TAC Meeting, October 9, 2014

TECHNICAL ADVISORY COMMITTEE (TAC) MEETING

REVISING THE MANUAL FOR EROSION AND SEDIMENT CONTROL

Thursday, October 9, 2014

GA DOT Area 4 Office

Frank Pinkston Building

4499 Riverside Drive

Macon, Georgia 31210

10:00 A.M.

Barbara Hilger, RPR

Certified Court Reporter, GA A-295

TAC Meeting, October 9, 2014

A P P E A R A N C E S

Brent Dykes, Executive Director, Georgia Soil and Water Conservation Commission

Ben Ruzowicz, Interim Urban Program Manager, Georgia Soil and Water Conservation Commission

TECHNICAL ADVISORY COMMITTEE MEMBERS PRESENT:

Thomas Brown	Betty Jean Jordan
Britt Faucette	Bob Moran
Adena Fullard	Reece Parker
Kirby Hamil	

ADVISERS PRESENT:

Glen Behrend	Guerry Thomas
Marc Mastronardi	Eric Harris
Dewey Richardson	David Eigenberg

PUBLIC SPEAKERS:

Representative David Knight
Representative Penny Houston
Brad McCoy
Donald Davis
Larry Booth
Kelli Davis
Wayne Seabolt
Wesley Zech
Michael Perez

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MR. DYKES: I'm calling to order today the Technical Advisory Committee Meeting, October the 9th in Macon. The first order of business, everyone should have received an agenda upon coming into the room today. Committee members, are there any changes or additions to today's agenda as presented to you today?

(No response)

The consensus is that we move forward on the existing agenda then?

(No response)

Okay. We'll do so. I want to say thank you to Marc Mastronardi and DOT for the opportunity to use their space here today and hope that it was easy for you to get to, and I appreciate this opportunity to be here in the middle part of the state.

We do have a court reporter with us again here today over to my right. Today, as we're going through comments and discussion, I'm going to ask you, if you are a committee member, to take your name tent and turn it like this if you want to speak. This helps the court reporter know who is doing the speaking and make sure we get captured all the information that takes place during

the meeting today.

As we go through the agenda today, certainly committee members will be recognized to make any comments or questions or things of that nature. If it becomes an issue that we need to reach consensus on, we'll reach consensus, and I will moderate the meeting today. Questions and comments from the public will be taken at the end of the meeting, as addressed on the agenda as Item Number 6. That's the purpose of today's meeting.

Now, moving on to Item Number 2, the review of the September 10th Technical Advisory Committee Meeting, as all of you know, we had a court reporter at that meeting who provided a transcript of the meeting, and it's also posted on our Website. At that meeting, just as a short review, Mr. Joel Sprague presented a finding that related to the BMP testing that was done with TRI Environmental and fielded various questions, not only from the audience but also from the Technical Advisory Committee members. At that meeting numerous Technical Advisory Committee members asked for copies of the DVDs of the tests that were done. That's the stack of CDs

you have before you. There's 77 CDs in each stack that document each test that was done. I apologize not having it to you before today, but they arrived, after having been copied by a third party, yesterday. So I apologize for not getting them to you sooner but today is the quickest we could get them to you.

At the end of the September 10th meeting we were presented with a copy of a review of the testing documents entitled "A Technical Discussion of Industry Questions and Concerns." That was performed by Dr. Wesley Zech. That was presented at the end of the public comment period and you've all been provided with that prior to today's meeting. That was produced by Dr. Zech as a third-party consultant for industry representatives. Dr. Zech was invited to present today but declined our offer to present: However, he is in the audience today. I'm sure if you'd like to direct questions to him, that would be up to his choosing should he decide to answer those. We appreciate him being in attendance today. We provided you information as far as his response to us as far as presenting to you today, and that information has already been sent to

you.

The Technical Advisory Committee received public comments, of course, at the September 10th meeting, and those were documented in the transcript, and they are also in the summary of comments that you have before you in the binder clip. These were comments that we received via the Website, through the Green Book comments address, in addition to questions that were not answered at last time's meeting back in September.

Joel Sprague of TRI was asked to respond to the comments and discussion provided by Dr. Zech on behalf of the industry and also to respond to comments made by Mr. Larry Booth at last month's meeting. So now I'd like to call Joel up to the table. Joel, if you'll come up and sit with us, we certainly want to give the Technical Advisory Committee an opportunity -- I know you've had a chance to have that document prior to today's meeting, but I also want to give you an opportunity to ask questions of Mr. Sprague regarding his response to the public comments. Joel, I don't know if you want to make any opening comments or anything before questions begin, but we certainly want to give

you that opportunity.

(Mr. Sprague declined to comment.)

So we want to open it up to committee members and our technical advisers, and we appreciate the DOT representatives being with us today, to ask questions of Joel regarding his response to the questions presented by Dr. Zech and by Mr. Booth.

MR. ZECH: Mr. Dykes?

MR. DYKES: Yes.

MR. ZECH: Am I allowed to ask questions?

MR. DYKES: We're going to take questions from the audience at the end of the meeting. This is the committee discussion time for committee members and technical advisers, so we certainly want to give you ample time to ask Joel questions or express comments at this time.

MS. JORDAN: I have a question. As I was reading through these comments, several times it said that they weren't installed according to manufacturer's directions, but the response each time was this is according to, I guess, agreed-upon setup for the testing method. So I just want to make sure I understand that

that is a common occurrence for there to be a difference between a testing method and a field-installed procedure.

MR. SPRAGUE: In every case the systems were installed according to really the scope that was set up by the contract. Some of the systems were to be installed according to Georgia DOT; some were to be installed according to the Georgia Soil and Water Green Book, and one, the compost sock, was to be installed as directed by the manufacturer of that product. And in all of those cases we followed those stipulations.

MR. MASTRONARDI: So, Joel, is that something in the RFP?

MR. SPRAGUE: Explicitly, yes.

MR. MASTRONARDI: So then in the 6th Edition when it ultimately came out, does it reflect what was tested in terms of the function of the stake spacing? The stake spacing, whatever it was, is less than the 6th Edition now proposes. Are you guys aware of that, conscious of that? It's an 8-foot test bed, okay? There's an 8-foot test bed, and in the picture there's eight stakes. Let's just say they're one foot apart.

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The 6th Edition manual shows a compost total size as having, I want to say, a 4-foot spacing in-between. We've tested something and then we've established a standard that isn't what we've tested in.

MR. SPRAGUE: It's clearly reported what the stakes were and how they were spaced and the results. There is no attempt to make a recommendation to do anything other than what was tested.

MR. MASTRONARDI: I'm not suggesting that you did. I think for my clarification I did not know, until I don't know how many minutes have passed since you said this, that it was at the manufacturer's recommendation.

MR. SPRAGUE: Which is how we were instructed to design it as.

MR. FAUCETTE: It's important to realize in the 6th Edition, the spec for the compost filter socks is not a propriety spec. It's not a manufacturer's spec. It's for compost filter socks in general. And so there was a UPL, unapproved product list, and that has been taken off the Website. And the way that this committee discussed it was that as products are tested, that's how they will be listed on the UPL. And that

doesn't exist anymore because that's been taken down, but I think what you'll see is, if you go back to that, the way the folks tested for materials, practices, and products, that's how it generally made the list. Now, generally speaking, as a category for compost filter socks, and there are quite a few companies that do make this product, there are different spacing requirements, there are different staking requirements, different installation requirements. I think the commission tried to capture that in their specs.

MR. MASTRONARDI: If that is so, and I do understand that it meets a minimum spacing, then it would seem that we would want --

MR. RUZOWICZ: (Inaudible)

MR. MASTRONARDI: No, no, no. In the photographs, not in the drawing.

MR. RUZOWICZ: I'm just making sure we are looking at the same thing. That came out of the 6th Edition. You said it was nine posts.

MR. MASTRONARDI: Right.

MR. RUZOWICZ: In the specs there's nine posts.

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MR. MASTRONARDI: So what is the 4-foot maximum? I think EPD and the GDOT said there was accuracy with 4-foot spacing.

MR. RUZOWICZ: (Inaudible)

MR. MASTRONARDI: I still have a question, though, in terms of, if we are going to have a manufacturer's recommendation, this is what the department would do: If we saw items that we thought were similar or amenable, we would recommend it fall to that manufacturer's installation as opposed to trying to generalize the installation. That's a comment that I want to make.

MR. DYKES: Joel, one question was regarding the A Factor and the calculation of that and how that did or did not affect the results of the testing you completed.

MR. SPRAGUE: There was an error in that calculation. It turns out the error -- the result of the test is to report a ratio. That's what this P Factor is. So the fact that we made the same error in both parts of the ratio made it a wash. And the error was in the calculation using a 40-foot length, which is

what we used in erosion control testing using the same slopes instead of 27-feet long, which is what is used in the test method that was employed for these devices. So that was a very legitimate, well, a clear mistake that we are fortunate didn't affect the results.

MR. BROWN: Joel, based upon the errors that have occurred I guess in your testing, is it possible that that can happen with another testing company?

MR. SPRAGUE: I guess I would say I would hope not. Part of the scope of this work was to formalize the test methods as well and work through the testing and learn what needed to be learned. This is cutting edge stuff. This is work that the Georgia Soil and Water has undertaken that no one else has undertaken. It's really at the forefront of doing this kind of testing, so there is a learning curve. Now, with that said, the mistakes are not in the testing. They are in the calculations applied to the testing results. So we are kind of a testing agency, and so in this case to try and get it to, get that data and put it in a form that then would be useful to a specifying agency like Georgia Soil and Water, like the DOT, is to figure out what

these calculations need to do and be. So kind of a long-winded way of saying the testing and the methodology which is included in each report should be very clearly now able to be dispersed to other laboratories and run effectively without error.

The calculation part of this, which is where the disputes tend to come up because it's the engineering side of this and each engineer tends to have their own sense of how to do things. So I would suspect that because we have embedded to our eyes a sense of what the calculation should be into this methodology, that Georgia Soil and Water is kind of saying, yeah, that's a reasonable way to use the data. And if others follow that or if others have issues with it, that could happen too. But that's really where the engineering judgment side of this comes.

There are different judgments to be made, but hopefully the errors, and there were clearly, and we tried to be open and report ourselves to Georgia Soil and Water, there were two calculation errors made. One, to the best of our understanding, did not affect the results; the other potentially did. And at some time I

think it would be good to talk about how those calculations were done, because they are not a part of the standard itself.

MR. DYKES: Joel, I'd ask you, since you brought it up, go ahead and expand on that if you don't mind at this time.

MR. SPRAGUE: Okay. The part of the calculations that were in error were in the channel testing, and it was simply a -- and I don't know how it happened. When you use these spreadsheets, son-of-a-gun a formula gets in a cell that shouldn't be there. And so in working with -- we were told about the error by Dr. Zech from Auburn, and he assisted us in fixing that problem. It turned into a result that led us to believe that a 70-percent reduction in sediment loss from a channel run through this test method would be a reasonable cutoff to use in a specification to say this is a good performing check structure. The original result said maybe that should be as high as 80 percent. So this is the part where I'm, now that we know what the correction is and we've got kind of agreement on what those calculations put out, I think a meaningful

discussion with the people who will use the results of this test on what's the appropriate threshold to use for specification of a good performing check structure would be a meaningful exercise for the Georgia Soil and Water, because it's a judgment call.

MR. FAUCETTE: I'd like to add onto Joel Joel said, in that he mentioned that some of this is new and at the forefront, but I think it's a topic of concern. The test method we are using is basically ASTM D6459, more or less, which has -- how long has that been in effect?

MR. SPRAGUE: We've got four different tests that were done. So there's the toe of slope testing that is using what is called Test Method 11340, which is a cousin of an existing erosion control testing methodology, which is ASTM D6459, and that's where our facility already was set up to do 6459, and our expertise. The other one, the channel, ASTM D7208, I guess the argument stands there as well. It's been around quite a few years, hasn't been used robustly, so we didn't have a lot that we could learn from other people's experience. But both of those test methods

have been around.

MR. FAUCETTE: One of my points is I think a lot of folks think some of this testing is new, and in fact a lot of it is not. It's been around for quite some time. And these methods, some of them are actually many years old and have been used by different groups, different agencies, using the C Factor as part of D6459 for erosion control products for many years. Now we are looking at the P Factor, which is just another component or factor (Inaudible). To me that makes a lot of sense, because if we are using the standard method that's been used for many years, could it be adjusted? Could it be made better? Probably. But we have used the C Factor for erosion control materials and practices for many years, and I think it's important that we actually evaluate our sediment control practices and in much the same way (Inaudible). So the check dam test is a little different because it's (Inaudible) used for quite a long time too, a performance standard, by several groups and agencies as well.

MR. SPRAGUE: Yes. And I do know that 11340, the toe of slope which provides the P Factor, has also

been used by the Wisconsin Department of Commerce to evaluate products.

MR. MASTRONARDI: Can somebody give me a chronology? Wasn't 11340 a working test? At what point was it graduated to an accepted standard test by the ASTM?

MR. SPRAGUE: It is not an ASTM standard, never been represented as one. It's a Georgia Soil and Water test method.

MR. MASTRONARDI: Okay. But I think I just heard you say 11340 was, 11340 is --

MR. SPRAGUE: It's modeled after ASTM D6459 which tests erosion control products.

MR. MASTRONARDI: Right. I've been under the impression for a couple years it was a working test at ASTM. Is that right or wrong?

MR. SPRAGUE: When you all adopted it, yes. And I assume it still is.

MR. MASTRONARDI: I'm not seeing the WK for it any longer, so I guess I'm asking you for that clarification.

MR. RUZOWICZ: As far as we know it's still a

working ASTM that 11340 is still in the process of going through. This was a big debate that the group had when this first came out, whether we were going to go with ASTM 7351 or we were going to go with WK 11340. We all sat there. It's in all the minutes. They all debated it, and everybody said their piece on it, and it was the agreement to go with the one that was more real life with what the group felt as far as the rainfall simulation to test these products. And that's how they proceeded to move on.

MR. MASTRONARDI: Again, I agree with that. I'm just trying to understand. So it's still a working test.

MR. SPRAGUE: I believe it is, yes.

MR. MASTRONARDI: I just want to be sure for all of our full understanding it is not an approved ASTM test. I'm fine that we used it. I'm getting that. I think it's important to make that clarification for the record.

Being a little bit stubborn, I'd like to go back to what we were talking about in terms of the check dam. On that Figure 6-12.4 of the 6th Edition it does

say under Note Number 2: "Place one stake at the center of the ditch/channel. Also place stakes at the bed/bank junction and at the end of the device not spaced more than four feet apart." So pictorially it shows nine out of ten stakes, but in terms of the narrative -- again, the broader point still being that if we're going to say compost filter socks are used universally by many suppliers and manufacturers, that needs to reflect what the manufacturers recommend.

MR. FAUCETTE: I'm not sure that this drawing doesn't show a broad spectrum of what these manufacturers would recommend. Not having done a survey, I can't say that for sure, but I am very familiar with the industry and I do think that correctly represents, that it does say, as Marc pointed out, not to exceed, so that means there could be more but not less.

MR. MASTRONARDI: And I guess (Inaudible) or GDOT, you can take from that that, if I had the opportunity, I may have made suggestions for our check daming scores, right? Ours also has minimums and maximums. That's something we did have the advantage of

doing.

I don't know if anybody was trying to go along with this list in order. If not, I do have some comments regarding the check dam mode.

MR. DYKES: Go ahead.

MR. MASTRONARDI: On September 10h I was asked does the installation meet GDOT's details. And I answered that it didn't, and only from one, from a cursory review of it, but I've since spent a lot more time looking at it, and I would share with you that our details recommend, and you can see in the photographs, that there be six horizontal wires. The commission is silent on what the wires should or shouldn't be. The department is not. We identified a 10-gauge wire in the top strands, 12.5-gauge wires in the seam, one-foot spacing horizontally. In the photographs I've seen I see four wires horizontally. I'll make the rational conclusion that if the posts are four foot apart, that you've got 4-foot spacing on the vertical wires. But that wire support is very important to the success of that device.

In addition, and I can't see from the

photographs but I want to say this: I can't tell definitively from the photographs but it doesn't appear that the fence is tied to the top horizontal strand of the wire backing, which is a requirement of the department as well. So I would share that.

I think the last comment to that is listed on check dams. Joel, you provided a drawing of how the detail met in terms of trying to get the 6inch elevation difference from the end post, but you represented that to be 25.5 feet in the drawings, or excuse me, in the pictures that I've seen in terms of, you know, the PDF presentation that's on the commission's Web page as well as the final report, those check dam wings are 12-foot long. So I would say that, again, I don't want to belabor that point to say that caused a blowout. I'm not going to make that statement. But to the broad question of does it meet our installation standard, on close review I reaffirm it doesn't.

MR. SPRAGUE: I disagree. It's -- I disagree with you.

MR. MASTRONARDI: I'm glad to show you where all this comes from.

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MR. RUZOWICZ: How do you feel that the wire, or the other would make a difference?

MR. MASTRONARDI: It's a structural support to the fence. If you look at some of the pictures, the fence is sagging. It actually looks in one where it's inundated that it exactly may have pinched it together. Here is what I don't know: Would it have made a substantive difference. I can't say it would or wouldn't, but it leaves a doubt that it would.

MR. SPRAGUE: Marc, this detail, it was painstakingly put in, and it didn't even come close to making it through the lowest load. I don't think there's any way any of those things, which I don't think occurred -- I mean, we really were painstaking trying to follow these details as best we could. There's no way this detail can work. It just can't work. And that's been interpreted as anti silt fence. It's not. It's this detail can't work, and that's all we had to work with.

MR. MASTRONARDI: So noted.

MR. DYKES: At the last meeting serving as moderator we had a lot of questions about Bentonite and

the use, that is, matching the test, not matching the test. Would you talk about some of those issues?

MR. SPRAGUE: For TAC members, on the handout that has the graphs in it, Item Number 7 tries to capture in summary this issue that went on quite extensively about the use of Bentonite. It gives some excerpts from the standard as we were instructed to follow, and we feel quite confident that we adhered to the spirit of this, especially the second. It's on Page 4: Place the SRD, that's Sediment Retention Device, so that no gaps are present along the perimeter barrier and be cut to fit, as necessary, to cover the width of the plot. Affix tall products, which in this case indicates logs and wattles are included in that category, to the boundary, by tying or adhesive, such that the water and/or soil cannot escape around the product but has to go over or through it. Pond sealing foam is suitable for this task.

So our interpretation was that this methodology intended for the testing agency to assure that the seepage went through or over the device. And so we did everything we could on the downstream side to

prevent it from getting down into the soil and coming through in whatever way, and Bentonite was our pond sealer of choice. As you know, in Georgia Soil and Water it's a pretty common pond sealer. So our folks were allowed to do that when it seemed like there was any chance of there not being a good, stable downstream side. I guess that tries to capture -- even with that said, we went back and evaluated all of the test methods. If you'll look at Page 5 of the handout, we evaluated the individual test runs. We happened to have a situation where -- back up just a step here.

Each test includes three replicates, and then we use the data from all three. It's kind of an averaging technique. In one of the cases one of the replicates didn't use any Bentonite and two of them did. And in your handout, that's the purple diamonds. And the results were virtually identical. In another case, what we were told at the last meeting that two fabrics were identically the same even though they had different names, when we compared those, it turns out one of those Bentonite had been used in the runs, and in the other one it had not been used, and they gave virtually the

same result. And that's what you see to the right side of the upper figure. We tried to dissect this to see if the use of Bentonite, even though we feel quite confident it was in compliance with the standard, would reasonably be expected to have caused any variance, any bias, which was one of the, shall we call it, suggestions at the earlier meeting. And once again, it does not appear that there's any indication that's the case.

And lastly, we just pulled out every run, just took off the data from runs that used Bentonite, and that's what the lower figure shows. And what's left still produces the same result, the same recommendation of seepage versus retention envelopes. So I feel like there's plenty of evidence that the Bentonite use was totally in compliance, and in being in compliance, it had no effect, it introduced no bias into the testing.

MR. DYKES: Thank you.

MR. BROWN: I believe in order to do a correct test you have to have all of the water and soil to go through the filter. If you don't close those gaps like it tells you to, then the test is not worthy. I believe

the Bentonite was fine to use.

MR. SPRAGUE: We certainly watched for that, and so that's what the results on all of the products we are confident describe, is what happens when all of the seepage goes through or over.

MR. PARKER: I have a question about the ASTM standard that you read. It says that it requires Bentonite be used, well, a sealer be used to cover the width, to affix tall products, logs, wattles to the boundary by tying or using adhesive. The boundary to me would be the ends of a sediment barrier, meaning a sediment barrier is a lot longer than the test. But does the boundary also include the bottom of the test bed?

MR. SPRAGUE: Our interpretation certainly indicated that way, especially since the paragraph right before, the sentence before, indicated that one of the things to make sure of in the test method is that no erosion takes place downstream as well, so that all what we are measuring is what comes through, not what can be generated on the bottom side. So the combination of no erosion, seepage having to go through or over, and in

fact we used it on the sides too, so the sides and the downstream, we interpreted all as the boundary and tried to force the behavior to be common throughout all the products tested.

MR. PARKER: I thought the Bentonite on the bottom was used to seal the poly that you had above the soil to prevent erosion from occurring.

MR. SPRAGUE: Absolutely.

MR. PARKER: But not to affix the log to the soil or to the boundary.

MR. SPRAGUE: It did the whole thing. Because that poly on the downstream side, well, and clearly you can see from the pictures and such it's used on the sides. We talked about that as well. But I don't think there was any adverse suggestions related to that. So that was accepted that we use it there, and on the downstream side to just seal it all off. And what you do on these things is try to have as least impact as you can with having the test run the way it should. And ultimately what they ended up doing was seeing towards the latter part of the testing, into July and August, the need to use more Bentonite to seal things up, and so

they did. And when you look chronologically at how the testing was done, it was done more towards the end, which my interpretation is that they ended up starting to see more higher moisture contents in the toe soils, and that helped seal it off as well.

So it's a tough bargain doing these tests. It's hard enough doing a little test. When you do a big one, you're just trying to control as many of these variables as you can while staying in compliance. Reasonable questions, though.

MR. PARKER: So you're saying that you're doing this to ensure that the soil and water cannot escape around the product, and around meaning along the sides or underneath?

MR. SPRAGUE: We are trying to do everywhere, yes. So we're trying to make the seepage go through and over. And generally that was not an issue. And so to try to prevent erosion on the downstream side, Bentonite is a wonderfully erosion-resistant material.

MR. RUZOWICZ: I just want to be clear, when he says underneath, that you don't mean underneath the product. You mean from going underneath the fabric, the

material that was placed behind the product; right? Not the fabric but the plastic or whatever it was behind the product to stop that.

