



Slate of Oregon  
Department of  
Environmental  
Quality

## DEQ Public Hearing: Columbia Biogas

November 18, 2010  
Metro Council Chambers  
600 NE Martin Luther King, Jr. Blvd  
Portland, Oregon

### Oral Comments

### Transcript

(Note: text in [square brackets] represents words that were inaudible or unclear.)

**Scott Manzano** - Today is November twenty--November the 18th, 2010. My name is Scott Manzano. I'm the presiding officer for this hearing, taking public comment on Oregon DEQ's proposed air quality and solid waste permits for the Columbia Biogas facility to be located in Portland, Oregon. First person to comment is Erwin Bergman, followed by Stan Jones. Please go ahead.

**Erwin Bergman** - My name is Erwin Bergman, 5330 Northeast Holman. I am a member of the Cully Association of Neighbors. And my comments really address addressing DEQ. Now I have lived in the Cully neighborhood about a quarter of a mile from the old Riedel plant, and I have been -- I was exposed to a terrible smell from the plant. It was not just a bad smell, odor, but it was unbearable. It was unbearable, and -- in addition to the noise from the plant. So I am a burned person, and I want to be sure that this does not happen again. I have been involved in dealing with Biogas folks. I feel that they've been quite forthcoming in indicating what they plan to do, and so I feel reasonably comfortable. However, I would like to have some insurance, and so I'm really asking DEQ, considering the folks that were burned severely in our neighborhood from Riedel, that it seems to me that the inspection period, to be sure that the start up is okay and nothing happens, is better than once every six months, and once every year. So I think that should be more often, because a lot of things can happen within just months, or days, instead of waiting a whole six months or year to check on things.

The second thing is, what happens if you have problems? Now, Biogas and Cully has been working on a good neighbor agreement. Now you realize a good neighbor agreement does not have any legal standing. So if something happens, and the response of -- from the company is insufficient, tardy, what do we do, and what we expect that the DEQ will come to our rescue soon, because when Riedel was operating, and it was up to Metro, and I believe DEQ, we had to fight for about six months, I believe, before we finally could survive and breathe clean air. And that length of time is unacceptable, so I would like to see DEQ to be very responsive when things arise. I don't think they will, but they may, so I would feel much better if they promise to stay on top of it. Thank you very much.

**SM** - Thank you for your comment. Stan Jones.

**Stan Jones** - Thank you. My name's Stan Jones. I'm the aviation environmental compliance manager for the Port of Portland. One of the hats I wear is the port-wide waste minimization manager, and so I'm involved quite a bit with the Port's food waste program, and food waste collection effort. And I wanted

to say that the Port has been a leader in the community with food waste collection. We had a food waste collection at the airport, approximately two years before the Metro program became effective. And we're up to about 250 to 300 tons a year right now, plus that much again in what we support with our partners and businesses near the airport. I'd like to come out in support of this facility, because right now all our food waste is being hauled up to Cedar Grove. The Port doesn't feel that that's sustainable to haul all that weight in, and I don't think that was ever the intention of the city of Portland or Metro's is to have a facility that far away.

And another reason why it's really exciting to the Port is because just the proximity to the airport. So for collecting all this food waste at the airport -- and I fully intend to at least double that amount of food waste over the next few years -- having a facility to take that to for processing within a mile of the airport is huge. If you just look at the carbon footprint from what it takes to haul that right now to the transfer station, then up to Cedar Grove composting. Also, I think it's very exciting that the type of products that this process are producing -- so we have composting facilities that produce compost and soil amendment, and I think this facility, with its proposed production of a liquid fertilizer and a soil amendment is a real positive thing. And if we can just figure out a way to harness the heat and the clean water that's coming [downriver?], I think they've got a real good thing going. Thank you.

**SM** - Okay, the next two commenters, Brian.... Brian, I can't read this last name. Brian Lightcap, West Multnomah Soil and Water? That's right? And Bruce Walker. Brian, did I get your name right there? Lightcap?

