Introduction

Purpose of the workshop – SMO annual goals for updates for QC Program and LIMS Contract Administration issues

This workshop merges both.
• What’s available in LIMS?
• What is the contract administration process?
• Overview of the QC Program and how it fits in LIMS
Overview of the QAPC
The Code of Federal Regulations requires the each State Highway Agency have a Quality Assurance program that contains:

A personnel qualification program (FDOT = CTQP)
A laboratory qualification program (FDOT = LQP MM 5.7)
A sampling, testing and reporting guide (FDOT = STRG in LIMS)
A final project materials certification (FDOT = MM 5.4)
An independent assurance program (FDOT = IA MM 5.3)

Contractor Quality Control was not required by the Federal code, but was offered as an option that FDOT took advantage of. The goal is that Contractor Quality Control will move the Department and Industry closer to performance specifications.
The purpose of this workshop is not to provide hands on training. However, you'll need to know some of the LIMS basics and terminology to understand how many of the reports are generated.
This is a general illustration of what key points can come into play in the acceptance process. They may or may not result in an exception, but they are indicators of where to look.
In regards to LIMS basics, let’s review the sample life cycle.

Log in = the field personnel log all samples into LIMS. Lab personnel do not log lab samples into LIMS.

When a lab sample is physically at the lab, the lab receives the sample. Field samples are auto-receipt.

Tests are performed on the sample and individual results are entered in the result entry stage.

Test results are validated in the validation stage. This stage allows data entry personnel to revise any data that might be in error before the sample is passed on to the approval stage.

In the approval stage, the sample comparison decision is recorded.

For Contractor Quality Control samples, a disposition code is assigned to the “Q” level samples.
For non-Contractor Quality Control samples, a disposition code is assigned to the “V” level samples.
Before you can enter data in LIMS, you need to get access. For Contractor personnel, here is the process:

For CCEIs, the process is similar except that you will submit your applications to the FDOT Project Manager.

For examples of the Contractor’s forms, see the SMO LIMS website.

NOTE: This process must be repeated for every project. OIS requires this, not LIMS. This way they can update the userid expiration dates as needed.
These are the security levels for Users. Contractor need Levels 1 and 2

Level 1 = View only. Sample status reports.
Level 2 = Data entry
Level 3 = Approver. These are verification personnel who make the verification decisions.
Level 4 = Requestor - NOT USED AT THIS TIME
Level 5 = Program Coordination – Lab Approver, Proficiency Sample Program Administration, Producer Approver, IA Evaluators, Certification Personnel
Level 6 = District Materials Office role in approval or change in mix designs for project by project basis
Level 7 = District Application Coordinators
How to get help...

- Submit all questions & issues to the local Help Desk (e.g. D1HELP)
- Submit a question online

http://www.dot.state.fl.us/statematerials_office/laboratory/lims/comment.html

LIMS Issues are handled by the local help desk. If it is a state wide issue, it gets bubbled up to the State Materials Office help desk. There it is assigned to one of the Super Users.

You can also submit a question on line at the SMO web site.
Here are the DISTRICT APPLICATION COORDINATORS. They will be assigned to assist with local issues related to LIMS. If they can’t resolve it or if it affects users state wide, they will bubble it up to SMO.
An authorized lab is a laboratory that has been qualified by the Department. It is also an Office or Laboratory that has a LabID.

Field offices for Contractors and CCEIs will be assigned a LabID. By field office, that would be an office that covers a certain region, not necessarily a project specific field office.

Resident Construction Offices will also be assigned a LabID.
Log in Lab samples
Result entry for field tests
Sample Approval and Disposition on samples that require a disposition code
Coordinating with District Materials Offices or State Materials Office for Final Project Certification
The PA is the point of contact for Prime Contractor Requests
The Project Manager is the point of contact for CCEI requests
District Materials Office personnel perform LIMS maintenance and manage the QC Program and IA program in LIMS.
They also perform some sample data entry. Most Resolution sampling and testing is performed at the District Materials Offices since the Resolution labs are required to be AASHTO accredited by the Federal Code.

