

November 25, 2013

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Chief, Permits Section
Division of Municipal and Residual Waste
Bureau of Waste Management
Department of Environmental Protection
P.O. Box 69170
Harrisburg, PA 17106-9170
717-787-7381

Re: General Permit Application No. WMGM047: Delta Thermo Energy Trash and Sewage Sludge Incinerator

Dear Mr. Walters:

Kindly accept these comments on the proposed General Permit Application No. WMGM047 for the trash and sewage sludge incinerator planned by Delta Thermo Energy (DTE).

Incorporation of Other Comments

It is our intent that the comments filed by the Pennsylvania Waste Industries Association on this permit and on DTE's Air Plan Approval 39-00099A be fully incorporated as a part of our comments, and specifically that the legal conclusions about the proposed facility being a waste incineration facility that must be regulated as such – not as an energy facility – become the basis for the comments below.

Request for Comment Deadline Extension and Application of DEP's Environmental Justice Public Participation Policy and DEP's Policy on Public Participation in the Permit Review Process

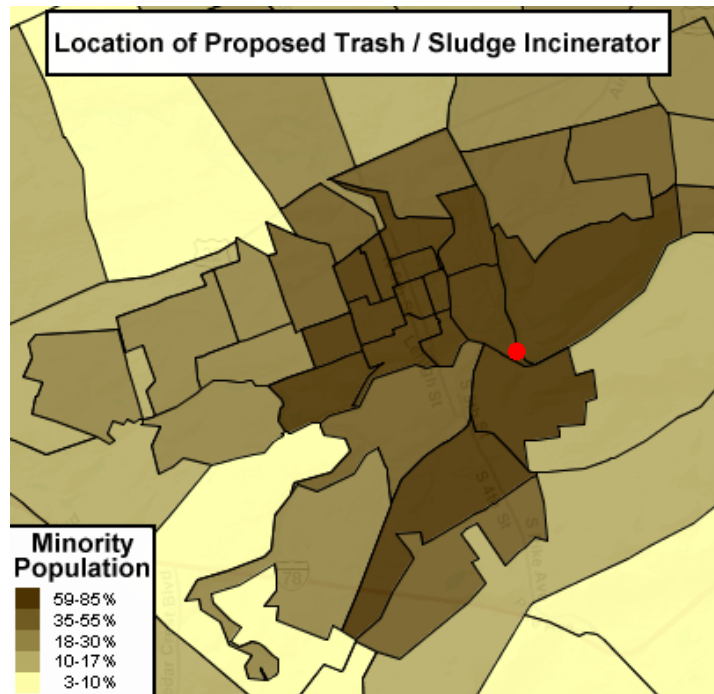
We respectfully request that DEP:

- Have all relevant DTE waste permitting documents, including the permit application and proposed general permit, translated into Spanish and made readily available in the community near the proposed incinerator at a location where files may be accessed in evening hours and on weekends;
- Hold a public hearing on the permit, as community members have been requesting;
- Do concerted outreach through English and Spanish-speaking media, and postings/mailers throughout the nearby community to alert people to the hearing at least two weeks in advance, with the English and Spanish language permit documents available for review during that time;
- Extend the comment deadline until 30 days after such a hearing takes place.

We feel that this is justified for several reasons, including:

- Significant public interest in the project, as demonstrated by the collection of 3,500 signatures by interested residents in the area earlier this year on a clean air ordinance initiative petition, at least 56 local news articles on the topic (some of which are in DEP's Northeast Regional Office files for this project; see Attachment A for the rest), largely in response to community organizing on the issue, and significant turnout at the public meeting which the community got after asking for a hearing.

- The fact that the community is an environmental justice community according to DEP’s own criteria. The tract that the proposed incinerator sits in, on Kline's Island, is Census tract 5. That tract is 86% people of color (66% Hispanic/Latino, 14% black and 16% white). The one immediately downwind (tract 96) is 60% minority (47% Hispanic/Latino, 9% black and 40% white), and the one just to the south of it (tract 6) is also 60% minority with almost identical proportions (48%, 8%, 40%, respectively).