**Brian Lightcap**- Yes.

**SM** - Brian, you're up first. Why don't you tell us who you are, and...

**Brian Lightcap** - Okay. My name is Brian Lightcap. I'm director and chairman of the West Multnomah Soil and Water Conservation district. I very much appreciate the entrepreneurial effort that it takes to do something like this. I and the district have a long history of being focused on landfill issues, waste recycling, and water quality. I served on the Metro task force for locating regional landfills, served as a technical coordinator for the West Hills and Island neighborhoods committee on their struggle to fight Wildwood Landfill. And I also got some state support on the issues with the Oregon Association of Conservation Districts. I still remain very active with this -- it's called OACD-- and remain on the convention planning committee for the next year's convention in Sun River. This doesn't seem relevant, but it will be. The 2009 convention was essentially focused on sustainably produced green industry, where we learned about campus expansion biogas projects at UC-Davis. And so your publicly elected directors are very supportive of biogas energy potential to supplement base power loads, and I appreciate this public disclosure, regarding this kind of a project here in Portland area. The Sun River 2010 conference, Gail Achterman was selected to continue the conversation with conservation districts all around the state -- there's 46 -- and she noted the future is shifting from a hydrocarbon to a carbohydrate energy base. Our district manager, Dick Springer, and my six other board members, have bit the hook on biogas energy, after the 2009 convention, and we have employed, as some of you might know, Alex Schay, Carbon Solutions Northwest, a talented individual in the area of biogas technology and connection. So he's helped us quite a bit in this. But we feel a biogas producing enterprise should

apply for DEQ air and water quality permits, particularly because, in addition to the bottom line, air and water quality matter. It may be the only opportunity for a wider discussion of public interest. We embrace the concept of eco-districts as a means to address food wastestream monopolies, and avoid cherry-picking. I don't know if DEQ is going to be addressing this, or just technical matters, but it's kind of an important thing. And I think, with that, I've said quite a bit right there. We are actively involved in a dialogue. We are working -- we have -- we are working with Portland Development Commission, project on the -- Burnside project as well, so we kind of know what we're saying when we talk about eco-districts. And we have all the questions. What about collateral -- there's collateral matters of public interest. Who will buy this energy baseload? BPA? PUD? Pacific Power? PGE? Eugene Water and Electric? What's a fair price? RSWC may want to encourage a conversation on which of this potential buyers would do the most for fish and wildlife recovery programs. Which of these enterprises has a policy in place to promote carbon-friendly energy and habitat programs? I will note that BPA, Rosie Mazaika, was one of the principal speakers at our 2010 convention.

Another way to get some attention is to propose a, excuse me, but a therm tax, where the funds are used for wildlife habitat recovery programs, which is the BPA program. So I think that more -- I'll just give this to you. I won't state it, but these are my comments on this. I'll leave with you the importance of eco-districts.

**SM** - Thanks, Brian. I appreciate that. Bruce. Bruce Walker.

**Bruce Walker** - I've got some written comments as well. I'm Bruce Walker. I'm the solid waste and recycling program manager for the City of Portland. I work for the Bureau of Planning and Sustainability. The City of Portland Bureau of Planning and Sustainability supports the construction and operation of the anaerobic digestion facility proposed by Columbia Biogas. The city views the expansion of food waste processing capacity offered by this type of facility as critical to achieving our solid waste management goals set for -- by the city and the metro region. This facility supports the Portland Recycles! Plan and mandatory food scrap diversion requirements for businesses, promotes expansion of the existing programs to recover food waste, improves the economics of food waste collection priority of businesses with a more central delivery location, and supports the effort to reduce greenhouse gas emissions. Our Portland Recycles! Plan contains strategies and recommendations to achieve the city's - City Council's set 75% recovery goal by the year 2015, including a mandatory food scrap diversion requirement for businesses that generate food waste. Full implementation of this requirement is dependent on sighting and operation of a food processing -- of a food waste processing facility within the Portland metropolitan region. This facility is -- the Columbia Biogas facility is appropriately located on industrial-zoned land. And being within the city limits will improve the economics and participation of food waste recovery.

The facility also supports the city of Portland's goal to reduce carbon dioxide emission that affects global warming, to 10% below the 1990 level by 2020. A local anaerobic digestion facility reduces carbon dioxide by significantly reducing the long distance hauling required for landfills. In addition, methane created from decomposition of food waste in landfills has over twenty times the greenhouse gas impact of carbon dioxide. A facility such as Columbia Biogas located within the city of Portland would greatly benefit the efforts of the city to increase food waste recovery, meet the city's solid waste

management goals, and decrease greenhouse gas emissions. Thank you.