Process Tracking is the Statewide Materials Model term for how long it takes the Materials Offices to perform certain process. You will see these types of functions denoted in LIMS with a "PRO..." Material Id. For example, PROCER is the process tracking for the Final Project Materials Certification Process.

Speaking of Final Project Materials Certification Process, due to many changes in the process and personnel at SMO, the District Materials Offices now are involved in the Final Project Materials Certification Process. You may be contacted by a District Materials Office person during the course of your project to address findings. This is due to there being a statewide goal of 25 days from final acceptance for the Final Project Materials Certification Process.

If you need LIMS training, contact your local District Application Coordinator.
Now that we know who does what, what can LIMS do for us?

One way to find information in LIMS is through the status screens.
Here is how you access the status screens.

Each screen filters the information in LIMS a different way. If you only want to view a particular sample, use the Sample Status by Sample ID screen and enter in the LIMS Sample ID. If you want to see all the sample IDS under a particular logger, use the Sample Status by Logger Id.

Later on, we'll take a closer look at Sample Status by Project.

NOTE: All the options on this screen are level 1 except for the Change Sample Information which requires a level 2 security. This option allows users to change sample header information. This would be information like station from and station to and other Sample Transmittal Card information. For changing test information that is incorrect, there is an option available at the Validation stage that is explained in the data entry hands on training.
LIMS also has some standard reports that can assist you.
All of the reports are available from the Reports tab. Like the status tab, all users with at least Level 1 security have access to these reports.

Since there are many more reports than status screens, the reports navigation is a little more complicated. All the navigation steps to generate a report in LIMS are on pages one through three of the reports hand out.

One report, the Sample Final Certification can be generated directly from the icon.

Other reports are generated by clicking on an icon, clicking on an option from one or more drill down lists, then entering parameters if required.

Let’s look at an example. On the first page, there are instructions for the Qualified Labs by District report. Click on the Qualified Labs & Producers icon, click on the Qualified Labs by District option on the drill down list. When the box opens for the parameters, click on the district and then click ok to generate the report.
When the window opens, the first parameter is highlighted. Use the drop down list to choose the correct option.
Click on the second parameter. Then use the drop down list to identify the correct option.
Once all parameters are identified, click on the OK button to generate the report.
In our next component, we'll look at a few reports that will assist you in starting up for a project.
The Job Guide Schedule is just that, a guide. Refer to your contract documents to ensure that all sampling and testing requirements are covered. An example of a document that would not be covered by the Job Guide Schedule is a technical special provision.
Here's what the report looks like.
The Sampling, Testing Reporting Guide is a report of all the Material ID information in LIMS. For cases where the Job Guide Schedule does not show the sampling and testing requirements, refer to the Sampling, Testing Reporting Guide to find the information.
This is an example of the QC STRG by Material Id. There are four options to retrieve this report:

STRG By Matl ID
STRG By Matl Description
STRG QC By Matl ID
STRG QC By Matl Description
This report shows all pay items measured by area. Some will need a spread rate or core, some will not. Use your discretion and pay item knowledge when running this report.
This is an example of the report. As you can see, Pavement removal would not need a spread rate or core, but Optional base might need coring.
Now let’s review the QC Program and how LIMS can help you track QC Program items.
What is “the QC Program”.

It is a materials based program established by Section 6.8 where the requirements for Producers and the Contractor are defined. In general, a QC Program is a QC Plan and some other requirements. For example, prestressed producers must have an acceptable QC Plan AND Accreditation in order to have an acceptable QC Program.

When you think QC program, think materials (structural concrete, hot mix asphalt, cement, timber, precast, prestressed, etc.) NOT necessarily Contractor Quality Control. There are items that are Contractor Quality Control that are not QC Program. One example is topsoil.
Okay, so we use QC Program and QC Plan a lot. And there’s also QC Manuals. It can all get confusing. How do you know which one is which?

QC programs are for Producers. It is a QC plan according to Specifications 105 + a some other requirement. For example, Prestressed Producers must have a QC Plan + PCI accreditation. Producer QC plans are submitted to the local District Materials Office except for cement and steel.