MR. SPRAGUE: We watched to make sure seepage goes through the product and over the product.

MR. PARKER: So it's my understanding Joel is saying that he wanted to adhere the product to the bottom, the boundary of the test channel.

MR. SPRAGUE: Well, we wanted the installation technique to speak for itself, if at all possible, but at the end of the day the method tells us seepage needs to go through the device or over the device.

MS. FULLARD: So you're saying that sealing all this off, the soil and the storm is pushed through the product.

MR. SPRAGUE: That's right, or over.

MS. FULLARD: So the rate of failure would have been expedited had it undercut. Are we looking for the failure of the product or the performance of the product? I think those are two separate issues. So I think that I'm agreeing with Mr. Brown as well. I think the Bentonite, we're not looking for failure; we're

looking for how efficient is that product.

MR. SPRAGUE: I think our interpretation of the method was it's looking for the ability to get performance on these products that can be compared. And so we try and create the phenomenon, if you will, the seepage phenomenon like throughout.

MS. FULLARD: Right, because if they are installed correctly, then you shouldn't have flow around a product or under a product. So honestly I don't think that's really going to affect a testing method, unless we're looking for failure to move on to a different product. So if we're looking for when this product will fail and undercut or send erosion around the channels, then we need to reevaluate, but I don't think Bentonite would be an issue.

MR. PARKER: If the product fails, it won't be able to meet the threshold that we're looking for.

MS. FULLARD: Right. But again, are we looking for the performance or are we looking for failure? And I don't think those two things are related. The storm will overtop the product, and at that point it becomes no longer efficient, but there'll

be some soil, there'll be some loss of soil, loss of sediment storage in that product, and that's what my interpretation was of the testing of the compost sock and the silt fence. Because if it's properly installed and it's keyed in and you have the toe or if you stake the compost sock properly, you shouldn't have -- that should be sealed up anyway.

MR. PARKER: How do we know that?

MS. FULLARD: In the field?

MR. PARKER: I'm just saying the results, it never (Inaudible) the product.

MR. RUZOWICZ: Originally when you guys first started talking about all this stuff, you guys weren't necessarily -- I mean, you were looking at products. In the field not everything is always installed perfectly, but you guys didn't look at it as during testing they're all going to be installed correctly and should be able to have the right water go through them or overtop them. And you know in the field things happen; people aren't going to install it a hundred percent.

MR. MASTRONARDI: Ben, to your comment and, Adena, your concern, I think that's the reason it would

be a safety factor in terms of establishing what the P Factor is, understanding it won't be perfect. But to speak to that too, again, in Athens there was a lot of things brought to, I assume, all of our attention we hadn't previously heard. So in an effort to try to get up to speed, I went back and looked. In terms of 11340, I just want to make sure everyone's really conscious of what we've done in regard to how it fits into the manual. So for the toe-to-slope tests that we did, it's on a 33-percent grade. By the commission's manual anything above a 20-percent grade is to actually have a 10-foot flat area for velocity and energy dissipation. So we've set a P Factor based on a practice we won't enforce.

I want to be sure we're all conscious of what we did. Whether that was not artfully discussed or captured in an effort to adopt the test, it is in effect what we did. The commission says the distance, the maximum length of (Inaudible) Sd1 standard by the commission is a 15-foot line. We have a 27-foot (Inaudible) line. So again, I'll say this: There is this need to establish or to use some test method to get

some baseline performance measures established. That's fine, but we also need to be mindful of what we currently say and the EPD holds us to in the design manual. So we got to accept a performance factor we can't actually attain, and that's a very big point to consider.

MR. RUZOWICZ: When we tested all these products, we weren't looking to throw any out. We were looking to test a minimum number so that from whatever that minimum number was that we got and what the group decided, we could then say, okay, if you have the latest and greatest BMP, then you can just meet that number.

MR. MASTRONARDI: I understand. Again, let me shame myself. This got past me. This got past all of us, or a bunch of us were conscious of it and never spoke up. Looking at it hindsight after what we discussed last month and sitting there thinking about it, in reality we set a standard based on a test. You can argue it's execution. That's fine. But the standard in terms of the practical application of what the State of Georgia mandates, you wouldn't actually install it that way.

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MR. SPRAGUE: I think that's the nature of a standardized test, though. It's kind of a compromise.

MR. MASTRONARDI: But the compromise to me then, Joel, would be to look at a P Factor that takes that into consideration.

MR. SPRAGUE: You talk about a factor of safety or something like that, yeah. I'm not sure how you might assign that, but I understand that portion of it. But I don't think we're going to ever come up with a test that --

MR. MASTRONARDI: No, but I want to make sure for the folks at the table and many new faces here in this committee, and I want everybody to understand that it's been said two different ways at two different times. The approach to this was to not replicate what happens in the field. Reece, you're right. Edena, you're right. Ben, you're right. Things are not perfect. So when you set performance standards in the back of your head, you need to bring it to the front of your head. It's important to recognize we have actually gone forward with things that don't actually match what would be required by the regulation. That's all.

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MR. RUZOWICZ: What you're saying is to take out that 10-foot piece, since when we tested it, it didn't have that 10-foot piece there, so that it matches.

MR. MASTRONARDI: You can do that but I think at the same time the department would still use it. You still have to get equipment down there and around it to maintain it. If you put a fence that's toe to slope, you're already some percentage slope, right? It doesn't take long to fill that fence and run the risk of overtopping it. Again, a three-to-one slope to put the fence up immediately adjacent (Inaudible), that's not a practical, not an application the state would recognize.

MR. FAUCETTE: We actually did talk about this in the previous Technical Advisory Committee when we were trying to decide what would be the best and most appropriate test method. We talked about scale. We talked about bench-scale testing, index testing, ASTM testing, very large-scale field testing like the DOT has done historically. We ultimately decided on this one for a couple reasons. One is it's a standard test.

It's really hard to duplicate large-scale field testing on performance information. But the point of the test was to evaluate performance, not design of these practices and products. We were trying to do performance testing to establish a benchmark and then be able to compare and to evaluate. The purpose of the test is not to evaluate the design and capacity of components of these practices, which I think is what Marc is insinuating. So it would have to be another test altogether if we're going to look at the design of each one of these practices and products, looking at their full slope length and spacing requirements, all these things. That's not the point of this test. It's a comparatively performance evaluative test, not a design capacity test.

MR. MASTRONARDI: I don't think I'm insinuating anything, Bruce, as much as I'm simply saying you set a performance standard. A performance standard will govern these issues. So in terms of the real world enforcement and what the EPD looks at, we set a number -- I guess what I'm arguing or suggesting is that number could go north or south of what's been

established. Again, if you have the effect of -- let me just stop. Let me just say this: I'm not debating whether or not we're evaluating design, but we as a state have said this is a performance, minimum performance measure, what is probably the harshest scenario to try to get to.

MR. PARKER: I think we were trying to replicate real-world tests as closely as possible, but you can't have a real-world test. You can get close but you can't have it. So we followed the standard. I guess I would want to reevaluate it if this 10-foot plateau is going to cause a product to not perform. We established a P Factor based on a test that was not exactly the same as what the regulation requires, but if that 10-foot strip is going to be detrimental to the performance of the product, then I think we should be looking at it, but I don't think it will. You're saying it would differ. Yes, it would, but we set a standard.

MR. MASTRONARDI: Again, I'm merely trying to bring to everybody's attention that in terms of what's -- again, comparing what we do as the test and what is required, understanding that setting performance

standard -- you know, you could have elected to have only had a 15-foot area of rain contributing to that. That's a deviation from the test but it's a working test. You just said it's Georgia's test. You could have put anything you wanted in the test. You could have said a 15-foot contributing area in the test block. That would give you that scenario. Again, I just want to bring it up. It's been reinstituted as much because questions have been raised that either were never considered or maybe we took too lightly. So I'm going to do my part to bring up the issues that ought to reflect that.

MR. BEHREND: Can you tell me how you determined the significance? You said there is no significant difference to the test with or without (Inaudible).

MR. SPRAGUE: That's where I referred you to these graphs, and it's just a visual comparison. What you see is the individual data points for each slope that was tested, and in the test report it's the cumulative of all three for each product. I think it's a little bit of both of those looked at together, but

that's the judgment call. And there just really is -- with this little comparative, we happened to luck into having some runs that we could compare. It wasn't any kind of designed experiment with and without. So if I've overstepped my bounds by using insignificant . . .

MR. BEHREND: Just to follow up on that, in the graph below, the seepage SRD system versus P Factor, if we look at the two Type A silt fence systems, the two circles that are right on the boundary, is it possible that the Bentonite or not Bentonite could have affected those results? They look pretty close.

MR. SPRAGUE: The lower ones are all nonBentonite tests, this lower figure.

MR. BEHREND: Okay. I'm just looking for kind of a sensitivity analysis. You said in the top graph that they're close, but how do we know whether it made a difference or not?

MR. SPRAGUE: The top graph shows all of the different slopes broken out. The bottom graph is the summary of three slopes for the products that did not use any Bentonite on any of their slope runs. But there is no statistical basis that this is subplotted and a

judgment made on where do you make a break. Marc's thoughts about factored safety, perhaps that's what happens there. These lines are fudged one way or another based on some judgment on how much factor safety is applied and such. I certainly see that.

MR. RUZOWICZ: Going back to the 10-foot slope length from the edge of the barriers, in looking at that, there's a lot of things in the manual that say shall and there's a lot of things that say should. And in the manual, the 10-percent, the 10-foot slope length is a should because we all know that there's applications where somebody isn't necessarily going to have the room. You're going to have a slope that's going to come up to somebody else's property or some kind of right-of-way issue where you've got to slope it right to the edge and you're going to have to be right on that. So that's why the manual says should and not shall. That way it gives the EPD the ability to use that at their discretion. So I don't feel that us putting it at that place would have really made a difference, being that people would be able to install it without that 10-foot slope length. Because when you

look at the bottom of Table 6-27.1, there is an asterisk there next to it and it says, "in areas," and then it has, "should be provided." And in the beginning of the manual it gives the different definitions between shall and should. When we were looking at all this stuff, there was a lot of times when we were talking about shoulds and we were talking about shalls and all that different kind of stuff. I just wanted to bring that to the attention of the group.

MR. PARKER: Could I go back for a little clarification, Joel, about something you said about the GDOT check structure installation? Marc was saying it wasn't installed per GDOT standard. And then you said it just won't work, the detail just won't work. Could you clarify what you mean? Do you mean that won't work in the test area or the detail won't work in the real world?

MR. SPRAGUE: The former. All I can say with a high level of certainty is that in this test method with this detail, it's not going to hold up. We really, really worked hard to get this installed I'm sure better than it's ever been installed in the field. And we are

required to run the trapezoidal test, trapezoidal channel, and to meet these requirements where the fence extends upstream at the top of the side slopes at least six inches above the top of the fence down in the channel. So it's got to overtop the fence in the channel. So the spirit of it really boils down to, given whatever configuration we have, and that's dictated by the test method, make that happen. And so I'm extraordinarily confident we made this section happen for the test channel we had to work with for the test method, and in that configuration. Because we ran it, and then we reran it, and we spent enormous time making the perfect installation best we could, and it just didn't hold up. It's some combination of this detail in this test method that won't work.

MR. PARKER: When you say won't work, you mean will not retain sediment?

MR. SPRAGUE: It won't structurally stay intact, ponding water, for the duration of the .5, the 1, and the 2 CFS.

MR. RUZOWICZ: This is just an observation. Maybe the way that it was installed won't work, but I do

truly think that someday or somewhere there's another detail or something out there that will get silt fence as a check dam to pass, and it might even be easier to install than what is already out there. I think Wesley Zech already has some studies on that kind of stuff that show the differences and how they do work better than others with traditional type geotextile fabrics that we've seen and we use out there. So I want to say we are not against silt fence; it's just the specific way in which it was installed that didn't do the best. And it might even be easier to install another way.

MR. MASTRONARDI: I previously said, Joel, when you said it couldn't work, I said, "So noted." I would say your opinion is so noted. What I would argue is, if our detail shows six wires, separate everything else out, if our detail shows six horizontal wires and there's four in place, can you tell me that matches our installation details?

MR. SPRAGUE: I can tell you we used the materials that we were supposed to use for Type C installation.

MR. MASTRONARDI: And it's possible, Joel,

that you can show me that's what you did. I don't know what's in the RFP at this point. I can show you details that existed at the time that the testing was undertaken that show these things. It's not been altered in years. So again, to the comment earlier, where the commission is silent on some details of, say, Type C silt fence, the department is prescriptive. So where a Type C silt fence check dam is to be installed, you can follow our requirements, right? (Inaudible) So our requirements, inclusive of specifications and the subset of details, demonstrate what I'm saying. That's all.

I'd also like to touch on the shall/should. Again, I'm not arguing about you can or can't install it in the total slope, but again, the principal being just, as we set performance standards, be mindful of what we've set. That's all I can say to that.

MR. RUZOWICZ: Something else that has come up a lot was repeatability of the test, and I believe there was some possible information of submitting it to the ASTM.

MR. SPRAGUE: Specifically the 11340, for

whatever reason, that was brought up as an issue looking at different steps within the test method and such. That may have meaning to someone but it doesn't mean anything to a testing lab doing standards. The only way to evaluate variability in a test is by the results of the test. And that's precisely what ASTM does with every single test. It's called establishing precision and bias. So whatever that conversation was all about, I believe it doesn't apply to this discussion, but it did prompt the question. So I sent the data from 11340 from all the control sections to ASTM and asked them to establish the statistics that are relevant. And they did provide that. It's on the handout we've been looking at on Page 6 down at the bottom, the table.

So there are a total of 12 control slopes that were run. The result of a slope run is the amount of soil loss at the chosen threshold. And the threshold I'm talking about is a certain R Factor or amount of rainfall that has been applied, and that's common then to all of the results on all of the slopes. And so what you see is the soil loss for five different slope runs on Slope 1 of our test setup and seven on Slope 2. Once

again, they tell me that the only relevant statistic is on the test setup, so doing the two slopes together doesn't count. You're taking each individually to assess the statistics that relate to how repeatable is the test.

There are two terms related to variability in ASTM. One's called repeatability. That's can a laboratory, when it runs the test a second time, a third time, a fourth time, does it get similar results. And then there's reproducibility, which is if two different labs run the test, how close are they. Of course, in this case only one lab ran the testing so repeatability is the only statistic that can be generated at this time on this data that has relevance. The statistics are statistics we're all quite familiar with, an average, and a standard deviation, which is a measure of the variability.

And so in the table at the bottom of Page 6 you see the soil loss at the threshold R Factor for each of the tests, each of the control tests. Then you have the average of those, and then you have the S small r. And the way ASTM does things, if there is no other lab,

they report that as their big R, which is the reproducibility. The little r is the repeatability. And these are in the same units as the original reported value. So 20.64 tons per acre soil loss is the average for Test Slope 1, five runs. The variability, as described by the standard deviation for those five runs, is .457 tons per acre. Okay? So what's pretty common is to use two standard deviations off the average as roughly 95-percent confidence of minimum versus maximum. So a lower end confidence means that this test on Slope 1 should be anywhere between 20.64 minus two times .45, or approximately 19.5 on the low end, up to, you'll do plus two standard deviations, so roughly 22. So that's kind of the range of expected results of this test based on the way ASTM does their statistics related to variability of testing.

And this is really good stuff. For a test of this size with these kind of variabilities, especially soil, this is really, really good repeatability. You can see on Slope 2 it's not as good but it's still very good. So I think we may be comparing apples and oranges between what comments were made at the last meeting and

what's being presented here, but as this relates to how we look at variability on running these standardized tests, this is the more appropriate way of looking at it.

MR. RUZOWICZ: And this was done by ASTM?

MR. SPRAGUE: This was done by ASTM.

MR. DYKES: We've had discussion for about one hour. Certainly don't want to close discussion if there are questions, so I'm going to keep it open for questions; if not, we're going to move on.

MR. SPRAGUE: If I could, on Page 3 of this same handout, I thought this was interesting, because the question came up once again at the last meeting that somehow we came up with different results for the properties of products that were supposed to be exactly the same. And so what we did is we looked at the actual index tested, the property testing of the index properties of these materials, and compared them to the performance results. And so at the top of Page 4 you see that it's a very small data set. Once again, this wasn't an experiment we could design but we had to use the data available to us. It must be that silt fence

materials that are made with the same formula, if you will, the same design of the fabric, if they are made at different times they can have different results. Because there's a wonderful correlation between the performance and what we measured on these materials that does reflect that I believe what was out there, it may have had the same name but it wasn't exactly the same product from a property standpoint.

I think that's kind of an important reinforcement for why this program is so important, is there are a lot of different materials out there. But if these performance tests can differentiate between them, what's actually being used, what actually is coming off the loom, coming off the production line, whatever it may be that can differentiate them based on how they really will work, I think that's a wonderful tool. It's not just another piece of something that looks the same to everybody.

MR. FAUCETTE: Joel, there was some question about how the P Factor was calculated in relation to the other factors within the design equation. Can you speak to that and how you did that and how ASTM does that?

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MR. SPRAGUE: We followed the procedures except for the error in the length that we have followed for years for the same methodology used in erosion control testing, the standard, 6459. And really the beauty of this test is that the results are a ratio. So as long as you make the same assumptions for the control as you do for the protected, they tend to wash out. It's almost as simple as this. We measure how much soil comes off. We measure that. It's not changing. It's not calculated. It's a measured number. And ultimately the P Factor is the ratio of the soil that comes off a control, soil that comes off of a protected slope, divided by the soil that comes off of a control slope. There's no fancy calculation, but to convert it to this thing called a P Factor so it can fit into the design equation, we manipulate it. But that ratio you can't screw up. And that's really what we've got here. If Wes and I disagree on what the R should be, or Wes LS I disagree on what the LS should be by .03, it doesn't matter. We are ultimately ratioing the amount of soil that came off of the two. And that's what this is. That's why, when I commented further, it doesn't change

things when we get into this engineering judgment thing, if that answers your question.

MR. DYKES: Before we move to the next agenda item I want to make sure committee members or advisers have asked the questions they'd like to ask of Joel before we move to the next item.

(No response)

Seeing none, Joel, appreciate your coming and sitting with us at the table today.

We'll now move to Item 4 on our agenda: Consideration and discussion of the need for third-party review of the BMP testing that's been conducted. We had some discussion certainly at our September 10th meeting. Certainly we've had discussion today, October 9th, today's date, about the testing procedures, practices, processes we went through, the calculations, and all the details, I think. And we've had comments from folks related to the industry. We've had comments from our testing, the person that's under testing contract with the commission through a state bid process.

So my question to the technical committee and the advisers is: Based on the information that you

received today and prior to today and consideration that you've made, do you feel as though it's a wise use of time and resources at the commission to contract with a third-party scientific review entity that has no prior knowledge of what we're doing here, has no ties with what we've done, to review the testing that has been done, review the comments that we received, and make comments as to the validity of the process that we've gone through.

We've ventured to seek those type of third-party reviewers, and we've had a couple of responses. We're not prepared at the commission to contract with somebody today, if that's what you want to do. However, if the committee and advisers think that's a worthy step forward, we would certainly look very favorably upon that recommendation. So I'll throw that out to the committee and technical advisers.

MR. MASTRONARDI: Would it be out of order to see if there is anything additionally here today from anyone in attendance before we answer that?

MR. DYKES: I definitely think we could certainly -- I'm not going to take any comments now. If

something during public comments prompted a change of opinion or ideas, absolutely, sir.

MR. MASTRONARDI: You provided us with hours of viewing pleasure.

MR. DYKES: Just wanted to fulfill the request that was presented. Other comments on a third-party review, the process and proceeding?

MS. JORDAN: I have one question on that. Where does that possibility come from?

MR. DYKES: The option, internal staff at the commission, we talked about it following the September 10th meeting. We thought that was a viable option that we ought to consider. The reason we asked the TAC to serve, the newer members now, those that have been here, those that are leaving, the reason we had advisers, is because we at the staff of the commission are not scientific experts. The reason we went through a bid process, and Mr. Sprague with TRI successfully won the bid, is because we don't do testing. So when we're receiving comments at the staff level from folks that are scientific in nature that are providing information, TRI provided us a scientific response back. We're not

scientists of that nature. If this group feels comfortable, passing judgment is probably the wrong word, but making that decision, then I would like to hear that. If you don't feel comfortable with that, I want to hear that also.

MR. MASTRONARDI: Is there anyone on the TAC that would like to see GDOT's installation details and compare them to these images available? I encourage you to look at that, if nothing more than to see the installation does not match our guidelines.

MR. DYKES: If anybody wants to take a look at it, that's certainly agreeable.

MR. HAMIL: I've listened to all this stuff, and this is the second meeting I've been to, and all this technical stuff, having been retired for 20 something years, is a little above my head. But I've reviewed plans and been out and inspected, used to go out to the jobs when I was in the design office, and I've seen a lot of failures and I've seen a lot of things that worked. I think the silt fence will work. I think the socks will work. One of the biggest problems I see is something that y'all haven't even

mentioned, or two things we haven't mentioned. Where you got a steep slope and a lot of soil coming off, one row of either one of them won't work. You have to put in two rows. A lot of the designs I've seen have two rows in them. That provides in my opinion a much better situation than just testing single rows.

Another thing is several of the plans I reviewed at a place downstream of the site, they require turbidity. I haven't heard a single word about turbidity. I know EPD has a serious concern about turbidity. With the clay soil we have in north Georgia, the clay module is very small and it goes through (Inaudible). The socks will help reduce that to some extent. How much? I don't know. But going through that much silt material it will reduce the turbidity.

Another problem I have is cost. This test cost I think a little over $6,000. You have to test every product that they have. That could mount up. If you have four or five products, that could mount up to quite a bit of money. A lot of these are small companies (Inaudible) put some of them out of business. Plus the testing facilities have been set up, I presume.

I would like to ask, Brent, where did they get the money to pay for all these tests and setting up the facilities and everything.

MR. DYKES: Are you speaking of TRI, or who are you speaking of, Mr. Hamil?

MR. HAMIL: TRI is the only one that does the testing. Is that not correct?

MR. DYKES: I do not have the correct answer to that. Ben, do you know anybody else that can do the testing?

MR. RUZOWICZ: I believe TPI is in the process of setting up to do the tests right now. And I believe there are a couple of private companies that already currently run the test, but without talking to them and getting it confirmed I don't want to start saying a bunch of names.

MR. HAMIL: Is it the same test TRI developed? TRI set up the site. I presume that cost a lot of money.

MR. DYKES: We went through a bid process to pay the testing entity based upon the technical qualifications of the bidder in combination with costs.

What they had on site prior to us working with them I have no knowledge, to be honest with you.

MR. HAMIL: Exactly how much have y'all set up to pay them?

MR. DYKES: Over $100,000.

