

October 15, 2013

Mr. Ray Kempa
Chief, New Source Review Section
Air Quality Program
Pennsylvania Department of Environmental Protection
2 Public Square
Wilkes-Barre, PA 18701-1915

**Re: Comments on Proposed Plan Approval #39-00099A
Delta Thermo Energy, A, LLC
112 W Union Street, Allentown, PA 18102-4912**

Dear Mr. Kempa:

Pennsylvania Waste Industries Association (“PWIA”) submits the following comments on proposed Plan Approval No. 39-00099A for the proposed Delta Thermo Energy, A, LLC (“Delta Thermo”) facility, to be located at 112 West Union Street, Allentown, PA 18102. PWIA further protests the proposed issuance of this Plan Approval, pursuant to 25 Pa. Code § 127.46, and urges denial of Delta Thermo’s Plan Approval Application under 25 Pa. Code § 127.13b. While PWIA appreciates the Department’s recent announcement that it will hold a public hearing on this proposed Plan Approval pursuant to 25 Pa. Code § 127.48, PWIA believes that the deficiencies in the Plan Approval Application require its denial.

PWIA’s Interest in the Above-Captioned Matter

PWIA is the Pennsylvania chapter of the National Solid Wastes Management Association, a non-profit organization that represents the interests of the North American waste service industry. PWIA members include both privately held and publically traded companies that own and operate commercial solid waste facilities throughout the Commonwealth. In

addition to solid waste landfills, our members operate resource recovery facilities, recycling facilities, transfer stations, and collection operations. PWIA's primary missions are to advance the safe, efficient, and environmentally responsible management of solid waste and to promote sound public policy in rulemaking that affects the management of solid waste.

PWIA members are intimately involved in a wide array of Department permit programs and have developed considerable experience in working cooperatively with the Department's regional offices and staff. Long ago, our members adopted and incorporated the procedures for applicants recently suggested by the Department when issuing its Policy for Implementing the Department of Environmental Protection Permit Review Process and Permit Decision Guarantee. Our members routinely request pre-application meetings with the Department; engage local governments and affected parties early in the project planning process; and take great effort to ensure that submitted applications are complete, technically adequate and meet all applicable statutory and regulatory requirements.

PWIA members take the Department's permitting processes seriously, and it is frustrating when our members see applicants that do not share their diligence. Our members frequently submit applications to the Department for projects that have significantly lower environmental profiles and higher environmental benefits than the project contemplated by Delta Thermo in its Plan Approval Application, and our members' collective experiences drive our conclusion that not only is this project meritless, but that the underlying Plan Approval Application is incomplete, inaccurate, and a blatant attempt to circumvent clearly applicable requirements. As a result, the Department was forced to rely upon erroneous information supplied in this Plan Approval Application, and the proposed Plan Approval does not meet the minimum

requirements of 25 Pa. Code § 127.12b(b) or the procedural requirements of 25 Pa. Code § 127.43a.

At its most fundamental level, and pursuant to both federal and state law, the proposed project is a waste disposal project. The revenues expected to be generated by this project are almost exclusively from accepting waste for disposal, not from selling electricity. From a rational investor's perspective, the revenue generated from the 2.3 MW (net) electric output from the facility¹ does not justify a capital investment of even 1/20th of what Delta Thermo has publicly said it will cost to build the project. In fact, the revenue stream Delta Thermo will obtain from selling electricity is of such little importance to the overall project that in a submission to the Department dated October 8, 2010, Delta Thermo indicated that "most of the electric power will actually be donated to the City of Allentown for their Waste Water Treatment Plant and a portion will be used internally for DTE's operations." Simply calling the project an "Energy Production Facility" does not make it true. The purpose of this facility is waste disposal.

A number of traditional waste-to-energy incinerators currently operate in the Commonwealth. Each of these facilities accepts municipal solid waste, combusts that waste, and makes electricity from the combustion of that waste. Each of these facilities complies with applicable federal regulations that apply to waste incinerators. **And each of these facilities generates almost twice as much electricity (per ton of waste combusted) than the proposed**

¹ See page 3 of the applicant's third written response, dated August 8, 2013, to the Department's Technical Deficiency letter.

Delta Thermo facility.² It is incredulous that Delta Thermo attempts to circumvent applicable state and federal requirements by characterizing this project as an “energy production facility”, when this facility will generate significantly less electricity, per ton of waste combusted, than traditional waste-to-energy incinerators that are also subject to much more stringent operating, emission, and monitoring requirements than those proposed in the Plan Approval for Delta Thermo. If this facility is built and operated as allowed under the proposed Plan Approval, it will be the dirtiest waste facility incinerating waste in the state.

The proposed Plan Approval does not include any of the applicable emission, performance, or monitoring standards required under federal law. Delta Thermo’s proposed facility is subject to at least one, if not more, of the suite of New Source Performance Standards that regulate the combustion of waste, set forth generally in 40 CFR Part 60, Subparts AAAA through Subpart FFFF, and Subpart LLLL (collectively, the “Waste-Related Combustion NSPS”). Yet, none of the Waste-Related Combustion NSPS are included in the proposed Plan Approval. This omission makes issuance of the proposed Plan Approval contrary to 25 Pa. Code § 127.12b(b).

² See generally Covanta Energy, Facility by Location Index, <http://www.covantaenergy.com/facilities/facility-by-location.aspx>, which contains links to five (5) Covanta-related facilities operating in PA. As two representative examples, Covanta’s Plymouth Meeting waste-to-energy facility produces 32 MW-Hr of electricity (net) at a maximum incineration rate of 1,216 tons per day. Similarly, Lancaster County’s waste-to-energy facility produces 35.7 MW-Hr (net) of electricity at a maximum incineration rate of 1,200 tons per day. Covanta’s other three (3) plants have similar production ratios. In addition, the Lancaster Municipal Solid Waste Municipal Authority (“LCSWMA”) advertises on its website that it generates 5.2 MW of electricity (net) for every ten (10) tons of waste they combust. In other words, LCSWMA generates 86.84 MW of electricity from combusting 167 tons of waste, while Delta Thermo’s capacity is significantly less, based on its stated 2.3 MW-Hr (net) output. See LCSWMA, http://www.lcswma.org/lcswma_energy_wastetoenergy.html. Similarly, municipal solid waste landfills utilizing gas collection systems to beneficially use the collected landfill gas have similar greenhouse gas footprints (factoring in all emissions, electricity generation, and carbon sequestration) to the traditional waste -to-energy facilities operating in the Commonwealth. All three (3) of the local MSW landfills operating in neighboring Lehigh County have beneficial use projects.

There are other substantive and procedural deficiencies in Delta Thermo's Plan Approval Application that make issuance of the proposed Plan Approval contrary to 25 Pa. Code § 127.12b(b). These additional deficiencies include:

- failure to address air permitting issues relating to aggregation with the Allentown Wastewater Treatment Plant;
- failure to perform and submit an accurate Best Available Technology ("BAT") analysis;
- mischaracterization of the results of the waste's laboratory analyses;
- improper assumptions regarding the disposition of metals and other hazardous air pollutants ("HAPs") contained in the waste;
- failure to meet the minimum requirements for municipal and county notifications;
- failure to submit a permit application for its proposed on-site wastewater treatment plant;
- attempted circumvention of the Department's regulations through staged permitting; and
- failure to address Environmental Justice concerns and/or to prepare a risk assessment that calculates the elevated cancer risk to local residents from its proposed operation.