Contractor QC manuals are the company wide statement of Quality. They are submitted to the State Construction Office and reviewed by all District Construction Offices and District Materials Offices as well as the State Materials Office.

Contractor QC plans are the project specific plans submitted to the Project Administrator. It can include a QC Manual by reference.
Let’s look at the process for the Contractor’s QC Manual and Plan. Later, we’ll see how the Producer QC Program and Lab Qualification Program work as part of this process.
Contractor’s QC Manual

Contractor submits QCM to SCO.

SCO coordinates review with District

Input from DCOs, DMOs, & SMO.

Does QCM meet minimum requirements?

Yes

Approve QCM and post on Infonet

SCO notifies Contractor

No

Notify Contractor of expectations

Contractor amends QCM

This flow chart shows how the Contractor QC manual is reviewed and approved.
If the QC manual option is used, the contractor must expand it to include project specific items. If the QC manual is not used, the contractor must develop a project specific QC plan. Either way, it is reviewed for correctness and completeness.
What goes in a QC Plan...

Shifting gears a little, we'll look at Section 105 which outline the major contents of a QC Plan whether it is for a Contractor or a Producer.
In the portion of the QC Plan, we want a list of TINS for the qualified personnel. But that is not enough. We need to know how the qualified personnel relate to each other. That can be accomplished through an organizational chart or descriptive language, but the idea is that we need to know who and how.
Checking Qualified Personnel

Active Technicians Per District

How do you know who is qualified?
You can use this report from LIMS, but more than likely you will use the CTQP website.
This is the typical way most qualifications are verified.
What goes in a QC Plan...

continued

Back to Section 105
3.3: Raw Materials:
- Identify Sources. Provide necessary details.
- Method of verifying Certification (that the material is same).
- System of identifying, isolating & disposition of failing raw material.

The green balloons are examples of Contractor QC plan information. The brown balloons are examples of Producer QC plan information.

What is a raw material? It depends on whether it’s a supplier, producer or contractor. That will be what is described in this section.

Aggregate Supplier = No raw material
Concrete Producer = aggregate, cement
Contractor = load of concrete arriving on the project
3.4: Storage of raw materials
- Describe methods & measures for preventing segregation, contamination & degradation.

3.5: Production Equipment (Not Testing Equipment)
- Calibration frequencies, Maintenance schedule & procedures.

3.6.1: Plant Identification

3.6.2: Process Control System:
- Methods & measures in addition to QC testing
- May include inspection, process control S&T, etc.

The green balloons are examples of Contractor QC plan information. The brown balloons are examples of Producer QC plan information.
3.6.3: Loading & Shipping Control

Methods & measures of preventing segregation, contamination & degradation.

3.6.4: Types of products approved by the Department.

3.7.1: Examples of Certifications issued.

3.7.2 Statements of compliance

3.7.3: List of approved producers.

3.7.4: Storage, location & procedures for supporting documents.

The green balloons are examples of Contractor QC plan information. The brown balloons are examples of Producer QC plan information.

3.6.4 – In a producer's QC plan, some producers will list the types of products they wish to supply, for example aggregate, cement and incidental precast. This will become important later when we review Contractor QC plans to make sure the sources listed can actually supply the required materials.

3.7.1 – If you don’t get any information in this section on the Contractor’s QC plan, don’t worry. There aren’t many certifications required for Contractors under 6.8 yet.

3.7.3 – This is where the Contractor listed producers.

3.7.4 – This is where Contractors and Producers describe where they keep QC backup documentation in case the Department wants to review it later since we don’t ask for copies of everything any more.
So how do you check 3.7.3? This is one area that District Materials Office personnel will verify. If you wish to check it, use the SMO website.
Use the SMO website to review the producers.
Or run the reports in LIMS for the latest information. The options for generating the reports in LIMS are:

Aggregate Sources
Precast
All Other Sources
All Other Sources by Company
All Other Sources by Number
All Other District & Type
All Other by District

NOTE: Previous to LIMS, producers and labs on these lists were only the ones with an "accepted" status. Now all producers and labs are listed with their latest status. Verify that that producers have a status of “QCP accepted”.