- The Spanish translation and extra effort to reach the Spanish-speaking community is a necessity considering the high numbers of residents in the community from whom Spanish is their first, if not only, language.
- The fact that [DEP’s Environmental Justice Public Participation Policy](#) explains that this permit should serve as a Trigger Permit, as it fits one of the seven types of permits for which “application reviews for these permits warrant heightened scrutiny by DEP and an enhanced public participation process.” Under Appendix A of the policy, waste permits for “commercial incinerators and other waste processing facilities” are trigger permits. Since this general permit application is illegal, as explained below, a conventional waste permit process is required and this policy must be applied. Even if the general permit application were legal, it should be considered a trigger permit by virtue of being an “opt-in” permit, through DEP’s consideration of: 1) identified community concerns; 2) present or anticipated environmental impacts; and 3) reasonably anticipated significant adverse cumulative impacts. It is clear that all of these factors are met, even though they are factors and not all must be met. There is significant and demonstrated community concern (see Attachment A). As the PWIA comments on DTE’s air plan approval point out (see Attachment B), the incinerator would be the most polluting of any in the state, this contributing to anticipated environmental impacts and significant adverse cumulative impacts. Significant adverse cumulative impacts are also apparent, as the Lehigh Valley is the nation’s 11th worst asthma capital (see: [Asthma Capitals 2013](#), Asthma and Allergy Foundation of America. <http://www.asthmacapitals.com>; full report here: http://www.aafa.org/pdfs/2013_AC_FinalPublicList1.pdf) and is 14th worst in the nation for

particulate matter pollution and one of just a handful of regions where this pollution is getting worse (see “The State of the Air 2013,” by American Lung Association, <http://www.stateoftheair.org/2013/assets/ala-sota-2013.pdf>).

- We also ask that DEP apply its new [Policy on Public Participation in the Permit Review Process](#).

This Proposed Permit is Illegal, Since General Permits are Not Allowed for this Type of Facility

The Pennsylvania Bulletin noticing this permit application lists the permit application under those “for a General Permit to Operate Municipal Waste Processing Facilities and the Beneficial Use of Municipal Waste.”¹

The notice for this permit describes the proposed permit as “for the processing of municipal solid waste and sewage sludge to produce a fuel for electricity generation.”

PWIA’s comments on DTE’s air plan approval 39-00099A make it abundantly clear that the proposed DTE facility is to be regulated as a municipal solid waste facility, not an energy facility.

25 Pa. Code § 271.811(g)² states that general permits may not be issued for the use of a waste for construction or operations of a resource recovery facility.

The law reads:

25 Pa. Code § 271.811. Authorization for general permit.

- (g) The Department will not issue a general permit under this subchapter for the following:
 - (5) The use of a waste for construction or operations at a resource recovery facility or disposal facility.

The municipal waste regulations’ definitions of “processing” includes “resource recovery facilities.” Even if the “processing” term did not apply to this permit sought by DTE, the definition of “resource recovery facility” clearly does.

The definitions³ state:

Processing—Technology used for the purpose of reducing the volume or bulk of municipal or residual waste or technology used to convert part or all of the waste materials for offsite reuse. Processing facilities include, but are not limited to, transfer facilities, composting facilities and resource recovery facilities.

Resource recovery facility—

- (i) A processing facility that provides for the extraction and utilization of materials or energy from municipal waste.

¹ 43 Pa.B. 302, Saturday, January 19, 2013. <http://www.pabulletin.com/secure/data/vol43/43-3/79a.html>

² <http://www.pacode.com/secure/data/025/chapter271/s271.811.html>

³ <http://www.pacode.com/secure/data/025/chapter271/s271.1.html>

(ii) The term includes a facility that mechanically extracts materials from municipal waste, a combustion facility that converts the organic fraction of municipal waste to usable energy and a chemical and biological process that converts municipal waste into a fuel product.

(iii) The term includes a facility for the combustion of municipal waste that is generated offsite, whether or not the facility is operated to recover energy.

