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**VIRGINIA TOBACCO INDEMNIFICATION
AND COMMUNITY REVITALIZATION COMMISSION**

701 East Franklin Street, Suite 501
Richmond, Virginia 23219

Bio-Energy Oversight Committee Meeting

Wednesday, October 29, 2008
3:00 p.m.

The Institute for Advanced Learning and Research
Danville, Virginia

1 **APPEARANCES:**

2 Mr. Clarence D. Bryant, III, Chairman

3 Mr. Buddy Mayhew, Vice Chairman

4 The Honorable Frank M. Ruff

5 Mr. Jordon M. Jenkins, Jr.

6 Mr. Ralph Byers, Virginia Tech

7 Ms. Martha Walker, Virginia Cooperative Extension

8 Mr. Ken Moss, Windy Acres Nursery

9 Mr. Haymore

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12 COMMISSION STAFF:

13 Mr. Neal Noyes, Executive Director

14 Mr. Ned Stephenson, Deputy Director

15 Mr. Timothy Pfohl, Grants Program Administration Manager

16 Ms. Britt Nelson - Manager of Program Assessments

17 Ms. Sara Williams - Grants Coordinator, Southwest Virginia

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19 OFFICE OF THE ATTORNEY GENERAL:

20 Mr. Francis N. Ferguson, Deputy Attorney General, Counsel to the

21 Commission

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1 MR. BRYANT: I'd like to welcome all members
2 to the Bio-Energy Oversight Committee meeting. I'd like the Staff to alert
3 me at 3:55 p.m., because we need to be out of here by 4:00. Several of us
4 have other meetings to go to at 4:00. I'd like to keep everything on track.

5 At this time I'll ask Neal Noyes to call the roll.

6 MR. NOYES: Mr. Bryant?

7 MR. BRYANT: Here.

8 MR. NOYES: Mr. Byers?

9 MR. BYERS: Here.

10 MR. NOYES: Mr. Haymore?

11 MR. HAYMORE: Here.

12 MR. NOYES: Mr. Jenkins?

13 MR. JENKINS: Here.

14 MR. NOYES: Mr. Mayhew?

15 MR. MAYHEW: Here.

16 MR. NOYES: Mr. Moss?

17 MR. MOSS: Here.

18 MR. NOYES: Senator Ruff?

19 SENATOR RUFF: Here.

20 MR. NOYES: Ms. Walker?

21 MS. WALKER: Here.

22 MR. NOYES: Do we have a representative from
23 Concerned Friends?

24 MR. BRYANT: Do I have a motion to approve
25 the Minutes from the April 28, 2008 meeting?

1 SENATOR RUFF: So moved.

2 MR. BRYANT: It's been moved and seconded, all
3 in favor? (Ayes.) The motion passes.

4 All right. On April 28th we met, and Mr. Robert Wright and
5 Ron Moffitt gave us a presentation, and unless something is new, I won't ask
6 them for that today. Everyone has a summary that's been given out that has
7 both of those projects in it, but as we get toward the end, and if we have
8 more time we'll do it, but at this time I'll ask Mr. Ken Moss from Windy
9 Acres to give us a project report.

10 MR. MOSS: We're virtually on the feedstock side
11 of the project, and we've got the feedstock established in the field growing,
12 Switchgrass, Panic Grass, Hardy Sugar Cane, Hybrid Miscanthus, Northern
13 Pampas Grass and Giant Reed. Feedstock that we can potentially grow.
14 We've done that this year. Then, we'll have some next year and possibly the
15 next. We do have enough material to harvest this fall, and we're going to
16 harvest that in preparation for conversion. That's moving along pretty well.

17 Where we are now as far as technology, we're talking about
18 Renewable Oil. The unit that we had given Renewable Oil deadline as of
19 today, able to get the unit up to contract standards, that has not happened.
20 The major issue was the heat exchanger and reaching the reactor temperature
21 around 1,000 degrees Fahrenheit. It was a basic design flaw. The heat
22 exchangers, that had to be redone, which has been done. So, that's been
23 corrected. It looks like the reactor temperature is correct. However, this has
24 recently happened within the last week, so heretofore we were unable to
25 complete the rest of the analysis process.