MR. HAMIL: That gives them a big advantage. They've already got the site set up. To set up a new site you have to spend money, and I don't believe people can afford to compete for that price. I think there ought to be a much simpler test that doesn't cost so much. I would love to see Georgia DOT set up a much cheaper test that people can afford that would give basically the same results. To me, doing all these calculations, all we want to know is how much silt is retained, what percentage, and come up with a simple test and evaluate what percentage would be retained. And you also need to evaluate the turbidity that comes out from the different soils. I think we do have some turbidity information, don't we, Ben?

MR. RUZOWICZ: The turbidity is in the results that you were provided.

MR. HAMIL: I haven't heard mention of it.

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MR. DYKES: It hasn't been discussed, no, sir, but it is in the results.

MR. RUZOWICZ: People can look at it and use that information for what they would like.

MR. HAMIL: Okay. Well, I think the test is too expensive and I think GDOT should come up with a simpler, much cheaper test, without going through the multitude of tests of each product with these variations, et cetera. And how much additional better information is that going to give you than a simple test? So those are my questions about the whole thing. I've listened to all these arguments and the charts and all that. To me the proof is in going out and looking in the field and see if it works.

MR. DYKES: In response to the comments related to DOT doing the testing, we've had communications with DOT for years about this. And the reason the commission went and sought a grant is it wasn't being done at DOT. And they had other plans moving forward, and certainly DOT changes leadership, but --

MR. HAMIL: I think the DOT set up a test

procedure. When I was chairman of Water, we had a test testing the sewage in the water. I know there's a good many companies here that do testing. Why can't DOT set up a simple procedure so that local folks can do it? Right now you have to go to South Carolina.

MR. DYKES: I'll let DOT respond to that. I don't do DOT testing.

MR. MASTRONARDI: Mr. Hamil, we certainly appreciate your confidence in us. We like to think we could undertake that challenge, but we simply don't have today full-scale, large-scale testing established. Our physical (Inaudible), so we're not currently equipped to do that. I do think you brought up a point to tie back to the point I make. If 11340, if it is a working test, how are we going to, with an independent lab, how would you specify -- I mean, if we do get an ASTM specification, it would just be this test; correct?

MR. RUZOWICZ: The testing methods and procedures were all posted on the Website, and that's how they were to be followed.

MR. MASTRONARDI: If somebody were inclined to want to go into testing, would they build a large-scale

testing facility that only accommodates 11340 or could they utilize those test beds for other testing? Britt is shaking his head in the affirmative. So I guess that is a point, though, in terms of, if there's only one or two people out there today, to your very astute point, would you make the $100,000 investment to get going if somebody is already out there (Inaudible) $6,000 per shot?

MR. FAUCETTE: I can address some of this, not all of it, and Joel is well equipped to handle some of this. I know this facility has been around for quite some time so it was built based off of this grant or funding for this grant. He's been doing this testing, some similar testing, for quite a while. His company I believe originally built that lab, although I'll let Joel explain that. There are several facilities across the country who can do this testing, and that was an important component we decided upon, whether this was an appropriate test. More than one lab can do it, so there is competition among labs, and folks don't feel like they have to go to one lab to do all this testing (Inaudible). I think that's an important distinction.

Of course, they all may charge something different, something much less. And we would anticipate that as more testing is done, the price could or would go down; not stay the same or go up.

I do know years ago, a little bit of response to Kirby's comment, I used to work with the University of Georgia engineering department, and we actually looked at building a large-scale testing lab with state funding and federal funding, and I think Brent was probably part of that group too. We found that it's simply too costly. We couldn't get the funding to do it. The University couldn't do it on their own as well. So it wasn't for lack of trying. We were really wanting to do it, have a state-run facility at the University. We just didn't have the funding.

MR. RUZOWICZ: In discussion at previous TAC meetings, one of the things, after we had talked about going with this test method, 11340, was the fact that it closely or similarly followed the 6459, which is possibly already set up on some other people's sites. So it might be, using that and the other two together, it might be a lot of easier for some of the existing

studies that don't have it to switch over to a test like this. That was just one of the little pieces that we talked about.

MR. HAMIL: The P Factor is based on how much soil the product retained. The percentage of that in some way is used with the standard to come up with the P Factor. Why do you need to go through that process? Why don't we just have a test that just comes up with the percentage of material retained? And that could be done with a very small test site.

MR. FAUCETTE: The original TAC Committee did discuss this. In fact, cost and scale was an initial concern when we first started talking about the performance testing. The group felt, and I don't want to speak for everybody, but my feeling is the group felt we wanted a larger-scale test because it would more closely replicate field conditions as much as we possibly could. We obviously wanted to do a standardized test, something that had already been established and used, and that's how we decided upon what we have. We didn't feel like it was our place to create a brand-new test from scratch. There were

concerns about making it too small, and if it was too small, it wouldn't replicate real world conditions.

MR. HAMIL: Why couldn't you make it more economical? It's a lot of money. Where did the grant come from? Was it a federal grant or state grant?

MR. DYKES: It was a federal grant through the Environmental Protection Agency that came through the Environmental Protection Division that the commission competed for and received through EPA.

FROM THE FLOOR: The total grant was $256,000.

MR. HAMIL: $256,000 of our federal taxpayer money has been spent on this process that we're going through?

MR. DYKES: On the process. Testing, manuals, yes, sir.

MR. HAMIL: I think that's a waste of my taxpayer's money, but that's just my opinion.

MR. FAUCETTE: I can speak to that a little bit. The 319 grants which the commission got to do this project, they are actually used quite commonly in other states to revise their (Inaudible). The state's probably pretty lucky to get that grant, but it is

common for states to get that money from EPD to use it for this type of use.

MR. HAMIL: I have no further comment.

MR. MASTRONARDI: I think I've said once already I'm stubborn so I'll hold to that. I think the question at the table was regarding a third-party test. I would ask this question --

MR. RUZOWICZ: Third-party review.

MR. MASTRONARDI: Third-party review. I will ask this of the folks here, both new and old: So if the department demonstrated the installation wasn't correct, it would demonstrated give you no pause as a group? It would give you no reason to consider any other actions?

MR. HAMIL: Could you repeat that?

MR. MASTRONARDI: If demonstrating that the installation of the check dam was not in GDOT standards, would it not give the group any pause? You have a question about third-party analysis of this. I don't know that that's the question that needs to be answered.

MR. DYKES: Marc, is your question related to just the use of silt fence by DOT in the check dam installation or are you talking about the whole process?

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MR. MASTRONARDI: I'm merely speaking of check dam installation. I made the offer and I'm really disappointed that no one raised a hand to say they'd be interested to see it.

MR. HAMIL: I don't think silt fence should be used for a check dam, because, especially on DOT projects, after they get them installed and leave them there, the mowers come along and just tear them all to pieces. I think for a maintenance purpose you don't need the riprap and whatever, or the socks. Generally the bat-wing mowers go over them, makes (Inaudible) and go over it, and the check dam would be left in place. To put a silt fence out (Inaudible) going to be torn up immediately after the DOT mowers (Inaudible) come along (Inaudible).

MR. MASTRONARDI: We do require check dams be removed when the site's been stabilized.

MR. HAMIL: So if it would be removed, I would have no problem with that, but (Inaudible) the erosion continues after you get through (Inaudible) grass.

MR. MASTRONARDI: We're trying to do better.

MR. PARKER: To Item 4, I think we should

consider independent third-party review of the testing, but we have to weigh the cost, the time. I don't think we need it. I think it would be helpful, helpful for me personally, probably helpful for everyone just to hear another opinion.

MR. FAUCETTE: I'm open to the possibility as well. I do have a concern on the time it would take and the cost, but I also do feel like that job is the job of the technical advisers of the committee. And if we feel like we can't do that, then we should retain a third party. But I feel like initially that is our responsibility as part of the committee to review it and decide on that.

MR. HAMIL: If you're only concerned about the cost of additional study, you ought to also be concerned about what it's going to cost these people to have it tested. If it's testing all their products every three years, that's going to amount to a tremendous amount of money that project developers are going to have to pay out. That's a tremendous cost too that needs to be taken into evaluation.

MR. SPRAGUE: Since we're coming back to cost,

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I don't know if you'd like a little information on it.

MR. DYKES: Would the committee like information on cost?

(No response)

MR. DYKES: Joel, we'll ask you to provide that.

MR. SPRAGUE: As Britt alluded to, the program was set up so that it developed the methodology as clearly as we could so that other labs could do it. The test slopes we used we actually built for this, and the two slopes completely built cost $6,000. So if that's prohibitive for a lab to set up, I would be very surprised. On October 1st the NTPEP opened up the submittals for this testing because they're convinced this is the right way to go regardless of what comes out of this organization. So the NTPEP, for those who aren't familiar, is the National Transportation Product Evaluation Program, which is run by ASHTO, the American Association of State Highway Transportation Officials. And so they have launched a large-scale testing program so folks can get this testing done through them independently and it be dispersed to all states. So any

manufacturer who spends this money -- and Mr. Hamil, you're right, it's a lot of money. There's no hiding that. But it's a pretty big bang for the buck that's provided with that one-stop testing capability.

Quite honestly, it's gaining momentum. More and more states every year are participating in NTPEP. Georgia DOT does on some of the programs itself. So I think the cost issue is -- well, at least now you can put it in perspective. Our lab director also said we have a standing policy: Anybody who thinks they got a bad test, come on, bring it back, we'll retest it. If we get the same result, you just pay for it again. If we don't, we suck it up. So, yeah, if you really feel like this is a bad test, any of you, let's rerun it under that agreement. And this is a standing offer, and we do it with all of our clients all of the time, and we hadn't had to suck one up yet. And that's why we did these retests along the way. We need to be absolutely sure that we've done the best job of testing we can. And there are little tweaks here and there, but will it change the result?

THE FLOOR: Are you the lab for NTPEP for all

these tests?

MR. SPRAGUE: We are currently the lab. It comes up for contract renewal every two years, I think.

REPRESENTATIVE KNIGHT: I'm going to ask the moderator also obviously of the agenda, but I want to ask that you bear with me. I've got I think some information that bears directly to what this board is now discussing and certainly what Mr. Sprague has just proposed. I don't know if that would be permissible. I will go ahead and tell you that what I've got probably will take a few minutes, but I think it is very, very pertinent to the discussion that this committee is having, not only this committee, but the ramifications of what's going to happen across the state. I would ask that you as the director and the committee allow that.

MR. DYKES: I'll defer to your comments. I would ask that you come closer to the court reporter.

REPRESENTATIVE KNIGHT: I'm actually going to set some things up. I think this is very pertinent to this discussion.

MR. DYKES: In the interest of time let's take a ten-minute break so we can get the computer set up.

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We'll reconvene at 12:00 noon.

(Break)

MR. DYKES: We are going to call the meeting back to order. Representative David Knight.

REPRESENTATIVE KNIGHT: First of all, I want to say thank you. Director Dykes, I appreciate you accommodating this. Obviously this has been an area of contention for a while for a lot of different reasons. As you start to look into how this affects not only the people, the industry or whatever, you start to look at how it affects Georgia, you start to look at it in how it affects our environment. And there are a lot of things that from a policy point of view or the legal perspective, that we're bumping up against some time here, quite frankly, with code and things like that, and I don't know if this committee and industry realize this. I guess that's the purpose of what I wanted to come up here and do, what I'm going to do. Hopefully it will lend some more information to this committee as they come and look at exactly what y'all were just debating.

First of all, I want to tell you this started

out as an industry versus industry issue, and I know some of you probably see it that way. I guarantee you it's not. At the General Assembly we see a lot of people fighting over things, and it's about that. But this issue is beyond that refereeing between competing industries. This is about Georgia's environment. It's about budget, tax dollars. It's about making sure we get this right. I'm talking about very right because the eyes of the entire nation, the way I understand it, are looking at Georgia right now.

Real quick, I want to tell you there's been some comments made about me. I want to tell you I am a lifelong Georgia resident, and some people in this room know me. I love the outdoors, from fishing in the pristine trout streams of North Georgia, to our coast, to all in-between. I love being outside and I care truly about what goes on and about what this issue, how this will affect our environment. So I want to let you know that, because I know that there's been comments made or implied otherwise.

With that, I'm going to ask Mr. Sprague to maybe join the conversation up here, because I want to

make sure I've got some information correct as I look at this as a CPA. I'm not an engineer. As you start reviewing this stuff, these are things that I had some questions about. Reading all these reports, especially that dadgum Athens report, and looking at it, and going back through the TRI report that came out, I want to make sure that I understand some things and make sure that the committee is focused in on some things.

When it comes to moisture content, how is moisture regulated during the test preparation? Give me a little idea.

MR. SPRAGUE: It's measured, and the test method requires -- I think you're talking about specifically test method 11340?

REPRESENTATIVE KNIGHT: Yeah. That's on the slope.

MR. SPRAGUE: The slope. It's required that it be between four percent above what's called optimum moisture content and four percent below optimum moisture content. So what we do is we take a sample of the soil and have a test done on it, a proctor test which establishes the optimum moisture, optimum density of

compaction, that relationship. And that gives us what the so-called optimum moisture is. Then we measure, before we run the test, by taking samples at three spots on the slope and taking them in and drying them to establish that we're within that plus or minus four percent. And if we're not, and it's almost always because it's too dry, then we have to wet it down before we run the test. If it's too wet, we have to till it up and let it dry and recompact it. So it's all about doing that measurement before we finish the test setup.

REPRESENTATIVE KNIGHT: Again, guys, y'all forgive me. I know y'all are engineers up here so you may get this, but I want to make sure I understand this. So if you look at the different plots and, say, some plots were different than others, drier than others, in other words, you start out differently, were there any that you found? And then how do you put that into your test results? In other words, if Plot A over here is a little bit different than Plot B as far this moisture measurement, how do y'all account for that?

MR. SPRAGUE: As long as you're within the prescribed range, there's no adjustment. That's

considered a good test, and then presumably that's one of the factors that factors into this thing called repeatability of the test method. So I guess what we could do is we know what the repeatability is because we got that data back from ASTM. We could look and see what range of moisture contents were on each of those controls to see if there was some relationship between moisture ranges and this repeatability number.

REPRESENTATIVE KNIGHT: But again, if you've got different moisture contents, it could ultimately affect the P Factor.

MR. SPRAGUE: Well, yeah, I think it's fair to say it could. What we as a testing lab do, and I guess it's because the designers of the test know that there's kind of a practical range or else you're forever trying to prepare this thing to get it exactly. Typically we are right around 20 percent optimum with the Georgia clay. So I think, and it's quite fortuitous that it came up during the discussion, the repeatability of these tests is really good. Compared to a lot of much smaller tests, this is really good stuff.

REPRESENTATIVE KNIGHT: And reading that

stuff, you talk about wind, you talk about your guys getting up early, so I assume that wind has an affect on testing.

MR. SPRAGUE: It has an affect on the uniformity of the rainfall distribution. And that's why we put out the cups to actually measure what's happening. And at times we have to tweak the pressure on each tree to get it. But once again, it's a necessity of doing this scale of testing. Part of the reason for three replicates is so that you're not just going to one single set of data to describe everything.

REPRESENTATIVE KNIGHT: I get that, but if you're doing protocols and you prepared this thing the prior day, how do you account for wind and things? Does that dry it out overnight?

MR. SPRAGUE: We do the moisture content right before we run the test. And we use a microwave so that we can turn around -- because basically you take a wet weight, dry it all out, take the dry weight, and the difference is the amount of moisture.

REPRESENTATIVE KNIGHT: I know in some of this, the testing and the discussion, you're talking

about blowouts. I mean, can you define -- I mean, I want to make sure I understand what constitutes or how you define a blowout.

MR. SPRAGUE: We use that term in the check structure testing, 7208 channel testing.

REPRESENTATIVE KNIGHT: In regards is there any type of a situation, blowout in slope testing?

MR. SPRAGUE: That's what's been a lot of discussion. That's what the test tells us to prevent from happening. Blowout would be something that happens under or around. This came up at the other meeting, and it's a good point. We probably need a definition for that term because I've used it in the report, but that's the intention, is when there's a sudden -- I can't say blowout because I'm using the term, but when there's a sudden release under or around the device.

REPRESENTATIVE KNIGHT: And did y'all have any?

MR. SPRAGUE: We didn't have any in the -- I'll have to go back and review because I'm not out there for almost all of the testing. But if there was anything in the slopes, then they were directed to try

and eliminate it because that's what the method tells us to do. That was kind of the criteria for stopping the tests in the channel testing, if suddenly there was just a give-away on one of the check structures, which happened with the straw bales when they were set up according to the existing technique that the Georgia Soil and Water had at the time and for that particular configuration of the silt fence installation.

REPRESENTATIVE KNIGHT: So what you're saying, you don't think there were any necessary blowouts, and if you did, you tried to fix them.

MR. SPRAGUE: Back on the slope, that's right.

REPRESENTATIVE KNIGHT: The check dam.

MR. SPRAGUE: The check dam would be in the channel.

REPRESENTATIVE KNIGHT: So from a procedural point of view, if you had one of these blowouts or occurrences that we're trying to define here where it's going up under, you said we try to fix it. So what is the procedure for dealing with that, and do you document those?

MR. SPRAGUE: That's where we had the

Bentonite.

REPRESENTATIVE KNIGHT: So do you document? I mean, in the testing how do you document?

MR. SPRAGUE: I would say we probably did not have a specific place where we documented that.

REPRESENTATIVE KNIGHT: And then again, great discussion going around with the Bentonite stuff. And again, I don't want to replow ground that we've talked about, that the committee has addressed. But again, the purpose of the Bentonite, I know I read the standard, I mean, the WK 11340, and again, as you look at this, the plastic is installed, and you don't want the water to exit the plot without, while doing the down-slope erosion. And then again, going back, and I know you've read this: "Place the SRD so that no gaps are present along the perimeter barrier and cut the fit as necessary to cover the width of the plot. Affix the tall products, logs, wattles, to the boundary by tying or adhesive such that the water and/or soil cannot escape around the product but has to go over or through it. Pond sealing foam is suitable for this task." I guess that's where I'm having some issues, because the thing

says around.

MR. SPRAGUE: And it says after that?

REPRESENTATIVE KNIGHT: I understand over or through, but if you read this, that's what I'm trying to say. But again, during what I heard you say, and I want to make sure, is was there any -- all the Bentonite was used -- was there any used upstream or downstream?

MR. SPRAGUE: It was all used downstream. Well, it was used upstream along the side walls in order to make sure there was no runaround of the end.

REPRESENTATIVE KNIGHT: And then obviously was there Bentonite applied either -- I would assume y'all would try to do all this before or during the test or after the test.

MR. SPRAGUE: I think the first two, before and during, to try and make sure that the seepage went through or over is how we interpreted that.

REPRESENTATIVE KNIGHT: And then overtopping. That's a thing that I've heard bounced around here, and I want to make sure I understand this. Overtopping, did it occur on any of the products in this slope stuff, slope testing?

MR. SPRAGUE: Yes.

REPRESENTATIVE KNIGHT: Is this what is considered a failure or not a failure as far as overtopping?

MR. SPRAGUE: There is no such thing as a failure.

REPRESENTATIVE KNIGHT: But obviously, if you've got water going over and it's overtopping, it would have direct results and affect the P Factor ultimately calculation.

MR. SPRAGUE: Yeah, that device will reflect that in the calculation of the P Factor.

REPRESENTATIVE KNIGHT: And then the final, I want to make sure I understand this, and I think we went over it but I want to make sure. Again, tell me the instructions were followed for installing the various products and practices for the 11340; right?

MR. SPRAGUE: No, no, no. The 11340 tells you to install it in accordance with what your client tells you to do. So the client has instructed us in the RFP, the scope of work, which system needs to follow which installation.

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REPRESENTATIVE KNIGHT: And again, I want to make sure I understand this from an outside-the-industry point of view. If Georgia Soil and Water has something on their list, it would probably be a hierarchy. If they you got to follow the Georgia Soil and Water manual, our instructions, you would follow that. If it didn't say that or they said go to the manufacturer's installation recommendation, you would do that. And then obviously, if it was GDOT, it would be the GDOT instructions.

MR. SPRAGUE: That's right.

REPRESENTATIVE KNIGHT: And the thing that I want to make sure I'm clarifying is that, and again, reading this report, when we go to this, the purpose of this test is to do a standard test to look at this. So when you look at this testing, I assume that you're doing what is posted, which -- and y'all jump in here with me, but that's sort of the minimum that's out there; right? In other words, if you go in the manual and here's what the minimum is, if it's four stakes, that's four stakes, you're going to go to the minimum, everybody's minimum. No matter what the instructions

come from, you're going to everybody's minimum; right?

MR. SPRAGUE: What we're going to do is I guess our best understanding of what we're asked to do and then report that. So all of our results include the installation.

REPRESENTATIVE KNIGHT: Okay. Maybe that's a question for Georgia Soil or Ben. But, I mean, if we're trying to replicate field conditions, we're going by these instructions, and I assume that's what's in the book. So we're going to that minimum. In other words, if it says every four feet, you do every four feet; right?

MR. RUZOWICZ: Yeah. I mean, to be a hundred percent sure we need to look at the RFQ or whatever that document is to see exactly how it was written.

REPRESENTATIVE KNIGHT: And I appreciate that. But what I want to do is I want to look at some things. Y'all forgive me. This is some of the video. One of my questions was have you had an opportunity to look at it. Obviously by looking at the disks in front of you, you have not had an opportunity to look at this. But it is out there. And I have looked at it, and these are some

of the things that I wanted to point out to the Technical Assistance Committee. These are -- again, I got these from open records of Georgia Soil and Water, and this was the video testing from TRI.

(Video shown)

What I get from this, it looks like even they notice from a visual point of view it was a whole lot more runoff in this test plot, and again, the acknowledgment that it rained last night. Let's look at the next one.

(Video shown)

As I look at this one, looks like they are talking or looking at the lack of a runoff. This is 15 minutes into the testing and they are sitting there looking for runoff. There's nothing obviously getting through the product, and they said they didn't see any backing up behind the screen.

MR. SPRAGUE: Very common.

(Video shown)

REPRESENTATIVE KNIGHT: They're talking about the Bentonite that's in the water. I don't know much about particles in the water, but it should be I guess

mud in the water and water? But I'm not sure about what are the residue or particles that would be coming off it of Bentonite.

MR. SPRAGUE: It's all by weight. Those are so light we couldn't even measure them with the accuracy of the scale.

(Video shown)

REPRESENTATIVE KNIGHT: As I looked at this one, I was like, if this is prior to the test, it looks like it's already absorbed a great amount of water or the test plot may not be even in, again, the variables or the standards that should be set up to make sure that test plot soil is exactly by whatever the standards are that have been set, and it should be applied on each and every test.