NOTE: The cement report is not generated from LIMS.
Now we'll depart a little from Section 105 and review how a producer gets an accepted QC program. Producers use 105 to detail their plans as well. The process is a little different. Let’s look at their process.
What goes in a QC Plan...

continued

Back to Section 105
The green balloons are examples of Contractor QC plan information. The brown balloons are examples of Producer QC plan information.

The words “when not in specs” are significant. Contractor QC Plans should not have any wording that refers to complying with the specifications. For example, the Contractor QC Plan should NOT state “The asphalt will be transported in accordance with Specification 330”. What the Contractor QC plan should say is HOW they will comply with 330.
3.9 Final product: field operations

- **Transportation**: method of delivery.
- **Storage**: method & duration of storage when not in specs.
- **Placement**: methods & equipment.
- **Disposition** of failing material: Methods & measures, when not in specs, for identifying & controlling failing material.

We looked at raw materials. What’s a final product?

This is the contractor exclusively since it's field operations.

Disposition of Failing Material is a recurring area that we haven’t talked about yet. Whenever there is a call for disposition of failing material information, what needs to be addressed is what processes are in place to avoid failing material. There are several issues that should be addressed in these sections:

1. Processes to avoid failing material.
2. Processes to identify failing material.
3. How the Department is notified of the failing material.
4. How the failing material is addressed.
5. What is being done to make sure the failure does not reoccur.

This doesn’t have to be specific at first, but Project Administrators can ask for specifics as needed in QC Plan revisions.
3.10 Testing Labs: Identify qualified labs.

Use the SMO website to verify labs.
Use the SMO website to view the laboratory listing.

NOTE: Previous to LIMS, producers and labs on these lists were only the ones with an “accepted” status. Now all producers and labs are listed with their latest status. Verify that that laboratories have the correct test methods for the areas they are shown in the QC Plan.
Or use LIMS. The laboratory report options are:

- Qualified Labs Complete List
- Qualified Labs by District
- Qualified Labs by Category
- Qualified Labs by Dist & Cat
What is the LQP process?

This flow chart shows how the Lab Qualification Process works.
QC Plan is now with the Department for review/approval

What happens once the plan is approved?

What occurs during the DMO review?

How can the plan be used once approved?
You may see a sample with the LIMS material ID, PROQCC on it. This sample is logged into LIMS by the District Materials Office and represents the DMO review time for Contractor Quality Control Plans. If you wish to see more information, click on the notepad icon to see if the DMO has entered anything in the note pad.
This is an example of a PROQCC sample with note pad information.
We’re to the point that the Contractor can begin work. That is until this point, the Contractor could not work on any material listed in 6-8 until the Contractor QC plan (or portion of the plan) was approved.
Now we'll review some information to monitor the project from the QC plan point of view.
Specifically, we’ll look at material acceptance, manufactured products, final project certification and some other reports to help you monitor the project.
First, let’s take a side trip and look at what can happen at log in to affect LIMS reports.
This is an example of the LIMS login screen. As you can see, there are a lot of fields to be reported on. Any field used in a report must be completed for that sample to show up in the report. For example, lot and sublot information that is blank will not be sorted properly on the Lot Index report.
When a sample is logged into LIMS, the data entry person assigns a project, pay item, Material ID, Sample level, Spec Year and Spec Authority relationship to the sample. This information can not be changed once it is saved. If it is entered incorrectly, the sample must be purged and reentered. Most of the time these fields can be filled by choosing the correct combination from the drop down list.

In cases the correct combination is not present, chose the correct pay item, then use the “Material ID on Spec” field to assign the right Material ID. Finish out the action by typing in the same Material ID in the “Substitute Material ID” field.

By doing this, the sample will then appear correctly in the reports.
Also, we need to understand what acceptable material is before we look into how it affects the QC program.
Acceptance Definitions

For CQC Testing:
- Asphalt meets standards if C.P.F. for a Lot is \( \geq 90\% \).
- Concrete meets standards if “payment tests” pass.
- Earthwork meets standards if ‘QC’ tests pass AND are verified.

For Non-CQC Testing:
- Material meets standards if ‘V’ test passes.