**SM** - Thank you, Bruce. The next two, Barb Fritz, and John Williams. Barbara, you're first. State your name, and go ahead.

**Barb Fritz** - My name is Barbara Fritz. My address is on the paper, and I'm a Cully neighborhood resident, and I'm a retired occupational and environmental health nurse with over 20 years in the field. Some of this experience includes being the on-site nurse for the contracting construction company, building another hydrogen sulfide stack at the paper company in Camas, Washington. I've seen what happens to the lungs and skin of workers exposed to direct hydrogen sulfide when there is an unexpected air inversion. And the banks of fog that we have here, frequently descend on exterior vents. That said, I appreciate the fact that the hydrogen sulfide in the proposed biogas company will be treated by a process of anaerobic digestion, and be converted into methane to be combusted into five megawatts of electricity. That would be a very exciting advancement, if the odor control systems can be shown to be successful.

I notice that at this point in the project, the final design of the in line ventilators, which draw from multiple collection points through duct work to exterior mounted biofilters, is not yet complete. My concern is with this process. According to Charley Alix and John McKinney at the presentation at the Word of Life Church, October 19th, the media absorption process should take two hundred and fifty to four hundred days to work. Now the DEQ application breaks this process down to about thirty-three days to accomplish detention in the hydrolysis stage, and the fermentation stage. So I wonder, what is the correct amount of time needed? With sixty trucks coming in daily, with the potential of converting their loads to 75% water at five to ten thousand tons per day, or a hundred thousand tons per year, will five storage tanks be enough to hold this capacity, even if they are fifty-five feet tall and forty feet in diameter, for approximately a year from start to finish, for this fermentation process, you know, that they're telling us it needs?

If this process is as successful as we all hope it will be, resulting in zero odor, I would respectfully request samples be taken every twenty-four hours, rather than every two weeks or week. If the odor exceeds ten parts per million, rather than twenty parts per million, even a ten parts per million for twenty four hours could make the neighborhood smell very bad, depending on how much volume is emitted of methane, hydrogen sulfide, or hydrogen sulfate. The human detection of odor is at 0.1 (zero-point-one) parts per million for the average person, so I would prefer to see the emissions kept to 0.2 (zero-point-two) parts per million at the fence line.

I have some concerns about the combustion noise for your employees, as well as the neighborhood, and would like to point out that as of October 15th, federal OSHA is seeking to place a greater emphasis on using engineering controls to mitigate noise hazard, rather than personal protective equipment and training. Thank you.

**SM** - Thank you, Barbara.

**John Williams** - My name is John Williams. Like Barbara, I'm very concerned about hydrogen sulfide

emissions, potential odor impacts on the neighborhood. The developer claims his flares are 99.9% efficient, they'll function during upsets. But even if 99.9% of the hydrogen sulfide is removed, they'll still be still far over the odor threshold for hydrogen sulfide. Their permit lacks pollution removal efficiency requirements for the selective catalytic reduction and thermal oxidized -- oxidation catalyst. There's no limit on start ups and shutdowns at the plant, The air pollution controls typically don't operate during start up and shutdowns. There's a lot of start ups and shutdowns. The pollution rates will be very high. There's no requirement in the permit for short term emission rates. Why are twenty two parts per million limit on hydrogen sulfide in the fuel gas? Why can't that be lower? The input of hydrogen sulfide in the emissions is thousands of times higher than the odor threshold. Even if a lot of it is combustion, the engines -- it will exceed the odor threshold. We need continuous emissions monitors on the exhaust from those engines, and at the property line.

The developer mentioned that some of these processes are similar to processes they use at wastewater treatment plants. The wastewater treatment plants remove 97% of the pollutants. He's only claiming an 87% removal rate. We need a permit limit on hydrogen sulfide, and a DEQ air permit. There's not one there. There's no indication that the flare will be required to remain on in standby mode. This means that if there's an upset, and the gases are vented to the flare, the flare's not going to be on for awhile, and the undiluted gases will be ejected in the atmosphere for considerable time. There's no permit limit on how many -- how often a year they can run that flare.