(Video shown)

I'm focused on the plastic that's up on the top of the hill there. Looking at the weather -- I'm not sure how far the testing facility is from Anderson but I would bet it's pretty close. That's some wind data and wind speed that was recorded that day. I'm sure everybody can go and look that up. Right here,

again, I don't know much about this, but when we talk about wetting the plot and doing it evenly, the purpose is to make sure the entire test plot gets a uniform rain amount. I think I'm correct on that, but it looks like the left side there is relatively dry compared to the right side. And if you look at the cup, it looks like the cup on the right side has a lot more water in it than the cup on the bottom side. We talked about blowouts, and this is one of the small blowouts.

(Video shown)

I'm not sure how it's measured. If there is a blowout, I'm not sure that that would be the fault of the product or the installation, but certainly with the amount of sediment that was going into the catch tray there, I don't understand how that would be fitting to the data.

(Video shown)

I'm not sure what the protocol is for significant blowouts or errors or whatever you want to call it. I would think there would be some kind of protocol that you start the thing over. As you saw, there was an exceeding amount of water and sediment that

was released during the blowout. As you can see in all three progressions of the video, it's still off the same slope and test slope.

(Video shown)

I apologize for the length of this one but I think it is interesting. If you'll focus to the bottom left corner around the corn stalk or the leaf of the corn stalk there or whatever it is, right there, you'll start to see the sedimentation start to come out right there. See it?

(Video continued)

You'll notice it's still flowing.

(Video continued)

It's on the inside of the product right there.

(Video continued)

It's still running.

(Video continued to conclusion)

I'm sorry for the long length of that but I think what astounds me was the amount of sediment that came out. And if I remember correctly in the prior discussion in Athens, from reading the transcript or looking at the test, one of the questions or concerns

was how was there a blowout. There was a blowout mentioned, but in the 6th Edition on the 6-inch test it only had one gallon more runoff than the 2- and 4-inch event. Again, I'm not an engineer, but I'm not sure how you do that. Plus the concerns and comments from whatever other videos that may contain those other blowouts seem catastrophic to me with the "Whoosh!" Believe it or not, I found that video Sunday night as my wife was hollering at me to come to bed. I found that Sunday night.

(Video shown)

I want, again, a protocol between setting the test up the day before and the night. If it's going to rain, I would think there would be some kind of protocol or protection of the test site such that the water from overnight rain, if potentially there was rain, would be accounted for to make sure that that test site continues to be in a proper condition and properly set up to be tested the next morning. I also thought I read where the fence was not supposed to be set up until the next morning. I'm not sure if I read that in the ASTM or not. I may be incorrect on that.

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(Video shown)

There's some mention of a TAC member showed up at the test, and about the middle of the video, Dr. Faucette, I think you're the one that showed up on your test. How that plays out I don't know, but I will tell you that this test was paid for by Georgia dollars and federal dollars. That video you just took, if it's being used for any kind of commercial use, that is called the Gratuity Clause of the Constitution of the State of Georgia. That is the property of Georgia Soil and Water and the State of Georgia.

(Video shown)

I haven't quite figured out the industry and all this testing, but it seems to me there is a conflict of interest there in regards to talking about recruiting and this testing method, that this is pioneering something, from a TAC Committee member and an employee of TRI. I'm not sure what that has to do with trying to come up with an objective test that this state is going to run by, nor what apparently the rest of the nation is looking to us to follow the lead.

We had a great discussion today, or y'all had

in your TAC Committee about installation methods, and I hate to pick on it, but, Dr. Faucette, you're the R&D director for Filtrexx and I want you to know in the video you're pretty close. Best I can tell according to the RFP, and I do have it right here in this notebook, it's to follow the manufacturer's instructions. And if I look at this, it looks like it is on 10-foot centers. If you look at that video again, and I'll be happy to rewind for the pictures, it certainly appears with an 8-foot wide slope, and even with those boards that are coming and cutting it off, you've got four posts there. I'm not sure if you missed it or if you didn't. Or to Mr. Sprague, did Georgia Soil and Water or Ben not send you what was supposed to be used or did you look at a wrong reference? I don't know. Guys, this is from the 6th Edition book. If you look at it, wooden stakes are every four foot on center for the sensitive, which is the old C-type fence, and six foot off center or on center for the nonsensitive. I'm not sure how this was tested or for what it was tested for, but either way you just passed a product that was overinstalled even according to what your new state-of-the-art manual calls

for.

My understanding is, and I want to make sure I understand this for what these implications mean to us and the State of Georgia and these agencies, according to the code that I've read, if you follow what's in the Green Book and all these people out here are using this on these construction sites or wherever it is, you're using this and you're going by what the Green Book says, you've got to protect some liability should some type of erosion event occur; in other words, you can go back and lean on "I did it according to Georgia Soil and Water standards." You just approved a product that doesn't even meet or wasn't even installed and tested based on what your new Green Book calls for. I wonder what kind of liability issue potentially could be out there.

There's a picture of it, 8-foot centers. I don't know about the Bentonite, but, my God, that was probably about three 5-gallon buckets of it.

(Video shown)

I'm not sure about the protocol, but I know when I looked through the tests, you had some blowouts on the check dams. And they were listed, specifically

the C-type fence was listed as blowouts. I don't ever recall seeing documentation in the test there was a blowout on the compost filter log there. And what I thought was funny -- and again, this is something the TAC Committee can go back and look at and sort of dial in. I think this was the 1.0 CFS test. So they've done the .05. This failed. I think if you go look at the data, they did the 1.5 that day or soon after and came back two weeks later and did this test. I don't understand it. I also don't understand the comments that were made about it's the same place again. By those comments you could lead me to believe, and again, I don't know for sure, I'm just going by what's on the video, that this probably played out before then. And then also, hey, we handtapped it, we compacted it, we handtapped it. Was there extra caution given in preparing the bed site or the slope or the ditch? It's sort of like they were astounded that it did this.

It's the 1.0 that failed. You talk about installation. Look at that, and if I count this right, seven stakes. Don't know how wide the bed is, but what I was able to find on the Internet as far as the

installation of Filtrexx logs was that. And, Dr. Faucette, you can tell me if that's the correct one. If I look at that, it looks to be one in the center of the ditch, and it looks to be otherwise placed on the 5-foot off center, in other words, every five feet. So if the installation by the industry is going to be according to these instructions, you can definitely tell that that was overinstalled. Even if you go to the Green Book, the new Green Book that was just passed, if you look at it and read through and you put one in the center of the bed and put one on each of the junctions going up the slope and then four feet, so even by the new Green Book standard, five. So what is the industry going to do when they get all this? they going to install it like this or are they going to install it with seven stakes?

(Video shown)

If you look at this one -- you talked about installation. Look real closely. Look at the left side there. See the sag? It's not according to GDOT. I'm not an expert, but the Internet is out there, and if you look at this, it calls for specific wire heights. As GDOT has already told you, it also calls for making sure

that it's attached at the top with wire. You look at the sagging.

The other thing I couldn't understand -- and, Mr. Sprague, I know this is in the response, and I know the TAC Committee members got it. If you look at the diagram, it says that the out wing was 25 feet. If you look there, there's four stakes on the top side, meaning there's probably about three widths in-between. If those were four feet, that's 12 feet. The other thing it said is the wings had to be inside the slope. I may be misinterpreting this, but according to TRI it said the surrounding terrain slopes away requiring the wings to run up the side of the channel. In other words, the way I took that comment before I went back and started reviewing this, is that you come up the slope where the gentleman is standing and then it slopes back off. So in other words, you couldn't go up there and run it off. I don't know. I will tell you that on the Internet I was able to get on and look at, there are specifications for installing these, the wire. It talks about there's about four different variables, the best I could interpret.

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Guys, I may have done some of the homework for you. I want to look at the committee for a second. Listen to me. I've been on committees, both professional and in my private life, and even in the General Assembly. We get on these committees and we go and we've got limited time in our busy lives and our busy careers, and sometimes we rely on everybody in that collective sort of momentum to go. And I can tell you you probably didn't do the homework that I did. I can tell you, my wife will tell you you have not done the homework that I have done on this.

Guys, this is way, way too important. I applaud you, or appeal to you, I should say, as TAC Committee members that this is just not about some argument about calculations, and I'm not even going there. I would tell you that looking at these videos of the actual tests would I hope call into your caution and maybe even look at is there a need for a third party. I would tell you that most of y'all I think are engineers on this committee or serve in some kind of professional capacity. Guys, this is way too important to the state. And as you can see what we've done, what's out there

right now, the confusion that's out there, not only confusion, I'm worried about the liability that is going to be put on the state and what's going to happen to our natural resources should the results of this test that you've actually seen and what you've seen on this test actually be put in the field. I would tell you at best I would be very, very suspicious of this test.

With that, Mr. Director, I'll be happy to answer any questions of the TAC Committee, but I know we're probably late for lunch and people are probably getting low. We may want to break for lunch and then come back, but that's your call.

MR. DYKES: I'll call the committee back to the table.

MR. SPRAGUE: It does seem like it would be fair to -- this is a bit of a --

MR. DYKES: I just want to get the committee back to the table.

MR. SPRAGUE: Would you like to go through them? Were those rhetorical questions or were those looking for real answers? Because we can go back through them.

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REPRESENTATIVE KNIGHT: Again, let me tell you, I'm not a technical person, Mr. Sprague. I think now that the committee has seen this, they are technical, and maybe they can speak to that. I'll be happy to bring the videos up of this. But I asked the questions about protocol making sure that I understood this. And so your comments need to be addressed to the TAC Committee.

MR. SPRAGUE: So those were rhetorical questions then.

REPRESENTATIVE KNIGHT: No. They were serious questions. Make no doubt about it.

MR. SPRAGUE: I understand that.

MR. DYKES: As moderator, I want to give the committee a chance to comment. If not, we'll turn to Joel's comments.

MR. MORAN: I appreciate what you've done, but this is my second meeting and I don't know what transpired prior to this. I'll be honest with you, obviously I haven't seen the total test, and I assume that's what this is. I appreciate the snapshot that we've gotten here, but I'd like to see the whole thing

before I try to make any engineering, if you will, decisions on how the test method works or doesn't work.

MR. DYKES: Other comments from the committee?

MR. HAMIL: I'll just say this further justifies my other comment that, based on these films, it seems to be a waste of taxpayers' money.

FROM THE FLOOR: I'd like to hear from Joel.

MR. DYKES: Joel, we'll turn to you.

MR. SPRAGUE: First off, I think that what's really good here is that you've gotten a good sense of what large-scale testing is. If you had an idea that this was something you do in a clean room, you're misunderstanding, because you've never been on a construction site. What we are trying to do is re-create best we can the real world. Now, when these tests are going on, whatever happens happens, and we react to it. And that's the way the test methods are written. They are realistic. And that's why you have three replicates, so that you hopefully can get as much control as you possibly can get. It's not easy to control all the variables, so you do the best you can.

Yeah, you can pick out on this replicate of

this test something that may be interpreted one way or another. Those technicians did a fabulous job watching, reacting in a tough situation, making a judgment call and going with it. What's the option? What's the option? Something goes a little wrong here, you stop and you rebuild the test and start over again? Another $6,000? Or I guess that's $2,000. Realistically this is large-scale testing. So what you've got is what you've got, and to me it says this is real-world stuff. This isn't pure. This isn't exacting. This is stuff that produces a result that can be used to judge the performance of these materials as they are being used.

So I stand by what happened. We had the good, bad, and the ugly, and the videos and pictures are not required of this contract. They were provided so -- I mean, it's all transparent. I thought we were working on this together to develop what's terribly important throughout the country, throughout the world. The U.S. is a leader in trying to figure out what to do with these sediment retention devices, how to figure out how they actually perform under simulated real-world experiences. It's not anywhere near perfect but it's

really darn good. Yeah, we can focus on the little thing here, there, or the other, but multiple replicates help us through those hurdles, and that's why that's part of the methodology. So as we've gotten through the 11340, you've seen it. You've seen the good, bad, and the ugly, and you've got the results.

So you judge whether that's good testing or not, because the results and the -- the only one that sticks out to me is the question where that single one where there was a big release. And what happened there was you saw the silt fence runs up along the wall, and what they do is they tie that last post tightly against the wall, so anything that seeps between the silt fence and the wall can't come down and make a big flush. And so that was part of the problem there was everything going on in that corner making a big flush, but you also saw in the text one of the technicians saying, "I'm going to mark gallons." So when he found that he saw the blowout with the big flow, he went down to the tank and determined that's where the impact of the higher flow came. And that's what they're trained to do. So the data I get makes the adjustment that they try and

make out there.

Now, is it on a data sheet? It's not, and that's our bad. We should have said we made a patch here, we did something wrong. So good call, and, yeah, the Representative's ideas on the ways we need to make this methodology better, absolutely. And that's kind of why these videos and pictures are there, so that we can have some discussion on how to tweak this thing. But the results represent what the testing does. And so I trust you to judge with that.

We followed strict protocol on interacting with Georgia Soil and Water and the personnel and staff, and we were wide open, and offered that anyone from the Technical Committee that wanted to come out and be there with the testing was welcome. We made that, and we welcomed anybody and everybody. Ben, you were out at one time I think as well. So be that as it may.

The channel testing, once again I wish these were real questions that were invited to be answered. The silt fence test? That's why we did the retest, to check and make sure that a good installation was done. Go back and do it again and make sure it's put that way.

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Okay. We kind of know we got to look at ourselves first. The compost sock blowout, a unique situation, in that we had run the .5 and we had run the 2, and there was no blowout. And then we ran the 1 and there was a blowout. So we said -- and you saw it on the picture. We questioned ourselves on the preparation because there had been a blowout there before. So we said we got to get that and recheck the 1. Should we have pointed that out? Yes, we should have. We certainly gave the videos and such. We weren't trying to hide anything. But when we rebuilt it because we had -- the channel is set up into two test sections, so we kind of got to go through a whole series of tests and then come back and fill in afterwards. So that's why the rerun of the one was scheduled later on. And the data speaks for itself. So you saw those two things, the 11340 and the 7208.

The implications that there's something shady going on here or inept going on here, you've got to judge that. What you did get, and it's a good thing, when you see the videos, this is the world of large-sale testing. Guess what? It's also the world of construction sites. I bet you saw a similarity there.

That's what we're trying to achieve. The constraints we have, though, is doing it in a confined space, and that became the problem with the silt fence, putting this configuration into the confined trapezoidal channel we have to work with. That's a problem with 11340. It's big, but putting a good representative installation within eight feet so we don't get runaround, it's tough.

So I guess just to finish my thoughts here, I feel like a lot of this was probably unintentionally misrepresented. Large-scale testing is just as ugly, just as nasty as a construction site. You have to make judgments while the test is going on, and you let the data guide you as to whether you've accomplished something worthwhile or not. So I would just suggest that, if you will, focus on the data and know that we really worked hard, really hard, long hours, to try and accomplish the goals of the Technical Committee.

MR. HAMIL: I would like to know if the product passed or failed.

MR. SPRAGUE: We don't do pass/fail. We build a test result. That's all it is, a test result for what was done, and try to fully represent what was done. The

questions on installation, when we report it, we show the installation, we describe the installation. There's nothing hidden. There's no attempt to favor anybody.

MR. HAMIL: What's the test for if you don't come up with a failure or passing?

MR. SPRAGUE: That's what your job is.

MR. RUZOWICZ: The Technical Advisory Committee looked at the results and then came up with a minimum number from what came up with that. So basically everything except for straw bales would have made the use as a sediment barrier. It was not to cut anything out. So then the committee decided do we need to have something for sensitive areas because there is already a Type A, a Type B, and a Type C. So instead of calling it Type A and B and C, they decided that they wanted to go with calling it nonsensitive because there can be things other than your traditional type of silt fence. So that's why they changed it to silt fence. And they put that number, it came right in the middle of all the products that were tested.

MR. HAMIL: Did the committee discover whether it passed or failed or not?

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MR. DYKES: By the selection of the P Factor number, yes.

MR. HAMIL: So did it pass or fail?

MR. RUZOWICZ: Well, it would have made the nonsensitive in some of them, and some of them would have made the sensitive. So some of them would have made both and then some of them would have only made one, but all except for the straw bales would have made the nonsensitive.

MR. FAUCETTE: It's important in this talk of pass/fail that all the practices that were in the 5th Edition are really in the 6th Edition and can be used widely on construction sites. The only difference is which ones could be used near sensitive water bodies. Of course, we can have discussion about that, what the general effect should be, but there haven't been any that have been taken out except, I guess, hay bales.

MR. RUZOWICZ: It's previously with the silt fence, two rows of Type C, or you can have one row of Type C backed by straw bales. Currently that is the only way in the 5th Edition of the manual that straw bales is allowed as a sediment barrier, unless somebody

were to certify it as an alternative BMP and want to use it on their plans. An engineer could do that, which would still probably be an option through the alternative BMP process if they had a way to do it.

MR. FAUCETTE: I'd also like to address the question about the staking in both of the tests. I think it's important to differentiate. There's such a common misperception in this industry and in regulatory bodies on the difference between a product and a practice. In the 6th Edition the compost filter sock spec is a practice, a generic public practice, because there's lots of different companies that manufacture, that make this. In fact, the new spec that's in the 6th Edition reflects pretty closely what a lot of other publications have had in their manuals from different DOTs, different states, EPA or EPDs, USEPA, ASHTO, a lot of different agencies. The 5th Edition actually had two products that were approved. That would be the (Inaudible) and the Filtrexx product. And Mr. Knight put up the specs from the Website, but one of the key things that he should know is that those are minimum requirements. Stakes can be placed by the designer or

the engineer in different configurations to meet the site under certain site conditions. It's very often done. But they are just a minimum requirement. Of course, we have to have some sort of minimum because if you don't, the contract will have one every 500 feet. Also, the size of those plots dictated to a degree a change in that.

This is actually one of the benefits of this type of generic practice. I'm not saying the Filtrexx product but the generic practice that a lot of other manufacturers that make that the stakes do not come prefabricated with this type of practice. They can be put in to meet specific conditions by the designer or contractor. I think a lot of the manufacturers that make this type of product have that. That would also include straw wattles. That would also include separate retention devices as well.

REPRESENTATIVE KNIGHT: Again, I want to address the committee in response to this. First of all, there RFP called for specifically going back to the manufacturer's suggested installation instruction in your product. I'm going to tell you, if you're going to

do this, if you're going to say that was a minimum, I guess every other manufacturer out there would like to come in and say this is our minimum, we'd like to double it up too. So if we're going to test, apples and apples, test on apples and apples. We're not going to let one product double down on its installation. It's sort of the same thing I guess you'd say if you're testing the weight load of a 2x4 but you put a 4x4 on there. The 2x4 may pass or it may not pass, but you think that 4x4 is going to pass? Yeah. You overinstalled it. Is that really what the TAC Committee wanted was to let one product be overinstalled at the discretion? I don't know whose discretion, because, again, Georgia Soil and Water set the direction. So, Ben, I don't know, or Brent, who sent the instructions?

MR. DYKES: We did as part of the RFP.

REPRESENTATIVE KNIGHT: What were the instructions? Was it to double up?

MR. DYKES: Follow the manufacturer's recommendation.

REPRESENTATIVE KNIGHT: And what were those?

MR. DYKES: I don't have them before me.

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MR. SPRAGUE: We contacted the manufacturer, and he told us what to do. That was the recommendation.

REPRESENTATIVE KNIGHT: If that were the case you would have also contacted GDOT and asked for the same instructions. Okay? Let's do apples and apples.

MR. SPRAGUE: You're exactly right.

REPRESENTATIVE KNIGHT: You would have contacted GDOT and said tell me how to install this. But I will go back to the TAC Committee, and I'm not an engineer, but if you're going to test this and you're going to test something to go in our manual which the industry is going to follow, is the industry going to go and say I'm going to double up on the number of stakes put in the product, or are they going to follow the manual? Okay? Brent gets it. This is about industry and this is about what the minimum amount is out on our environment. And that is what they're going to follow. And so to go down that road of reasoning is very, very disingenuous when the test showed everybody minimum standards. If you're going to let somebody double up, you let everybody double up on the installation of the product.

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MR. DYKES: Thank you, Representative. I think you've given us a lot of food for thought. And, Britt, I'll give you one more and then we're going to move on the agenda.

MR. FAUCETTE: There's still an important distinction here, and that is the generic spec in the manual and then the product spec that at some point, and I don't know if this will happen or not, but there was supposed to be an approved product list which would have manufacturers. So you'll have basic specs that are minimum requirements, but as (Inaudible) that can follow the manufacturer's specifications which may not be exactly what is generically represented in the manual. That happens all the time.

MR. DYKES: As a public entity the commission has to represent not one single product, not one single practice, so Representative, I appreciate you bringing the information to us today. It's been very helpful I know to me personally and I'm sure to other people on the committee also. Is there any other discussion regarding the presentation we saw?

MR. MASTRONARDI: Just to conclude that issue

out, we set a standard based on the installation. That's the take-away. If we set a standard on a 4-foot spacing, what's the outcome of that? And then I think that's the salient point of all that is a standard has been set based upon (Inaudible).

MR. DYKES: Thank you. We had broke at Item 4. For the sake of time let's move past Item 4. Ben Ruzowicz has provided to you today a list of comments to date. We'll certainly entertain activity from the commission on the comments to date; however, I know that you're just receiving -- actually, you've received them prior to today. If you'd like to discuss any in detail, we would be glad to do that at this time, as committee members. That's the packet of information bound in the black binder clip.

MR. MASTRONARDI: The item regarding T Posts, the pounds per foot, I would encourage that be adopted. We've found that that still gave sufficient support (Inaudible). It actually was a conscious decision that we had to make. Not that (Inaudible) our minimum practice.

MR. DYKES: Any other comments on that item?

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That was Item 6 on Page 1.

MR. RUZOWICZ: I just want to say something real quick. In putting this in Excel format, it wasn't to take out anybody's name; it was just to save space. You guys received the full comments as were e-mailed to me through your e-mails, but this was just to try to save space and paper on some of the shorter ones that could make sense without having the whole discussion that goes with it, if there was a discussion that went on. And then some of them were unanswered questions from the last Technical Advisory Committee meeting out of the minutes.

MR. PARKER: Marc, with the little bit lighter posts that you're using now, is it getting anywhere near a threshold being a weak point in the system?

MR. SPRAGUE: No, it's not. Honestly, we've been doing it, I don't know if it's actually since the '90s. I would say it's probably been in place since '05, almost ten years.

MR. RUZOWICZ: I know I'm not a Technical Advisory Committee member, but I wouldn't have a problem with that specification.

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MR. PARKER: I don't think it would change our result, skew the decisions we've made at all to change that. I suggest we do as Marc and Ben say and test for 1.15 in lieu of the 1.3 lb.-per-foot stakes.