We also continue to note a pattern of incomplete, misleading, and inaccurate statements made on behalf of Delta Thermo in submissions to the Department. The bedrock of the Permit Decision Guarantee process is submission of a "complete and technically accurate application." In response to the Department's Technical Deficiency Letters, Delta Thermo submitted approximately one hundred (100) pages of new information. Notably, its multiple responses to the Technical Deficiency Letter contained more pages of official Department Plan Approval Application forms than the original Plan Approval Application. Delta Thermo's submission of the bulk of the application forms, with two-thirds of the Department's allowable processing time

passed, is unfair to the Department and could be construed as an attempt to impede the Department's ability to properly analyze the Plan Approval Application. Due to the nature of the omissions and errors in the underlying Plan Approval Application and Delta Thermo's responses to the Technical Deficiency Letter issued by the Department, this Plan Approval Application should be disqualified for further consideration under the Permit Decision Guarantee policy.

Comment #1: The Plan Approval Application fails to address that Delta Thermo's facility should be aggregated with the Allentown Wastewater Treatment Plant.

Delta Thermo's proposed facility will be co-located on the site of the Allentown Wastewater Treatment Plant ("WWTP"), and is therefore "contiguous and adjacent" to that facility for purposes of an aggregation analysis under the federal Clean Air Act and the Pennsylvania Air Pollution Control Act. Specifically, Attachment 1-1 of the Plan Approval Application states: "DTE has leased an undeveloped parcel of land from the City of Allentown located adjacent to the Allentown WWTP...in order to construct and operate this proposed facility."³ According to its Plan Approval Application, Delta Thermo's facility is wholly dependent on obtaining sewage sludge for its operations from the Allentown WWTP. [See Attachment 1, Plan Approval Application]. However, the Plan Approval Application does not address aggregation issues relating to emissions from the interdependent operations of the two facilities. Similarly, the Plan Approval Application fails to address the potential applicability of

³ Please note that this so-called "Confidential Version" of the Plan Approval Application contained no confidential information whatsoever. See Right-to-Know Appeal, Docket No. AP 2013-1275.

40 CFR Part 60, Subpart LLLL, 40 CFR § 60.4760 *et seq.*, as it relates to the sewage sludge that will be combusted at the site of generation by Delta Thermo under the doctrine of aggregation.⁴

Comment #2: A proper evaluation of Subpart AAAA demonstrates that the facility is subject to Subpart AAAA and/or one of the other Waste-Related Combustion NSPS.

Facilities that combust “solid waste,” whether as ingredients or as fuel, are subject to Clean Air Act Section 129 and the solid waste incineration unit regulations set forth in the Waste-Related Combustion NSPS, promulgated at 40 CFR Part 60, Subparts AAAA to FFFF, and Subpart LLLL. The Waste-Related Combustion NSPS work together to ensure that all solid waste incinerators are regulated under the Clean Air Act’s New Source Performance Standards. As such, only facilities that meet certain limited statutory criteria are exempt from the Waste-Related Combustion NSPS. The regulations are further encompassing as they require that all non-hazardous secondary materials (“NHSM”) that are combusted in incineration units are treated as “solid wastes” for purposes of section 129 of the Clean Air Act,⁵ unless specific statutory exemption criteria are met. 40 CFR § 241.3(a).

As set forth in its Plan Approval Application, Delta Thermo is proposing to “utilize municipal solid waste (MSW) and sludge from the City of Allentown’s Wastewater Treatment plant as feedstock to produce a fuel to generate 3 to 4 gross megawatts (MW) of electricity for internal use and sale” at its proposed facility in Allentown, PA⁶. [Plan Approval Application, Attachment 1-1]. Under Clean Air Act regulations, municipal solid waste and waste water

⁴ Note that aggregation is solely a Clean Air Act concept, and does not affect or change the definition of the term “generator” under the Resource Conservation and Recovery Act (“RCRA”).

⁵ And also Section 1004 of RCRA.

⁶ The facility will only generate 2.3 net megawatts, which is the relevant consideration..

treatment sludge are by definition NHSM. 40 CFR § 241.2. Though it unilaterally proclaims that it is using such NHSM to create a “clean fuel (not waste),” Delta Thermo does not meet the criteria for exemption under 40 CFR § 241.3 (relating to non-waste ingredients or fuel), exemption as a “small power production facility,” or any other exemption. Therefore, Delta Thermo’s proposed facility is considered a “solid waste incineration unit” for purposes of the Waste-Related Combustion NSPS.⁷ Accordingly, the Department is required, pursuant to 25 Pa. Code § 127.12b(b), to include the Waste-Related Combustion NSPS in Delta Thermo’s Plan Approval.

A. The NHSM that is proposed to be used as “feedstock” by Delta Thermo and the “fuel” it is proposing to produce are “solid wastes” for purposes of Section 129 of the Clean Air Act and the Waste-Related Combustion NSPS.

Under 40 CFR § 241.3(a), all NHSM that are combusted are “solid wastes” for purposes of Section 129 of the Clean Air Act and the Waste-Related Combustion NSPS,⁸ unless they:

- (1) are categorically exempt from the definition of solid waste by the United States Environmental Protection Agency (“EPA”) in 40 CFR § 241.4(a);
- (2) meet the processing and legitimacy criteria set forth in 40 CFR § 241.3(b); or
- (3) are determined to be non-solid waste by EPA according to strict criteria set forth in 40 CFR § 241.3(c).

NHSM is not converted into a non-waste fuel simply because an applicant says so. Rather, the regulations require that the applicant, Delta Thermo, demonstrate and document to the Department and the United States Environmental Protection Agency (“EPA”) that it meets the criteria for exemption from the Waste-Related Combustion NSPS. That has not been and

⁷ And also Section 1004 of RCRA.

⁸ And also Section 1004 of RCRA.

cannot be done by Delta Thermo.

As set forth in more detail below, neither the NHSM proposed to be used as “feedstock” nor the “fuel” Delta Thermo is claiming it will produce meet any of the exemption criteria set forth 40 CFR § 241, and therefore each is a “solid waste” for purposes of the Waste-Related Combustion NSPS.

1. Neither the NHSM nor the “fuel” that will be combusted by Delta Thermo meet the categorical exemption set forth in 40 CFR § 241.4.

Under 40 CFR § 241.4(a), EPA has designated four (4), and only four, specific NHSM as non-solid wastes when used as a fuel in a combustion unit – scrap tires, resonated wood, coal refuse, and dewatered pulp and paper sludge. Delta Thermo does not claim exemption under 40 CFR § 241.4(a), nor does its proposed project include any of these exempted NHSM. As such, the 40 CFR § 241.4(a) exemption does not apply.

2. Delta Thermo is not the generator of the NHSM it proposes to combust and therefore cannot meet the criteria for exemption under 40 CFR 241.3(b)(1).

The exemption set forth at 40 CFR § 241.3(b)(1) applies only to NHSM that remain within the control of the generator and that meet the legitimacy criteria specified in 40 CFR §241.3(d)(1). NHSM are considered to remain “within the control of the generator” where (1) they are generated and burned in combustion units at the generating facility; (2) they are generated and burned in combustion units at different facilities, but the facility combusting the NHSM is controlled by the generator; or (3) both the generating facility and the facility combusting the material are under control of the same person. 40 CFR § 241.2; 76 FR 15459 (Mar. 21, 2011).

In the instant matter, Delta Thermo is being paid to accept the municipal solid waste and the sludge it intends to use as feedstock from “households and public institutions” and the City of Allentown Waste Water Treatment Plant, respectively. [Plan Approval Application, Attachment 1-2]. Delta Thermo does not control the households, public institutions, or Allentown WWTP from which it is obtaining its “feedstock.” Therefore, Delta Thermo does not meet the criteria for exemption under 40 CFR § 241.3(b)(1).⁹

3. Neither municipal solid waste nor waste water treatment sludge meets the legitimacy criteria set forth in the regulations such that Delta Thermo meets the exemption criteria for non-waste ingredients under 40 CFR § 241.3(b)(3).