Here are the definitions for acceptable material for Contractor Quality Control and non-Contractor Quality Control materials.
So, what does all this mean to the project and the Contractor’s QC plan?
We’re focusing on QC Performance so we have to understand what is acceptable. When the Department identifies poor QC performance, that might lead to a QC plan action. In some cases, the Department may opt to suspend the QC Plan or part of it. The Contractor will have to submit a revision to address the reason for the suspension.

What are some of the reasons for suspending QC Plans? There will be cases where project issues do not apply to the QC plan. There are others where they will definitely apply to the QC Plan. There may even be times when an issue falls under both categories.

Think of it in terms of what must be done to sustain the plan. There are five Department expectations.
Maintaining QC Program

Supply required information timely.

Example: On time data entry.

Expectation One: When the Department requests information, it must be supplied in a timely manner. This might be done by a letter from the District Materials Office to a Producer or through the Specifications. For example, the Specifications require that sample data entry must occur within twenty-four hours.
This report tells you when samples are entered into LIMS, but do not have test results entered yet. If a Project Administrator ran this report and saw that earthwork sample results were not being entered in a timely manner, this might be a case where he or she would suspend the Contractor QC plan and ask for a revision that addresses how the QC Manager was going to ensure that earthwork sample results would be entered in a timely manner.
Expectation Two: Material meeting Specification requirements.

The goal of the QC Program is to have material that is consistently high quality. However, the Department will not accept material that does not at least comply with the Specifications.
This report shows the asphalt on the project that is less than a 90% composite pay factor. Specifications 334 says the Department will take certain actions when this happens. Does that mean there is no option to address the Contractor’s QC Plan? No. This is an example of an issue that is both a contract administration issue and a QC plan issue. The Project Administrator will follow 334, but also ask for a revision to the Contractor’s QC plan that will address HOW the composite pay factor will be brought up and kept up above 90%.
Here is another report that would identify material that does not meet Specifications. Depending on the number and/or severity of occurrences, the Project Administrator might suspend the earthwork portion of the Contractor’s QC plan and ask for a revision that address HOW the failing earthwork will be addressed.
Maintaining QC Program ...

Cont’d.

Take immediate corrective action relative to deficiencies in the performance of the QC program.

Example: Correct IA deficiencies.

Expectation Three: Take immediate corrective action relative to deficiencies in the performance of the QC Program.

This is a case where the Department has communicated some action on the Contractor’s part to address QC program deficiencies and none has been taken.
This report shows Technicians that have been suspended. If these technicians were listed in the Contractor's QC Plan, that would definitely entail a QC Plan suspension and/or revision to address the unqualified personnel.
This report can be run prior to the technicians becoming suspended. The purpose of IA is not to suspend personnel, but to identify areas where sampling and testing methods are not being followed and provide coaching to personnel to eliminate variability.

If the QC manager was made aware of technicians that needed coaching but did not make arrangements to provide it, that could warrant a QC plan action. The Project Administrator would suspend the area the technician is listed in (such as earthwork) and ask for a revision stating HOW the Contractor is going to address the unsuccessful IA reviews.
This is the actual Qualification Performance Report on an individual technician. From this report, the Project Administrator or QC Manager can look up the sample status in LIMS to get the details needed for coaching technicians.
Expectation Four: Using materials that are produced under an approved QC program only.

This is the case where a Contractor lists a producer who is not qualified to supply the particular type of material needed. Some producers are qualified to supply material and the materials themselves are addressed by other programs such as mix designs for asphalt and concrete. Other producers must list the types of products they wish to supply. For example, a cement supplier lists the cement types and other additive types. Or an aggregate producer lists the types of aggregate such as coarse, fine, etc.

What happens in this scenario is the Contractor has identified a producer who is not able to supply the particular type of material needed.
Some Producers are accepted only for certain types.

This is the cement report. It is not really used on the project level Contractor QC plans, but it shows the types of cement for each location.
Call Producer to find out what aggregate types approved to produce.

The aggregate report does not have the same listing, however. If a Contractor needs to know if an aggregate producer can supply a certain type of aggregate, it is up the Contractor to call the producer to find out.