MR. DYKES: Any dissension from committee members regarding comment 6 to size posts at 1.15 lbs. per foot? Any discussion? Okay. It's adopted.

MR. PARKER: The four previous comments above that are dealing I believe with just spelling.

MR. RUZOWICZ: Yeah, misspelling.

MR. PARKER: I'm good with these.

MR. RUZOWICZ: I don't have a problem with going back and changing them.

MR. DYKES: Anybody want to disagree with the correct spelling? There being none, it's adopted.

MR. RUZOWICZ: The next one is just a comment. We don't require that to be done on construction sites, so I think it's more of an observation, not something that can be done. But it was a submittal so I didn't want to not put it on the list.

MR. PARKER: I agree with that comment.

MR. RUZOWICZ: So just no comment is okay?

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MR. MASTRONARDI: No response warranted.

MR. RUZOWICZ: Okay. Just wanted to make sure.

MR. RICHARDSON: I would say probably the easiest thing to do is start at the top and go through. That way we're not jumping around.

MR. DYKES: I think the only one left on Page 1 is regarding skimmers.

MR. RUZOWICZ: He was wanting to know how the reopening of the manual affected the skimmer.

MR. RICHARDSON: It's a permit requirement as of January 1st, 2014 that you have to use that outstructure that dewaters from the top, so technically this doesn't affect skimmers. So as of January 1st, 2014 you have to use that. If not, if it's not feasible to use it, you have to include a written justification as to why it's not feasible, and then you can use other options like retrofits, things of that nature.

MR. RUZOWICZ: The only other thing that's in that specification is that it checks to make sure that it does discharge the amount of water that it says it's supposed to discharge. That's the only other

requirement that was in there, and there's not even an approved product list or anything like that. It just says check your product and this is a test that you could follow in order to check that product.

MR. PARKER: The second question there is does this delay implementation of the new Green Book requirements. I guess the answer is it only delays implementation of a specific Green Book requirement.

MR. RUZOWICZ: I think Dewey hit it on the head when he said it's already a part of the MPDS permit.

MR. MASTRONARDI: I'm not sure actually of the foundation of the question. I don't know if it's asking about the suspension of the manual edition, provisions in the manual. I think we're kind of reading into it. If Dewey is correct (Inaudible). In terms of a response, it may be that the response needs to be it doesn't allow you to deviate from the regulatory permits.

MR. RUZOWICZ: I was just going to refer to the MPDS permit page number.

MR. MASTRONARDI: That's fine.

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MR. DYKES: On the back of the legal size page there are eight additional comments or questions.

MR. MORAN: How much do you turn upstream? How many feet?

MR. DYKES: So Bob's question was how many feet upstream would you turn the product.

MR. MASTRONARDI: The check dam is actually a ditch. I think it's a negligible gain turning it upstream. The center of the ditch is still the low point. It's going to (Inaudible).

MR. FAUCETTE: I would agree with Marc. I would argue that if you would do that, that would be more of a (Inaudible) not really a check dam.

MR. RUZOWICZ: So you guys are saying straight across, leave it like it is.

MR. DYKES: The next question related to construction exits and the location of them.

MR. RUZOWICZ: Maybe that's something we could add a note to make sure that that isn't done on the detail, to specify that kind of action for tractor-trailer trucks?

MR. BROWN: Based upon the comments for the

construction exit, it just depends on what site you're looking at. It's going to be based on what site. If you only have a certain depth of site, you're not going to be able to wash them down at the construction site. Like have a note in there --

MR. RUZOWICZ: That it's not mandatory?

MR. BROWN: That it's not mandatory but it --

MR. RUZOWICZ: It's a good best management practice?

MR. BROWN: Yes, best management practice if needed and can be accommodated on that site.

MR. DYKES: Good point.

MR. PARKER: We could say if the space is available, and then we could say if it's not available, for traffic control required, or other means of cleaning tires?

MR. DYKES: Okay. Temporary sediment basins, a question regarding use of perforated riser pipes in deference to the EPA's requirements for surface skimmers, I think we just answered that awhile ago. You can write an explanation as to why you're not going to use a skimmer, but in most cases a skimmer is required.

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The next question is regarding vertical perforated pipes and moving that information to another section. Ben, are you familiar with what they're asking for there?

MR. RUZOWICZ: He's talking about attaching the skimmer to the vertical pipes. There's a detail in the manual that shows if you have a temporary structure, you don't necessarily have to have that vertical pipe; you could put it straight through the dam. So that would be something to show them. But with all skimmers there has to be emergency spillway, so that was one of the requirements that was out there. And just like the permit says, it says dewatering from the top, so they can always write a rationale as to why they can't have a skimmer and still use the traditional SE 3, any of those other forms of sediment storage that we already have. I mean, going off memory, I think this is -- I don't know. We can contact the guy to make sure that that's what he is asking, if you want. You guys have all the full e-mails.

MR. DYKES: So the recommendation is what now?

MS. JORDAN: It sounds like his question is

whether there should be a separate BMP called out for a surface skimmer, and possibly he's saying put all that information in with that (Inaudible).

MR. RUZOWICZ: Yes. I think the best thing is I can write him an e-mail asking him to clarify what he is saying here, because there is a section for surface skimmer and there is some talk about it in the SE 3 because there's always been a little bit there. But we can make sure that that's what he's -- just clarify what he's specifically asking with the question so we answer it a hundred percent correctly.

MS. JORDAN: I think it would be helpful to keep the surface skimmer separate. There is a great deal of information there.

MS. RUZOWICZ: Right, yes, because it can be used on permanent or temporary structures. So I'll contact him, John Spots.

MR. DYKES: The next question or comment regarding our numbering system for figures, looks like we skipped from 10 to 12, so I think that's editing, easily handled.

The next item is one which y'all have probably

discussed about before today, and that's regarding the 67 cubic yards per acre of sediment storage for soils below the Piedmont.

MR. MASTRONARDI: I don't think you can entertain that based on the regulation. That's a minimum established by EPA, approved by EPD.

MR. RICHARDSON: Marc is correct. It's permit required. It does state in the permit that if you can't meet the 67 cubic yards, again, you have to do a written justification why you can't and basically have a statement stating that the BMPs that are installed will control erosion and prevent sedimentation.

MR. RUZOWICZ: So permit requirement would be the logical answer for that one?

MR. RICHARDSON: Yes.

MS. JORDAN: However, my understanding of what the question gets at is how many acres you calculate. There's a big difference between how to calculate 67 cubic yards per disturbed acre versus per acre of drainage basin. You can have a huge drainage basin come into a relatively small disturbed area, and if you've got to retain sediment for that huge drainage basin, and

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I've seen this, you might have to disturb more area than you would have otherwise just to get the whole drainage basin. I was looking back, and on the SE 2 it does say drainage basin. On the SE 3 it doesn't really call it out and there's an example calculation, but it doesn't give you clarification because in that particular example the drainage basin (Inaudible) as disturbed area, so you can't really tell by the example what's intended. But I think this definitely has some merit because (Inaudible), Because in south Georgia you've got such slow relief (Inaudible).

MR. RUZOWICZ: I know the permit states that it's 67 cubic yards per acre drained unless you can route that area around your project. So you could have a larger area, and as long as you bypass that water through or around your site, then you don't have to account for it.

MR. MASTRONARDI: The permit also allows you to justify why you cannot install the (Inaudible). So even if it is more intrusive to install the sediment basin, we've had (Inaudible) consideration from EPD to not do so.

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MR. RICHARDSON: Again, all you have to do is make sure, like Marc said, do a written justification.

MR. DYKES: Next question or comment is regarding consideration of testing two rows of Type C silt fence, and did we do any testing on the two. To my knowledge we did not?

MR. RUZOWICZ: Right. At the meetings we talked about that, but price was talked about as an issue, so in order to keep price down, they decided let's just test one and do more replicates than do additional rows behind it to drive the price up.

MR. FAUCETTE: The commission still required in the 6th Edition two rows in certain places.

MR. RUZOWICZ: Along sensitive areas.

MR. DYKES: The last comment on the summary sheet is regarding the scientific basis for selecting the point .03 P Factor as the criteria for products and the scientific basis for such a number. We had some discussion earlier today about the ratio, how that is determined. Would you like for a different answer to be given to that?

MR. RUZOWICZ: Do you want me to say -- so

they want to know how we came up with the .03 as the minimum P Factor number, from what I'm looking at here. So that was just the lowest performing BMP that we had besides straw bales. We weren't trying to cut anybody's specific product out. We were just trying to make a minimum number.

MR. BROWN: I think based upon it being a minimum requirement or a minimum result from the testing, it should be adopted.

MR. RUZOWICZ: Right. This is just how we came up with it. I'm sure we're going to have more discussion about these tests after you guys go back and look at the videos and stuff like that. I was just trying to show, you know, how we got the .03 and the .045. And then the other number came up because it was basically right in the middle of all the products that we did, and the group felt that since we already had a Type C, we needed to have something for sensitive areas as well to be kind of equivalent to that. So they set it right in the middle.

MR. DYKES: Attached to that summary sheet are three other documents, maybe four, containing comments.

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Due to the nature of time I would entertain either moving to the next public comment period, or if you all want to go through these comments, we'll be glad to do that now. These are comments also that have been submitted in letter form and we have not summarized. Is there interest in going through the letter form comments at this time?

MR. MASTRONARDI: I would rather suspend that and actually circle back.

MR. DYKES: Sensing no dissension, I think there's agreement.

MR. MASTRONARDI: I don't mean to put you in a difficult spot, but we have all heard an awful lot of information today. There was a question on the table at one point regarding third-party analysis.

MR. DYKES: Absolutely.

MR. MASTRONARDI: Is that question still a valid question? Do you want to in your capacity -- certainly I'm not suggesting what you do, but do you want to table that issue?

MR. DYKES: I'm open to comments from the Technical Committee and advisers on how you would like

to proceed. I'm open.

MR. MASTRONARDI: Since you've asked, I would strongly recommend that there be some consideration to providing your board with a resolution addressing the timetable as well as addressing -- when I say timetable I mean in terms of implementing the changes. I don't want to throw the baby out with the bath water, but there's a lot of issues. And quite frankly, simply because I often have to represent the department in legal matters, I wouldn't want the commission to consider what you heard today almost in terms of -- put it this way: Could you defend that? Would you be willing as the agency under that challenge to adopt what's in place? If that challenge were to be something that was a real probability, would you go forward? I would rather say that it would be prudent as a panel, especially with a lot of new members, that we actually slow down and digest what we've heard. That's my recommendation.

MR. DYKES: Comments from the committee?

MR. MORAN: I concur with what he said.

MR. BROWN: Based upon the information that we

got today and those TAC videos, I don't think it would be worth deciding if a third party should review or not at this time.

MR. MORAN: Have you looked at a third party? Who would that be?

MR. DYKES: We've looked at other folks in the academic world that have done erosion control testing, and private entities that do the same thing. We have not contracted. We just want to know was it even a possibility.

MR. HAMIL: I concur with that.

MR. DYKES: Yes, sir. So we are discussing a slow-down and looking at making a recommendation, or the committee is, making a recommendation for a timetable implementing the changes to the commission board. We need to talk about a time table.

MR. MASTRONARDI: I honestly think it's a two-fold issue in terms of you're either going to accept everything in place, and that takes time to determine based on the things I've heard, or actually discard that. I don't want to take that conversation on today. I think it needs to be posed this way: That you look at

the 5th Edition as being the governing manual. A lot, a real amount of time went into this. It took years and years. If it's nine months, it's nine months. But come January 1 the EPD is going to rely on whatever is effective on January 1. If we rush into a decision to say Mr. Sprague has adequately explained it all away and come January 1 it's inaccurate and on the heels of that there's challenges, we are all very publicly exposed to that. I would rather not do that.

MR. RUZOWICZ: I have an idea. There's been a lot of stuff brought up about bits and pieces of it, but there's also a lot of other good stuff that does come into play and keep up with our new permits. We've heard a lot of stuff on silt fence. We've heard a lot of stuff on check dams, all that kind of stuff. Maybe that's the stuff we can continue to take a closer look at, but those other BMPs that people have been certifying as alternatives that got in there, and generic BMPs or the skimmers that people are using all the time, you know, and the updates to the other parts of the manual that give people reference information such as Websites and where to go to get information,

that stuff be still used, but all this other stuff that's been brought into question, slow it down like you're saying. Let's take a look at it and let's make sure we get it a hundred percent right. Nobody wants to put out something that's wrong.

I don't feel that we have a bad product, but I do think that some things can be changed from what we have seen, and that nobody has physically, with the check dam testing, from what I've seen, nobody has physically attacked the test itself. They've attacked the installation of the product but not how the test is being run. I haven't heard that that specifically is a bad test itself, but I do agree let's take a look at it, let's go back. But I don't think the test itself is a bad thing, and I don't think using the clay soils that we've used in these tests is either a bad thing because that's a majority of what we have in Georgia. And we also proved that that was cheaper to test with because the setup and dry time was cheaper. We didn't know that when we started, but the industry might like that down the line.

MR. MASTRONARDI: I would think in terms of

subsequent meetings you could tackle those in bites. What I'm driving at is, if you've got two board meetings left for this year for the commission, there's an action to be taken for it (Inaudible). Whatever the path forward is in terms of sticking with Edition 5, 6 with several items omitted, whatever that is, I think that's what needs to be decided. You know the schedule.

MR. DYKES: I think irregardless of what the committee decides today, the manual will be discussed at the next two meetings of the commission. If this committee would like to make a recommendation, now is one opportunity to do so. If you would like to make your recommendation known, now would be the time to do so. It will be a discussion item and has been for most of the month. It will continue to be. But if this committee wants to make a formal recommendation, this would be the time to do it.

MR. MASTRONARDI: For clarification as well, you're establishing that in your capacity, if the committee recommends something that you can't support, the commission will.

MR. DYKES: I don't make the decision. I

bring recommendations from the committee to the Conservation Commission Board. If I do or don't support it, I'll make that known to the board.

MR. MASTRONARDI: Okay. I didn't know the weight of the responsibility on this grou as it relates to that decision.

MR. DYKES: This group was appointed to provide recommendations on anything related to the manual by the Soil and Water Commission Board. So if this is a matter you'd like to take up, then certainly it's a good discussion and should be acted upon today, if the committee so chooses.

MR. MASTRONARDI: Can someone succinctly tell me what's governing today?

MR. DYKES: The 5th and 6th Edition are both being used. There's no approved product list other than the DOT qualified products list.

MR. RUZOWICZ: And what was previously in the existing edition of the manual.

MR. BEHREND: We would like to see that clarified because we hear confusion, and that is what our director has mentioned in letters. We'd really like

to see that clarified.

MR. DYKES: So if this committee would like to find some type of clarifying resolution or recommendation, I should say, then certainly that would be carried to the commission board.

MR. MASTRONARDI: I would recommend that we return to the 5th Edition manual for a period of not less than nine months, or let me say this: September 1st, 2015.

MS. JORDAN: My preference would be stay with the 6th Edition minus the BMPs that we're discussing right now.

MR. HAMIL: It's my understanding we only have three board members left, and one of them's term is being expired in about two years, and one is being expired in one year, and one other, his term is still going on. How is that going to affect what the situation is? Because I don't know the status if somebody's term has expired.

MR. DYKES: All state commission board members serve until their successor is named. So all existing board members, even if their term has expired, continue

to serve with full authority. So we will have a board meeting in early November and we'll have a meeting in December. It will take a quorum of three, which is all the members we have at this time, to have a meeting or to take any action.

MR. HAMIL: What if the Governor decides to replace two of them?

MR. DYKES: Then he can do that, absolutely, but we'll still have a quorum.

MR. HAMIL: And they won't know anything about what's going on.

MR. DYKES: Absolutely. Then they are a sovereign board just like any other board and they have to make their decision based on the knowledge that they have.

REPRESENTATIVE KNIGHT: One other question.

MR. DYKES: Yes, sir.

REPRESENTATIVE KNIGHT: It may be relevant here. You're talking about the 6th Edition, combination 5th and 6th Edition. I want to bring back to the attention of the committee my understanding is that NTPEP has adopted these testing methods. Director, you

and I had a conversation early in the week. One of the things, and I don't know if Ben would care to comment, but has NTPEP been told of what's going on here? Ben, apparently you made a phone call, according to Brent.

MR. RUZOWICZ: I've always e-mailed them the revised testing material as well.

REPRESENTATIVE KNIGHT: What was your comment? In other words, this industry, according to the minutes from the last meeting, said, hey, we would request that NTPEP be informed of the dilemma or the issues that may be public. I guess I'm asking what specifically, since there is nothing on record, did you maybe inform the committee of that?

MR. RUZOWICZ: Yes. I sent the National Transportation Product Evaluation Committee, I sent them the revised testing, and then after today they were also wanting all the information from the reports provided by Joel and the studies that were done by Wesley's test as well.

REPRESENTATIVE KNIGHT: Guys, I say this as a legislator, and all of us are on the same team, Georgia team, what decision that y'all make also will reflect as

to -- since this has been promoted and advanced by Georgia, and what you've heard today brings enough pause and concern, how is that going to make us look? And that I think goes back to the manual and the question of are we going to keep something we've got concerns about, maybe indeed have errors in the output from it? I think it's a policy decision.

When you guys go home, the issue is going to be, the headlines in the paper, you know, we implemented something and had everybody follow us down the road, and it wasn't the road that we thought we were going down. That's where there is a lot of concern at my level in how do we continue to protect Georgia, its reputation. And I know all of y'all in here, what we care about, and that's making sure that Georgia is environmentally protected. So I want to caution y'all on that.

The other thing, and I'll bring one more point to the table, reading the manuscript from last time, talking about just the silt fence and the check dam, I believe there was a comment, and I don't know if it was ever answered by Mr. Sprague, but one of the pictures in that slide apparently, and I looked at the video, looked

like there was Bentonite that was used on, was it inlet? Was it inlet testing? It was outside of the slope and the check dam. It was another one of the devices. If I remember that conversation, reading that manuscript right, it wasn't supposed to be there. That brings into question from my point of view are there other similar type issues that need to be looked at other than what has been focused on right now, which is the slope and the check dam. That's just a thought for the committee. Y'all know more about this than I do.

MR. MORAN: To follow up, this is an e-mail I got September 30th from ASHTO and NTPEP. I don't know if you got it or not. I'll just read it real quick. It says: "To all interested parties, beginning October 1st --" which is past "-- 2014, NTPEP will begin accepting applications for large-scale sediment retention device testing through the Erosion Control Products Technical Committee. This testing will include the following methods," and they go on to ASTM 7351, ASTM 7208, ASTM D5141. I was surprised, though, that TM 11340, perimeter performance testing, is on the e-mail. I don't know how much it cost, but I was real surprised

to see it on there because it's not an ASTM test yet. Everything else I've ever done in the 23 years I've been doing this is ASTM driven. And if this is still in committee, I was surprised to see it on here.

REPRESENTATIVE KNIGHT: And I guess when I looked on the Internet and I'm learning about this board, that you go through this committee, and obviously Ben Ruzowicz is a friend of the committee, Joel Sprague is, your colleagues at TRI are friends of the committee, and obviously the DOT members that are there. And again, guys, no matter where you stand down here, you need to make sure that up here you're protecting Georgia and how we look and what we're doing, and that's the policy decision. You need to think about it as you go through these questions that you are now asking yourself, because it will have ramifications even come January or February of next year.

MR. DYKES: So Mr. Mastronardi has made a suggestion that a recommendation come from this committee regarding returning to the 5th Edition for a period up to nine months, which would be September 1st, 2015.

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MR. MASTRONARDI: Can I amend that?

MR. DYKES: Absolutely.

MR. MASTRONARDI: What I was thinking about is in terms of the EPD, because it's a January 1st date by code, and I would suggest it be January 1st of 2016.

MS. FULLARD: As a regulator, I would not want to go back to the 5th Edition simply because it is lining up. Most of the BMPs, as Britt pointed out earlier, they are all the same. It's just these testing methods and to get the alternative products on a list. They are allowed in Gwinnett County, alternative BMPS. We use them all the time. We encourage them in sensitive areas. We encourage designer flexibility. And I feel like if we go back to the 5th Edition, then as a reviewer it's going to be difficult for us to implement the new changes because there's no standard. They are going to say in the 5th Edition there's no standard for a skimmer; in the new edition there's no standard for nonsensitive or sensitive areas. I like Betty Jean's suggestion to go with the 6th Edition with the areas of concern being removed or some notation that these are under review. But just to throw it out, I

feel like really we are throwing out the baby with the bath water. It's very difficult. Reviewers, when you're sitting across the table from an engineer, and we had this conversation before, it's difficult to implement erosion control because it's not a one product fits all. It's very subjective. So we need to make sure that we're in line with the EPD. And this is moving toward it. The 5th Edition, the data on it, we are not moving with EPD permits. The 6th Edition does. So it will be my recommendation to the rest of the committee to go with the 6th Edition, and again, the areas that need to be reviewed, open it up.

MR. MASTRONARDI: Are you aware that you have the ability to exceed the commission's minimum standards? That's what the 5th Edition, that's what any edition represents, the minimum. So if Gwinnett County chose to adopt a practice for Gwinnett County, they could. Would that serve your purposes?

MS. FULLARD: Marc, I do know that. I've been 17 years, so I understand. Again, in the economic times that we live in, it's very difficult for me to say or Gwinnett County to say we're going to be more stringent.

If I've got the skimmer and the details of the skimmer, how that needs to be put in, then I've got a guide. I've got some way to at least -- even the staff that works for me. It's not going to be proprietary. It's actually a practice. And that's just where I'm coming from. I understand I can be more stringent and I can go to the 6th Edition, which is what we've done. And still, if someone wants to use the 5th Edition, we go back to the 5th Edition, but again, it's the 5th or the 6th, the 6th or the 5th. So that would be my recommendation.

MR. FAUCETTE: I think this is one of the reasons that the board decided for this interim period to use either one while we sort of figure some of this out. Making the decision to go back to the 5th Edition solely, that manual was written probably almost 20 years ago. A lot of stuff has happened in this industry in that time period, and I know a lot of folks probably in this room have not only been part of that or working with the commission to try to make updates, and this is the first time that's really happened. And I think part of the goal here is to put emphasis more on performance,

which is good, but I think if we're going to go back to 5th Edition, I think that actually brings more confusion. I think that throws out a lot of good stuff that's happened. So my recommendation to the board is keep it where it is right now until we figure this out.

MR. BROWN: I've been on all three sides of the table. I've been in the government, I've been on the engineering, and I've been on the contractors side. If we go back to the 5th Edition, it's going to confuse everyone even more on the ones that are actually installing these products. I bid projects every day. I look at designs on projects every day. If I'm going backwards on something, we might as well just go backwards on everything. It's not worth it to go back, and just to continue to go forward and progress. I agree with Betty Jean. Leave out the items that have discrepancies and that we have questions about but continue with the 6th Edition.

