



North Carolina Department of Environment and Natural Resources
Division of Air Quality

Beverly Eaves Purdue
Governor

B. Keith Overcash, P.E.
Director

Dee Freeman
Secretary

May 6, 2010

Mr. C. Reed Parks
General Manager
Carolina By-Products Fayetteville Division
1309 Industrial Drive
Fayetteville, NC 28301

Re: Commercial & Solid Waste Incinerator Determination
Carolina By-Products Fayetteville, NC
Cumberland County

Dear Mr. Parks:

This letter is in response to your January 18, 2010 response to North Carolina Division of Air Quality's (NCDAQ) additional information letter regarding New Source Performance Standards (NSPS) for New commercial and industrial solid waste incineration (CISWI) units applicability for the proposed Process boiler #7 - natural gas; No. 2, recycled No. 4 equivalent fuel oil, No. 5 and No. 6 fuel oils; saleable fat-fired (29.3 million Btu/hr heat input) at your Fayetteville facility. As discussed below, the NCDAQ has determined that the recycled No. 4 fuel oil and the saleable fat, as described in your applicability response letter, is not a solid waste as defined under the Solid Waste Disposal Act. Therefore the CISWI NSPS standard is not applicable to the proposed boiler. This determination is based on your January 18th response addressing the multiple factors outlined in the September 28, 2009 letter from Marc Bernstein, North Carolina Attorney General's Office, to Keith Overcash, Director, NC Division of Air Quality (NCDAQ). Each factor, as applicable, is discussed below.

1. Identification of Unit in Which the Material is Being Burned

The proposed boiler has previously burned natural gas, saleable fat (including fat blended with No. 2 fuel oil), and No. 6 fuel oil. The proposed unit is capable of burning all requested fuels without any modification to the boiler; thus the requested materials being burned in the proposed boiler are no different than the materials it was designed to burn.

Permitting Section

1641 Mail Service Center, Raleigh, North Carolina 27699-1641
2728 Capital Blvd., Raleigh, North Carolina 27604
Phone: 919-715-6235 / FAX 919-733-5317 / Internet: www.ncair.org

One
North Carolina
Naturally

- **Recycled No. 4 Equivalent Fuel Oil:**

This fuel will be burned in the new 700 horsepower (hp) boiler. It is also a permitted fuel for several of the other plant boilers.

- **Salable Fat:**

This fuel will be burned in the new 700 hp boiler. It is also a permitted fuel for several of the other plant boilers.

2. **Description of the Process by Which the Material to be Burned was Developed**

The materials to be burned are products of the rendering process and recycled No. 4 fuel oil purchased from outside vendors. The recycled No. 4 fuel oil will be purchased from a DAQ approved vendor (see NC Approved List of Recycled Oil Suppliers on DAQ's website under DAQ's Toxic Protection Branch Recycled Oil Management Plan). Valley Proteins, Inc., d.b.a. Carolina By-Products (CBP) was approved to burn recycled No. 4 equivalent fuel oil in four of their existing boilers (ID Nos. ES1, ES2, ES3, and ES19) during a previous permit modification (issued permit no. 00951T26) at which time the appropriate monitoring, reporting and recordkeeping was added to ensure the recycled No. 4 fuel oil equivalent meets the specifications of an "unadulterated No. 4 fossil fuel" as defined under DAQ's Toxic Protection Branch Recycled Oil Management Plan.

- **Recycled No. 4 Equivalent Fuel Oil:**

A description of the process by which the fuel is developed is not possible since it is a commercially available fuel which is purchased from a fuel vendor. This is a normal product that the fuel vendor sells to many customers.