When checking Contractor QC plans, this might occur in aggregate or incidental precast. The District Materials Office will verify this information during review. Should a Project Administrator have a question regarding whether or not a particular producer is capable of supplying the correct material, he or she should contact the local District Materials Office.
Maintaining QC Program ...

Cont’d.

Correct any deficiencies related to any requirement of the QC program within the amount of time defined in the notice.

Example: Dept. suspends producer or lab

Expectation Five: Correct any deficiency related to any requirement of the QC program with the amount of time defined in the notice.

Here we say that when the Department has notified the Contractor of a deficiency, he or she must correct it in the time frame specified in the notice. If we said fix it in a week and the deficiency is not addressed in a week, that’s grounds for suspension.
At this point, the Producer’s QC plan has been accepted by the Department. How do they get suspended?
Either through inspection or through monitoring, the District Materials Office detects a QC program non-compliance issue.

The first day, the Producer is suspended in the LIMS database and the producer is notified of what was found and what to do.
Also on the first day, the District Materials Office notifies the State Construction Office who in turn notifies the District Construction Offices who in turn notify the Residencies.

The Project Administrator has until the second day to review the Contractor’s QC plan to see if it has to be suspended. If the producer is listed on the Contractor’s QC plan and there are no other producers of the same type listed (alternate sources), the Project Administrator must suspend the Contractor’s Project QC plan. The plan will remain in suspension until the Contractor finds another producer who is not suspended or the suspended producer is reinstated.

The same is situation applies to sole source laboratories.

Any material produced and placed during the period between the producer being suspended and the Project Administrator suspending the Contractor QC plan will have to be reviewed and addressed, if needed.

That is it for Contractor QC plan issues. If it does not fit one of those criteria, use some other means of contract administration. If it does, proceed with the QC Plan process as needed.
Manufactured Products
Process

Now let’s look at Manufactured Products which are part of the QC program process.
Here is the flow of the process. For project level actions there are two main focuses, ensuring that the certification is good and logging the certification into LIMS.
To make sure you have a correct certification, visit the SMO Manufactured products web site. Click on the particular example.
The example should match the certification you are verifying. It must also be for the correct material.
Once you have determined that the certification is correct and it is for the right material, you are ready to log it into LIMS.
1. Cert P/F/ or C
   P = the certification is acceptable and it matches the material it represents
   F = the certification is unacceptable or it doesn’t match the material it represents or both.
   C = the certification is a Contractor (installation) certification

2. Project ID/Pay Item/ Mat’l ID/ LIMS Spec Combination – find the correct combination of Project ID, Pay Item, Sample Level (V), Spec Year and SPEC AUTHORITY = CERTIFICATION. If CERTIFICATION is not on the drop down list, add it in Mat’l ID on Spec field.

3. Date Sampled

4. Quantity Represented & Unit of Measure

That is all that is needed for logging in a certification. They are Auto Receipt. If the Spec Authority of Certification is used, there are no tests assigned so it skips Result Entry as well and goes straight to the Approval stage where the Project Administrator approves the sample with a code of “RS”.
Let’s look at some screens and reports that will assist in the Final Project Certification process.
If you have a sample on your project with the Material ID of PROCER, that means someone is reviewing the project for the Final Project Materials Certification.

NOTE: This screen shot is from SYSTEST, the testing environment for LIMS. In most cases, you will only have one sample under the PROCER material id in the Production Environment.

If you want to review the findings, click on the sample to highlight it, then click on Notepad to see the findings.
Here is what a typical PROCER notepad might look like. Notice that issues are being reviewed and addressed “real time”.