On the digester processes, there's vents, there's relief valves. If there's a problem, and those relief valves open, will those be vented to pollution control devices? If so, that's not in the permit. There's no pollution removal efficiency for the digester tank vent biofilters, so you don't know how much pollution will be removed by those biofilters. Every valve, and seal, and pump, and vent in that facility should have periodic equipment -- periodic testing required to reduce leaks. Sixty trucks a day, those doors open for one minute every time a truck enters and leaves. That means the doors will be open for two hours a day. What chemicals and acids will be added to the anaerobic digestion process? Why won't the existing soil contamination on the site be cleaned up, before the plant is installed? The containerized waste may sit on the site for lengthy periods. Will those storage areas be 100% enclosed, with discharges scrubbed? There's no description of the odor scrubber for that storage area. The membraned dome containing the conditioned biogas will probably have dents, and relief valves. We need testing of those vents and valves to ensure they don't leak. There's no indication whether these tanks will have floating roofs, or what kind of pollution control devices, or other efficiencies will be installed on those tanks. We need MSDS sheets for the polymers and other additives utilized in this process. The nutrient-rich concentrate will be stored in a tank. Once again, how will leaks from those tanks to the air be controlled? What about sour water from the facility used in scrubbing devices? Will that sour water be discharged to the Portland sanitary sewer, and if so, how will those odors be controlled? What is the pollution removal efficiency for the treatment device for the unloading area? What is the treatment device?

The type of sulfur recovery they're talking about, the sulfa treatment has a breakthrough point, where the media gets saturated with sulfur, and it becomes inefficient. Will that treatment device need to be regenerated? Will the process need to be shut down? Will there be a backup scrubber? Finally, if folks went to the library, as advertised, to try and find documents, those documents were not in the library.

We were not allowed the opportunity to review all the application materials, so I'd like to ask for a two week extension on the comment period. Thank you very much.

**SM** - Thank you, John. The next two commenters, Mike Bradbury and Robert Granger. Mike's first. Mike, state your name, and here you go.

**Mike Bradbury** - My name's Mike Bradbury, and I reside in Portland, Oregon, north Portland. I'd like to comment on the proposed Columbia Biogas facility, and the impact this type of facility will have on the surrounding community. I'm a concerned greater Portland metro area resident. I frequent the area, my commutes, and enjoy recreating at Colwood Golf Course, which sits directly adjacent to the proposed siting of Columbia Biogas, located at 6849 Northeast Columbia. I feel the impact resulting from this proposed plant's daily operations to the surrounding neighborhood will have a lasting negative effect on its citizens, businesses, and recreation areas, which will outweigh any positive benefit gained from this plant's operation. I have personally experienced the nuisance of odor that a composting facility can produce. [When?] an operator was led to conduct his composting facility at the intersection of Columbia and Lombard at the entrance to Terminal 6, I believe, not to mention the city of Portland's wastewater treatment facility, located further east on Columbia Boulevard.

As a representative of the labor's union, I've received many concerns related to this proposed facility from our membership, who live and enjoy the surrounding area, as well. There are listed below, agreements for the waste byproduct, and holding and handling of that waste byproduct. I don't see a current traffic study for this project. The proposed plant's entrance is a bottleneck of only two lanes on Columbia. The nuisance and the handling in dealing with rodents; the operating history of Veolia Water North America with this type of plant and composting facility; the significant amount of noxious odors; VOC compounds, and known carcinogens that will be the byproduct of the operation of this plant; the waste stream that will be allowed to be trucked in from outside Oregon in the greater Portland metro area; the breeding potential of harmful bacteria in the proposed stormwater holding ponds; the operating history of this type of plant in North America; the business history of Verde Renewable LLC. And I would also like to see the agreement with PPL, or the purchaser of the electricity produced from this plant. I don't think that the citizens should have to shoulder the negative impacts that could arise from the operation of this plant. I don't see a proven track record of this type of plant in North America. I don't feel that the citizens should be the test subjects, and bear the negative impacts associated with the daily operations of this type of facility. I would respectfully request that these issues of concern listed above are addressed by a formal studies being required, and/or further information being provided to the public with an extension of the time period to review that information, and comment further. Thank you.