1 We moved from the heat exchanger problem to the next phase,
2 and then it showed a, the system is an automatic computer control system,
3 and they're interlocked, and it won't allow the next phase to happen unless
4 you've completed the previous phase. So therefore we run into some
5 computer problems and control problems. It's something we can correct, and
6 Joe Darnell is working with us and going forward. Right now where it
7 stands is that the unit is not completed and there are some issues to be
8 completed. We're confident we can rectify the problems to demonstrate the
9 site as whole and operational. The Hammermill and everything else is
10 operational, we just have this impasse at this point in time with the technical
11 components of the unit itself.

12 Are there any questions on that?

13 MR. BRYANT: Do you have an update?

14 MR. MOSS: I received an update, I received it,
15 and I didn't do it myself, Phil Badger. I got it about 1:00. It basically
16 outlines what I said. With any of these reports, I can give you those. It
17 outlines from one through seven each system. Where he is right now, he has
18 just completed number one. Individually they all operate, but they're in
19 sequence, and they're automatic cycles. We didn't get past number one
20 because of the control problem. It doesn't mean it doesn't operate, but you
21 can go the manual phase and operate the claw hammers and the bio-oil, and
22 all these things operate individually, but until you see the bio-mass, and they
23 interlock one with another. It's dependent on the process before it in order to
24 move forward. Due to number one, the heat carrier, heat transfer, until that's
25 corrected, you can't go any further. So, that just happened this past week.

1 We found we had a problem with the control system, which can be rectified,
2 Joe Darnell is here, and something we can correct. We've got a computer
3 that ties in with the program, and we can analyze all that, which ROI did not
4 have that. We purchased that separately, and it's not part of the system. We
5 purchased that ourselves, but we've got that ability.

6 Joe is here to answer any questions. It is a problem for one
7 certain issue until we get, the furnace works, but we haven't tried it with the
8 syngas, we won't know that, because we haven't done enough with it yet.
9 These are just some of the issues, but we're working on them.

10 MR. BRYANT: What about the licensing
11 agreement?

12 MR. MOSS: I've got it; I've got it right here. The
13 non-exclusive agreement comes with the plant and with a three-year
14 exclusive on the territory of 34 counties representing the Tobacco
15 Commission, and this is what came originally when we signed it in 2007.
16 We've had a lot of communications with ROI related to that because of the
17 amount of expertise and work we put into the plant, and we put in a lot over
18 and above. It's not compensation, not within the contract, not compensated
19 to me or the Tobacco Commission. We put extra time and expertise into it,
20 and with that he had given us consideration, potential consideration for the
21 original territory, which is 34 counties in Virginia for three years, exclusive.
22 At the end of three years we would renegotiate the exclusive part. Non-
23 exclusive is perpetuity and anywhere in the United States or the world, for
24 that matter. We renegotiated with him to give us exclusive in the entire state
25 of Virginia, plus territory down to the line parallel with Raleigh, North

1 Carolina in perpetuity for a cost of \$50,000. He agreed to that, and I've got a
2 document to that effect. We didn't formalize it, because we ran into some
3 problems with the contract. It wasn't formalized, but he agreed to it, and I've
4 got the document for that.

5 I also have the original contract which was originally sent to me
6 back in 2006. This is actually the original contract. That is important,
7 because in here it has contractual standards, product yields and whatnot.
8 This contract is written for two tons per day capacity, as opposed to the
9 potential five tons. More importantly, under the product yield, and you can
10 look at that and it gives you the yield, and I think 50 to 70 percent by weight
11 of the oil, a percentage of bio-mass, and then things on char and syngas. So
12 we'd have to meet those standards, which we couldn't do because it didn't
13 produce oil.

14 In addition to that, it has to, or the oil has to be tested by a lab,
15 and all that is contained in this document here. So I guess the original
16 license, I think this was sent to you for additional consideration, and that
17 encompassed the extended license down in North Carolina, but it gave
18 further consideration and access to the University of Massachusetts for
19 upgrade technology. That technology would give you the right to use it
20 exclusively within our extended territory. It also gave the right to ROI to
21 use it, but that would have to be designated, you're paying for it. I think
22 you're in the driver's seat on that and not ROI. These are things that are in
23 place but haven't been finalized yet. All that's in here, we can talk about it
24 now or later.

25 MR. NOYES: Members of the Oversight

1 Committee are familiar with my letter of August 22nd which made
2 recommendations that we consider whether or not there is a material breach
3 in the original agreement with ROI, indicating that ROI wasn't in compliance
4 with the licensing agreement, and the fine would be \$1,000 being held at
5 Virginia Tech. That hasn't happened, so I need some direction from this
6 Committee in terms of how you wish me to proceed.