To be designated as a non-waste ingredient under 40 CFR § 241.3(b)(4), the regulations require that the NHSM be an ingredient in a combustion unit that also meet the legitimacy criteria specified in 40 CFR § 241.3(d)(2). 40 CFR § 241.3(b)(3). Delta Thermo fails both parts of this test. The term “ingredient” is defined as a NHSM that is “a component in a compound, process, or product.” 40 CFR § 241.2. Delta Thermo does not claim that either the municipal solid waste or waste water treatment sludge is a non-waste ingredient subject to exemption under 40 CFR § 241.3(b)(3), nor does the municipal solid waste or wastewater treatment sludge meet the legitimacy criteria for ingredients set forth in 40 CFR §241.3(d)(2), as set forth in more detail in Section A(4), *infra*.¹⁰

4. The “fuel” that Delta Thermo proposes to produce and combust does not meet the processing or legitimacy criteria set forth in the

⁹ Even if Delta Thermo controlled such facilities and/or combusted only municipal solid waste and sludge that it generated or the Department accepted Delta Thermo’s argument that it is not combusting municipal solid waste/sludge but rather a “fuel,” such material would not meet the legitimacy criteria specified in 40 CFR § 241.3(d), as set forth in Section A(4), *infra*, and thus would be ineligible for exemption under 40 CFR § 241.3(b)(1).

¹⁰ Note, exemption as a non-waste fuel, as opposed to an ingredient, is evaluated pursuant to 40 CFR §241.3(b)(4).

regulations such that Delta Thermo meets the exemption criteria set forth in 40 CFR § 241.3(b)(4).

To be designated as a non-waste fuel under 40 CFR § 241.3(b)(4), the regulations require that the NHSM be “processed” as that term is defined in 40 CFR § 241.2. After processing, the NHSM must meet the legitimacy criteria for fuels set forth in 40 CFR § 441.3(d)(1). Both criteria must be met for the non-waste fuel designation in 40 CFR § 241.3(b)(4) to apply. Based on the information contained in its Plan Approval Application and the materials relied upon by the Department in preparing the proposed Plan Approval, Delta Thermo fails to meet either of the above criteria. In other words, Delta Thermo has not and cannot demonstrate to the Department and EPA that it is in fact “processing” municipal solid waste and sludge into a fuel that meets the legitimacy criteria set forth in 40 CFR § 441.3(d)(1).

Processing

The term “processing” is defined in 40 CFR § 241.2 as

any operations that transform discarded non-hazardous secondary material into a non-waste fuel or non-waste ingredient product. Processing includes, but is not limited to, operations necessary to: Remove or destroy contaminants; significantly improve the fuel characteristics of the material, e.g., sizing or drying the material in combination with other operations; chemically improve the as-fired energy content; or improve the ingredient characteristics.

Minimal operations that result only in modifying the size of the material by shredding do not constitute “processing” for the purposes of 40 CFR § 241.2.

Whether what Delta Thermo is proposing to do to the municipal solid waste and sludge received at its proposed facility is “processing” is unclear, since neither the Plan Approval Application nor the materials the Department relied on to prepare the proposed Plan Approval address EPA’s criteria for “processing.” According to guidance proffered by EPA, the

determination of whether a particular operation or set of operations constitutes sufficient “processing” to meet the definition in 40 CFR § 241.2 is necessarily case-specific and fact-specific, and any such determination must take into account the nature and content of the NHSM, as well as the types and extent of the operations performed on it. EPA, *Implementation of the NHSM Regulations, Part 241 Rule Clarifications and Response Letters*, <http://www.epa.gov/wastes/nonhaz/define/index.htm>. Therefore, until Delta Thermo demonstrates to the Department and EPA that it is in fact “processing” municipal solid waste and sludge, and not simply disposing of it, its facility is not entitled to exemption from the Waste-Related Combustion NSPS pursuant to 40 CFR § 241.3(b)(4).

Legitimacy

NHSM are considered legitimate fuels or ingredients if they conform to the criteria codified in 40 CFR § 241.3(d), which this comment refers to as “legitimacy criteria.” Legitimacy criteria are designed to ensure that the fuel or ingredient is not being “sham” recycled for the sole purpose of avoiding being considered a waste. 76 FR 15459 (Mar. 21, 2011). Under 40 CFR § 241.3(d)(1), the legitimacy criteria for fuels include: 1) management of the material as a valuable commodity based on the following factors - storage prior to use must not exceed reasonable time frames, and management of the material must be in a manner consistent with an analogous fuel, or where there is no analogous fuel, adequately contained to prevent releases to the environment; 2) the material must have a meaningful heating value and be used as a fuel in a combustion unit that recovers energy; and 3) the material must contain contaminants at levels comparable to or less than those in traditional fuels which the combustion unit is designed to burn. See 78 FR 9159 (Feb. 7 2013) (“[L]egitimacy” is shorthand for

referring to NHSM that are not abandoned or thrown away, are saved and are reused by being burned for their value as a fuel. The legitimacy criteria are the factors needed to be examined to make this determination. For example, it is relevant how the NHSM is managed and its heating value since burning materials that have minimal or limited heating value shows the material is being burned for discard and not energy recovery. In addition, the extent to which contaminants are present in NHSMs may also indicate that the real reason for burning the secondary material is simply to destroy or discard them—referred to as “sham” recycling.”). Delta Thermo must meet all three (3) of the above criteria in order for its “fuel” to be considered non-solid waste under 40 CFR § 241.3(b)(4) and therefore exempt from the Waste-Related Combustion NSPS.

As stated above, Delta Thermo has not made the requisite demonstration to the Department or EPA that its “feedstock” and/or proposed “fuel” meet the legitimacy criteria of 40 CFR § 241.3(d). As a general matter, Delta Thermo cannot demonstrate that its “feedstock” or proposed fuel is sufficiently homogenous to be considered a legitimate fuel. Delta Thermo is proposing to use a non-homogenous¹¹ waste stream (i.e. municipal solid waste) as its “feedstock.” Except for the initial removal of bulk, glass, and metal materials, Delta Thermo is proposing no significant sorting of such waste. As such, the main ingredient in its proposed “fuel” will be heterogeneous in nature and thus chemical composition. While Delta Thermo’s proposed process of mixing, steaming, and drying may make the proposed “fuel” look

¹¹ In the preamble to 40 CFR Part 60, Subpart CCCC, 78 FR 9124 (Feb. 7, 2013), EPA provides:

In keeping with this interpretation, we maintain that the homogeneous wastes are generally material specific (e.g., tires or used oil). We believe this means that a homogeneous waste is of known origin and that it can be identified as a specific material or materials—using the example in the Act, certain used oils or scrap tires. By contrast, municipal solid waste can be identified as municipal solid waste as a general term, but it is not composed of only one or two specific type of waste; e.g. municipal solid waste cannot be identified as one specific material or group of materials.

homogenous, it will not change the chemical composition of the waste, on a batch-by-batch basis over time, in a manner that makes it homogeneous.¹² In other words, the “fuel” will not be sufficiently homogenous to be considered a legitimate fuel for purposes of 40 CFR § 241.3(d).

There are also very basic demonstrations required for a fuel to meet the legitimacy requirements of 40 CFR § 241.3(d)(1). First, the non-hazardous secondary material must be managed as a valuable commodity based on the following factors: (A) the storage of the non-hazardous secondary material prior to use must not exceed reasonable time frames; (B) where there is an analogous fuel, the non-hazardous secondary material must be managed in a manner consistent with the analogous fuel or otherwise be adequately contained to prevent releases to the environment; and (C) if there is no analogous fuel, the non-hazardous secondary material must be adequately contained so as to prevent releases to the environment. 40 CFR § 241.3(d)(1)(i). Delta Thermo has not provided any information in its Plan Approval Application regarding storage time,¹³ analogous fuels, or fuel management, as required under 40 CFR § 241.3(d)(1)(i). Second, the non-hazardous secondary material must have a meaningful heating value and be used as a fuel in a combustion unit that recovers energy. Delta Thermo has also failed to provide the Department with any analysis of heating value of the NHSM it will use as “feedstock” or the proposed “fuel,” as required under 40 CFR § 241.3(d)(1)(ii). Third, the non-hazardous secondary material must contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel(s) which the combustion unit is designed

¹² Contaminant levels detected in “fuel” produced at Delta Thermo’s pilot facility were highly inconsistent, with levels of certain contaminants (i.e. cadmium and nickel) ranging by more than an order of magnitude and levels of all but two (2) contaminants (of those with sufficient data) varying by more than a factor of 2.