- **Salable Fat:**

This fuel is one of the products of the rendering process, which is the business of this facility. During the rendering process the raw material, animal parts and cooking greases, are separated into a solid protein meal product and the liquid fats/oils product. The fats are produced from the cooking or evaporator step and then centrifuged to remove solid proteins remaining in the liquid and then sent to storage tanks. The salable fat is a primary product that is stored in tanks for a few days before either being sold to customers as a raw material for their process or burned as fuel. The salable fat is sold to customers to use as an ingredient in animal feeds, cosmetics, soaps, industrial lubricants or bio-diesel fuels. It is also sold to some customers for use as a fuel. The fats are produced at the same facility they are being used for fuel by the Fayetteville facility.

3. **Description of the Non-Combustion Facility Process**

CBP operates a rendering facility at this Cumberland County site. The rendering operations process raw inedible animal by-products. Fayetteville Division consists of a Feed Grade Plant and two Pet Grade Plants. Rendering at the Feed Grade Plant includes one cooker, two feather dryers, seven (7) feather cookers, one feather hydrolyser

(installation pending), a grease process, and meal load-out operations. Rendering at the Pet Grade Plants includes two cookers, and poultry meal and feather meal load-out operations. CBP also operates six (6) boilers for process heat generation and odor control.

- **Recycled No. 4 Equivalent Fuel Oil:**

The fuels will be burned in boilers at the plant to provide steam for use in the process. The steam is used to provide the heat necessary to operate the rendering process, which is the purpose of the facility.

- **Salable Fat:**

The fuels will be burned in boilers at the plant to provide steam for use in the process. The steam is used to provide the heat necessary to operate the rendering process, which is the purpose of the facility.

4. **Physical and Chemical Characteristics of the Material to be Burned.**

The saleable fat is produced on-site from the rendering process and has not been chemically treated as discussed previously under item #2 above. The recycled No. 4 equivalent fuel oil is purchased from outside vendors as discussed previously under item #2 above.

- **Recycled No. 4 Equivalent Fuel Oil:**

This fuel will meet the specifications for a "unadulterated No. 4 fossil fuel" as defined in the NC DEQ internal memorandum of June 11, 1991.

- **Salable Fat:**

The salable fat is a very low sulfur fuel with a heating value slightly lower than No. 2 fuel oil. Its criteria pollutant emissions are between No. 6 and a No. 2 fuel oil but without the hazardous air pollutants (HAPs) or toxic air pollutants (TAPs) in the fuel oils.

Based on a review of the EPA website for listed wastes:

<http://www.epa.gov/waste/hazard/wastetypes/listed.htm>

the above listed fuels are not considered to be solid waste on the F-listed waste (40 CFR §261.30), K-listed waste (40 CFR §261.32), or P-listed and the U-listed waste (40 CFR §261.33).

5. **Markets for Materials**

Recycled No. 4 equivalent is commercially available as a fuel. Saleable fat is generated on-site and sold to customers to use as ingredients in pet foods, health and beauty aids, and fuels. As described in the January 18th response letter, both fuels are treated as materials with positive economic value as evidenced by its collection and use in the

rendering process as described in factor 3 above and recycling of No. 4 fuel oil that would otherwise be discarded waste oil.

- **Recycled No. 4 Equivalent Fuel Oil:**

This fuel is a commercially available fuel provided by fuel suppliers on a routine basis. The February 2006 application included a list of 11 suppliers on a North Carolina approved list for No. 4 Recycled Fuel Oils.

- **Salable Fat:**

The salable fat is sold to customers to use as an ingredient in animal feeds, cosmetics, soaps, industrial lubricants or bio-diesel fuels. It is also sold to some customers to use as a fuel.

6. Any Treatment Processes Applied to the Materials

As described in the January 18th letter and summarized in factor 3 above, there is no treatment of the materials to allow them to be used as fuels in the existing process.

- **Recycled No. 4 Equivalent Fuel Oil:**

This is commercial product and Valley Proteins does not do any treatment of processing of the fuel

- **Salable Fat:**

The salable fat is centrifuged and maybe filtered to remove entrained protein solids product from the fats produced during the rendering process. The salable fat undergoes no further processing for use as a fuel.