7 MR. BRYANT: Would it be appropriate to ask the
8 Committee if they would allow you or myself and Ken, possibly, if we can
9 get a way to proceed?

10 MR. NOYES: If those are the wishes of the
11 Committee, I think that's a good way to proceed from here on.

12 MR. MAYHEW: Mr. Chairman, I move that be
13 adopted.

14 MR. BRYANT: A motion has been made and
15 seconded, all in favor? (Ayes.) Opposed, no? (No response.) The motion
16 is carried.

17 All right. At this time I'll call on Mr. Jerzy Nowak from
18 Virginia Tech.

19 MR. NOWAK: Dr. Foster Agblevor, I talked to
20 him this morning, and he's supposed to be here, and he was going to give an
21 outline which he did some work in September. We're not fully operational,
22 and the preliminary data is being collected, and Foster was going to bring
23 two products which came out of this unit. This encompasses his work on
24 this, collecting data. This has to do with the bio-oil system, and he was
25 going to bring a chart. This information can be used to explain exactly what

1 the results we would expect to be. I believe the Oversight is meeting to see
2 if the unit is operational. The agreement is that we develop, and Foster's
3 group was planning to do the research and would remain doing this for three
4 years. Referring to the part of the discussion we had, but there is a
5 remaining \$51,000 we had allocated to ROI for equipment, but I'd like to
6 make a statement that the reason I bring this request up is that we had like 30
7 days from the time that we got the unit to be fully operational. Since the
8 grant expired the end of December, I would ask the Committee for a fair
9 amount of time, and because of the complexity of this situation I feel that the
10 project, or that we return this money to the Tobacco Commission. It would
11 be much more convenient for me as project manager to do it.

12 MR. NOYES: Do you need time to, we need some
13 language here to do that, have those funds provided to Concerned Friends so
14 that they can be used.

15 MR. STEPHENSON: What I'm hearing is that
16 Virginia Tech wants to relinquish the funds back to the Commission, is that
17 correct? The motion earlier was for the Director and the Chairman with the
18 advice of counsel as to this position of the \$51,000 that we heard about
19 earlier. If Virginia Tech relinquishes the grant and control of that money is
20 back in the hands of the Commission and the two of you gentleman upon
21 advice of counsel can act.

22 MR. MAYHEW: Are you returning the funds in
23 the amount of 10 or 11 thousand that was to be used for travel, is that still in
24 Virginia Tech's control or not?

25 MR. NOWAK: Because, or according to the

1 original contract that was allocated for closing installments and payments,
2 they'd be returned to the Commission.

3 MR. NOYES: When you complete this project the
4 remainder will be returned to the Tobacco Commission?

5 MR. NOWAK: The deadline for the completion is
6 December 31, and that was extended because I think all the other projects
7 are in line. Are there any comments on your part? You had a large amount
8 to spend. The balance here is without claim.

9 MR. MOFFITT: We have completed originally
10 from the outset of the project we had to deliver basically the project, we've
11 actually done more than that. We started something where we were trying to
12 make pellets, and when you go to a higher concentration the polymer into
13 the wood is that if you make this on a pellet mill so much polymer, it's best if
14 it's granulated if we can't go back to, you might have to break it up. We've
15 also got a project where you utilize specific polymer because of its melting
16 characteristics. It melts in the pellet mill as we make them. What this has
17 allowed us to do is make wood pellets basically and using wet wood. We
18 can also make pellets using completely dry wood, so this polymer additive
19 allows us to make wood pellets over a broad range of moisture content,
20 which heretofore was impossible to do. As far as development coming out
21 of this project, that by far is the largest and most important one. We've got
22 some compositions work that we've been doing to at least validate the
23 concept. We hope to complete that before December. We're gearing up to
24 allow the twin screw extruder. There has been other equipment purchased
25 that we granulated to size.

1 MR. MAYHEW: Have you looked at the
2 economic aspect of where this is leading? A new type of wood pellet that
3 contains an additive. Have you looked at the cost of doing it compared to
4 what its value would be and whether this could be possibly used in a new
5 industry? What are the economics you're looking at?