¹³ While the Plan Approval Application addresses processing time for various components of the proposed facility, total storage time is not estimated or otherwise presented.

to burn. Delta Thermo fails to identify which traditional fuels are comparable to its proposed “fuel,”¹⁴ let alone provide the Department with the required comparison of the proposed “fuel’s” contaminant levels to those of comparable traditional fuel, as required by 40 CFR § 241.3(d)(1)(iii).¹⁵ The limited number and nature of the parameters included in the summary of the laboratory analyses by Delta Thermo are insufficient to perform a comparable fuel analysis versus any of the potentially comparable fuels.

As described above, Delta Thermo has not and cannot demonstrate to the Department or EPA that it will be producing a non-waste fuel by combining municipal solid waste and waste water treatment sludge in its proposed facility in Allentown, PA. As required by 40 CFR § 241.3(b)(4), “[u]ntil the discarded non-hazardous secondary material is processed to produce a non-waste fuel or ingredient, the discarded non-hazardous secondary material is considered a solid waste and would be subject to all appropriate federal, state, and local requirements.” In other words, until Delta Thermo is able to make the requisite showing under 40 CFR § 241.1 *et seq.*, the Department is required to include the Waste-Related Combustion NSPS in the proposed Plan Approval.

¹⁴ As an aside, Delta Thermo’s proposed project includes acceptance of waste deliveries equal to its ability to incinerate the waste. Despite its summary assertions that may in the future sell its fuel to third party facilities, Delta Thermo has drafted its Plan Approval Application such that it will not be entering the fuel marketing business. Although not determinative, this is yet another sign that the purpose of the project is waste disposal/destruction, and that Delta Thermo will never be able to meet the requirements of EPA’s legitimacy criteria. The standards for selling this material as fuel are even higher than combusting it on-site, and requiring an actual US EPA determination (which Delta Thermo has not requested). This issue is discussed in more detail in Comment 2, Section 5.

¹⁵ Even if it were to do so, this would be a technically impossible and scientifically meaningless endeavor, as fuel mix results presented in Attachment 3 of its Plan Approval Application demonstrate that contaminant levels can range sometime more than an order of magnitude.

5. Delta Thermo has not obtained a non-waste determination from EPA, as required for exemption under 40 CFR 241.3(c).

Facilities that combust fuels that (1) were obtained from a third party and (2) have been determined by EPA to be non-waste are exempt from the Waste-Related Combustion NSPS. Pursuant to 40 CFR § 241.3(a), EPA does not consider NHSM used as fuels that have been transferred to a third party, and have been granted a non-waste determination from EPA, to be “solid waste” when used in combustion units. 76 FR 15460 (Mar. 21, 2011). This provision is inapplicable to the proposed Delta Thermo project as it is not proposing to obtain its fuel from a third party that has obtained a non-waste determination from EPA. Rather, Delta Thermo is proposing to produce its own “fuel” which it will combust in its own facility.

Should Delta Thermo attempt to produce and sell its fuel to third party facilities, as is proposed in its Plan Approval Application and subsequent submission to the Department, those facilities would be subject to Section 129 of the Clean Air Act and its regulations, unless Delta Thermo obtains a non-waste determination from EPA. Obtaining a non-waste determination is a significant and lengthy process, which includes demonstration to EPA that the fuel meets the legitimacy criteria set forth in 40 CFR § 241.3(d)(1) and satisfies the following five criteria: (1) whether market participants treat the non-hazardous secondary material as a fuel rather than a solid waste; (2) whether the chemical and physical identity of the non-hazardous secondary material is comparable to commercial fuels; (3) whether the non-hazardous secondary material will be used in a reasonable time frame given the state of the market; (4) whether the constituents in the non-hazardous secondary material are released to the air, water or land from the point of generation to the point just prior to combustion of the non-hazardous secondary material at levels

comparable to what would otherwise be released from traditional fuels; and (5) other relevant factors. 40 CFR § 241.3(c)(1); 76 FR 15460 (Mar. 21, 2011).

Once submitted, EPA will evaluate the petition and issue a draft determination, notice of which must be provided to the newspaper or radio station where the combustion unit is located. EPA will accept comments on the draft determination for at least thirty (30) days, and may also hold a public hearing. Only after receipt of such comments and close of any such hearing may EPA issue a final non-waste determination. 40 CFR § 241.3(c); 76 FR 15460 (Mar. 21, 2011).

As set forth in Section A(4) above, neither the fuel proposed to be produced nor the feedstock proposed to be used by Delta Thermo meets the legitimacy criteria set forth in 40 CFR § 241.3(d). There is no also evidence in the Plan Approval Application or the material that the Department relied on to prepare the draft Plan Approval¹⁶ that Delta Thermo has petitioned for or obtained a non-waste determination from EPA. *See also* EPA, *Implementation of the NHSM Regulations, Part 241 Rule Clarifications and Response Letters*, <http://www.epa.gov/wastes/nonhaz/define/index.htm>. Accordingly, Delta Thermo's so-called fuel is a "solid waste" that if burned on-site, subjects its facility to the Waste-Related Combustion NSPS. Should Delta Thermo transfer such fuel to any third party facility, that facility would also be subject to the Waste-Related Combustion NSPS.

B. The Waste-Related Combustion NSPS apply to Delta Thermo's proposed facility.

As stated above, the Waste-Related Combustion NSPS, promulgated at 40 CFR Part 60, Subparts AAAA to FFFF, LLLL, work together to ensure that all solid waste incinerators are

¹⁶ In response to the Department's September 7, 2013 publication of its notice of intent to issue the instant Plan Approval, LAW specifically requested to review "the application, DEP's analysis and other documents used in the evaluation of the application." This comment is based on the documents obtained from that file review.

regulated under the Clean Air Act. As such, only those incinerators that meet certain limited statutory criteria are exempt from the Waste-Related Combustion NSPS. Delta Thermo is a solid waste incinerator subject to the Waste-Related Combustion NSPS because it meets the definitional criteria and is not entitled to any exemption.

Subpart AAAA imposes strict pre-construction and operating requirements, as well as emission, performance, monitoring and other standards, on new municipal waste combustion units that have the capacity to combust at least 35 tons per day but no more than 250 tons per day of municipal solid waste or refuse-derived fuel. 40 CFR § 60.1010; 40 CFR 60.1050 *et seq.*

In its July 19, 2013 Technical Deficiency Letter, the Department stated:

According to our technical support section in Harrisburg, the facility is subject to NSPS Subpart AAAA- Standards of Performance for Small Municipal Waste Combustion Units. Please update page 14 of the application identifying this subpart and provide a narrative discussing the applicability of NSPS subpart AAAA to this project.

