

Minutes – Regular Meeting
Solid Waste Advisory Board
October 2, 2008
Approved January 15, 2009

Attendance: Jan Sassaman, Al Vickers, Remus Smith, and Michelle Grunwald

Staff: Blair Pollock, Paul Spire, and Wanda McCain

Guest: Phil Barner, Ray DuBose, and John Mason

1. **Adoption of Minutes from September 4 SWAB meeting** Smith moves to accept. Vickers 2nd. Passes unanimously
2. **Board Member Comments** None
3. **Landfill Gas Recovery Project – UNC/Olver Inc. Presentation** by John Masson, UNC Facilities Dept. with Question and Answer session following a version of the Power Point slide show given to the public after the SWAB presentation is available at the County's web site: www.co.orange.nc.us and click on "What's new" and then "Landfill Gas Public Information Meeting"

Questions and Comments During the Presentation

Sassaman asks what is the pressure.

Mason replies it's relatively low pressure.

Pollock asks if the gas cleaning will be done at the landfill site.

Mason replies yes.

Vickers asks what air emissions are expected at the cleaning operation.

Masson replies none are expected but there might be some condensate from cleaning up the gas.

Dubose adds that it would be condensate similar to the leachate [from the landfill] that is currently dealt with [by putting it in the OWASA Sanitary sewer] and it will be a very small quantity.

Sassaman asks what is the BTU value of that gas, about 500?

Barner replies typically yes.

Use of methane gas has been discussed for a long time and we believe the gas will reach peak capacity soon after. That part of Chapel Hill is growing and the gas will be used to provide electricity at the Giles Horney building where UNC's facilities

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services are located. There is a peak capacity of one megawatt. We will also build a duct bank of electric lines to serve the Giles Horney complex.

Pollock states that there are three things that may be useful – I'm not sure the number for the landfill closure has been revised to 2012. We were targeting 2011 for capacity and closure.

Spire states that that landfill closure will happen in 2012 but it will reach capacity in 2011.

Pollock states that when you talk about gas reaching peak capacity, because we have the two components, the 1995 unlined closed landfill that has passive venting now and the new piece that is going to reach capacity that is lined, [there is] the collective peak between the two because obviously the south side will not peak for another ten to fifteen years. The third thing is, was there some reason to go the extra expense of doing a direct wire as opposed to buying and selling to Duke Power through the sub station? That seems expensive to run a mile down Estes with wire. Is there an advantage to doing that?

DuBose states that it is more valuable to offset electricity that we are already purchasing with an alternative source than to sell directly to Duke. Duke has a fixed rate to buy that and we pay more for electricity than I can sell it for. Putting electricity on Carolina North property gives us the carbon offsets directly for that campus. That is our goal for the campus.

Pollock states that with all the nuances of buy/sell and how carbon offsets will be portrayed or used, it is worth running a one megawatt line down there. It bothers me to spend so much [tax money] constructing that line instead of being able to sell to the grid.

Vickers asks if essentially you will transport the gas to Homestead area from the landfill and generate power there, and then use the wire from there down, why have a pipe to begin with? Why not generate the power from the landfill?

DuBose states that the wire will be there anyway from Homestead into Carolina North campus and it is cheaper to run the pipeline. Plus it's cheaper to use the electricity we make than it is to buy and sell it.

Sassaman asks is there a reason to put the generator on Carolina North property. Are you getting certain benefits – carbon offsets or other economic benefits -- by making that a part of your package?

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Spire states that the commercial terms of the contract haven't been completely ironed out. The University will receive all the carbon credits from this project. And that's the major good they're getting from this project. To maximize that, they want to have that where they can also get those and utilize the electricity within their own facility. Getting to the Homestead facility that they currently own would be easier than going through the Town of Chapel Hill to do what they are wanting to do to get a facility built and run their own duct bank to their facility.

Masson states that UNC wants its own [generator] for methane destruction and power purchase offsets. The gas is no longer vented and it helps meet the UNC goal of sustainable leadership. The former Chancellor made the commitment to make Carolina North a model of sustainability. It is a green project and this helps with carbon neutrality. We're in the final stages of the contract with Orange County and considering the various pipe routing alternatives. We have some issues to work out on crossing County owned land, Town of Chapel Hill and NCDOT. There are also a number of permits that have to be obtained - air permits, landfill permits. Then it has to be designed and we are not pressing forward with design until then. The tentative date for Board approval is in November - we can begin flaring in late 2010 and begin power generation in early 2011.

