

**From PA Bulletin [Saturday, September 7, 2013]**

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39-00099A: Delta Thermo Energy, LLC (112 W Union Street, Allentown, PA 18102-4912) to issue a plan approval for the construction and operation an energy production facility in the City of Allentown, Lehigh County.

In accordance with 25 Pa. Code §§ 127.44(b) and 127.424(b), the Department of Environmental Protection (DEP) intends to issue Plan Approval No. 39-00099A to Delta Thermo Energy A LLC, 112 W Union Street, Allentown, PA 18102-4912, for their plant to be located in the City of Allentown, Lehigh County.

Plan Approval No. 39-00099A is for the construction and operation of an energy production facility. The facility will utilize municipal solid waste (MSW) and sludge from the City of Allentown's Wastewater Treatment Plant as feedstock to produce a fuel to generate 4 gross megawatts (MW) of electricity for internal use and sale. The facility will be designed with equipment capable of processing an average of 120 tons/day of Municipal Solid Waste (MSW) and 47 tons/ day sewage sludge as feedstock. Feedstock for the facility will be prepared onsite from MSW and sludge. The facility will use presorting of the MSW to increase the recovery of recyclables and state-of-the-art technology Resource Recovery System (RRS) to convert feedstock to a renewable clean fuel that will be combusted using an improved Stoker-type combustor to generate steam, which in turn will power a turbine to generate a green, renewable source of electricity.

The facility will consist of the following processes. Receiving & Sorting, Shredding, Feedstock Pit, Five (5) Resource Recovery System Units, Dryer, Combustor (CCC), Boiler, Turbine/Generator and Wastewater Treatment System (WTS).

The facility will emit Clean Air Act-regulated pollutants, including PM10, NOx, CO, SO2, VOC, acid gases and metals. The emission control system consists of the following devices in series: twin cyclones for primary PM removal, selective catalytic reduction (SCR) system with urea injection for NOx control, economizer, flue gas recirculation for NOx control, fabric filter for control of PM and metals control, wet packed tower with caustic solution recirculation for control of SO2, HCl, and HF, 2-stage carbon adsorption system for VOC and mercury control.

After control, the following are estimated emissions from the facility.

Pollutant	Control Efficiency %	Controlled Emissions	
		Lb/hr	Tons/yr
NOx	85.1	1.3	5.0
SO2	97.5	1.04	4.0
SO3	—	0.85	3.3
HCl	99.1	0.13	0.5
HF	85	0.12	0.46
CO	—	3.5	13.4
VOC	40.6	1.04	4.0
PM	99.8	0.39	1.5
Hg	90	0.0015	0.006
CO2	—	16382	62,907

The company shall be subject to and comply with 25 Pa. Code § 123.41 for visible emissions. The facility also subject to Best Available Technology (BAT) provisions of 25 Pa. Code §§ 127.1 and 127.12(a)(5). The emissions from the sources will be controlled by the various air pollution control equipment to meet or exceed the BAT requirements for the sources. The Plan Approval and Operating permit will contain additional recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

The Department will include following conditions in the plan approval limiting emissions.

1. Pursuant to the Best Available Technology (BAT) provisions of 25 Pa. Code §§ 127.1 and 127.12(a)(5), the Owner or Operator shall limit the emissions from the facility to the following:

- a. PM—0.39 lb/hr, 1.5 tons/yr. in any 12-month period, rolling monthly.
- b. NO<sub>x</sub>—1.3 lb/hr, 5.0 tons/yr. in any 12-month period, rolling monthly.
- c. HCl—0.13 lb/hr, 0.5 ton/yr. in any 12-month period, rolling monthly.
- d. CO—3.5 lb/hr, 13.4 tons/yr. in any 12-month period, rolling monthly.
- e. VOCs—1.04 lb/hr, 4.0 tons/yr. in any 12-month period, rolling monthly.
- f. SO<sub>x</sub>—1.89 lb/hr, 7.3 tons/yr. in any 12-month period, rolling monthly.
- g. Hg—0.0015 lb/hr, 0.006 ton/yr. in any 12-month period, rolling monthly.
- h. HF—0.12 lb/hr, 0.46 ton/yr. in any 12-month period, rolling monthly.

2. Pursuant to the Best Available Technology (BAT) provisions of 25 Pa. Code §§ 127.1 and 127.12(a)(5), the Owner or Operator shall limit the emissions from the facility to the following:

- a. Lead—0.20 milligrams/dscm at 7% O<sub>2</sub>.
- b. Dioxins/Furans (total mass basis)—13 nanograms/dscm at 7% O<sub>2</sub>
- c. Arsenic and compounds—7.2 ug/dscm at 7% O<sub>2</sub>
- d. Beryllium and compounds—0.2 ug/dscm at 7% O<sub>2</sub>
- e. Cadmium and compounds—15.8 ug/dscm at 7% O
- f. Hexavalent chromium and compounds—2.3ug/dscm at 7% O<sub>2</sub>
- g. Nickel and compounds—25.0 ug/dscm at 7% O<sub>2</sub>

3. Pursuant to the Best Available Technology (BAT) provisions of 25 Pa. Code §§ 127.1 and 127.12(a)(5), the Owner or Operator shall limit the emission of ammonia for selective catalytic reduction (SCR) system exhaust to 5 ppmvd, measured dry volume corrected to 15% oxygen.

4. Pursuant to the Best Available Technology provision of 25 Pa. Code §§ 127.1 and 127.12(a)(5), visible emissions shall not exceed 10 percent opacity for periods aggregating more than 3 minutes in any 60-minute period, except during startup, when visible emissions may not exceed 20 percent opacity for periods aggregating more than 3 minutes in any 60-minute period. Visible emissions may not equal or exceed 30 percent opacity at any time.

5. The storage and handling of the material associated with the aforementioned source(s) shall not at any time result in the emission of fugitive air contaminants in excess of the limitations specified in Section 123.1 of Chapter 123 of the Rules and Regulations of the Department of Environmental Protection.

The Plan Approval and Operating Permit will contain additional, recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

Copies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Any person(s) wishing to provide DEP with additional information, which they believe should be considered prior to the issuance of this permit, may submit the information to the address shown in the preceding paragraph. Each written comment must contain the name, address and telephone number of the person submitting the comments, identification of the proposed permit no. 39-00099A and a concise statement regarding the relevancy of the information or objections to the issuance of the permit.

A public hearing may be held, if the Department of Environmental Protection, in its discretion, decides that such a hearing is warranted based on the comments received. All persons submitting comments or requesting a hearing will be notified of the decision to hold a hearing by publication in the newspaper or the Pennsylvania Bulletin or by telephone, where DEP determines such notification is sufficient. Written comments or requests for a public hearing should be directed to Ray Kempa, Chief, New Source Review Section, Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915, Phone 570-826-2511 within 30 days after publication date.