In response, Delta Thermo submitted a letter to Krishnan Ramamurthy on July 25, 2013, which summarily concluded that “Delta Thermo will be producing and combusting a clean, homogeneous, pulverized, dewatered fuel generated from Delta Thermo’s Hydrothermal Decomposition batch process..[that] is neither MSW nor RDF under the Subpart AAAA definitions.”¹⁷ To reach that conclusion, Delta Thermo greatly misconstrued the definitions of “municipal solid waste” and “refuse-derived fuel” applicable to Subpart AAAA, arguing that

¹⁷ On behalf of PWIA, its counsel Land Air Water Legal Solutions LLC (“LAW”) requested an opportunity to review the proposed plan approval and the materials relied upon by the Department in processing this application, pursuant to the Department’s September 7, 2013 PA Bulletin notice. LAW reviewed these files on offered September 26, 2103. No information responsive to the July 25, 2013 correspondence, or setting forth any analysis or the basis used by the Department in failing to include the Subpart AAAA or any of the other Waste-Related Combustion NSPS requirements, was included in the materials that the Department relied upon in preparing the proposed Plan Approval.

despite the fact that municipal solid waste is the primary component of its “feedstock,” its proposed “fuel” (1) does not meet the definition of “municipal solid waste” since it also contains waste water treatment sludge, but (2) such “fuel” is not “refuse-derived” because Delta Thermo will not be “size-classifying” the waste during its processing.

The term “municipal solid waste” includes household, commercial/retail, and institutional waste. 40 CFR § 60.1465. The term does not include sewage sludge. 40 CFR § 60.1465. Delta Thermo’s proposed facility is a new facility designed to process an average of 120 tons per day of municipal solid waste. [Plan Approval Application, Attachment 1-1]. As such, Delta Thermo meets the threshold criteria for applicability under Subpart AAAA. The fact that it will be adding 47 tons per day of waste water treatment sludge on top of the 120 tons per day of MSW does not remove the facility from the auspices of Subpart AAAA.¹⁸¹⁹

Delta Thermo also argues in its July 25, 2013 letter to the Department that it is not subject to the requirements of Subpart AAAA because it is not proposing to burn “refuse-derived fuel.” Refuse-derived fuel is a subset of municipal solid waste, and Subpart AAAA defines the

¹⁸ Subpart AAAA does not broadly redefine municipal solid waste as non-municipal solid waste simply due to mixing it with a non-municipal solid waste, as suggested by Delta Thermo. In fact, Subpart AAAA specifically addresses this issue in the provisions pertaining to co-fired combustion units, which are defined at 40 CFR §60.1465 as:

Co-fired combustion units means a unit that combusts municipal solid waste with nonmunicipal solid waste fuel (for example, coal, industrial process waste). To be considered a co-fired combustion unit, the unit must be subject to a federally enforceable permit that limits it to combusting a fuel feed stream which is 30 percent or less (by weight) municipal solid waste as measured each calendar quarter.

Even under this definition, the municipal solid waste and non-municipal solid waste fuel still maintain their separate classifications/definitions. Co-fired combustion units are regulated under Subpart AAAA—they are not exempted from the subpart.

¹⁹ Although the Plan Approval Application repeatedly states that the facility will be taking 120 tons per day of MSW and 47 tons of sewage sludge, it also indicates that the “fuel” mix ratio will be 2 parts MSW to 1 part sewage sludge, by weight. The disposition of the up to 26 tons per day of MSW is unclear. At the waste acceptance rates stated in the application, the facility will combust 71.9% MSW by weight; at a 2-1 ratio, the facility would combust 66.7% MSW by weight. Both figures are more than double the co-fired combustion unit definition’s maximum allowable firing rate of 30% MSW by weight.

term to include “municipal solid waste produced by processing municipal solid waste through shredding and size classification.” 40 CFR § 60.1465. Delta Thermo argues that its proposed fuel is not refuse-derived because it is only shredding and not size classifying the municipal solid waste it receives. As an initial matter, EPA considers shredding to be a form of size classification. *See generally* EPA Comfort Letters, *available at* <http://www.epa.gov/waste/nonhaz/define/index.htm> (operations that modify size of material through shredding do not convert waste or refuse-derived fuel into nonwaste, because they do not meet the definition of processing). As a factual matter, Attachment 1-2 of Delta Thermo’s Plan Approval Application plainly states that “[b]ulk items such as mattresses, furniture, and large appliances [*sic*] will be sorted and removed from the site.”²⁰ Similarly, Attachment E-2 to Delta Thermo’s August 8, 2013 response to the Department’s July 19, 2013 Technical Deficiency Letter states: “[t]he bulk waste is separated from the rest of the MSW in the tipping floor. Bulk waste is then carried to a separate part of the plant and determined what is needed for their disposal.” [Attachment E-2]. By its own admission, Delta Thermo is removing bulk (i.e. large) items from a waste stream and therefore is utilizing “size classification” as a means of processing. Regardless, neither shredding nor size classification alone or in combination is sufficient to transform waste or refuse-derived fuel into non-waste for purposes of either the NHSM or the Clean Air Act waste combustion rules.

Even if Subpart AAAA were inapplicable, Delta Thermo would then be subject to the more stringent requirements of Subpart CCCC. Like Subpart AAAA, Subpart CCCC imposes

²⁰ The July 25, 2013 letter also lists “post sorting” as one Delta Thermo’s “major process components.” Though the letter does not further describe what “post sorting” is, and it is not included in the process description contained in Attachment 1 to the Plan Approval Application, it is reasonable to assume that such sorting may also include some size classification.

strict pre-construction and operating requirements, as well as emission and performance standards on commercial and industrial solid waste incineration units, which include “any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241.”²¹ As stated in more detail above, Delta Thermo is proposing to “utilize municipal solid waste (MSW) and sludge from the City of Allentown’s Wastewater Treatment plant as feedstock to produce a fuel to generate 3 to 4 gross megawatts (MW) of electricity for internal use and sale”²² at its proposed facility in Allentown, PA. [Plan Approval Application, Attachment 1-1]. Under Clean Air Act regulations, municipal solid waste and waste water treatment sludge are by definition NHSM. 40 CFR § 241.2. Delta Thermo cannot unilaterally proclaim this material or its proposed “fuel” to be non-waste.²³ Rather, it must demonstrate to the Department and EPA that it meets the statutory criteria of a non-waste fuel pursuant to 40 CFR 241.3(b)(4). Without such demonstration, Delta Thermo’s “feedstock” and proposed “fuel” is presumed to be a solid waste and its proposed facility is subject to the Waste-Related Combustion NSPS.

C. Delta Thermo’s proposed facility is not a “small power production facility.”

Delta Thermo’s previous attempt to characterize its proposed facility as a “small power production facility” in order to circumvent the requirements of Clean Air Act Section 129 and

²¹ Similarly, Subpart LLLL (sewage sludge incinerators) provides support for Delta Thermo’s proposed facility is regulated under Subpart CCCC, as it indicates that combustion units that incinerate sewage sludge and are not located at a wastewater treatment facility may be subject to Subpart CCCC of 40 CFR Part 60. 40 CFR § 60.4780.

²² According to Delta Thermo’s Plan Approval Application, the proposed facility will net only 2.3 MW electricity. As previously noted, this “energy production facility” will make just 50% of the electricity from a ton of waste than traditional waste-to-energy incinerators, despite the fact that this facility will have higher air pollutant emissions for each ton of waste incinerated.

²³ Attachment 4 to the Plan Approval Application summarily states: “[s]ince DTE will be burning a produced fuel (not a waste), this rule [Subpart CCCC] does not apply.”

the waste combustion regulations within 40 CFR Part 60 similarly fails.²⁴ Clean Air Act regulations provide that small power production facilities are generally exempt from the requirements of 40 CFR Part 60, Subparts AAAA and CCCC if they meet four (4) criteria.

Those criteria include:

- (1) qualification as a “small power production facility” under Section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C));
- (2) combustion of homogeneous waste (excluding refuse-derived fuel) to produce electricity;
- (3) notification to the Administrator of EPA that the unit qualifies for the exemption; and
- (4) provision of documentation that the unit qualifies for the exemption to the Administration of EPA. 40 CFR § 60.1020(b); 40 CFR § 60.2020(e).