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Text Editor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0480000091</td>
<td>3 Lots (8), (6), (7) of 123 Sprague were accepted with CPV for less than 90%. They were accepted based on an EAR.</td>
</tr>
<tr>
<td>0480000092</td>
<td>There is no record of Straightedge performed.</td>
</tr>
<tr>
<td>0480000093</td>
<td>NOTE: THERE IS NO SPELL CHECK!</td>
</tr>
<tr>
<td>0480000094</td>
<td>Posted by RT722AH on 9/24 AM 2000/04/</td>
</tr>
<tr>
<td>0480000095</td>
<td>The Straightedge report was found. No deficiencies were noted. NOTICE: Invalid Sample Status, only Viewing permitted.</td>
</tr>
<tr>
<td>0480000096</td>
<td></td>
</tr>
</tbody>
</table>

**Sample Status**

- **Sample Status by Project**
- **Sample Status by Group**
- **Sample Status by Status**
- **Sample Status by Sample**
- **Sample Status by Machine**
- **Sample Status by Issue**

**Maintenance**

- **Setup**
- **Machine**
- **Error**

**Performing NotePad**

[Image of a computer screen showing a notepad application with text entries]
This is an example of the Exceptions report from LIMS. If the Certification personnel are proactive, this report can be kept up during the life of the project. In most cases, it won’t be available until near the end or after the project is complete.
Here are some other screens and reports to help you in monitoring a project.
This is an example of the Sample Status by project screen. It can be useful in reviewing Monthly Certifications from the QC manager. The certifications will have a project, a begin and an end date. These 3 pieces of information will generate this screen. If it’s on the certification, it should be on this screen. If it’s on the screen, it should be on the certification. You can view individual samples and tests directly from this screen by clicking on the sample in question and clicking on the View Tests icon. The test screen will appear. You can’t do any data entry, but you can see what has been entered thus far. To get back to this screen, click on the exit icon. Continue until all samples you wish to see have been viewed.
Here is what the test screen would look like. When you click on the exit icon, you will be taken back to the Sample Status by Project screen.
This is an example of the Earthwork Maximum Density Report. This report lists all the proctors for a Financial Project Id. It is useful as a print out of the proctors for field personnel, density log book checks, etc.
This is the lot index report. It is useful in determining if enough samples have been taken per lot or sublot. Notice that the first samples have no numbers in the lot number field. This is because the data entry personnel did not include that information at the login screen.

<table>
<thead>
<tr>
<th>Lot No.</th>
<th>Sample No.</th>
<th>Sample ID</th>
<th>Rdwy Side</th>
<th>Station From</th>
<th>Station To</th>
<th>Lift No.</th>
<th>Verified?</th>
<th>Quantity Represented</th>
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Number of Rows on Report: [10]
This report shows all the samples that were coded with a disposition code other than “Full Pay per Specification”. It is useful in determining if material is being placed that may not meet the acceptance criteria. It is also useful in determining if material may be an exception. Just because the material appears on this report does not mean it’s an exception, but it might be so start looking for possible exceptions with this report.
This report shows you if you have prestressed pay items on your project and if any samples have been logged into LIMS under those pay items.
This report shows samples that have been coded with an approval code of “RS”. That may or may not be a good thing. Non-Contractor Quality Control items, such as thermoplastic are supposed to be coded as “RS” so ignore those. For Q level Contractor Quality Control items, they should not be coded as RS unless the V level was missing. For V level samples coded RS, the Q sample is missing. Either situation will warrant further investigation and is possibly an exception.
This report shows all Q level samples that are coded “RE”. That means there was a V sample to compare with it, but it did not compare favorably. There should be resolution samples for these samples and possibly an exception.

One note for Material Removed and Replaced or Reworked. There are requirements for both situations that warrant additional sampling and testing. In both cases, make sure the material has been sampled and tested accordingly.
This is a report of the active technicians who have already received an evaluation. If you think a technician may need an evaluation, generate this report and see if he or she has been recently evaluated.
This report shows all samples in LIMS that are not yet approved. The goal of this report is to be blank. It can be blank by typing in the wrong contract number, by there never being ANY samples entered into LIMS for that contract or all the samples on that contract have been passed through the LIMS sample life cycle and are approved.

If you receive a blank report, double check the contract number.
This report is similar to an open pay item report. Because a pay item has no samples assigned to it may not be a bad thing. If the pay item is not used, there would be no samples on the pay item. Future versions of this report will show a quantity paid to date column. When that column is present, it will be easier to determine if a pay item is missing samples. Also it does show the number of samples taken versus the number passed and failed. Those totals should coincide or some samples have not yet been fully processed.
The end.