(iv) The term includes land affected during the lifetime of operations, including, but not limited to, areas where processing activities actually occur, support facilities, borrow areas, offices, equipment sheds, air and water pollution control and treatment systems, access roads, associated onsite or contiguous collection, transportation and storage facilities, closure and postclosure care and maintenance activities and other activities in which the natural land surface has been disturbed as a result of or incidental to operation of the facility.

(v) The term does not include:

(A) A composting facility.

(B) Methane gas extraction from a municipal waste landfill.

(C) A separation and collection center, drop-off point or collection center for recycling, or a source separation or collection center for composting leaf waste.

(D) A facility, including all units in the facility, with a total processing capacity of less than 50 tons per day.

While DTE claims it is an “energy production facility,” given the minimal amount of electricity it will generate, and that the meaningful portion of its revenue generation will come from disposing of municipal solid waste, it is undoubtedly and primarily in the business of waste disposal and can only be understood as a resource recovery facility, which makes it clearly ineligible for a general waste permit.

This Proposed Permit is Illegal, Since General Permits are Not Allowed for Use of Heterogeneous Fuels

The project does not meet the *conditions* required for a general permit. Under 25 Pa. Code 271.811, general permits may be issued if certain conditions are met. The first condition listed [25 PA Code 271.811(a)(1)] states:

“The wastes included in the category are generated by the same or substantially similar operations and have the same or substantially similar physical character and chemical composition. If wastes are not the same or substantially similar and are blended for use, the blend shall be consistently reproduced with the same physical character and chemical composition.”

The project does not meet this condition because it plans to burn municipal solid waste (combined with wastewater treatment sludge), which is highly heterogeneous. DTE may intend to sort out the non-recyclable waste in order to create a more homogenous waste stream and thus build a more consistent fuel out of the waste, but there is little evidence they (a) will be successful in this endeavor, or (b) possess the self-regulating interest or capacity to ensure aggressive and careful sorting processes to ensure this

consistency on an on-going basis. With regard to (a), as the PWIA notes in its fourth comment on DTE's Air Permit Application (attached, pages 28-29), the actual test data for air emissions provided by DTE confirm that the fuel product was not homogeneous. PWIA notes, in particular, "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."

DTE may eventually be able to produce laboratory reports implying a more homogenous product, but with respect to point (b) above, there is no reason to believe DTE will be reliable in producing such results on a consistent basis, most obviously, because they have no meaningful operational history of their waste-to-fuel process or technology and because they are explicitly and intentionally attempting to avoid the application of continuous emissions monitoring, which would alert them and DEP of their failure to successfully sort waste and/or produce a consistent fuel. A company that cannot even follow the proper permit application processes, that endeavors to keep information from the public by falsely classifying it as "confidential," and that is falsely trying to mask its clear task of waste disposal under the guise of an extremely (and comparatively) inefficient energy production facility cannot be trusted to self-monitor and self-regulate its own waste homogenization process. Given the hazardous nature of the pollutants that can be emitted from DTE's combustion process, for DEP to allow DTE to self-monitor and self-regulate in this way would be a clear violation of its mandate to protect the health and safety of its citizens through a cleaner environment.

This Proposed Permit is Illegal, Since General Permits are Not Allowed for Facilities That have a Potential to Adversely Affect the Environment or which are Related to Municipal Waste Management Plans

25 Pa. Code 271.811(g)(2) disallows the use of general permits for two additional reasons, both of which apply to this proposed permit:

25 Pa. Code § 271.811. Authorization for general permit.

- (g) The Department will not issue a general permit under this subchapter for the following:
 - (2) A facility or activity which should be covered under the individual permitting process required in this article because of its size and potential to affect the environment adversely or because of its relationship to municipal waste management plans.

In addition to not meeting the *conditions* required for a general permit. Under 25 PA Code 271.811, under this same section of the law, DEP is *obligated to reject* applications for general permits when they are for projects that have the "potential to affect the environment adversely" or if they are related to municipal waste management plans.

As a solid waste facility with a 35-year contract to accept the City of Allentown's municipal solid waste for disposal, this clause is triggered by virtue of the fact that the facility will need to be included in the Lehigh County Solid Waste Management Plan. 25 Pa. Code § 272 requires that Lehigh County include DTE in their Municipal Solid Waste Management Plan.