Substantively, Delta Thermo has not and cannot demonstrate that its proposed facility meets the criteria for exemption as a “small power production facility.” Specifically, Delta Thermo is proposing to burn a non-homogenous waste stream such that it cannot meet Criteria 2 of the small power production facility exemption. As explained in the Preamble to the most recent iteration of the Waste-Related Combustion NSPS,

²⁴ In its December 1, 2010 e-mail to Mark Wejksner, Delta Thermo states summarily that “[t]he Allentown facility meets [the “small power production facilities”] exemption category, in which case, the NSPS does not apply.” Similarly, in Attachment 4 to the Plan Approval Application, Delta Thermo states, “DTE understands that this plant is classified as a small power production facility.” Nowhere in its Plan Approval Application or in the materials relied upon by the Department to issue the draft Plan Approval does Delta Thermo provide any legal or factual support for this statement. Given the two very clear procedural requirements for classification as a small power production facility—notification to US EPA that the facility has been so designated and receipt of documentation affirming that status, it stretches credibility that an applicant would claim to “understand” it is a small power production facility without having the documents that prove it so. A review of the Federal Energy Regulatory Commission’s (FERC) docket shows no evidence that a small power production facility application has ever been submitted by Delta Thermo. Due to the on-going partial Federal government shutdown, we were unable to contact FERC staff directly.

Congress intended [the small power production facility] exemption to apply only when the waste stream has a consistent makeup that allows the source and the enforcement authority to predict the range of emissions from the combustion of the waste on an ongoing basis. In keeping with this interpretation, we maintain that the homogeneous wastes are generally material specific (e.g., tires or used oil). We believe this means that a homogeneous waste is of known origin and that it can be identified as a specific material or materials—using the example in the Act, certain used oils or scrap tires. By contrast, municipal solid waste can be identified as municipal solid waste as a general term, but it is not composed of only one or two specific type of waste; e.g. municipal solid waste cannot be identified as one specific material or group of materials.

78 FR 9124 (Feb. 7, 2013). Simply put, EPA has determined that municipal solid waste is, by its very nature and definition, a non-homogenous waste stream. The reason for limiting such exemption to facilities burning only homogenous waste is to ensure “predictable known contaminant levels, even if those contaminant levels vary within a range.” 78 FR 9124 (Feb. 7, 2013).

In the instant matter, Delta Thermo is proposing to combine municipal solid waste (an already heterogeneous waste stream) with waste water treatment sludge to make a “fuel” which it will then burn on-site to generate electricity. Unlike other companies that are proposing to use sophisticated mechanical and spectroscopic equipment to remove contaminants from solid waste, recover the valuable fuel feedstock, and improve the physical and combustion of such material so that it meets unique customer specifications, Delta Thermo is proposing to use municipal solid waste as a whole (except for certain bulk items, glass, and metal) to make its proposed “fuel” with no customer specifications. While its proposed process of mixing, steaming, and drying may make the feedstock look homogenous, it will not change the chemical composition of the waste such that it is homogeneous. In other words, once processed by Delta Thermo, each batch

of waste will not have the same consistent chemical makeup that will allow the Department to “predict the range of emissions from the combustion of the waste on an ongoing basis.”

This is borne out in Delta Thermo’s own submissions. In Attachment 3 to its Plan Approval Application, Delta Thermo states that it conducted sixteen (16) tests “of the feedstock after it was converted into the PF product” over a 180-day period. However, Delta Thermo summarizes the results for only three (3) samples of “pulverized”²⁵ fuel mix. As reported by the applicant, contaminant levels detected in those samples were highly inconsistent, with the levels of certain contaminants (i.e. cadmium, nickel) ranging by more than an order of magnitude.²⁶ It is clear from even this minimal testing, that Delta Thermo is not producing a homogenous “fuel” as required to meet Criteria 2 of the “small power production facility” exemption to Subparts AAAA and CCCC.

There is similarly no indication in the Plan Approval Application or the materials relied upon by the Department to prepare the proposed Plan Approval that Delta Thermo has taken the necessary procedural steps to exempt its facility as a “small power production facility” (i.e. notifying EPA that its proposed facility qualifies for the exemption and providing the requisite documentation), as required by 40 CFR § 60.1020(b). *See also* 78 FR 9124 (Feb. 7, 2013) (“[T]he final rule [under 40 CFR Parts 60 and 241] requires qualifying small power producers and qualifying cogeneration facilities that combust solid waste notify the EPA that such waste is

²⁵ The applicant’s use of the term “pulverized” in describing its fuel is confusing, as the Plan Approval Application lists mechanical shredding equipment but does not appear to include any equipment that will “pound, crush or grind” the waste “into a fine powder”. *See* Definition of “Pulverize,” <http://www.thefreedictionary.com/pulverize> .

²⁶ The results for aluminum, antimony, arsenic, chromium, copper, potassium, magnesium, manganese, lead, and zinc analyses also varied by more than a factor of 2. Delta Thermo has also failed to present any analysis as to what percentage of the metals in its proposed “fuel” will be retained in bottom ash following combustion. Instead, Delta Thermo merely recites model ash retention factors from a 1990 seminar hosted by the cement industry.

homogeneous. (40 CFR 60.2020 and 40 CFR 60.2555).”).

The mandate of 40 CFR 241.3 is clear - NHSM that are used as ingredients or fuel in a combustion unit are “solid wastes,” unless categorically exempt under 40 CFR § 241.4, processed such that they meet the requirements of 40 CFR § 241.3, or expressly determined by EPA to be non-solid waste. Absent such exemptions, facilities that burn solid waste are obligated to comply with the Waste-Related Combustion NSPS. Neither the NHSM that Delta Thermo proposes to use as “feedstock” nor the “fuel” it proposes to produce meet the criteria for exemption under 40 CFR § 241.3 and therefore each is considered “solid waste” for purposes of Clean Air Act Section 129 and the regulations promulgated thereunder. As such, Delta Thermo’s proposed facility is subject to the Waste-Related Combustion NSPS and those regulations must be included in the proposed Plan Approval before it can be issued. Approval of the current proposed Plan Approval would allow circumvention of the appropriate permitting procedures required for solid waste combustion units, and would result in approval of a facility that is non-compliant with the Clean Air Act.²⁷

Comment #3: Delta Thermo has not provided an accurate Best Available Technology analysis.

25 Pa. Code §127.12(a)(5) requires that the emissions from a new source will be the minimum attainable through the use of the best available technology. 25 Pa. Code § 121.1 defines best available technology as “equipment, devices, methods or techniques as determined by the Department which will prevent, reduce or control emissions of air contaminants to the maximum degree possible and which are available or may be made available.” Whether a

²⁷ And potentially RCRA.

control technology is available is determined in the same manner that Federal Best Available Control Technology ("BACT") is determined based on technological feasibility and availability considering the cost of control on a dollar per ton of emissions controlled.

Delta Thermo has proposed a variety of control devices and methods that will reduce emissions of air contaminants. However, the application does not include any information indicating that Delta Thermo has performed a credible analysis to demonstrate that the control is the "maximum degree possible and which are available or may be made available." More specifically, there is no indication that the RACT/BACT/LAER Clearinghouse ("RBLC") was reviewed for possible controls used in similar operations. At a minimum, the technologies used to achieve the emission limits set forth in the Waste-Related Combustion NSPS must be evaluated as part of the BAT analysis. Absent a demonstration by the applicant to the contrary, the technologies relied upon by US EPA to establish those emission limits are technologically available; because Delta Thermo failed to perform a proper BAT analysis, it is unclear as to whether they are also economically available.

