

Blue Ridge Environmental Defense League

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March 23, 2012

Eric Cornwell, Program Manager
Stationary Source Permitting Program, Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, Georgia 30354

**RE: Draft Air Quality Permit No. 4911-163-0036-E-01-0, Application No: 20770
North Star Jefferson Renewable Energy**

Dear Mr. Cornwell:

On behalf of the Blue Ridge Environmental Defense League, our chapter Jefferson Environmental Defense Initiative and our members in Georgia, I write to provide further comments on the draft permit for North Star Jefferson Renewable Energy to supplement my oral and written remarks of March 8, 2012 and earlier written comments. We recommend that Georgia Environmental Protection Division, pursuant to O.C.G.A. § 12-16-5 *et al*, reject and not proceed with the draft permit.

Environmental Justice

According to the United States Census Bureau, the population of Wadley is 2,088. The city is 77.11% African American, 20.26% White, 0.14% Native American, 0.05% Asian and 1.92% from other races. The median household income is \$15,300 and 40.2% of the population is below the poverty line. Jefferson County is 56.28% African American, 42.09% White, 0.12% Native American, 0.16% Asian, 0.01% Pacific Islander and 0.83% from other races. The median income for a household in the county was \$26,120 and 23% of the population is below the poverty line.

North Star Jefferson has circulated a pamphlet which touts job creation and the economy. But this is a chimera. According to Dr. Robert Bullard, "economic boosters could usually count on their promise of jobs as an efficient strategy of neutralizing local opposition to growth projects."¹ In *Dumping in Dixie* he cites the following to explain how profit motives were concealed:

Perhaps the key ideological prop for the growth machine, especially in terms of sustaining support from the working-class majority, is the claim that growth "makes jobs." This claim is aggressively promulgated by developers, builders, and chambers of commerce; it becomes part of the statesman talk of editorialists and political officials. Such people do not speak of growth as useful to profits² rather, they speak of it as necessary for making jobs.²

¹ Bullard, R. D. 1990. *Dumping in Dixie: Race, class, and environmental quality*. Boulder, CO: Westview

² Harvey L. Molotch, "The City as a Growth Machine: Toward a Political Economy of Place," *American Journal of Sociology* 82 (September 1976): 320.

It would be a classic case of environmental injustice if the State of Georgia were to permit a facility which emits excessive levels of toxic air pollution in Wadley which has higher rates of poverty and a greater percentage of black residents relative to Jefferson County. The prospect of jobs cannot and must not sacrifice the health of our communities.

Excessive Levels of Pollution

The Environmental Protection Division of the Georgia Department of Natural Resources draft permit is for a 312 MMBtu/hr fluidized bed boiler, 25 megawatt electric power plant burning wood and used automobile tires in Jefferson County near Wadley, Georgia. According to EPD, the permit is drafted in accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, *et seq* and the Rules at Chapter 391-3-1.

The air emission limits listed in the draft permit are:

Pollutant	Air Emissions
Particulate Matter	0.03 pounds/million-BTU
Nitrogen oxides	249 tons per year
Sulfur dioxide	249 tons per year
Carbon monoxide	249 tons per year
Hazardous air pollutant (single)	10 tons per year
Hazardous air pollutants (aggregate)	25 tons per year
Greenhouse gas	99,000 tons per year

The draft permit would allow the emission of 39 to 42 tons per year of particulate matter, depending on whether scrap tires are burned with wood or wood alone is used. As we have brought to your attention in previous comments, in 2007 the Massachusetts Department of Environmental Protection issued guidance on biomass air pollution emissions and best available control technology, or BACT.³ MassDEP determined that any biomass-fueled plant should emit no more than 0.02 lb/MMBtu. If Georgia EPD were to apply state-of-the-art and best available control technology (BACT) to the North Star unit, particulate emissions would drop to maximums of 26 to 28 tons per year under the same fuel usage, a 33% reduction. Georgia EPD should require the North Star Jefferson facility's permit to conform to this standard.

Fine particulate matter carries potentially harmful chemical compounds, allowing them to "hitch a ride." These contaminated particulates in the air can penetrate deep into the lungs or temporarily attach to the clothes or bodies, depending on their size. The smallest of these particulates, PM-2.5 and ultrafine particulate matter, smaller than 0.1 μ m (UFPM), are known to cross the blood-air barrier in the lungs. The toxins then circulate throughout the body to peripheral organs and the brain where they are associated with neurodegenerative pathology.⁴

³ Best Available Control Technology (BACT) Guidance, Biomass-Fired Electric Generating Units, James C. Colman, Assistant Commissioner, Bureau of Waste Prevention, MassDEP, April 18, 2007

⁴ *Air Pollution: Mechanisms of Neuroinflammation & CNS Disease*, Block and Calderón-Garcidueñas, Trends Neurosci. 2009 September; 32(9): 5066516.