DTE's facility clearly has the "potential to affect the environment adversely." Among the many environmental problems associated with this project, the facility will be going into an area that is already non-compliant with Clean Air Act standards for fine particulate matter (PM2.5). Air quality is a serious

problem in the Allentown area, and is especially problematic for the particular “environmental justice community” in which this incineration facility will be located. Children in this area suffer exceptionally high levels of asthma, of which PM2.5 is both a cause and a trigger. Additionally, it is worth mentioning that some toxic metals such as mercury tend to volatilize and concentrate on particulate matter during combustion process. This is seriously concerning in light of the limitations of the air pollution analysis documented on page 27 of the PWIA attached comments on DTE’s air permit, not to mention DTE’s failure to conduct a proper dispersion analysis or risk assessment of dioxin or mercury emissions, which have significant and long-term impacts on the environment and human health. With regard to dioxin, many studies, including EPA’s dioxin reassessments, show that high cancer risk and increased adverse health effects are associated with exposure to dioxin. Due to the fact that the DTE’s contract is for 35 years, the adverse cumulative effects of 35 years of operation must be accounted for, including bioaccumulation of mercury and dioxins in local fish populations, which are easily pushed over the limit where such contaminants make them unsafe to eat.

In addition to contributing to PM2.5 emissions through its combustion activities, DTE’s activities will draw diesel trucks that are currently leaving the city to landfills into the heart of a populated urban area. The fact that this puts a special burden on one particular area of the city is apparently of no concern to DTE, although it should be to DEP. However, setting such concentrated impacts aside, at the “public meeting” held in Allentown on October 30th, DTE inexplicably claimed that overall truck transportation would be reduced. The relevant Traffic Impact Study (TIS), of which DTE has only submitted an Executive Summary, does not account for pollution generated by trucks removing ash from the incineration site. This issue is not only relevant to the expected increase in diesel fumes in a populated urban area, it is also relevant to matters of on-site storage of ash. Specifically, if DTE expects few trucks will be leaving the site with ash, it is only because it is storing more of this waste on site between trips, in which case the risks posed by future floods are greater, should the levy be breached or water otherwise enter the facility.

Data on Water Contamination is Unclear

DTE has failed to provide clear information about water contaminants. It should be noted that there is a difference in water flow (including steam) in DTEs proposed block diagram and process flow diagram, which are attached (see Attachment C). Also, based on the process changes they proposed in their presentation at the Public Meeting in Allentown on October 30th, it is quite difficult to understand what DTE exactly planned for water treatment.

DTE claims their water treatment process includes cyclone separation, activated carbon absorption, reverse osmosis, etc., but they only include some pictures and never explain the detailed process for these treatments. The five piping and instrumentation diagrams they provide in their proposal are just copies of materials from plans at other plants and fail to follow standard steps of process design. For instance, piping and instrumentation diagrams should be explained after an accurate process flow diagram to show that all material and energy balances have been completed. Furthermore, water from the scrubber, the main water stream from the reactor, and boiler blowdown should all be treated, but DTE provides no information and analysis regarding this treatment process. Are we to “just trust” that DTE can make various metals, plastics, and other substances – transformed into air and water pollutants – disappear?

While they claim they will be providing their own wastewater treatment on site, no permit application has yet been submitted for such a treatment plant. Because DTE plans to discharge its treated wastewater to the Kline Island Wastewater Treatment Plant, the removal of toxins and metals is especially important to avoid their accumulation in wastewater sludge. Based on our email correspondence with the Lehigh County

Authority (LCA), which is now responsible for the Kline Island Wastewater Treatment Plant, DTE has not provided them any information that would allow them to determine whether or not they have the capacity to treat the wastewater that DTE would send them. Of particular concern is LCA's response to the following question: "The City of Allentown WWTP is sometimes forced into a bypass mode during rain events which allows peak flows to discharge into the Lehigh River without receiving full treatment, during high rain incidences. How will the Allentown Wastewater Treatment Plant ensure that the large amount of non-treated water coming from the DTE plant will not be directly discharged into the Lehigh River before getting treated at the Allentown Wastewater Treatment Plant?" Rather than respond to this question by stating that such an outcome under no circumstances would be possible, LCA stated that "We really don't have enough information about what DTE plans to discharge to LCA's plant to answer this question." The potential for significant environmental impacts arising from DTE's unpermitted water treatment facility remains unknown at the present time and requires that the company, at a minimum apply for a site specific individual permit until water contamination information has been theorized, tested in the laboratory, and demonstrated by operational history.