Similarly, the applicant ignores long-standing Department guidance documents that are directly applicable to its project, including the Air Quality Permitting Criteria, including Best Available Technology for Municipal Waste Incineration Facilities published in 1996. At a minimum, absent a demonstration by the applicant to the contrary, the technologies relied upon by the Department to establish these emission rates, as well as the continuous monitoring requirements set forth therein, should have been evaluated by the applicant and assumed to be technologically available. Given the age of the determinations set forth in this guidance document, the applicant should have performed a survey to determine how far modern control

techniques have advanced in the intervening seventeen (17) years. It is our understanding that the other guidance documents and Department determinations relating to waste incineration have been issued by the Department, and the application fails to note the existence of any of these additional sources of regulation and/or information.

Given our time constraints in preparing this comment letter²⁸ and the extremely limited information and analysis provided by Delta Thermo, PWIA cannot offer specific comments regarding Delta Thermo's selection of specific control equipment. However, we note that the discussion of particulate matter and metals emission control technology is particularly worrisome. The short narrative indicates that cyclones are "only 75 to 80 percent effective on large particles, and basically ineffective in removing submicron particles and metals fumes." (Plan Approval Application, page 4-13). Delta Thermo then indicates that it will combine this technology with "fabric filtration," the efficacy of which it does not discuss at all in the BAT section. On page 3-4 of the Plan Approval Application, Delta Thermo uses a control efficiency of 99.8% from the proposed baghouse to calculate the estimated emissions from the project. The source of the 99.8% control efficiency is unstated, and directly contradicted by the applicant's equipment vendor. [See Attachment 2-1, 2-2 of the Plan Approval Application, including the Data Summary of Performance and Design in the Ducon Technologies proposal]. While the difference in control efficiency between 99.4% and 99.8% is seemingly small, the lower control

²⁸ The Department provided notice of the 30-day comment period regarding this application in the September 7 and 14, 2013 issues of the PA Bulletin. The September 7, 2013 PA Bulletin was available on-line on September 6, 2013. On September 6, 2013, in response to the PA Bulletin announcement, PWIA's counsel, LAW, requested an opportunity to review the proposed plan approval and the materials relied upon by the Department in processing this application. LAW was offered September 26, 2013, as the first available date to review the materials. In a letter dated September 24, 2013, LAW requested an extension of the comment period due to the unavailability of file review appointments. In a subsequent telephone conversation between LAW and the Department's counsel, LAW was informed that the comment period for this Plan Approval closes on October 15, 2013, and that it was highly unlikely that an extension of the comment period would be granted by the Department.

efficiency actually triples the emission rate versus the higher control efficiency. The proposed Plan Approval uses the 99.8% control efficiency. Similarly, Delta Thermo dismisses Venturi scrubbing technology because it generates wastewater, although elsewhere in the plan approval application Delta Thermo notes that it intends to install a wastewater treatment system for treatment of its wastewater prior to its return to the adjacent and contiguous Allentown WWTP. Delta Thermo has failed to provide the required BAT analysis, is proposing installation of equipment that does not meet BAT requirements, and has miscalculated the PM-10 emission rate from the facility.

Comment #4: Delta Thermo has mischaracterized the results of its laboratory analyses.

As noted in Comment #3 above, Delta Thermo's Plan Approval Application indicates that it "conducted 16 tests over a 180-day period" in its pilot plant but only provides three sets of laboratory analysis. [Plan Approval Application, page 3-1]. It is unclear as to whether Delta Thermo has withheld the other 13 sets of laboratory data, or whether the use of the phrase "16 tests" was merely erroneous. Although the Plan Approval Application claims that the "laboratory results indicated that a fairly consistent product was produced over the entire test period," the actual test data demonstrates this to be the opposite—the laboratory results confirm that the product was not homogeneous.

The highest reported result for most of the parameters was more than double the lowest value. In many instances, the variances were much higher—approximately one-third (1/3) of all tested parameters had variances between the low and high sample of at least a factor of four, and two parameters varied by more than an order of magnitude. This is not indicative of production

of a “fairly consistent product”; it is direct proof that the processed waste is not consistent and is not homogeneous.²⁹

Comment #5: Use of improper assumptions regarding the disposition of metals and other hazardous air pollutants (“HAPs”) contained in the waste.

Attachment 3 of the Plan Approval Application indicates that certain emission factors were “taken” from the Basic Engineering Report, issued in November 2012, prepared by a German company, Jasper GmbH. On August 8, 2013, Delta Thermo indicated that Jasper GmbH “will” be the designer of the Complete Combustion Chamber portion of the system. It is our understanding that the Department was neither provided nor relied upon the Basic Engineering Report, as it was not provided to the commenter. The Plan Approval Application includes no technical discussion of the assumptions, data, methods, etc. that Jasper GmbH used to calculate the so-called emission factors. Interestingly, Jasper GmbH does not appear to evaluate or estimate emissions from any of the parameters subject to the laboratory analysis discussed in Comment #4. The Department has an obligation to review and evaluate the Basic Engineering Report to determine its reliability in processing this Plan Approval Application.

Pre-control emissions were estimated by using the high values obtained for certain parameters in the laboratory analysis, and then assuming that virtually none of the metals present in the combusted waste are emitted (for seven of the nine metals, pre-control emissions were stated as being between 0.44% and 0.04% of the total metal present in the waste stream). The basis for this assumed emission rate is not the effectiveness of the control devices (as these are

²⁹ It is our further understanding that EPA requires significant laboratory data and statistical analysis when evaluating submissions from applicants seeking non-waste determinations, and requires that additional parameters be tested for beyond those selected by the applicant.

pre-control estimates), but rather a paper presented at a conference for a totally different combustion technology prepared twenty-three years ago.³⁰ [See Plan Approval Application, Attachment 3-3; a copy of this paper was not provided to the Department in the Plan Approval Application]. The Department has an obligation to ensure that current and accurate emission factors are used to estimate metal, including HAP metal, emissions. Use of a twenty-three (23) year old paper discussing cement kiln emissions is not reliable.

Other than sorting and removing bulky items and some recyclables, this facility will be accepting and incinerating all of the municipal solid waste it receives. Included in the municipal solid waste that the facility receives will be plastics and other chlorinated materials. Chlorine content is a major factor in the levels of dioxins, furans, and dioxin-like compounds (collectively, "dioxins") that will be produced in the combustion process and emitted by the facility. Dioxins are powerful carcinogens that are regulated as both Hazardous Air Pollutants and as Persistent Organic Pollutants. No emission estimates, control technology, or monitoring requirements are included in the Plan Approval Application for dioxins. This is a significant omission, and regulating and reducing dioxin emissions is an important objective of the Waste-Related Combustion NSPS. There is no discussion or basis setting forth any analysis by the Department for the selection of the dioxin/furan limits in the proposed Plan Approval in any of the Department's documents, including the undated Permit Review memorandum.

³⁰ Reliance on this cement kiln data implies that Delta Thermo considers cement kilns to be an equivalent technology to its proposed process. It seems logical that an evaluation of cement kiln control technology and emission limits, as set forth in NSPS and National Emission Standards for Hazardous Air Pollutants, should have been included in its BAT evaluation.

Comment #6: Failure to meet the minimum requirements for municipal and county notifications.

Under 25 Pa. Code §127.43a, applicants for plan approvals “shall notify the local municipality and county where the air pollution source is to be located that the applicant has applied for the plan approval as required by section 1905-A of The Administrative Code of 1929 (71 P. S. § 510-5). The notification shall clearly describe the source and modifications that are to take place. The notice shall state that there is a 30-day comment period which begins upon receipt of the notice by the municipality and county.” Delta Thermo’s Plan Approval Application does not include municipal notifications that meet this requirement. The only municipal notifications included in the application are specific to zoning and land-use issues, and fail to accurately describe the source and modifications that are to take place. These municipal notifications are further deficient under 25 Pa. Code §127.43a, as they instruct the recipients to limit the nature of their comments to land-use issues only, and further indicates that only a small portion of the full application (the General Information Form) should be reviewed by the recipients. [See Plan Approval Application, Attachment 5 (“DEP invites you to review the attached GIF and comment on the accuracy of answers provided with regard to land use aspects of this project; please be specific to DEP and focus on the relationship to zoning ordinances”)]. In addition, Delta Thermo’s purported municipal notifications indicate that they are issued as required under 25 Pa. Code §127.462, which pertains to minor operating permit modifications, not plan approval applications.