6 MR. MOFFITT: Yes, we've looked at that, and
7 what we've found is that the offset in costs would be one factor. As far as
8 commercialization, there are a number of avenues this could take. One, at
9 least in my review of the patents literature, there are no products based upon
10 using a single sized catalyzed polymer material to make wood pellets. The
11 reason for that, most of the patents on wood pellets or wood polymers were
12 developed in the late '70s or early '80s, and some of these procedures weren't
13 developed until the early '90s. No one has experienced problems, no one
14 thought when they were looking at this material as additives. What it does is
15 create a market for the material itself. The pellet comes out of the
16 polyethylene gases, and that's extruded down, and there's a market for that
17 with the associated technology. There is also the ability to take the
18 technology to make pellets out of wet sawdust, complete the drying
19 operation after the pellet is made. Now the wood pellet. The moisture
20 content requires you to maintain around 10 percent plus or minus a percent;
21 with this invention we can run bone-dry for 30 percent.

22 MR. MAYHEW: Can you make money off of it?

23 MR. MOFFITT: Yes. To give you an idea of the
24 margin, we figured somewhere around 90 percent because the cost of wood
25 pellets, and to make a wood pellet, the cost to manufacture the wood pellet

1 hasn't changed, the fuel, the BTUs, that price has been escalating, but the
2 cost of the wood pellet has not escalated. I think there's a lot of money to be
3 made.

4 MR. NOWAK: You don't see any problem by the
5 end of December?

6 MR. MOFFITT: No.

7 MR. NOYES: Members of the Committee, I don't
8 recall right now if you got a copy of this, but there's an addendum to this
9 agreement, Partners at Virginia Tech. I don't have it in front of me, but
10 there's a component plan to that, or an addendum. They were questioned at
11 each stage of this process with the Chairman, as well as Mr. Moss, and I
12 think that confirmed the ultimate Commission ownership of the Hazen unit
13 to remain in Blacksburg until called for at any point after 12-31-08. Called
14 for by the Commission, at which point we would be responsible for
15 transporting it to a location that we determined, non-exclusive access
16 intellectual property from Hazen without some exclusive right through 12-
17 31-08. The final piece which Virginia Tech is willing to offer IP
18 consideration non-exclusive basis within the Tobacco Commission footprint
19 and even beyond sometime out in the future, which is most appreciated. I
20 think those were the essential four points. I think the document, as I recall it,
21 has a not-to-exceed-five-year term in Blacksburg, but the important thing is
22 that should the Commission request the unit after 12-31-08, then we would
23 be able to do that. I think that's correct on that.

24 The other thing is that the Oversight Committee would be
25 invited to see the demonstration and the investigative process made. We

1 have a meeting scheduled in Blacksburg for Agribusiness Committee and the
2 Technology Committee on December 11th. If you put that on your
3 calendars, we'll make arrangements to do that at that time, and other
4 members of the Commission can also attend.

5 MR. BRYANT: Anything else by way of
6 summary? Mr. Wright, anything you want to say?

7 MR. WRIGHT: We feel like we're right on track
8 conducting new and independent experimentation. If Ken wishes, he can
9 come down and utilize the grinder. We started working on the chips that
10 have been grown. This is a continuing operation. The Woodgro product is
11 to develop a novel wood-based plant growing substrate and to develop high
12 tech plant growing media from wood chips. Most of these are already sold.
13 We have a substrate which we can utilize. These can be utilized essentially
14 in a number of commercial operations. Work continues to determine the
15 most efficient way to manufacture the Woodgro for commercialization, as
16 well as testing material in commercial nurseries. We're working in Gretna,
17 and we're hoping to generate revenues to the area from Woodgro sales, and
18 the sales of timber and commercialization of Woodgro is under the direction
19 of Virginia Tech Intellectual Properties. Woodgro is a viable plant growing
20 substrate for container production of a wide range of greenhouse and nursery
21 crops.

22 There's an article in the *American Nursery* magazine, but since
23 then we have had calls and e-mails from all over the country, and the
24 question is when can we get this material, from Ohio and Oregon. Our
25 position now is we're not there yet because we're still demonstrating this

1 material, but we like what we hear and see. We're hoping that in the next
2 year or so we can work with Ken and the Tobacco Commission in setting up
3 a sizable grinder and create the commercialization and how best to produce
4 it on a continuing basis. It's a question of how fast it can go through the
5 grinder. Also, we want to learn how to combine it with other products to
6 make it commercially available.