MR. MASTRONARDI: I guess my question then would be what are the items we're talking about.

MR. RUZOWICZ: I would say silt fence and check dams are definitely two of the ones that were

definitely brought up.

MR. MASTRONARDI: Don't they constitute the substantive changes between the 5th and the 6th.

MR. RUZOWICZ: No. There are a lot of other BMPs. We are not just talking Chapter 6. I mean, there's chapters, all the other chapters and appendixes. I mean, they are all updated to have the new information which goes back to the right Websites and stuff. I mean, whatever you guys decide. There might be other BMPs that you guys might want to take into consideration as well besides just those two, but I was just throwing that out there as the two that had already come up from what Mr. Knight had brought up. I know from what we have seen on plan reviews and stuff like that, the skimmers is definitely a huge deal, and a lot of the people in the industry are using that information and have good comments about that.

MR. MASTRONARDI: We currently are (Inaudible), but I'm making the suggestion that GDOT does (Inaudible). That's not my suggestion. I'm looking for simplicity. If there is a way to simply do it that satisfies the state regulators, I'm not privy to

what their recommendation was, then that should be fully considered.

MS. FULLARD: We also have a whole section on the slopes to building that had been updated, which is huge for our regulators, because it does give alternative. And as long as it's meeting a standard, that's -- I don't want to go back to (Inaudible). I want to stay with (Inaudible).

MR. RUZOWICZ: Nobody has questioned that. That's been a full ASTM for a long time, and IHDA has adopted it as far as the slope stabilization.

MR. HAMIL: The total testing needs to be left out subject to Mr. Knights' presentation.

MR. FAUCETTE: Just to give a little bit of historic perspective, I think, one of the reasons that we've gotten to this point with the 6th Edition is that I think the commission hasn't had an efficient, effective way to evaluate new practices and to be able to implement them into a new manual. (Inaudible) field tested by the DOT (Inaudible) you can't standardize that. So I think with this process there's finally a path forward where they can do that in a nonsubjective

manner and approve these test methods. And if we're not going to use them, then I think we need to give the commission a tool or a way to be able to do that. If we're basically talking about taking that away, we're taking away their ability, we're hamstringing them to be able to fairly and effectively and objectively evaluate between practices and what can and can't be used. I know at the end of the day there's a lot of different stuff to review and say whether it's approved or not. We need to have a way where they can do that in an effective, efficient, objective manner, and it hasn't happened until we've come up with this.

MR. HAMIL: I still like my idea. Let the DOT develop a test and let the local people do the testing. It will be cheaper to set up until such time we come to agreement. I think the DOT is very smart and I think they can come up with a simple test that won't cost too much until we come up with something different. Sorry about that, Marc.

MR. MASTRONARDI: I take it as a compliment.

MR. PARKER: I'm in line with Adena and Betty Jean as far as a partial manual, but I have the same

kind of questions that we are talking about in my head of, you know, which BMPs are we going to leave out, and are we going to say that they are -- sediment barriers, if we leave that out of the new edition right now, are we saying we are going to just accept the 5th Edition sediment barriers for the check dams, or are we saying we're just going to accept the 5th Edition check dams? So in other words, is that what we would revert to?

MS. JORDAN: My understanding is right now we are working on both manuals until the end of this year, calendar end.

MR. DYKES: The official code of Georgia says the manual in print on January 1 is the manual that holds reference for the entire calendar year. So if there's any reset, it occurs at January 1 of each calendar year.

MS. JORDAN: Is there a way to say we continue what we're currently doing looking at both manuals for maybe another year to give us more time to sort through other issues?

MR. DYKES: You could, yes.

MR. FAUCETTE: The way I understand that is

that's a decision of the board. If they made that for this calendar year, they could or could not make it for the next one.

MR. DYKES: What you would be doing today as the committee is making a recommendation to the commission.

MR. PARKER: I don't know that my question was answered. Would we revert back to the 5th Edition BMPs if we were to do a combination of the manuals?

MR. DYKES: Yeah. In simpler terms, you'd have to fill in the blank. You couldn't take silt fencing out without putting something back in there. That would be one option.

MS. JORDAN: You might have a skimmer on your site or you might go with ABC silt fence, kind of put it together.

MR. PARKER: And then selecting which BMPs to leave out, you know, I definitely heard questions about the checks, the barriers, potentially the inlet traps.

MR. RUZOWICZ: That would be another good one.

MR. MASTRONARDI: Let me propose a suggestion here. Consider this: Eliminate the performance

standards.

MR. PARKER: Which is only one more BMP, the slope.

MR. RUZOWICZ: Both slope and then channel stabilization. You guys went with the existing ASTM 6460 and then existing ASTM 6459. So even though there wasn't any testing done by us, you guys used the existing data that was already out there, which is how you guys came up with the C Factor. Who was it with the NRCS? She has made a recommendation to make the minimum C Factor whatever tackified straw was, because if something couldn't do as good as tackified straw, then it shouldn't be used on the slopes. So we looked around and instead of having to run the test, we found somebody that had already run it, and that's how we came up with that C Factor number, was tackified straw to that slope using that ASTM. And then anything that did better than that would be able to be used in that application whether it was matting and blanket or whether it was anything else, you know, hydraulically applied product, because we've had a lot of people with a lot of big projects come to us and say we want to use hydraulically

applied, do we have to go through the alternative BMP process. We've always told them yes because they're not (Inaudible).

MR. MASTRONARDI: I think you could (Inaudible) the performance factor and recognizing the QPI for that period.

MR. FAUCETTE: Just for clarification, are you saying keep the specifications but get rid of the C Factor?

MR. MASTRONARDI: I think that's what's in question, because if we're not eliminating products, which I think is the issue with the 6th -- I'm not sure. Yeah, I think that's what's in the 6th Edition. The biggest reason we're here and had this protracted meeting is the standards established that have made it, it has in fact impacted some folks in the manufacturing industry. We need to visit that, but in terms of as a sock, a check dam, could it be a check dam, if the commission and this panel says it's a check dam, it's a check dam. And in terms of establishing when other socks were needed, again, that goes back to when you think of this decision, think about it from the

commission's standpoint. If the manual allows for alternative BMPs, then you have to have a yardstick to apply. If it's not these which you've been using and been considering, then what would it be? That's a great issue, I think, for you guys to carry forward. Again, I made a very simple recommendation. I understand it's not popular with all but it's very simple. Alternatively EPD has made a suggestion. Glenn, do you know what it is well enough to speak to it?

MR. BEHREND: I believe it's the next page in the comments.

MR. RUZOWICZ: Which one?

MR. BEHREND: Manual for (Inaudible).

MR. RUZOWICZ: I wasn't sure if that came from you guys or where exactly that came from.

MR. MASTRONARDI: Again, I think my concern would be if you keep the 6th open and you have it to use as a yardstick, you essentially have no controls at all if you're going to evaluate alternative BMPs, or else you revert back to the practices of evaluating BMPs prior to the TAC being impaneled at all.

MR. DYKES: I'm not sure the commission will

react on any type of new BMP during the transition period. I can't speak for them but I'll just say if this committee or anything has been recognized as a standard, how can you hit a target that doesn't exist? I think the bigger issue is what happens January 1 with the manual. I'm not as concerned as a director about alternative practices. I am concerned and I don't want to misstate but my bigger concern is what this committee would recommend as of January 1 for a manual. That's my bigger concern.

MR. FAUCETTE: Marc has a good point. I think that if we are going to go with the 6th Edition and move forward with that but we are not going to have the testing or performance standards, we have to recommend to the board a way that the commission can then evaluate new practices and products. I think that was the reason for putting this together to some degree, and so I think we can't leave them hamstrung with no way to do this in the future. We have to give them at least a recommendation for them to be able to move forward. I know a lot of this falls on Ben and Gary to get all kinds of products and practices (Inaudible). You have

to give them a fair way to go.

MR. DYKES: From a timing standpoint, not today's time but timing in general, the next commission board meeting is November 6th. If the committee at this time, meaning your committee, is not prepared to make a recommendation or to move forward on a recommendation, there is time to schedule a meeting between now and prior to November 6. If this committee would like to deliberate sometime in the next week or so and come back and reconvene, that certainly could be done. I'm not saying you're not prepared today. I'm just saying you're not pushed that you have to make a recommendation today for a commission board meeting tomorrow. That's not the case.

MS. JORDAN: Will that November meeting be the only time the board meets between now and the end of the year?

MR. DYKES: As it stands now, there would be a November 6 meeting and there would be a meeting the third Thursday of December, as it stands now.

MR. PARKER: If we move to the 6th Edition but leave out the BMPs that have performance factors,

performance thresholds, can't we just use the same method that was used during the 5th Edition submitting alternate BMPs?

MR. FAUCETTE: Just my opinion but I think it's very inefficient and a somewhat subjective process. I feel like that process was created as a stopgap until something more efficient could be done. Because what that means is a whole list of materials need to be submitted (Inaudible) information on design testing specifications for every project, every plan (Inaudible). I think that's a lot of extra work for plan reviewers. I think the staff needs to have the ability to be able to do this, to be able to put these new practices on a list or have them in the manual and not have to wait 20 years to be able to do that process.

MR. PARKER: But they can't generate a TPL list without having positive data to base it on.

MR. FAUCETTE: You're right. I think that's part of what Marc is also saying, is that if this process has given that ability to put stuff on that list, so if we don't go with this process discussing or the P Factor, you know, you have to come up with another

one that we can all agree on and comfortably use that they can then put stuff on that list in a somewhat efficient, objective manner.

MR. PARKER: But I don't think we're talking about coming up with another method. I think we're just coming up with stepping back and looking one more time at what we have looked at.

MR. FAUCETTE: I agree. I think there was some discussion about going back to the 5th Edition altogether and getting rid of everything in the 6th Edition was part of my response. But I agree with you.

MR. MASTRONARDI: I'd just like to remind the TAC that the NPDES permit allows for alternative BMPs to be proposed by a designer, but what you won't have is a clearinghouse with the commission. You can instead still have a one-off ability by the regulator to use an alternate BMP. It doesn't slam the door to say you can't come up with another mouse trap.

MR. FAUCETTE: I think that alternative BMP rule has been a good kind of stopgap measure to sort of bridge the 5th and 6th Editions. What it does is it intentionally creates a very subjective process with

testing, research, design, specification. It gives a lot of information that's requested on, I think there's four or five things on that list, that then needs to be reviewed on a case-by-case basis. And then not really evaluate apples and apples. I'm in favor of giving designers leeway to do what they need to do, but I think some designers probably don't know how to evaluate certain things, certain research projects or testing, and is this a fair test, where did this come from, and then so everybody sort of doing that across the state. I like the idea of sort of centralizing that and having experts making that decision. I'm not disparaging designers. There are some great ones out there and that are sitting at this table that do know how to evaluate, but there's others that I think are looking for somebody to help me with this decision.

MR. DYKES: Is there any recommendation from the committee specifically about the January 1 manual? Mr. Mastronardi made a couple of comments, and then Ms. Jordan, and certainly Adena has. Is there any consensus on the recommendation at this point?

MR. FAUCETTE: My recommendation for the board

is to continue what they agreed at their previous meeting and be able to use both until we can make a recommendation to them as to which changes are more informative.

MR. RUZOWICZ: I just think the TAC should take some more time to think about it and come back and have another meeting.

MR. BROWN: I agree with Ben.

MR. RUZOWICZ: There's a lot of information to look at, and I don't necessarily think that going back and looking at some of the performance testing we did, if not all of it, is necessarily a bad thing. There are other options for sediment barrier testing, and if you go back and look at the minutes, those options were presented at the meeting in the very beginning. So there are other options. You know what I'm saying? It doesn't mean necessarily that what we did is wrong or -- you know, there was some very good stuff put in that video, but like you said, we did do replicates of three and there is a lot of stuff to look at. Realistically that's a lot of information to digest for this committee between now and November, December, and it needs to be

looked at carefully. So I feel that there's BMPs that can go back.

MS. JORDAN: I agree.

MR. SPRAGUE: May I share just one thought? I think as it relates to the testing, you have the test method and then you have the recommendation what to do with the results. And I think they really are two different issues. Is there a proposal on different tests? Is there a proposal on using the results differently? The P Factor, is it too tight to satisfy some folks? And so the answer is maybe just to make it a little looser. There's that engineering judgment that's been made, and then there's the test method that's been done. Just an observation.

REPRESENTATIVE HOUSTON: May I make a suggestion? We've got some people back here that are authorities on this subject. Could we have some public comment? We've been sitting here four and a half hours.

MR. DYKES: Yes, ma'am, we're moving to public comment. Any consensus today?

MR. HAMIL: I'm hungry.

MR. DYKES: I think there is consensus there,

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Mr. Hamil. I can guarantee you that. I'm hearing varying opinions and some consensus, but I don't hear majority consensus. I say we do move at this point to public comment and allow those that have signed up for public comment to do so. At the end of public comment we will schedule a meeting, with my hopes, prior to the November commission board meeting such that we can move forward with some of the items we talked about then and certainly have time to peruse the information that's been provided.

So we have a list of folks. I'll tell you what, let's take a 30-minute break. At 3:00 we'll reconvene here for public comment.

(Break)

MR. DYKES: To start off public comment, Item 6 as listed on the agenda, I'm just going to call from the list as presented. Representative Houston.

REPRESENTATIVE HOUSTON: I just had one or two comments. They kept on talking about real-life situations and real-life things, and then I hear you say that you had six inches of rainfall in 20 minutes. This is supposed to be a test in Georgia. Could you tell me

where in Georgia and when they had a six-inch rainfall in 20 minutes? That's just as a layperson. I wonder if this is going to be about Georgia, and I think this test was done for Georgia. And I think one thing, we cannot have the appearance of any conflict of interest, and I think we've got to go overboard to avoid a conflict of interest. And I was surprised to see one person there when his fabric was tested. Were they notified that their fabric was going to be tested at that time? And was everybody notified that they could come and view their fabric being tested? If we are going to do one thing for one person, let's do it for all. Let's be completely fair and completely open about this. And we cannot give any appearance of conflict of interest.

And the next thing, I was just appalled at some of these videos, and just a layperson like me, I'm not an engineer, but when I saw the rainfall up there where it rained the night before and they pointed out the rainfall the night before, and they went on and tested it like it didn't rain, I would think testing had to be done the same way. And you talk about moisture. Even somebody like me could tell it was a lot more

moisture in one of these tests than the other. You've got to be fair. I just think we need to treat everybody fair and have fair testing. And from what I've seen, it doesn't look like it's been fair. That's all I've got say.

Now you tell me where the rainfall is six inches in Georgia in 20 minutes.

MR. SPRAGUE: That's really a good question. This is a standard that's used for erosion and now for sediment control so people can test their products and those be used all over so that --

REPRESENTATIVE HOUSTON: Not all over. I thought this was for Georgia.

MR. SPRAGUE: But the manufacturers don't want to have to pay just for Georgia and just for Alabama, and just --

REPRESENTATIVE HOUSTON: So this manual is for everybody in the United States?

MR. SPRAGUE: Standardized testing is. So then they'll interpret things, but --

REPRESENTATIVE HOUSTON: But I don't understand why we're putting state dollars in this thing

if it's for everybody else. And I think we did put state money in here, even if it was compensatory.

MR. SPRAGUE: We'll just follow the procedure. In terms of the videos, once again, for anybody who has done large-scale testing, they'll understand. It's like being on a construction site.

REPRESENTATIVE HOUSTON: Well, at a construction site --

MR. SPRAGUE: And it's messy, it's dirty, stuff goes on, yeah, it does. So that's a little bit I guess surprising that --

REPRESENTATIVE HOUSTON: Well, it was surprising to me that you said you had that much moisture in the soil yet you had rain up there one day and went on and tested. That's surprising to me.

MR. SPRAGUE: But you know Georgia soil is clay and it doesn't absorb. So if it gets a light rain the night before, not a big deal. It doesn't absorb. The moisture --

REPRESENTATIVE HOUSTON: I thought you said you tested the soil to see if it had so much moisture.

MR. SPRAGUE: Right before the test. That's

right. So if it rains the night before --

REPRESENTATIVE HOUSTON: You could see this thing right before testing, and it just didn't make sense. I'm sorry. I'm just a layperson. I'm not an engineer. It just didn't look fair, and I just want everybody treated fairly. Thank you.

MR. SPRAGUE: And I agree with you as well. We do our darndest to, number one, follow the scope of services, which we did religiously, to follow the test method, which we did as best --

REPRESENTATIVE HOUSTON: When you see pictures, it just doesn't look like you did.

MR. SPRAGUE: Especially when they're taken excerptively and not given a chance to respond to each one. That was unfortunate.

REPRESENTATIVE HOUSTON: And then I saw the wind up there blowing. You said you took wind into consideration. I don't know if you were on the test site a lot or you just had this man doing it that was on the picture.

MR. SPRAGUE: I am the director, so I am responsible.

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REPRESENTATIVE HOUSTON: Thank you.

MR. DYKES: Thank you, Representative. Next is Mr. Brad McCoy.

MR. McCOY: I'm Brad McCoy with Gro-Green Solutions. As a manufacturer, I'm going to go back in time kind of when everything got pulled down the first time, the approved list. We had an incident that kind of came to mind with a regulator from Gwinnett County. We had multiple incidences with distributors of ours. As you can imagine, Gwinnett County is a pretty substantial hotbed for our types of products. We had multiple instances where we had folks that sell our product for us up there called by their customers and told they couldn't use the C-POP product. Our concern from the manufacturer's standpoint is, with the melee that went on with the list that went out, what kind of revenue we could have seen lost during that time when we really didn't know what we had on the street as far as the testing information. I guess my question may be for the individual from Gwinnett County. Has that been resolved? We haven't heard much from it here in the last month but we did have a couple instances where

people were even asked to remove the C-POP material and told they could use a Type A instead of the C-POP.

MS. FULLARD: The situation arose when you have RDPs, residential drainage plan, submitted to Gwinnett County, and along with those details RDPs we required the details for silt fencing. So if we had Type C silt fencing with the wire back and steel posts, it's not a contractor's choice. That's the designer's choice. So when we had the inspectors out in the field go inspect the site, the C-POP material had been placed. If the RDPs were revised and they clipped a note on there that says you're going to use alternative products, the C-POP detail is on the details, we've never had a problem with it. It's just going out in the field and placing or installing a BMP that is not approved for the residential drainage plan.

MR. McCOY: So it was a Gwinnett County thing. What do you think about that?

MS. FULLARD: I'm not sure I --

REPRESENTATIVE KNIGHT: Excuse me for interrupting. I've heard this from different counties, not only this county. I've been told by people that we

had either planned to use it and we're being told now by the regulatory authority that the 6th Edition is in place and now you can't use the old 5th Edition, which in many cases was the silt fence. Do you understand what I'm saying? We're saying that the confusion was or what has been an issue is that instead of saying you could use the 6th Edition or 5th Edition, and you correct me if I'm wrong, that the cord only got out, there was confusion or the regulators said no, we're going to stick with 6th edition. And under the 6th Edition the C test was not allowed because it did not meet the BMP testing standards of the P Factor.

I'll tell you that is of grave concern to me, especially if we've got confusion out there because of this, because of small businesses and Georgia businesses that were denied something, not because it was the right thing to do but because somebody chose to say we're only going to recognize the 6th Edition, where under law and under what Director Dykes has said and this committee has said that you've got the 5th and 6th Edition. You see where I'm rolling with this? There's multiple instances around the state of that happening, or at

least what I've been told.

MS. FULLARD: Well, it's not in Gwinnett County. Once C-POP was recognized, then you had the detail according to the manufacturer's recommendation. If there's a failure, then it's up to the owner to replace. So whatever product is specified on the residential drainage plan, that's what the inspector is going to inspect out in the field. If there's something different, he's going to tell them to remove it and place what's on the plan. So, like I said, I've been in Gwinnett County 17 years and we've always said the alternative products are accepted. It's just we have to have the specs. If it's not on the specs, the product will be asked to be removed.

REPRESENTATIVE KNIGHT: You said alternative, meaning alternative BMP or?

MS. FULLARD: C-POP --

REPRESENTATIVE KNIGHT: Let me ask, the 5th Edition, is that an alternative product or is that a recognized product?

MS. FULLARD: It's not a recognized product in the 5th Edition.

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REPRESENTATIVE KNIGHT: It is. I thought under the 5th Edition that Georgia Soil and Water recognizes the GDOT QPL.

MS. FULLARD: Right, but Gwinnett County does not allow the wooden posts on the C-POP, so we use that as a (Inaudible). It's still used.

MR. PARKER: I just want to point out that the NPDES permit does require that construction drawings match what's on the ground. So a government authority can't approve installation of something that's in variance from the approved plan.

FROM THE FLOOR: But on that note, you can redline it in the field and not --

MR. DYKES: We're not going to be able to call on you. In order to keep the integrity of the record we kind of need to stick where we're at. Anything else, Mr. McCoy?

MR. McCOY: No. I'm done.

MR. DYKES: Thank you for your comments. Mr. Robert Page.

MR. PAGE: I'm done.

MR. DYKES: Mr. Donald Davis.

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MR. DAVIS: I've got just really one thing directed toward the DOT. Has any of these products, like the silt sock or Silt-Saver, have they ever been tested by y'all before?

MR. MASTRONARDI: Yes, they have.

MR. DAVIS: What's the results?

MR. MASTRONARDI: Compost filter sock for sediment barrier, we will allow it if it's staked every two feet. It sits in our specification as an alternate.

MR. DAVIS: My question is did it work. Did it ever fail?

MS. MASTRONARDI: We had a few failures. We did some site testing and it was not accepted in the site test.

MR. DAVIS: What about Silt-Saver?

MR. MASTRONARDI: Silt-Saver, because it is a nonwoven fabric, we don't approve it. It actually --

MR. DAVIS: But it just passed its test.

MR. MASTRONARDI: The commission recognizes it.

MR. RUZOWICZ: I'd like to say something, to be clear. Silt-Saver is I think recognized as the dome

structure, and I think what you're talking about is BRSF, the specific silt fence. Is that correct?

MR. DAVIS: Is that what you guys tested?

MR. RUZOWICZ: I just want to make sure that you're talking about the same thing.

MR. MASTRONARDI: We tested the Silt-Saver product with the dome ST2 inlet cover, and it has been an allowed alternative. As a silt fence for sediment barrier, we don't approve the product because actually after a couple uses we find it clogs and retains water and it can threaten to get water into our roadways. On the primary definition of the ASTM spec governing this it's meant to be a woven product.

MR. DAVIS: And that was tested, what, five years ago?

MR. MASTRONARDI: Quite some time ago.