7. Describe General Market for the Material

Most rendering facilities employ the use of the rendered waste to the extent practicable, as well as in the production process as a fuel. The use of saleable fat as a fuel decreases the amount of fossil fuels needed to operate our boilers. In addition, the recycled No. 4 fuel oil equivalent is a valuable resource that can be reused as a fuel since it has a high Btu content. The US EPA published their decision on September 10, 1992 not to list recycled oil that has been destined for recycling as a hazardous waste. Used oil destined for recycling would be subject to Federal Used Oil Management Standards. NC DAQ Toxics Protection Branch has developed a Recycled Oil Management Plan that requires adherence to the recordkeeping stipulations of the Federal rule, as well as eight key parameters and an accompanying certification indicating that the fuel oil contains no PCBs as these are absent from virgin oil products.

- **Recycled No. 4 Equivalent Fuel Oil:**

This material is a general commercially available fuel product that can be purchased from a number of approved suppliers

- **Salable Fat:**

Salable fat is sold to customers to use as an ingredient in animal feeds, cosmetics, soaps, industrial lubricants or bio-diesel fuels. It is also sold to some customers to use as a fuel. It has become a major raw material for the production of bio-diesel fuels.

8. **Benefit Derived From Burning of Material Other Than Energy Production**

There is strong probability that if the fuels were considered solid waste they would end up in the local landfill.

- **Recycled No. 4 Equivalent Fuel Oil:**

This material is strictly used as a fuel and is burned based on comparative fuel costs versus other permitted fuels.

- **Salable Fat:**

This fuel has the benefit of lower emissions of criteria pollutants and no emissions of HAPs or TAPs.

9. **Third Party Handling**

In this case there is no third party handling of the saleable fat material. The material is generated onsite and used as part of the rendering process. The recycled No. 4 equivalent fuel oil is purchased from NC's approved list of recycled oil suppliers and is assumed to meet the specifications of an unadulterated fossil fuel.

- **Recycled No. 4 Equivalent Fuel Oil:**

No other information on third party handling of the fuels

- **Salable Fat:**

This fuel is produced by Valley Proteins for their own use. They do not purchase this material from other parties.

10. **Other Information and Discard**

In order to be a solid waste the material must have been discarded. Under the normal meaning of discard the materials to be burned in the rendering plant at CBP are not discarded. Similar to the Native American Indian and the buffalo, the industry utilizes the entire animal in the production process. Moreover, in this case none of the materials are transported offsite or stored for any significant time. None of the indices of discarded apply to recycled No. 4 fuel oil or saleable fat as they will be used as fuels in the #7 process boiler to provide steam for the rendering process at CBP.

- **Recycled No. 4 Equivalent Fuel Oil:**

No other information on fuel preparation since purchased from a fuel supplier

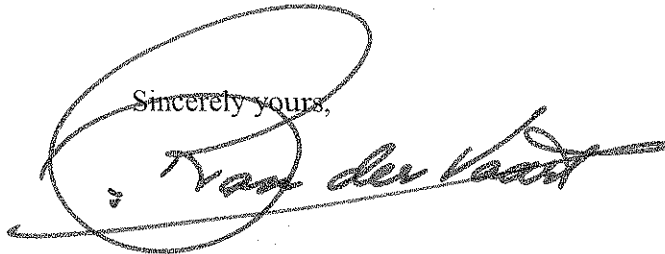
Mr. Reed
May 6, 2010
Page 6

■ **Salable Fat:**

The salable fat is not discarded at any time after its production until it is used as a fuel or sold as a product.

Should you have any questions concerning this matter, please feel free to contact me at (919) 715-6253.

Sincerely yours,

A handwritten signature in cursive script, reading "Van der Vaart". The signature is written in dark ink and is enclosed within a large, loopy oval shape that also serves as a flourish.

Donald R. van der Vaart, Ph.D., J.D., P.E.,
Chief

c: Steven Vozzo, Supervisor, Fayetteville Regional Office
Central Files