A Mercury Diversion Plan Should be Required

Mercury is another notoriously toxic pollutant released from incinerators. It is a potent neurotoxin that accumulates in the fatty tissue of fish once in the environment. Mercury emissions from trash incineration were a close second to coal power plants in the early 1990s, which is rather incredible given the much larger size of coal power plants and the fact that there are about five times as many coal plants as incinerators. Pollution controls required on trash incinerators reduced the industry's mercury emissions 96% by 2005.^{4,5} However, even with this dramatic industry-wide reduction, trash incinerators still put out 6.4 times as much mercury as coal plants do to produce the same amount of energy, according to the latest available national data from 2005.^{6,7} A state-wide analysis by the New York State Department of Environmental Conservation found that, in 2009, the state's 10 trash incinerators released 14 times more mercury per unit of energy than the state's 8 coal power plants – high enough that the total amount of mercury coming from the incinerators was higher than the emissions from the coal plants, even without adjusting for the fact that the coal plants are far larger facilities.⁸

Sewage sludge contains significant amounts of mercury, which is readily released into the air as a vapor when burned.⁹ This mercury comes from business and industrial sources, as well as from domestic wastewater. Over 80% of the mercury in domestic wastewater is mercury excreted by people who have mercury-containing "silver" amalgam dental fillings, which off-gas over time. Only 15% of the mercury in domestic

⁴ "Emissions from Large and Small MWC Units at MACT Compliance," U.S. Environmental Protection Agency memorandum, August 10, 2007. http://energyrecoverycouncil.org/userfiles/file/070810_Stevenson_MWC_memo.pdf

⁵ "EPA Report on the Environment, A-Z Indicators List: Mercury Emissions, Exhibit 2-39 – Mercury emissions in the U.S. by source category, 1990-1993, 2002, and 2005." U.S. Environmental Protection Agency, December 2009. <http://cfpub.epa.gov/eroe/index.cfm?fuseaction=detail.viewInd&lv=list.listbyalpha&r=216615&subtop=341> (chart) and http://oaspub.epa.gov/eims/eims.roereport.getfile?p_download_id=11217 (data).

⁶ "Exhibit 2-39. Mercury emissions in the U.S. by source category, 1990-1993, 2002, and 2005," U.S. Environmental Protection Agency. http://oaspub.epa.gov/eims/eims.roereport.getfile?p_download_id=11217

⁷ U.S. Environmental Protection Agency, Emissions & Generation Resource Integrated Database, eGRID2007 (2005 data). <http://www.epa.gov/cleanenergy/energy-resources/egrid/>

⁸ New York State Department of Environmental Conservation, "Matter of the Application of Covanta Energy Corporation for Inclusion of Energy from Waste Facilities as an Eligible Technology in the Main Tier of the Renewable Portfolio Standard Program. Case No. 03-E-0188," Aug. 19, 2011. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={DEEA097E-A9A6-4E53-898C-0BC2F4C60CC4}>

⁹ Jennifer Callahan and Trudy Johnston, "Biosolids Pellets Marketability as a Supplemental Biomass Fuel," Material Matters, Inc., 2012, p.4. http://materialmatters.com/publications/Callahan_Biosolids_Fuel_WEF-RBC_Paper_01-19-12_FINAL.pdf

wastewater is from food, toiletries and household products.¹⁰ The only larger source of mercury in sludge is the dental offices themselves, where the preparation of these “silver” fillings, which are actually half mercury,¹¹ cause large amounts of mercury to go down the drain. A 2001 study by the Association of Metropolitan Sewerage Agencies looked at seven municipal wastewater treatment plants and found that dental offices were “by far” the greatest contributors of mercury to the sewer system – 3 to 4 times larger than what people excrete from their leaking fillings. According to the report, dentists accounted for an estimated 40 percent of the mercury load.¹² Other studies have showed that dental offices may account for as much as half of the mercury ending up in sewage treatment plants.¹³ This may be decreasing as consumer and environmental advocates have been succeeding in passing laws to mandate amalgam separators to capture the mercury at dental offices before it goes down the drain.¹⁴