While this failure by Delta Thermo could be viewed as “harmless error” given the demonstrated high level of public interest in the project, this error could be construed as part of a

larger scheme (improper confidentiality requests, etc.) designed to hide as much of the proposed project as possible from public review and comment.

Comment #7: Failure to submit a permit application for its proposed on-site wastewater treatment plant.

The proposed project will generate significant amounts of contaminated wastewater, which will be produced by the application of steam to the shredded municipal solid waste as well as from various industrial process discharges, including condensate and air pollution control device discharge (scrubber). Delta Thermo's Plan Approval Application indicates that this wastewater will be treated on-site and sent to the Allentown WWTP for processing. [Plan Approval Application, page 1-3]. The amounts of contaminated wastewater that will be generated are not stated in the original Plan Approval Application, nor are the expected contaminants and/or levels of contamination. Given that the facility proposes to process 120 tons per day of municipal solid waste using high pressure steam and operate a scrubber, it would seem obvious that the quantity of wastewater and the levels of contamination will be significant.³¹

In response to the Department's Technical Deficiency Letters and about two-thirds of the way to expiration of the timeline set forth in the Permit Decision Guarantee, Delta Thermo submitted nearly one hundred (100) pages of additional application information in multiple submissions (two (2) separate submissions to the regional office and a third submission to the Department's central office). A single page of its August 8, 2013 response letter dealt with Delta

³¹ On the other hand, Delta Thermo's General Information Form indicates that the facility will generate less than 800 gallons per day of wastewater. At the proposed rate of 120 tons per day of municipal solid waste, this works out to at least 300 pounds of waste processed per single gallon of water (excluding the two condensate wastewater streams).

Thermo's plans to construct and operate the proposed wastewater treatment plant. While that response did include some additional information, it was very limited in scope (i.e. over three thousand (3,000) pounds per day of treatment chemicals will be added to the waste water, and Delta Thermo's wastewater treatment plant would send 165 tons per day of industrial wastewater to the Allentown WWTP, but no pollutant or contaminant information). As Delta Thermo notes, it's "Wastewater Treatment System (WTS) is a fundamental technology of the DTE's plan process" (emphasis added)³². Based on the limited information available, it appears that a water quality permit is required for Delta Thermo's proposed facility (or, in the alternative, a justification that such a permit is not required). However, based on the Plan Approval Application, review of the PA Bulletin, and the Department's eFacts website, Delta Thermo has not submitted any application for its treatment of waste water prior to discharge to the Allentown WWTP.

Failure of Delta Thermo to submit an application for its proposed WTS appears to be in conflict with the Permit Coordination Policy and the Department should not issue this proposed Plan Approval (or any other permit) to Delta Thermo until all required permit applications have been filed with the Department. We also note that the Department will often "hold" completed permits ready to be issued under one Department program until all other permits required for the project are ready for issuance. It is unclear as to why issuance of Delta Thermo's permits is not being coordinated as such.

³² See page 10 of Attachment E to the August 8, 2013 response.

Comment #8: Delta Thermo has attempted circumvention of the Department's regulations through staged permitting.

Delta Thermo has repeatedly attempt to circumvent the proper air permitting processing procedures, in violation of 25 Pa. Code § 127.216. Specifically, the Department approved a Request for Determination ("RFD") for a "Research and Development" (R&D) facility to be constructed on the Allentown site by Delta Thermo in 2010. Despite various and sundry efforts by Delta Thermo to have the restrictions applicable to R&D facilities lifted in the RFD (including litigation), the Department did not do so and the Environmental Hearing Board dismissed Delta Thermo's appeal. Delta Thermo freely admits that the facility proposed to be constructed in the pending Plan Approval Application is the same facility approved in the RFD. In its March 29, 2013 Plan Approval Application transmittal letter, Delta Thermo indicates that it believes it can begin construction for this facility, to be operated for commercial purposes, under authority of the RFD that authorizes only R&D operations, despite the fact that it expressly indicates that it has no intention of operating an R&D facility and despite the fact that no plan approval has been issued. To do so is a classic case of circumvention.

Comment #9: This proposed facility appears to be located in an environmental justice community and Delta Thermo has not completed a risk assessment that calculates the increase in cancer risks to local residents from its proposed operation.

According to the Department's eMap website and the proposed facility's latitude and longitude (as provided by Delta Thermo in the GIF), the proposed facility is almost perfectly centered in an environmental justice community. There is no indication that the Department or Delta Thermo have followed the public participation procedures in the Department's Environmental Justice Public Participation Policy, Document No. 012-0501-002 (April 24, 2004)

to ensure fair and meaningful involvement of the community, and to otherwise ensure fair treatment – that no group of people, including any racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. This is true despite the fact that the project at issue involves waste and sludge incineration, a classic example of a so-called “trigger permit” under Department-parlance. Given the high levels of public interest and opposition that exists to this project, as documented in press clippings in the Department’s files, this facility also should have triggered the public participation procedures, from initial application submission.

Although the Plan Approval Application includes a dispersion analysis, the Department’s files do not include any information that indicates whether the dispersion analysis was completed pursuant to a Department-approved protocol. Similarly, the Department has not produced any information indicating that the dispersion analysis was reviewed and approved by the experts in the Department’s Central Office.

The dispersion analysis included in the Plan Approval Application does not analyze emissions of mercury or dioxin. This is a significant error given the serious potential health-effects from these pollutants. Just as troubling is the fact that no risk assessment for cancer and non-cancer effects has been required by the Department. Landfill gas-to-energy projects, using much cleaner, proven, and reliable technology, with significantly lower emission rates, have been required to submit dispersion models (far exceeding the limited scope of applicant’s effort) and full-blown risk assessments. The proposed Plan Approval should be denied as environmental justice concerns, including a calculation of the increase in expected cancer rates,

has not been performed. This issue is even more troubling given that the applicant has made no effort to include any information relating to its dioxin emissions in the Plan Approval Application. Finally, we note that Delta Thermo improperly claimed the dispersion analysis, as well as most of its Plan Approval Application, to be confidential business information. The Department ultimately released all of the claimed “confidential” information as it found that none of the information was in fact classified as confidential. It is black-letter law that emission information cannot be held confidential by the Department, and Delta Thermo’s multiple attempts to claim the dispersion analysis as confidential, thus avoiding from the affected public an opportunity to review this document, possibly surely hints at what the results of a risk analysis may show.

Conclusion

Issuance of the proposed Plan Approval would violate the Air Pollution Control Act, the Clean Air Act, and their implementing regulations. The Plan Approval Application that the Department relied upon in preparing the proposed Plan Approval is incomplete, inaccurate, and attempts to circumvent inclusion of clearly applicable requirements. As a result, because the Department was forced to rely upon erroneous information that was supplied in the Plan Approval Application, the proposed Plan Approval does not meet the minimum requirements set forth in 25 Pa. Code § 127.12b(b), nor the procedural requirements set forth in 25 Pa. Code § 127.43a.

At its most fundamental level, and pursuant to both federal and state law, the proposed project is a waste disposal project. The proposed project would produce half of the energy of

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traditional waste-to-energy incineration, while being subject to significantly much less stringent emission limits, as well as operating, monitoring and other requirements. PWIA urges the Department, under authority 25 Pa. Code 127.13b, to reject Delta Thermo's Plan Approval Application.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Mark Pedersen FOR". The signature is fluid and cursive.

Mark Pedersen
President