7 MR. MAYHEW: What's the cost of the grinder?

8 MR. WRIGHT: I think you can get about a
9 hundred dollars per sack, but you have to remember there are by-products
10 from this, too. The operation in Richmond, after grinding the sizes
11 producing 500 yards a day of this material, 70 percent wood and 30 percent
12 bark, and that's going off somewhere as fuel, you make about \$100 for a
13 tractor-trailer load of materials. You can put it in Woodgro, and you can
14 increase your profit. The material is out there. There's a lot of opportunity
15 to make money, I think, and increase the proficiency of the forest, at the
16 same type provide the substrate to the horticulture and save money. I
17 appreciate the Tobacco Commission helping to fund this, and I think it will
18 be very beneficial long-term.

19 MR. BRYANT: Next on the Agenda is Concerned
20 Friends for Tobacco, Grant #1669. This grant was approved by the full
21 Commission on 7-30-08. The grant is for the Concerned Friends from the
22 Tobacco Commission, project manager, Ken Moss. The grant was to
23 support and produce and convert feedstock value-added products. The
24 vendors were named in the grant, which ties the hands of the project. This
25 project needs some flexibility to seek the best technology and to give this

1 project a degree of success. We're asking to take the names of the vendors
2 out of this grant and leave it open so that there is flexibility to go to the
3 project. It doesn't mean you might not use some of the ones that are named,
4 but I think it's unfair to these vendors to tie their hands and also take away
5 the competitive edge that you need. So I'm asking the Committee if they
6 would approve taking that part out. We'll have to go the full Commission
7 also and have a vote to approve it, but I need that recommendation.

8 MR. MAYHEW: Mr. Chairman, I move this
9 change be approved by the Committee.

10 MR. BYERS: Second.

11 MR. NOYES: I'll just remind the Committee that
12 because the award was from the Special Projects Committee, which meets
13 tomorrow morning, and the Chairman will be reporting on your
14 recommendation. It will be Special Projects that then takes the
15 recommendation to the full Commission and authorizes the change in
16 language, the language within the agreement.

17 MR. BRYANT: Any discussion? All in favor?
18 (Ayes.) Opposed? (No response.) The motion carries.

19 MR. JENKINS: Mr. Chairman, looking at 1669
20 proposal and putting in this for tomorrow's consideration as written here in
21 the top, it gives a figure approved, but the figure within the proposal still is
22 up to 1.1 million. The decision has been made to change that, or what does
23 that reflect? What action is taken?

24 MR. NOYES: The award as it was decided by the
25 Commission was for a lesser amount. What you see in the application is the

1 requested amount.

2 MR. JENKINS: Is it left up to the project leader to
3 decide, then, what portion of the original will not be funded? The request
4 was 1.1 million, and it was approved for seven.

5 MR. PFOHL: There was a budget element in that
6 request in the larger amount that was requested to fund \$138,125, a research
7 assistant for Virginia Tech. By mutual consent that amount was removed.
8 That specific dollar amount was taken out of the requested amount.

9 MR. NOYES: It's not discretionary, these
10 expenditures would have to follow the remaining budgeted line items as
11 were approved.

12 MR. BRYANT: Any other issues that we need to
13 discuss?

14 MR. MOSS: Mr. Jenkins, there is a budget to the
15 effect, a line item budget to affect that, so it's not non-discretionary.

16 MR. JENKINS: That's why I was confused. I
17 thought at the Special Projects Committee meeting that I saw a budget, and
18 now when you get ready to make final approval I hear they got it, and that's
19 why I was confused.

20 MR. MOSS: The budget you saw is the same one,
21 \$138,000.

22 MR. BRYANT: Is there any further discussion?
23 Any public comment? All right, we have another meeting to go to.

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25 PROCEEDINGS CONCLUDED.

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CERTIFICATE OF THE COURT REPORTER

I, Medford W. Howard, Registered Professional Reporter and Notary Public for the State of Virginia at large, do hereby certify that I was the court reporter who took down and transcribed the proceedings of the **Virginia Tobacco Indemnification and Community Revitalization Commission Bio-Energy Oversight Committee Meeting when held on Wednesday, October 29, 2008 at 3:00 p.m. at The Institute for Advanced Learning and Research, Danville, Virginia.**

I further certify this is a true and accurate transcript, to the best of my ability to hear and understand the proceedings.

Given under my hand this 20th day of November, 2008.

Medford W. Howard
Registered Professional Reporter
Notary Public for the State of Virginia at Large

My Commission Expires: October 31, 2010.
Notary Registration Number: 224566