to track these samples.

10.10. Q: Can I utilize a contract to test project samples?

A: No, all project samples should be mailed to MTD for testing.

10.11. Q: What questions should I expect from asphalt binder suppliers regarding project samples?

A: The following is list of questions/information typically asked/requested by the suppliers:

1. Where was the sample pulled from?
2. Was the sampling witnessed by TxDOT?
3. Was the TxDOT personnel witnessing the sample certified?
4. What was the chain of custody?
5. Where and how was the sample stored?
6. Contractor's name and location.
7. Shipment BOL information.
8. Was the correct sample container used?
9. For sealcoat: was the sample collected after the first load completely shot?