EPA estimates that in 1995, when sludge incineration was at its peak, sludge incinerators released one ton of mercury into the nation’s air.¹⁵ A 1992 study by the state of Minnesota found that approximately one gram of mercury, the amount in a single fever thermometer, is deposited to a 20-acre lake each year from the atmosphere. This small amount, over time, can contaminate the fish in that lake.¹⁶ The one ton of annual mercury emissions from sludge incineration is enough to contaminate over 900,000 of such lakes to the point where the fish could not be eaten.

Due to these concerns, the permit ought to require a mercury diversion plan that requires mercury containing sources to be eliminated from the incoming waste stream and limiting the incinerator’s acceptance of sewage sludge to sludge only from wastewater treatment plants where all dental offices served by the sewage system use amalgam separators.

PA Bulletin Notice was Defective and Must be Republished

The PA Bulletin notice for General Permit Application No. WMGM047 is defective in that the business name is incorrect and does not belong to any existing business entity in Pennsylvania. There are two entities bearing the Delta Thermo Energy name in Pennsylvania:

- Delta Thermo Energy A, LLC – registered 5/15/2012
- Delta Thermo Energy, Inc. – registered 12/1/2009

The January 19, 2013 Bulletin notice lists “Delta Thermo Energy, A, LLC” – a name with an extra comma not present in the legal name of the business entity on file with the Pennsylvania Department of State, Corporations Bureau. As something as seemingly insignificant as a comma in a legal name can and has been

¹⁰ National Association of Clean Water Agencies, “Evaluation of Domestic Sources of Mercury,” 2000, pp. 10-11. http://www.nacwa.org/index.php?option=com_content&view=article&id=356%3Aevaluation-of-domestic-sources-of-mercury-august-2000&catid=10%3AWatershed-water-quality&Itemid=7

¹¹ U.S. Environmental Protection Agency, “Health Services Industry Detailed Study -- Dental Amalgam,” August 2008, p.3-2. http://water.epa.gov/lawsregs/lawguidance/cwa/304m/upload/2008_09_08_guide_304m_2008_hsi-dental-200809.pdf

¹² Association of Metropolitan Sewerage Agencies, 2002 (March. Amended July 2002). “Mercury Source Control & Pollution Prevention Program Evaluation. Final Report.” Prepared by Larry Walker Associates, p.27. <http://archive.nacwa.org/getfileb882.pdf?fn=finalreport.pdf>

¹³ U.S. Environmental Protection Agency, “Health Services Industry Detailed Study -- Dental Amalgam,” August 2008, p.3-1. http://water.epa.gov/lawsregs/lawguidance/cwa/304m/upload/2008_09_08_guide_304m_2008_hsi-dental-200809.pdf

¹⁴ Campaign for Mercury-Free Dentistry. http://www.toxicteeth.org/about_Us.aspx

¹⁵ U.S. Environmental Protection Agency, “Mercury Study Report to Congress – Volume II: An Inventory of Anthropogenic Mercury Emissions in the United States,” December 1997, Table ES-3, p. ES-6. <http://www.epa.gov/ttn/oarpg/t3/reports/volume2.pdf>

¹⁶ Interstate Mercury Education and Reduction Clearinghouse, “One Gram of Mercury Can Contaminate a Twenty Acre Lake: An Clarification of This Commonly Cited Statistic,” 2004. <http://www.newmoa.org/prevention/mercury/mercurylake.pdf>

used to signify distinct corporate entities, this public notice is defective and must be republished with the correct business entity, making it clear which entity the permit is being granted to. This is especially important in light of the confusion created by the Air Plan Approval and the NPDES permits also being misadvertised, listing inconsistent names for the business entities to which the permits are being granted.

Sincerely,

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