Sassaman states that there has been at least one concern about the pipeline and the pipeline routing. People in the neighborhood were concerned that a pipeline would be going through the neighborhood without thinking there are gas pipelines now going through the neighborhood. You might want to be prepared for that at the public hearing. The question that I have is, "Is there any State or Federal regulatory authority over gas transmission?"

Vickers points out that if you sell the gas to someone you're a regulated utility, but if you use it yourself, you're not.

Pollock states that regarding the carbon benefits there are some new discussions going on about the immediacy of the methane because the problem is occurring now. Because if you look at the stream of methane over a 100 year period you are talking about 20 times carbon dioxide equivalent. But in the 20 year time frame some people are now talking about 72 times as much [greenhouse gas trapping effect] which fundamentally changes the economics of carbon offset. I don't know if that has entered into the discussion.

Barner states that the contract is still in negotiations. There are discussions going on about that. It may change down the road.

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Pollock states that that is huge. There is one guy in Wisconsin, Peter Anderson, he postulates the value at 100 X. The other thing I was curious about, was the flaring going to take place at the landfill site?

Barner replies yes it is.

Pollock notes that may be clarified during the public meeting.

Masson shows the location of the pump and condensate line on the landfill, then routing and how the gas line goes across tracks, then the Green tract, on to Weaver Dairy Road Extension, across a little panhandle of Carolina North that come out to Homestead Road, then goes on the South side of the road with the gas line and the duct bank to the where the Duke Power service center used to be. The University owns that now and we would propose to build a substation there behind that building where we would also locate the generator. The Homeless Shelter will also go there. This is about two miles of gas pipeline.

Vickers notes you should define megawatt, how many houses will it power?

Spire states that some things that may come up are: “Is the gas explosive? What happens if the pipeline catches on fire? Will it blow up? What protections are built into the system?”

Pollock states that if you demystify what methane is it would help. I agree with Paul that people in proximity to the landfill are concerned about every aspect of the project. I don't know if the United Church will be represented as they're proximate to the site and the pastor is on the Orange County Organizing Committee. Can you consider using the waste heat for district heating, how far can you push the hot water?

Smith asks how long will the gas be available?

Barner replies from an economic value about twenty years - it could last a little longer.

Smith asks how many houses will a mega watt of electricity serve?

DuBose states that there are about ten kilowatts per house. We will have to ask Jeff for an exact number.

Smith states that if it is only 100 houses you are wasting my money.

DuBose states that the real value of the project is the environmental values. The construction of the methane and the carbon offsets we are getting.

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Smith asks if that 's much more than simply burning or flaring it.

DuBose states that flaring destructs it and you get the credits. Generating power or using it for converting the gas into some form of energy whether it is heat or power you get that benefit as well. The University needs the carbon offsets. Our carbon foot print is huge. The energy value of the gas is not enough. The real value is in the environmental benefits.

Smith asks if there is a cheaper way of doing the environmental value than millions of dollars. Is there no other way of getting rid of it.

Spire states that there are no requirements to do anything with it now. It could be collected in a stack, where no one could see it, that destroys the methane, but it's also wasting a huge resource of energy that could be converted to do something else. That is what the University wants to do. However miniscule it is in the scheme of the University of NC, anything they can do to off set that is a plus for the County to go into conjunction with the University. There is no cost to the County. The County will benefit monetarily when the contract is done.

Vickers states that it may be the University's money but it will be paid by the tax payer and that may become a question of if this is worth doing.

Pollock states that if everything was about the bottom dollar one could stop there and say "Destroy the methane. And collect the carbon credit for driving it down to 21x less greenhouse gas", some economists might say "You're right".

Smith says, let's get rid of the gas environmentally soundly. If it were to run more than 100 houses, like 2000 or 3000 houses, it might make sense.

Sassaman asks, "What are your thoughts about combusting refuse derived fuel in the University system?"

DuBose states that there is a quite a portfolio of ideas and that is one on the list to discuss further.

Sassaman asks how much would be needed.