MR. DAVIS: I had a similar thing. I had a catastrophic failure. If I'm not mistaken, it did get out on the highway. None of that stuff -- didn't any of the TAC members know that?

MR. FAUCETTE: I am familiar with some of the testing that Georgia DOT has done. We have actually

worked together on some of this. And I don't know that the TAC knows a lot of this history. I think that's partly how a lot of this (Inaudible) we'd have to start again. Choosing location has always been kind of difficult. (Inaudible) standard test method. That's one of the reasons why this committee wanted to have a standardized test so we could avoid some of that. I do know that they've had a separate (Inaudible) for quite some time. I don't know that all the practices that we're talking about have gone through previous to now some standard test method.

MR. DAVIS: If I'm not mistaken, the TAC, did you guys just pass -- I mean, doesn't it pass the C Factor test where you guys are accepting it?

MR. FAUCETTE: What's the question?

MR. DAVIS: Didn't it just pass y'all's test, the C Factor test?

MR. RUZOWICZ: The Silt-Saver wasn't tested. Our goal was to set benchmark standards, not to cut any BMP that was already being used.

MR. DAVIS: But when it's our gold test and you set it up to get tested --

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MR. RUZOWICZ: It failed the test as far as what the DOT was looking at in their application. It was tested in another scenario under this test, and we weren't looking --

MR. DAVIS: Are y'all going to test it again before you --

MR. RUZOWICZ: And then the other thing is the Technical Advisory Committee did take into account the negative effects of ponding. There's stuff in the write-up that says that if there is detrimental or negative effects as far as ponding where somebody could hydroplane or something like that, an engineer can write a rationale. And there's even that statement, I believe in the NPDES permits, to allow them to not put that BMP in so that they don't cause that effect. And I know it's in the write-up for inlet protection, and that's why they have the blocks behind it so that when it does overflow it can go down into those drains as well and hopefully stop that.

MR. DAVID: I didn't see it. And what did you say? The silt sock, did it pass before, two years ago, five years ago?

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MR. MASTRONARDI: I think our specification is a compost filter log that can be used by a contractor I believe in place of Type B silt fence. But we tried compost filter sock, was it for a check dam?

FROM THE FLOOR: Sediment control.

(Inaudible conversation among several participants.

MR. DAVIS: The last meeting I said along with (Inaudible) testing I would suggest using a different county or whatever to put some of these products that we want to try to accept on projects now so you can go back six months later, or have somebody monitor them to see if they really do work or don't.

MR. RUZOWICZ: I'd just like to say we've had a lot of complaints from industry people as well as far as the testing not being the same, whether it's installed in north Georgia, whether that's through a DOT test or somebody else, whether it's in north Georgia or south Georgia. So that's why the group wanted to come back to one thing so that everybody was trying to do the same.

MR. MASTRONARDI: I think what will still

happen, if nothing else were to change, the department would still hold many of the same views in terms of safety. So regardless if the commission approved an item, we would recognize that those be more stringent. And our measure is safety in terms of that.

MR. DYKES: Thank you, Mr. Davis, for your comments. Next on the list is Mr. Roger Singleton. He's not here. Next on the list is Mr. Larry Booth.

MR. BOOTH: Larry Booth with Willacoochee Industrial Fabrics. I want to again thank Georgia Soil and Water for allowing us to be a part of this process. We have had a lot of input in all of the meetings and talking with Joel earlier during the break. And as I've said earlier, Joel is a very knowledgeable person in testing. TRI is a very knowledgeable organization. Joel had stated earlier that mistakes were not made in the testing but mistakes were made in the calculations. I don't know that I fully agree with that because I've viewed all the videos. He says that because this is groundbreaking technology, that's why they have issues, technical issues, blowouts and things like this, and they've done their very best. With that in mind, if

that is the case, why would the Technical Advisory Committee and Georgia Soil and Water make wholesale changes in the Green Book based on a new test method and new procedures the first time it was done? I think that was a serious error in judgment there on something as new as this was.

Now, WK 11340 is not approved by ASTM, as had been stated several times in this meeting and previous meetings. That test method was chosen by the Technical Advisory Committee for this testing. When you are doing new testing, groundbreaking testing, large-sale testing that's going to impact not only the manufacturers in our state but also impact the environment in our state, then I think you should be using, before you start the testing, you should determine that the test method you are going to use is a test method that is reproducible and also repeatable. Now, the reason ASTM has not adopted 11340, and it's been in contention for almost 12 years. Willacoochee Industrial Fabrics is a member of ASTM, and at the last meeting the question of repeatability, which Mr. Sprague stated was the ability of a lab or a manufacturer to test this product over and

over and get the same results. That's repeatability. Reproducibility is the ability of me to use that same test method and Joel to use that same test method, and any other lab to use that same test method, with the same product and get repeatable results. Neither of those have been established for this test method. So the choice of that test method for this groundbreaking work was in my opinion an error. They should have waited. They should have chosen a different test method which had already been approved, or they should have waited until the reproducibility/repeatability had been established on this test.

Also, the use of Bentonite was permitted per the contract, it was stated earlier. Now, I refer back to the minutes of the September 10th meeting where Mr. Singleton made the statement: "I believe the test was to test the product itself for flow and efficiency, not the installation method. In order to test the product itself you have to close off any escape of water passing through or under in order to test the flow throughout the product and the efficiency that passes through or over the product." Mr. Sprague's response:

"And I guess I'd have to disagree with you on that one. The goal here was to run and install performance tests, so the installation is supposed to represent how it's put in in the field and to do it in accordance with the procedure."

Now, earlier today Mr. Parker made the statement also that we were trying to evaluate real-world performance. Dr. Faucette made a statement later on that they wanted to replicate field conditions. Now, real-world performance and field conditions do not permit the use of Bentonite to control the product from undermining this, which is one of the points that we have made in previous meetings, that if you're looking for real-world conditions, it's fine to use Bentonite and to seal the edges, but in order to determine real-world conditions you cannot seal off the underpart of that, because if there is a product that will allow undermining, that needs to be noted and established in the testing in order for it to give you real testing performance.

I think the stakeholders have had the opportunity to demonstrate a lot of issues to bring up

for the committee to consider, and as has been alluded to by Mr. Knight over here and other people, the decisions that you make are far reaching. They are not just Georgia decisions that affect Georgia and the soil and water and environment in Georgia. The industry is looking at these tests from Georgia Soil and Water and they have used these tests, and companies that have products tested in this test have promoted the use of their products based on this test method, even though there were significant issues that have been raised there.

I'd like to go back to a question that Ben answered earlier where Representative Knight asked if NTPEP had been provided with all of the test data that was done in this test and in the revision of that test data, and he stated that they had been. I did not understand whether or not NTPEP had been provided with all of the issues that were brought up at the last meeting that were published in the minutes of the meeting and stated clearly, that there could be some potential issues. Was NTPEP provided with all of that information also?

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MR. DYKES: I'll answer that, Mr. Booth. No, they have not received the public document, the written document. They received communication from us by phone and possibly an e-mail, but they will, following today's meeting, receive all communication, all issues as brought up through the transcript and other issues that have been brought to light.

MR. BOOTH: I think that is critical, because, as was stated in a letter that was read earlier by one of the Technical Advisory Committee members, and I don't remember who read the letter, that said they are moving forward, I received the notice also that ASTM is going to move forward with testing and the WK 11340 was one of the test methods that's being used. Now, I don't believe that if they had knowledge of all the issues that have been brought up, that they would have taken that step. So I think it's imperative they are made aware of that to be able to use that in their decision-making process.

MR. DYKES: Yes, sir. It's a public document.

MR. RUZOWICZ: Do we have a copy of the video so I could send that too?

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MR. DYKES: We have videos too. They'll get a copy of the videos and everything. I don't think we have a copy of the presentation from the Representative but we have all the videos that would encompass that.

MR. RUZOWICZ: Can I get that too to send along?

REPRESENTATIVE KNIGHT: I'll let you send that along. I'm surprised you haven't done your homework already, but, yeah, you can copy off my sheet.

MR. BOOTH: In addition to that, there was a lot of information disseminated to a large group of people in the erosion control industry, 70,000 members. E-mails went out with all the glorious promoting this testing and all the test results. Now, those members do not have access to these issues either, and I think that with the same vigor that it was promoted to them initially, we should use the same vigor in ensuring that they are kept abreast of it up-to-date on the current issues that exist.

MR. DYKES: We will do a much better job.

MR. BOOTH: Thank you very much.

MR. DYKES: Next on the agenda, Ms. Kelli

Davis.

MS. DAVIS: I'd like to thank you all for allowing us to come and speak. I've listened to everything this morning, and I've heard on multiple occasions where people said it would be confusing if we went back to the 5th Edition. I understand why you said that, because you've done so much hard work on this. But let me share something with you from a manufacturer's standpoint. In this 6th Edition -- and I deal with silt fence all the time, but I deal with other products as well. Underneath the silt fence type sensitive, are you aware that the TRI testing that was done for this particular thing was not done as per your schematic here? It says type sensitive will have 4-foot max spacing and a woven wire fence. That is not how it was tested. That is not per Georgia DOT. Georgia DOT says Type C will have wire fencing and 4-foot spacing. So if you flip on over to the silt fence type nonsensitive, it says 6-foot on centers, no wire fencing.

I think after we're in our tenth month people have been looking at this 6th Edition, and I don't know,

as far as regulations or regulators go out there on the jobsite, if you go out on a jobsite and you see this configuration, is it going to be passed or is it going to be failed? That's confusing, I mean, just as an installer. I don't install. Our company does not install, but just think about this. If this is law and for the last ten months people have been out there trying to install this product as per the 6th Edition, they would fail. This is not actual installation methods for Georgia DOT, and it is not what was tested in the TRI test results. And that's all I have to say. Thank you very much.

MR. DYKES: Thank you, Ms. Davis. Next on the sign-up sheet is Mr. Wayne Seabolt.

MR. SEABOLT: I appreciate it. I'll try to make this short and brief because I know that you guys are ready to go. But mine is altogether a different scenario here. I'm in the compost filter sock business, and by the way, Natural Growth's compost filter sock was not the one that was tested by the DOT. It was turned down. It was the Filtrexx product.

Three or four years ago -- I'm in the soil

enhancement compost business as a result of that I got into the compost filter sock business. And Dr. Britt Faucette and I go a long way back, even back when he was in school. And I wanted to get approved as an alternative BMP, and I got the information. It's a four-step criteria that you have to go by to be approved as an alternative BMP. I submitted all this information to Georgia Water and Soil Conservation, and I was told that I had met the criteria. There's a four-step criteria here, one-page summary, detailing why the alternative BMP is equivalent, on and on and on, documented side-by-side testing, BMP; number three, proof that the alternative BMP was previously installed; and number four, all specifications including design requirements and the procedure for the proper installation and so forth.

Well, I met all that criteria, and as a result of that I started marketing my product. Well, in my conversations with Georgia Water and Soil Conservation there was an approved products list that was on their Website and it had Filtrexx approved A and B. Now, my point was and I was told that I had been approved for A,

B, and C. And my question was why can I not be put on the approved products list. I was told if we put you on the approved products list, it's going to appear that you're just approved for A and B, and you've been approved for A, B, and C. I was actually told you've been approved for A, B, and C, and Filtrexx has not.

Now, the problem I run into is that time after time -- and you talk about getting into your pocket, and you're talking about affecting your business, time after time I will have people that will contact me and they want to use my product, and yet they are told that I'm not on the approved products list. But they can call Georgia Water and Soil Conservation and through a discussion with Georgia Water and Soil Conservation it seems that for some reason most of the time up until recently I am allowed to be used. Well, one particular engineering company in Atlanta, a very big company, I'm not going to call their name, they wanted to use our product on all the renovations on the new McDonald's. They were told that we weren't on the approved products list. Well, I said call Georgia Water and Soil Conservation. They didn't want to go to that trouble,

so as a result of that, my product has not been allowed to be used because I'm not on the approved products list.

My question is, if I met the criteria for the alternative BMP, what does it take to get on the approved products list? I was told that there has not been a new product put on the approved products list in the last seven years. I was also told that a company -- and I don't mind. Britt and I go a long way back so I can just be open. I was also told that Filtrexx was on the approved products list. And I said, "How did Filtrexx get on the approved products list?"

"I don't know."

But yet here's the real catcher: When all this testing through TRI and everything came down, I was never contacted to even remotely present my product to have it tested. Filtrexx was. Now, according to the documentation here, Natural Growth compost logs was a Georgia Soil and Water Conservation approved alternative BMP for the DOT Type A, B, and C silt fence; however, the contract stated that there was only one product approved and therefore they were left, my company was

left out of the process. My point is that if I went to the trouble and I hired engineers and I went to the trouble and I have met the criteria as an alternative BMP and the other compost filter sock company has not, how were they tested or how were they approached to be tested and my company was not? I don't have $19,500 to pay to have my three products tested. That's the 9-inch, the 12-inch, and the 18-inch sock. It's more than that now. I'm beginning to get interested in 24-inch socks. But my point is that my competitor, Filtrexx, they had their testing done and they didn't have to pay a penny. But I've been told if you're going to have your testing done, you're going to have to pay $6,500, and if you pay that money and you don't pass that test, then you forked out $6,500 for nothing.

So all I'm asking, I need some clarification. If nothing else, I appeal, I plead, to the Technical Advisory Committee or somebody to give me direct clarification in regards to what it's going to take for me, Natural Growth, to be on the same level playing field. I think it's unfair. I think that my company was left out of the loop. Anybody have any questions

for me, please?

MR. RUZOWICZ: I'd like to say something. Awhile back Mr. Seabolt came to us with some documentation. He asked me to look at it. He said does this meet the criteria set forth in this. I looked at it, and, yes, it looked like it would meet the criteria. But the way that the alternative BMP is written up is that it's written up on a case-by-case basis. So each local initiative authority has the ability to approve that BMP. If they want to deny it, they have to come to the EPD or the Georgia Soil and Water. And in those e-mails back to him I told him it has to be done on a case-by-case basis.

And just recently there was one that came up to where the local initiative authority called it into effect, and the question-and-answer sheet on that alternative BMP sheet says, "Does an alternative BMP have to go back through the review process if it wasn't already on the plans?" And that had been answered yes. So that was my answer, that, yes, it had to back through the alternative BMP process. This was a process that was developed by the commission and the EPD with the

last round of NPDES permits, not the recent ones that just went through, but the ones prior to that, five years before that, so I think you're talking seven years ago when this did take affect. And that was per the NPDES permits. It was written into those permits.

So I don't have the ability to sit there and say yes, this is approved on every single site. I was just looking at it saying yes, it looks like it's all there; if you're submitting to them, it should be the right information if the local initiative authority does choose to approve it as a BMP.

MR. SEABOLT: The documentation that I presented has got Georgia Soil and Water Conservation Guidance Document for Alternative BMPs. Now, this was not just an arbitrary thing that I gave to you. I may be misinterpreting what you're saying, but you seem to be implying that I just presented some documentation to you. I went by this documentation right here called Guidance Document for Alternative BMP. I also got an e-mail: "Mr. Seabolt, the BMP you're proposing would fall under a compost filter sock. Otherwise you could use this information you have acquired and certify it as

an alternative BMP through the alternative BMP process." The other one I got, 1/14/13: "Mr. Seabolt, once an alternative BMP has been approved by an LIA, local initiative authority, it can be used once the fees and the notice of intent are sent in. If an alternative BMP is used in an area where there is no LIA and the plans are submitted to the EPD, then you may start 14 days after submittal."

This is the information I'm getting, and all I'm saying is that I just want to be on the same -- for an example, and I don't want to put you on the spot, but say in Gwinnett County you wanted to use my compost filter sock, Natural Growth, and you looked on the approved products list and I was not on there, what would your decision be?

MS. FULLARD: It would be for you to fill out the alternative BMP forms in Gwinnett County and we would allow it.

MR. RUZOWICZ: And that's what I said in that e-mail is that you have to apply to the LIA. The reason I said the EPD is because in some areas there is not an LIA and it would go to EPD. EPD does not necessarily

approve or deny plans but they do -- they don't necessarily approve or deny plans, but after 14 days you can start your construction. So after starting that, EPD would either then let you know if you did or didn't meet it. And if you don't hear anything, then you just assume that it is okay.

MR. SEABOLT: Then why was not my company -- because Dr. Faucette and I had a conversation. He and I badger each other. We had a conversation, and I said, "You've never met the criteria to be approved as an alternative BMP." He said, "Yes, I have --" We were kidding with each other "-- because of the articles I wrote." I said, "You can't write articles and be approved as an alternative BMP." My point is that when this testing was set up, why was I not contacted and given an opportunity to have the testing done when I am the only company in the history that I know of of Georgia Water and Soil Conservation that was ever approved, compost filter socks, as an alternative BMP? I was never contacted. I was never even given the opportunity to do this, but yet Mr. Faucette's company was.

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MR. RUZOWICZ: I mean, before I became this position they were already on the list. I'm sure if I go back and look, I'm going to find documentation and stuff that was submitted to us, however that got there. But the reason it got used was because it was already on the approved list.

MR. SEABOLT: I know I'm taking too much of y'all's time.

REPRESENTATIVE KNIGHT: This is a procedural question. I want to ask the director about this. If you've got a procedure within Georgia Soil and Water that says if you can apply to be an approved alternative BMP and you meet those four criteria, and you're telling me you met it, and I haven't seen the documentation, and you're telling me that Filtrexx either has or hadn't, I don't know, but it's an approved procedure, if you met every one of those procedures, then why would that not be sent for board approval to be put on the qualified list and one wouldn't? Why? If your procedures are equal and treating everyone equal, and all being equal, everybody has followed that four-process step, why would it not have gotten an equal treatment that another

product would have? And I'll ask you this, Ben: Have you had conversations where you are approved for A, B, and C, but I don't want to put it on there because somebody may misunderstand it? That's been a question that's been eating me because this constituent has come in here forever.

MR. DYKES: To go to your question, Representative, as far as alternate BMP, very confusing subject so I'll try to do my best to explain it. The Filtrexx product prior to the grant that we've been discussing all day today, prior to the testing that we've discussed today, the commission board was petitioned at random times throughout the year prior to that about getting new products into the current, at that time would have been the 5th Edition of the manual. At that time the commission board said if you could prove the product you had, whatever it was --

REPRESENTATIVE KNIGHT: Those four things.

MR. DYKES: Right. And that you provided that, the board would consider that and the board would vote to put it in the 5th Edition. Filtrexx did that and was placed in the 5th Edition. Mr. Seabolt, when he

approached us, my understanding was, it was after the board of the commission received the grant to do the testing. The commission board -- what was the date, Mr. Seabolt? Because I don't know the date.

MR. SEABOLT: How long ago was it that you received the grant? I think, Ben, that I submitted this to you three or four years ago.

MR. RUZOWICZ: I don't know.

MR. DYKES: We've had the grant between three and a half and four years.

MR. SEABOLT: Of course, this was never mentioned to me.

MR. DYKES: March of 2010, from my recollection, is when the grant started that started the reformed ATAC, different than this committee, and we started down a road that led to the testing we talked about today. My understanding of what Mr. Seabolt's product is -- and I'm not passing judgment on his product. It may be the grandest thing ever created.

MR. SEABOLT: It is.

MR. DYKES: Is that that time line from the time the board officially received that grant and we

started forward, the board suspended accepting any products. We have a stack in the office of products like Mr. Seabolt's. I don't mean compost filter socks. I mean erosion products that would dearly love to be in the Green Book, but they are not in there, including Mr. Seabolt.

REPRESENTATIVE KNIGHT: Mr. Director, we can solve this. Why don't you go back and look back and find the documentation and trace it back once and for all, and maybe get back with Mr. Seabolt and the TAC Committee regarding this issue.

MR. DYKES: Sure. We'll be glad to do that. Anything else? Britt?

MR. FAUCETTE: To give a little bit of historical context to this too, I'm very sympathetic. I feel sorry for Wayne Seabolt. I think his story actually represents what is wrong with the 5th Edition, quite honestly. And a lot of other folks have been in your position, and that is trying to come to the commission to say can you evaluate and approve hopefully this product. And there hasn't been a consistent, equitable, objective way to do that. I don't know the

time line either, and I'm not even part of that, but I do know in the history of the commission they've approved two products historically, and this goes back years ago. One of them is the Filtrexx product and one of them is the BRSF. I think this predates Ben but I don't really know that for sure. That said, the way that I understand it, the board allowed those to be part of the 5th Edition. Somebody correct me if I'm wrong.

What Wayne and I think a lot of other folks have gone through is the alternative BMP rule which are these four criteria that have to be reviewed on a case-by-case basis. Unfortunately, the way I understand it, Wayne's product is not part of the 5th Edition, unfortunately, and it has to be reviewed on a case-by-case-by-case basis, which is a lot of work for the designer, for the plan reviewer. And I think honestly that's the problem with the alternative BMP rule. I said earlier that I thought it was an okay stopgap between the 5th and the 6th Edition, and it's helped in this process, but it hasn't helped in my opinion enough. I think you should have an avenue to be able to be included in the 6th Edition. And this

process that we have created with the 6th Edition actually now allows folks like him to be able to have a process to do that, not just him but anybody who wants to submit a technology or product or practice or new installation or anything.

MR. SEABOLT: I agree with you on that, but I'm talking about going back to when I did this and when I made this, when I introduced this information. The only time that I've ever seen anything in regards to Filtrexx was when in 2008 one of your Filtrexx representatives did a test for the DOT and the test was denied but the DOT said you could use A and B. My question still is, though, your company never submitted, from my knowledge I've been told, has never submitted the criteria to be approved as an alternative BMP. If you weren't, then what steps did you go by to get approved? Because what I want to do is back up and do what you did.

MR. FAUCETTE: Right.

MR. SEABOLT: This is a waste of my time, energy, and money.

MR. FAUCETTE: I agree with you. There is no

standard process, and you're exemplifying that with how Robert Singleton got his approved, how Filtrexx did, and what happens now. There was never a standard process ever in the history of the commission. This finally gives them a process to do that.

MR. SEABOLT: I understand where you're coming from, and I don't mean to belabor this. I know you guys are ready to go. I'm just saying that this has been very detrimental to me financially because there have been numerous, numerous times that my company could have been involved in erosion control from the perspective of compost filter socks but there's been some question in regards to whether we are approved or not. And now in the 6th Edition of the Green Book it doesn't refer to Filtrexx. It refers to the compost filter sock. I was a little surprised earlier when you mentioned something about the 5th Edition, that Filtrexx was approved under the 5th Edition. I feel like I've been at a disadvantage because I haven't been able to sit on the state TAC Committee like you have.

MR. DYKES: Thank you, Mr. Seabolt. Next is Mr. Wesley Zech.

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MR. ZECH: Thank you for letting me speak at the meeting. I'm here representing the scientific community, so I want to make sure that what's in the report that Georgia Soil and Water finally accepts is technically correct, because it not only has state implications but it has interstate implications and also national implications.