**SM** - Thanks, Mike. Robert Granger.

**Robert Granger** - My name is Robert Granger. I live in the Cully neighborhood. I'm involved with the Cully Association of Neighbors, and along with Erwin Bergman, we're one of the founders of Northeast Neighbors for Clean Air, which was a group of citizens put together to deal with air pollution issues from the Boeing airplane painting factory, so I'm aware of kind of the impact, and response of the neighborhood on environmental issues. That said, I think that is a very important implementation and

facility for us here in Portland, but beyond that, for us here in the country. We need to be able to recycle, reuse, and generate green energy. That is a must in our future. We have to have a successful proof of concept, and best practice example, to show how this can happen in an environment that reduces the carbon footprint of transportation, which means regionally dispersed locations of these types of facilities in mixed use environments, including business districts and residential areas. In other words, we have to make this work. We have to figure out how to make this work. The burden, however, really falls, if it doesn't work, quote, unquote, besides on the investors, is on the immediate neighbors, and the environmental impact that this has on the quality of life. As a neighbor, I'm willing to take the risk of having this implementation in my neighborhood if in fact the bar is set high enough by the regulatory agencies that are really chartered to make sure that this works. We need to get to a point where we virtually guarantee the success of this program, because if we do, then we'll have the opportunity to replicate and scale this type of implementation, not only in the metro area and the region, but in the country. Failure to make this a success has significant long term impact, and therefore, I really call on DEQ to sharpen your pencil, and to really set standards, working with Columbia Biogas and the neighborhood that will allow us to have a win-win-win situation all the way around. Failure to make this a successful implementation is very significant, and beyond just this particular implementation.

The Natural Step system conditions, system condition four, deals with the social impact of sustainability. As a resident of the neighborhood, we're the recipients, and the -- are the recipients of failure to meet that system condition. And I hope that we come -- come with a solution that sets boundary conditions, and working relationships that make this a success.

**SM** - Thank you, Robert. We have one last commenter, Mark Kendall.

**Mark Kendall** - I'm Mark Kendall, with Kendall Energy Consulting. I'm a principal. We do renewal resource and policy planning for jurisdictions and corporations. I have no financial or contractual interest in the Columbia Biogas project. Our firm recently completed a study for Lane Council of Governments on a bioenergy facility that integrated cellulosic ethanol, a digester as well as composting, and bio-brick fiber fire log replacement materials, and we determined in the mass balance and economic models that a two megawatt mixed supply digester with state of the art technology that Columbia Biogas has proposed, meets the economic threshold of viability that allows a system like that to start right, and stay right, and to afford the rigors that we've heard people talk about and indicate that are called for. The technology uniqueness that John mentioned, having to do with negative pressure, and then the centrate filtration with reverse osmosis, are proved, yet state of the art in this application. So they're not stretching any envelopes, as far as the applicability of these technologies. We reviewed a number of designs that are the current practice in Europe, and many of those are in -- very near urban commercial environments, and they operate with a lot of satisfaction from the communities and neighborhoods. And the feed stock supply, that demand that this facility is going to have, can easily be met. The Energy Trust of Oregon completed a study this spring that assessed food and feedstocks, food waste feedstocks from both commercial industrial food processing sources, and there's ample feedstock to meet the needs of this size facility, and provide room for other -- lots of little local, more distributed opportunities for eco-district development.

And in closing; I would like to point out that a recent study by my associate in our firm identified that there is very high probability that Oregon cannot meet its greenhouse gas emissions, or CO2 emissions reduction goals of 2020, even when accounting for the renewable portfolio standard, adoption of a low carbon fuel standard, and replacement all of Boardman Coal's energy capacity with renewable resources. And that accounts for the current, ongoing rate and pace of energy efficiency and renewable resource investments. So more of this type of state of the art, next generation energy supply that's distributed, is called for now.

I had only one other note, and that was a concern about the process flow diagram, and that is that the cab to truck bed volume ratios is off for the implied tonnage of the truck.

**SM** - Thank you, Mr. Kendall. Are there any other folks who want to provide any verbal comment at this time? I'm going to close the formal comment -- the formal public hearing portion. The time is now 7:52. We'd like to thank you for coming and providing your comment. The hearing is adjourned.