Permitted Fuels Negative Impacts

Up to 20% of the fuel for the proposed facility in Jefferson County would be used automobile tires. The balance of fuel would include agricultural crops, plants, trees, wood, wood residues, sawmill residue, sawdust, wood chips, bark chips, and forest thinning, harvesting or clearing residues; wood residue from pallets or other wood demolition debris, peanut shells, pecan shells, cotton plants, corn stalk and plant matter including aquatic plants, grasses, stalks, vegetation, and residues including hulls, shells, or cellulose containing fibers.⁵

According to the permit application submitted by North Star Jefferson which forms the basis for Georgia EPD's draft permit, the following technical data apply to the proposed unit:

The primary emission source will be a fluidized bed boiler referred to as Source Code B1. The boiler will be fueled entirely by wood bio mass, or a combination of wood biomass and tire derived fuel (TDF, up to 20% by weight). The heat input capacity will be 320.6 million BTU per hour (MMBtu/hr) when firing wood biomass only, and 296.2 MMBtu/hr when firing a 80%/20% wood biomass/TDF blend.⁶

Note that the heat capacity of the wood-tire fired boiler is 8% lower than the heat capacity of the wood-only fired boiler.

According to draft permit Section 2.10 on Tire-derived fuel (TDF), TDF must meet the legitimacy criteria of 40 CFR 241.3(d)(1) for non-hazardous secondary materials used as a fuel in combustion units. The permit states *inter alia*:

- ii. The non-hazardous secondary material must have a meaningful heating value and be used as a fuel in a combustion unit that recovers energy.
- iii. The non-hazardous secondary material must contain contaminants at levels comparable in concentration to or lower than those in traditional fuels, which the combustion unit is designed to burn. Such comparison is to be based on a direct comparison of the contaminant levels in the non-hazardous secondary material to the traditional fuel itself. [emphasis added]

The US EPA's Final Rule on Non-hazardous Secondary Materials implementing 40 CFR Part 241 uses the terms "comparable to or lower than" in its discussion of NHSM, but provides further guidance. However, the draft permit fails to address either specific fuel constituents—for example, as is done for sulfur content of fuel oils in industrial boilers—or pollution limits—as is done for NO_x, SO₂ and other criteria pollutants specifying pounds per heat input unit. EPA's final rule gives examples for pollutants lead and barium in parts per million, Georgia EPD provides none.

⁵ EPD Draft Permit Section 2.9

⁶ Air permit application for the North Star Jefferson Renewable Energy Facility submitted to the Georgia Environmental Protection Division, December 2011, Section 1.3.1 Fluidized Bed Boiler

EPA recognizes that combustion is an inherently destructive process, even when energy is recovered. If a non-hazardous secondary material contains contaminants that are not comparable to those found in traditional fuels, and those contaminants are related to pollutants that are of concern at solid waste combustion units, then it follows that discard is occurring....Units that burn such materials are therefore most appropriately regulated under the CAA section 129 standards for solid waste incinerators.⁷

Lacking a clear standard, neither we nor EPD can determine that the North Star facility should not be regulated as an incinerator. In order to protect air quality, a Georgia EPD permit must have specific standards, recordkeeping, monitoring and enforcement. The draft permit is unclear on waste storage practices, heat value and contaminant levels. As noted above, North Star's application states that the heat value of the proposed power plant's combined fuels is *lower* than the heat value of wood alone. How will waste throughput affect pollution levels? Furthermore, what methods should be used for analysis? How many contaminants are to be compared? Are comparisons are to be made between individual contaminants or groups of contaminants? The permit is unclear as to what constitutes legitimate NHSM and what levels of air pollution would be emitted; therefore, the permit is not practically enforceable.

Conclusion

Burning wood and scrap tires to produce power in the 21st Century is such a bad idea that it beggars description; tires are not biomass. The residents of Jefferson County and Georgia do not deserve an additional, unnecessary source of toxic air pollution imposed upon their community.

Respectfully,

A handwritten signature in black ink that reads "Louis A. Zeller". The signature is written in a cursive style and is followed by a horizontal line.

Louis A. Zeller, Science Director
Blue Ridge Environmental Defense League

CC: Furqan Y. Shaikh, NOx Permitting Unit Manager

⁷ 76 Fed. Reg. 15523, March 21, 2011