DuBose states that the plasma technology is being used in Europe and Japan but not in this country yet.

Barner asks are you talking about putting it in the existing boiler? RDF or direct burn. You could process it and make a briquette or a pellet.

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DuBose states that they are not looking for direct burn. Gasification is the technology that might work here in Orange County.

Sassaman clarifies that is MSW.

DuBose says if we have a pipeline then that is that much more gas that could be generated.

Tipton states that the Commissioners asked the SWAB to look at alternatives to landfilling or dealing with municipal solid waste. The County hired GBB [Gershman, Brickner and Bratton] to do a study.

Sassaman states that that is what triggered the question.

Pollock states to summarize the report, GBB states that like twenty years ago direct fire mass burn or RDF are still the most promising near term fulfilled technologies. They are partial to looking at gasification like a biodigester type. Then further down the list was pyrolysis and plasma technologies for a combination of economic and technical reasons they were more skeptical of those.

DuBose asks if there were permitting issues for direct fire or RDF.

Pollock states that they did not go into that. The game stopped at \$100/ton to capitalize and operate our own [waste combustion] plant versus \$50/ton to bury it. They did not talk about a hybrid where the local government capitalized the RDF plant and a power company capitalized the combustion unit. There was not a step where they combined those steps.

DuBose states they are looking at gasification only, not direct fire. It doesn't seem attractive to us.

Pollock states that he will get them a copy of the report.

Sassaman summarizes the GBB report -- two plants of less than 200 tpd plasma arc plants are operating in Japan. There is one anaerobic digester operating in Israel for two years. Gasification – there are two facilities in Japan for the past ten years. Small units in Europe. Pyrolysis, pilot plant at 50 tpd in California for the past two years. They concluded these emerging technologies are still emerging, none has emerged.

Pollock clarifies that there is a carbon trading system but no legal framework as in Europe to require it.

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Sassaman says we are talking of an RDF type facility. Is that something the University would be interested in?

Tipton adds Can you at least keep this issue in mind as you do future planning. Any future thinking we can do in conjunction with others would be useful. This may not be the solution but it should be on the table or being thought about.

DuBose states that from an energy perspective what we can offset from coal or Duke Power we're interested. Whether it's RDF we can just push that aside. Gasification would probably be better for the County. Then there has to be a processing facility associated with it [to make the gas].

Spire points out the landfill will be full in 2011 and there will be a transfer station.

End of Presentation

Vickers states that their presumption is that the public has more knowledge and familiarity with the issues. They need to talk in pragmatic terms.

Spire states that the other guys that will be there, the person from Affiliated and Matt the designer and potential operator of the system will have a better presentation as far as how it works.

Sassaman states that they need to put it in terms of the average person - what it means and the cost-benefits and trade offs. It didn't come across clear that they were getting the environmental benefits of doing something useful with the gas but they are getting environmental benefits for burning less fossil fuel to generate electricity and that has to be factored into the cost. If the pipeline is 10 psig there is basically no pressure in there. If it ruptures there's not going to be much of a fire danger because it's not much volume in there when there is a low pressure. There are probably gas lines in the neighborhood which may be [higher than this].

Vickers states that they could use a better map showing where the pipelines will be. "Is it near my house?" will be the issue.

Spire states that these comments will be given to them at tomorrows meeting.

- 4. Discussion of County SWAB Representative Vacancy** Sassaman states that in speaking with Barry Jacobs regarding the attendance and representation on the SWAB, there is one member who has yet to attend a meeting. He has asked, for health reasons, to be taken off the board. Barry has asked that I raise this with you all for discussion. There are five people that have applied to serve on this board for the Orange County slot.

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Jeremy Brownard – Chapel Hill resident, may not be a high priority to represent the County, a relative recent resident, doesn't appear to have a detailed knowledge of Orange County.

Doug Guild – Orange County resident, his application dates back to 2004, his current interest needs to be verified if we are interested in him.

Shirley Lally – Chapel Hill resident, has a lot of relevant experience in a lot of solid waste and planning issues. She might be a good candidate for Chapel Hill.

Andrew Ribner – appears to be Orange County in the County Planning zone, he does not have much background relevance in the SWAB's interest.

Brian Rosa – Hillsborough resident, extensive experience in composting and organics diversion.