I'm going to kind of go through and clarify some things in relation to Joel's responses to our original discussion. Joel has acknowledged miscalculations of the original sediment yield, which is the A calculation, as a result of the area being miscalculated in the test report. He has also acknowledged miscalculation of the original R Factor. He's acknowledged a miscalculation of the original K Factor. He acknowledged that the soil loss index, the soil aggradation index, were grossly miscalculated in the ditch check testing, and then he also acknowledged in his comments back to our comments that there were numerous editorial oversights. So take that into consideration as I kind of go through trying to clarify misconceptions.

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So Joel has stated that the change in area from 40 feet in length to 27 feet in length is just an oversight; he adopted calculations from the 6459 test method and didn't adjust for that; and that it does not have any change on the resulting P Factor. That is false. We have gone back and recalculated and re-created using formulas, spreadsheets, commonly accepted ways of calculating all these factors, and when you change the area, it changes your K Factor, and Joel acknowledged that. He said it went from .03 and now it's .044, which is a big change. It will change your LS Factor. And then, depending upon what R Factor you choose, whether it's 231 -- joel has indicated his lab has recalculated it to 162 -- that will change the end result. It will change the total soil loss for that particular control or various products tested, which will ultimately result in a different P Factor.

So there are gross miscalculations and there's a misconception that just because we made this one little mistake it doesn't affect anything. That is untrue. If you go to the revised report, which is what I have, many of the A Factors for both controls and for

the various products tested are based upon the data points that are collected, which is basically soil loss, and then Joel creates a regression curve. Now, the regression curves that are used for the controls or the products, they are not all linear. Some are exponential, some are logarithmic, et cetera, which he uses that regression equation that's developed from these regression curves to get total soil loss. Since the area has changed, these data points change, which means the regression curves change, which ultimately will result in a different A Value, and then when you take the ratio of the control and the products tested, will result in different P Values.

Another thing that we've noticed is some of the factors that are chosen there's no reference to how they were calculated, the R Factor being one of them. So in our technical discussion we created a different R Factor, which we use commonly accepted formulas and procedures for calculating this, and Joel probably did the same thing. And we had to kind of re-create what Joel did because it wasn't in the report. We were just using the report. So depending upon what R Factor you

choose, if you go back it will create a different linear regression equation which will ultimately result in a different total amount of soil loss that's computed using that equation. So the R Factor ultimately will affect how various products respond.

The LS Factor is another item of concern. I am not sure what the true dimensions of the test plot are. It's indicated in the report it's 27 feet. I'm assuming that's 27 feet horizontally, which is going to result in a longer gradient length, which will basically change the LS Factor. And there is no questioning on what the LS Factor is. If I calculate it, Britt calculates it, my research group calculates it, or Joel calculates it, it should be exactly the same because it's using a common table as part of the Russell formula and you would just use straight interpolation of the values and we should all arrive at the same value.

One comment that was made earlier today is that during index testing there's lot-to-lot variability in various products that are evaluated, which I don't disagree with. There is probably small variations during the manufacturing process that results in this

lot-to-lot variability. Compost socks, doesn't matter who manufactures them, there is going to be lot-to-lot variability. Granted you can't compare it directly to some of the index testing that you have for silt fence, but you can measure weight, density, circumference, et cetera, to take into account that variability in those particular products. So the one thing that I implore the TAC to think about as a result of lot-to-lot variability and silt fence fabrics or compost filter socks products, the reported P Factor should account for that variability. It should not be one firm number, because it will perform differently depending upon which product is implemented out in the field. So I'm just curious why performance thresholds and product P Factors are presented without some margin of variability as a result of that.

To beat a dead horse, I know we've all talked about Bentonite, so in the WK 11 standard it does say you can use Bentonite to prevent runoff or water from going around the product. Again, this is going to come down to interpretation on whether around is around the sides or underneath the product, but I've done plenty of

large-scale testing, and products undercut. So it gets back to whether we're evaluating the installation or the performance of the product. This is a combination of both, and one thing to remember is that these two elements are intertwined. If the installation doesn't perform correctly and it undercuts, it affects your performance. So by evaluating those installations and truly evaluating them and not altering the installation by the use of Bentonite, whether it was a silt fence product or a compost product, if you introduce Bentonite along the bottom edge, you basically altered the installation, which therefore alters the performance, and that is reflected in the results in the report.

The one thing I want to point out is: You know your high retention envelope that was established? All the products that use Bentonite fell within that high retention envelope, and when the data was removed and those products were no longer there, no products fall in that high retention envelope anymore. And that's based upon the graphs that Joel provided.

And then another comment that Joel made which concerns me as a large-scale tester, he indicated that

Bentonite is a wonderfully erosive-resistant product. So if we're testing erosion and sediment control and now I got a product that resists erosion, why would I introduce it into my test method? Because ultimately it will alter the performance of that installation.

Another thing that we brought up was variability within the test method or the test procedure applied. So the big question that we all have is whether or not this test is truly repeatable. And the analysis that we did where we evaluated rainfall, runoff, and soil loss in the 2-inch, 4-inch, and 6-inch categories, it proved using standard statistical methods that it's not a repeatable test. I know Joel today presented the statistics that were sent to the ASTM lab, and they came back saying yes, your test is repeatable. Well, these statistics, all they are is the upscale soil loss values in tons per acre. It's not even the actual soil loss that came from the plot. It is upscale, which hides things. And all they did, which I'm unsure why you would send it to ASTM for somebody to do this, it's just an average in the standard deviation. That is it. This little R, big R, which is supposed to stand for a

function of repeatability and reproducibility, it's just the standard deviation of these values that are incorrectly calculated. So if you actually were to go back and look at the total soil loss for these different control plots and you looked at it in pounds per area, the average is much different and the standard deviation is in the realm of 22 instead of what Joel reported where it's fairly close. So upscaling values hides the true nature of the data you're collecting, which really hides whether the test is repeatable or not. So the method that is presented as a response is not a robust method. It is not a method that states how repeatable a test is, because it's just averages and standard deviations.

The other thing that I would like to clarify is that the silt fence installation used as a ditch check is in a 2-foot bottom-wide ditch with two-to-one side slopes. If I had to take a guess, because I live in the State of Alabama, I work closely with the Alabama Department of Transportation, this geometry of the ditch itself is atypical in the southeast. So I'm a little uncertain on why we're using an ASTM standard with such

a small ditch and we're applying it in the southeast when we don't even construct ditches in the southeast to that geometry. So I just kind of leave that as a question for the TAC to consider.

And then the diagram that Joel has provided in part of his response, he actually should have extended that wing 25 feet from the midpoint of the channel in order to get that bottom elevation of the wing to be at the exact elevation of the point, and then you would have had to extend it further to get that 6-inch minimum. So I believe that could be another miscalculation.

The other item that I would like to point out, and this has been stated multiple times, is that ASTM does replicate testing, so they usually test in threes. And the reason that you test in threes is so that you can come up with an accurate average of performance for a particular installation. It is not so if one structurally fails or has a blowout, you can just shuck it aside and just use the other two values. In my lab when we do large-scale testing, if we find that a product fails structurally or has a so-called blowout,

we document it and we try to investigate how that blowout occurred so we can improve the installation to improve the integrity of that particular practice or product so when it's employed in the field it's going to perform even better. We don't omit it from the report. One thing that I find concerning is that omissions of data with regards to structural failures in my meager opinion is willfully misleading the readers of the report. So structural failures should be reported and then they should be appropriately retested to see whether or not it happens again.

We've had discussions today about installations and whether products were overinstalled or underinstalled, and if they were per the product manufacturer's guidelines, GDOT guidelines, or Georgia Soil and Water guidelines. Some of the products that I saw, and I won't point things out, but I think they were overinstalled. And if they are overinstalled, it is going to affect your performance of that product under a test method. I am not a contractor. I'm not a manufacturer. I don't install these for a living. But I'll tell you I know this: Contractors are going to do

the bare minimum. They will install it bare minimum because it's going to ultimately affect the bottom line. If they go overinstall and put in more stakes, they're spending more time installing it, which eventually cuts into their profit margins. So I would implore, if testing is done in the future, that it is tested at the minimum standards because that's what you are going to see in the field.

And then I heard something about water quality samples being taken and recorded, but from what I can see in the report, turbidity is not part of the report, it's not part of the discussion, it's not part of any kind of evaluation. And I will end with that. Thank you.

MR. BROWN: I have a question for you. I am a contractor. I work with contractors, and I've worked around contractors for 13 years. No contractor that I've ever inspected or worked with or around does the bare minimum. No contractor that I know has ever gotten a fine, that I've worked with or worked around. So stating that contractors do the bare minimum is a very untrue statement.

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And also, before you stated that you were representing Auburn. Today you said you are representing the scientific community. Which one is it?

MR. ZECH: I am a professor at Auburn University. I'm a researcher. So I'm an academic in nature, I'm a researcher, and I look out for the scientific community. I evaluate journal articles that are being considered for publication in reputable journals. I peer review those. I provide feedback. So it's all of the above, but I am affiliated with the university.

MR. BROWN: Who has funded you to review this process, or who has put you to the attention to review this process?

MR. ZECH: Industry.

MR. BROWN: Is that industry in this room?

MR. ZECH: They could be.

MR. BROWN: Thank you.

REPRESENTATIVE KNIGHT: You make a point, though. You say contractors don't underinstall, that you've never seen it. I would think on the other side of that, if you're saying that every contractor puts out

and overinstalls a product, that, my friend, is equally a lie.

MR. ZECH: I would agree with that too.

MR. HAMIL: You saw Representative Knight's presentation. How much of what he showed or what he reported would have an effect on the results of the test?

MR. ZECH: To me that would be concerning, because you have -- and I understand large-sale testing. Just like Joel indicated, it's not easy, it's not clean, it is messy. But I believe that you can follow a standard test method, whether ASTM is a start, and then you modify and then you implement things during testing, that you can actually control a lot of those variables. From what I saw on that video, which this is the first time I've seen it, I am concerned. And if I had those things going on in my test lab I would definitely correct it. Having water just kind of go underneath a product and then that's all, whether it's being captured or not, it's not accurately recorded. It wasn't properly documented, so it really alters the opinion of whoever is ultimately reviewing the report.

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MR. HAMIL: When something like that happens you should start the test all over again; right?

MR. ZECH: If it was my test lab, I would start it all over. I know there is cost implications associated with that, and I understand why those workers were trying to do what they were trying to do to save that test because they put a tremendous amount of time, effort, sweat into building the test, installing it, and they are trying to save it. And that is admirable, but it also needs to be properly documented to make sure that that particular test is valid.

And another thing I'd like to point out in terms of the repeatability, you also stated that you could have taken those moisture content samples and kind of done a repeatability analysis on that, but you could have also done it with the runoff, the soil loss. So the question of repeatability I still put a big question mark on whether it is actually a repeatable test.

MR. RUZOWICZ: You had talked about variability and where they had set the numbers with plus or minus. Even on whatever the lowest one, let's say it was straw bales, we put a minimum, whatever that

percentage was there would still be a minimum number from that one which somebody would meet; correct?

MR. ZECH: There's multiple ways to look at it, but I'm hard pressed in just arbitrarily selecting a number. And I know it's not an easy job. I've done --

MR. RUZOWICZ: As far as when you're going to look to put other BMPs to set a benchmark standard, which is what this grant was set for, was to look at what we already had and set that benchmark standard. So even when you do put a plus or minus on the variability, there would still be a lowest number which somebody would ultimately have to meet.

MR. ZECH: But at least you're giving variability there, but I'm still concerned in setting the P Factor at .03 or .04 because you're really throwing out some products or practices that are doing a pretty good job capturing soil. And I know I'm not the only one that has made that statement because I've looked through some of the comments, and others have made the same statement. You have high-performing practices as long as the testing has been done correctly in all the products, so to cut it someplace arbitrarily,

I question it.

MR. RUZOWICZ: The only reason I believe that the group did that was because there was already a standard set as far as having a traditional type stake. I don't know that there's any scientific documentation other than flow-through rate as to why something got to be a type C previously. Like you said, it wasn't scientific; it wasn't just the middle of the road. Other than that, it would be up to a design professional to set a minimum number, just talking in general, for them to select which one they want to use along sensitive and nonsensitive waters. But again, we're going back and we're going to look at all this stuff and look at the testing and all this stuff that you have brought up. But even if you do have plus or minus, I still think you'll have a minimum benchmark number which people would know they would need to meet.

MR. ZECH: Eventually, yes.

MR. RUZOWICZ: And then that plus or minus could be taken into account if there was still a thing for sensitive area application, so that if they were within that plus or minus and the group decides to keep

a sensitive area, then they could fall into the sensitive. I think that's more what you're kind of referring to, not necessarily for the bottom.

MR. ZECH: Correct.

MR. DYKES: Thank you, Dr. Zech. Next to speak is Michael Perez.

MR. PEREZ: In the original report there were two P Factors reported. There was a P Factor in the appendix, and then you also noted a P Factor in the summary report, summary table. Those two P Factors are completely different in the way they were calculated and in the numbers they yielded. We pointed this out in our original review, and Mr. Sprague has said the second P Factor, the one included in the appendix, was irrelevant and it shouldn't be used. So my question is what is the difference between those two P Factors and why are you choosing to use one and not the other? Can you answer that?

(Inaudible)

I'll go ahead and answer your question. The reason there's two P Factors calculated is because the one in the summary table is based on actual data that's

collected during testing. The one in the appendix is based on theoretical numbers that come from your K Factor, your LS Factor, your R Factor, and your C and your P. It's from the Russell equation. So when your K Factor changes, when your LS Factor changes, when your R Factor changes like you've stated that they were incorrectly calculated in the original report, that second P Factor that's calculated in your appendix is completely different and you can no longer correlate that second P Factor in your appendix with the P Factors you're reporting in your summary table. If those two were calculated with the same factors, the numbers would correlate very closely. So that was my two cents on the two P factors.

MR. DYKES: Thank you, Mr. Perez. Joel, if you'd like to make any response.

MR. SPRAGUE: I'll just be brief. Our Auburn friends have kind of expressed what was in the reports that you received. I think everybody got the reports from the first one. So I won't belabor it because you got my responses as well, and we started to look at those.

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In a nutshell, the testing we do is standardized testing. The calculations that have been kind of beat up here are -- calculations become the engineering side of this. So this 11340 is derived from 6459 in which for a decade now there's been an accepted process of using that data in calculating the C Factor for 6459. So we have just transported for 11340 the same use of all those values for calculation of the P Factor; whereas, in 6459 you set P equal to one, and 11340 you set C equal to one.

I'm not going to get in a spitting match, especially with the bright field of people from the university. As you noted probably in the notes here, this is something you just vet through the ASTM process. If you can get everybody to buy into your calculation procedure, then that's how the method starts going. So I just encourage them to bring those ideas on calculating different numbers differently. The idea that our numbers are in error is, well, I think that's playing a little loose with things.

I guess all in all we didn't really break any new ground here. I can't express enough we're doing

standard tests. So the whole term "repeatability" is defined by ASTM and how you describe it is defined by ASTM. So variability is something people can do their own way, and I think that's a fairer description of what's being discussed as, if you look at this, that, and the other, you see a great amount of problem with the repeatability. If you gauge it the way ASTM does, the test has a great deal of repeatability. The results, I hate to put words in anybody's mouth, but, Marc, when you saw the results a couple years ago, well, looks like what we see every day. And if we got a little lackadaisical, that's how it all appeared. We're getting results that represent what we're seeing in the real world. I think that's across the board.

So the vagaries of large-sale testing, we've heard and seen more than we ever wanted to today on that, but I think at the end of the day this is just yeoman's work and what the TAC has done, what the Georgia Soil and Water has done here is landmark work, and I don't, using the adage that Marc used, throwing the baby out with the bath water, we need to find some way around doing that. Because it seems to me, and this

is why NTPEP is interested in this, they just want to test. Every state in the country people want new products to be used. "What can I put on my approved product list?" Every DOT is struggling with this same thing, looking for a way to make apples-and-apples comparisons between these things, and you've done it. Is it perfect? Okay, it's not perfect, but it's way better, way better than anything else, anything else in the country, really, and that's what's motivated NTPEP to follow suit. Now, what you do differently here is you take the results and you say, okay, now we have to decide what's approved, what's not approved, what we put on the approved products list. NTPEP doesn't worry about that. They leave that up to the states. They say we just want to produce independent data.

And so in closing, what our goal always has been at TRI is to present you with solid independent data that you can feel comfortable setting whatever thresholds, because that's tough work. That's the politics of it all. I hope that as you consider things here and try to have a little sense of the difficulty -- there's a reason there aren't a lot of people doing

large-scale testing. It's hugely expensive. We had a half a million dollars of our own money locked up in this before we ever -- well, I guess just to give us the qualifications to quote for this work. And we just keep learning every day and being diligent about it. And we have an accreditation in our lab. With all that said, we don't for a minute consider ourselves perfect at this and we hope we haven't come across as glib to that effect, but we certainly are completely convinced that this is really, really good information for you to do your work with. Thank you.

REPRESENTATIVE KNIGHT: Mr. Sprague, I have one question. You said this data is right, reliable. I'll point everybody back to that long slide. This is where I do need an answer. That long slide, remember the corn stalk in there? It was on a 6-inch rain event. If y'all will remember, it probably ran, all that mud, just ran and ran and ran, probably ran best I remember 30 or 45 seconds before anyone even noticed that it was a problem. And then it was a span of about probably seven, eight minutes between fixing it and trying to fix it and it was still running. Remember the comment, "It

plugged it up a little bit"? But this is the point where the data matters.

MR. SPRAGUE: Can I answer that first?

REPRESENTATIVE KNIGHT: Let me finish. Let me finish. Your data, this is the test, your data shows under the runoff in the gallons, the three tests, 151, 147, and 152. And I would dare say that this committee sat here and watched that video and it went on for six or seven minutes, and I'll be happy to hook the machine back up. If you think that correlates to what's on this and what's in this report as far as data is correct, I would love to understand the explanation to know how you know that runoff was at almost -- 151.6 was the first test, Slope 2. I guess the second test, I don't know the dates, but 147.57. And then on the third one 152.01. So if you're measuring the runoff through this thing, how in the world do you account for that huge difference in all of what was lost that we saw in the video.

MR. SPRAGUE: It was fortuitous that you caught it on the video. You heard the technician say mark the gallons when they discovered it. You saw that.

You noted it. That's what they're trained to do when there's an upset. And that wasn't mud coming out. It was red water. So it was an effect that they needed to watch the -- they needed to gauge where the problem started best they could, work on it, and then make the adjustment. Remember, we do commercial testing. We don't do research. So we try and make these test reports as succinct as possible. But I don't deny, you're right, all of that, in a perfect world all of that is documented or written down. So if you don't have confidence in us because of that, I absolutely understand that.

REPRESENTATIVE KNIGHT: I think the issue though is you're saying mark the gallons. It went on for seven minutes and they tried to plug it up and it was still coming out from up under the thing, and I think he said, "Well, that's the best I can do," or "It's okay."

MR. SPRAGUE: Yeah, and since we didn't have the video we can't really tell how they bypassed it or what they did. I just can't answer that. I know they are instructed to try and make the assessment so that

they can back out what happens there.

REPRESENTED KNIGHT: I'll tell you what, guys, if I were that manufacturer and this was my product, how much faith do you think you would have in this test?

MR. SPRAGUE: I know exactly. You'd look at the other two replicates first to just see. In fairness of mind you'd just say okay, two other tests have been run, so it gives me something to compare it to. Right? That's just fair to think about, you know, here's hard working, well meaning, giving their best effort, wanting to do the best for the client --

REPRESENTATIVE KNIGHT: Let me stop you there. I'm a CPA. We are both professionals within our profession. We've got certifications. Most everybody who is on this board or the TAC Committee is the same way. Best efforts don't get it. We are certified for a reason, and that is for the outcome and professional work that we do. No matter our most best intentions in trying to get it right, sir, that falls short.

I'll ask you one more question: How many times did it take you to recalculate the wetted test area? How many times?

TAC Meeting, October 9, 2014

MR. SPRAGUE: Wes, what did you tell them? How many times? Okay. Three or four times. So we got to know what's going together here, don't we?

REPRESENTATIVE KNIGHT: Let me tell you something. I'm an auditor. If you think I'm going to leave this and you think these people (Inaudible), I'm the one that is investigating, sir. This is about the taxpayer dollars. This is about the policy of the State of Georgia.

MR. SPRAGUE: I absolutely understand.

REPRESENTATIVE KNIGHT: You were sent a letter from the director of this agency three weeks before Athens to check every single other calculation in this test. Did you?

MR. SPRAGUE: I went through the calculations and missed another thing when I did it.

REPRESENTATIVE KNIGHT: Sir, I don't doubt you're a good guy, but I'll tell this committee, guys, good efforts don't get it and don't override a professional and accurate output when you're sitting here talking about people's lives, their businesses, and what they've ever done that they've done and put

everything in.

I'll also tell you again, back to a policy decision -- and, sir, I'm sorry. I shouldn't have responded the way I did about the install and overinstall. But y'all got to remember state law -- this group is going to be in trouble. State law says this is the minimum. So when somebody is being called in on a permit and they stand behind that minimum, that's what's going to hold up in court, that's what's going to hold up in the EPD, and that is defensible. So we are not talking about the good intentions of somebody overdoing this or installing a little bit more. We're talking about the bare minimum, and that's where this group has got to go back as to the policy and how this affects the State of Georgia and the taxpayer dollars in the defense legally of this. You have got to get it right. You miss it this much, as well intentioned as you are, it doesn't matter how far you missed it. You missed it and it's going to lead to big, big ramifications for the State of Georgia.

MR. DYKES: That ends our public comment period. The last matter of business for today's

discussion is setting of another meeting date. We can handle that multiple ways. We can try to set a date today, or as we have at the previous meetings, we can do that through an e-mail, poll what days are best. What does the committee prefer?

MR. HAMIL: (Inaudible).

MR. DYKES: Mr. Hamil suggests we send something out via e-mail. Is everybody okay with that? It would be our intention to schedule a meeting sometime in the next three weeks at the best possible day.

On behalf of the commission, I'd like to thank the committee members and advisers for your due diligence today, for your time and commitment. I hope y'all have a safe trip home. We are adjourned.

(Meeting adjourned at 4:30)

C E R T I F I C A T E

G E O R G I A:

FULTON COUNTY:

I hereby certify that the foregoing proceedings were reported, as stated in the caption, and reduced to the written page under my direction; that the foregoing pages 1 through 221 represent a true and correct transcript of the proceedings.

This, the 20th day of October, 2014.

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BARBARA HILGER, RPR

Certified Court Reporter #A-295

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