How would you all like to proceed on this?

Smith states that he could not give any of them a recommendation because he doesn't know them. He would hope that some landowner in northern Orange County would get it.

Grunwald states that when applying for the position it was difficult to find [the application] on the website. There was an advertisement for an opening in the paper. Then I called the BOCC and I tried to find it. So there may be people out there who are interested we're not getting.

Sassaman states that all that can be done by us is to make a recommendation to the Commissioners. Then it's up to them to make an appointment. Right now Bonnie is the only representative for the County. Al and Linda represent Carrboro, I represent Chapel Hill and you two (Remus and Michelle) represent Hillsborough.

Tipton states I feel that people in the unincorporated part of the County are underrepresented. I would feel good about someone outside of the municipality service zones at the same time some of them have a good credentials.

Grunwald states that experience with municipal waste is important, but experience with the region and representing the views is more important.

Sassaman asks to clarify where Doug Guild lives.

Pollock clarifies that he is in the unincorporated area.

Sassaman points out that Guild applied in 2001 and updated his application in 2004. He owns an environmental consulting firm.

Sassaman asks is it worth having staff talk to any of the applicants to see what their interests are and making a recommendation to the Commissioners. He suggests Doug Guilds because he is a long time resident and has the qualifications and discloses that he is a friend.

Tipton asks if he is the only applicant that does not live within the municipality.

Sassaman states that Ribner also lives in the Orange County planning jurisdiction, but he has no experience.

Grunwald suggests Brian Rosa, although he is in Hillsborough town limits.

Pollock notes that he is the head of organics management for the State. He is knowledgeable and has experience. Maybe there is a tradeoff for living in town.

Tipton notes that Lally also has experience.

Sassaman asks if there are any objections to ask staff to speak with Doug Guild to see if he is still interested.

Pollock asks if there is a backup plan in case he is not.

Vickers suggests Brian Rosa.

Sassaman states that the other option is BJ [Tipton].

Grunwald asks BJ if she wants to apply.

Tipton replies that she doesn't mind doing it if it is OK with the SWAB.

Sassaman asks how do you feel about it Blair?

Pollock states that in the interest of full disclosure Doug and I have known each other for a long time. Likewise BJ would be a fine addition to the board with the respect that she is a rural resident and understands the issues.

5. Programs/Services Updates

Solid Waste Operations Center Spire states that it is moving right along. Still shooting for a mid-November move in date. The parking lot curb and gutter has been poured.

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The siding is going on the exterior of the building. The storefront [style] windows are going in between the buildings. Sheetrock, electrical, etc is all taking shape.

Transfer Station Siting Process Spire states that it will be going back to the Commissioners on October 21st. After that time there will be four sites remaining when the community specific criteria are applied. The Commissioners asked to see all ten sites as they rank now and all ten sites after the community specific criteria have been applied to compare the numbers [rankings] side by side. The very last community-specific criterion is cost. How it will play out I don't know.

Landfill Leachate Line Spire states that construction starts tomorrow morning. They are starting from the backwards point moving toward the landfill. The Animal Shelter water and sewer line blasting are starting tomorrow.

Solid Waste Plan Work Group Process Pollock states that the next meeting will potentially be October 29, 30 or 31. Barry Jacobs was asked first and his preference is not Friday or Thursday evening. Two items on the agenda are to bring enough information to finalize your recommendation on the solid waste convenience centers. Pay As You Throw, Alternative Financing dovetailed with the franchise issue. The other thing is the commercial programs that will be boiled down to a series of options. Because that has not been discussed in six months it will mostly be an update of what the surveys found and the cost of commercial recycling systems. So we're boiling that down to a series of options. That way you will be prepared for the November meeting, you will have a run up to that with this briefing piece on commercial recycling.

The last two substantive pieces [after that] are the financing package, an umbrella including how the financing of the transfer station, landfill closure, types of 3-R Fees, how this should all fit together. The piece after that is what is the implementation schedule and you'll see that in March then it goes to the public in April, Commissioners in May and by June there is a 61% plan goal.

Other None

6. Other Business None

Smith moves to adjourn. Grundwald 2nd.

Adjourn: 8:55 pm

Next meeting November 6, 2008

Southern Human Services Center, Chapel Hill