COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF AIR QUALITY

COMMENT AND RESPONSE DOCUMENT

ON

DRAFT TITLE V OPERATING PERMIT:

TVOP-23-00004

Table of Content

Comments and Responses
For Covanta Delaware Valley Facility

Covanta Comments and DEP Responses

The comments and responses are numbered consistent with condition numbering on the proposed Title V Operating Permit. They are also organized by the Section designations of the Operating Permit. The comments are detailed such that the ***bold italicized*** text indicates a proposed addition and ~~strikeout~~ text indicates a proposed deletion. The *underlined italic* text indicates modified conditions in the final operating permit.

Section 1 Covanta Comments and DEP Responses

Section 1.1 Comments and Responses regarding Draft Review Memo

Comment 1 The permittee requests to clarify that this renewal application does NOT seek a modification that triggers PSD and/or NNSR review.

Response 1 Review memo states on Page 1 that there are no physical and process changes to the emission sources. The statement on Page 2,

> "*This Covanta facility is classified as a major emission facility for the following requirements and/or pollutants:*
>
> - *Prevention of Significant Deterioration (PSD) source for PM, NOx, CO, VOC, and SOx emissions;*
> - *Nonattainment New Source Review (NNSR) source for NOx and VOC emissions;*
> - *Hazardous Air Pollutant (HAP) emissions source for individual HAP of HCl; and*
> - *Greenhouse gas (GHG) emissions*." (on Page 1 of Review Memo)

explains the current facility classification, emission and regulatory applicability for PSD, NNSR, HAP and GHG. The review memo does not imply that the application is seeking a modification which triggers PSD and/or NNSR review. Thus, the statement remains.

Comment 2 The permittee states that Lime Slurry Injection Rate is not subject to a compliance standard or recordkeeping requirement and therefore is not subject to a CMS (Page 4 of Review Memo). Lime slurry usage is determined by acid gas values and is therefore continuously adjusted as needed.

Response 2 DEP concurs. Lime slurry injection system is not subject to 40 C.F.R. PART 64 — Compliance Assurance Monitoring (CAM) (or the CEMS requirements) as the uncontrolled sulfur oxide emissions did not exceed the Title V threshold of 100 tons. The lime slurry injection rate shall be modulated based on the HCl and SOx concentration as well as the exhaust flowrate to ensure compliance as specified in Condition #017(b)(4) for each combustor (Rotary Combustor 1 through Rotary Combustor 6 (Source IDs 101 through 106)), in Section E of the permit, under group name: LARGE MWC, as stated below:

"(b) The following operating parameters shall be monitored and recorded continuously using the Department approved continuous monitoring system (CMS) for each combustor at the locations, if specified:

(1) Oxygen, at both upstream and downstream of the air pollution control equipment;

(2) Temperature of the gases exiting the combustor monitored at the furnace roof position approved by the Department;

(3) Temperature of the gases at the inlet of each baghouse for the combustors.

(4) The lime slurry injection rate to the dry acid gas scrubber; and

(5) The steam load for each combustor in lb/hr and calculated in 4-hour block arithmetic averages."

Comment 3 This Covanta facility is not subject to 40 C. F. R. Part 60 Subpart Ea, and Section 3005 of Subtitle C, under the Solid Waste Disposal Act. (Page 6 of Review Memo)

Response 3 *40 C. F. R. 60 Subpart Ea —Standards of Performance for Municipal Waste Combustors for Which Construction Is Commenced After December 20, 1989 and On or Before September 20, 1994*

40 C. F. R. 60 Subpart Eb —Standards of Performance for Large Municipal Waste

Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996

DEP concurs. The facility is not subject to 40 C.F.R. Part 60 Subpart Ea.

Comment 4 The permittee requests to clarify the classification of the Facility as a Major source of VOC emissions for RACT I purposes.

Response 4 At the time of RACT 1 analysis, Southeast Region was designated as severe non-attainment area and as per 25 Pa. Code Section 121.1, Major NOx emitting facility and Major VOC emitting facility are defined as follows:

Major NO_x emitting facility—A facility which emits or has the potential to emit NO_x from the processes located at the site or on contiguous properties under the common control of the same person at a rate greater than one of the following:

(i) Ten TPY in an ozone nonattainment area designated as extreme under section 182(e) and (f) of the Clean Air Act (42 U.S.C.A. § 7511a(e) and (f)).

(ii) Twenty-five TPY in an ozone nonattainment area designated as severe under section 182(d) and (f) of the Clean Air Act.

(iii) Fifty TPY in an area designated as serious under section 182(c) and (f) of the Clean Air Act.

(iv) One hundred TPY in an area included in an ozone transport region established under section 184 of the Clean Air Act (42 U.S.C.A. § 7511c).

(v) Twenty-five TPY and is located in Bucks, Chester, Delaware, Montgomery or Philadelphia County. This threshold does not apply to § § 129.96—129.100 (relating to additional RACT requirements for major sources of NO_x and VOCs).

Major VOC emitting facility—A facility which emits or has the potential to emit VOCs from processes located at the site or on contiguous properties under the common control of the same person at a rate greater than one of the following:

(i) Ten TPY in an ozone nonattainment area designated as extreme under section 182(e) of the Clean Air Act.

(ii) Twenty-five TPY in an ozone nonattainment area designated as severe under section 182(d) of the Clean Air Act.

(iii) Fifty TPY in an area included in an ozone transport region established under section 184 of the Clean Air Act.

(iv) Twenty-five TPY and is located in Bucks, Chester, Delaware, Montgomery or Philadelphia County. This threshold does not apply to § § 129.96—129.100.

Covanta submitted an application of Reasonable Analysis Control Technology (RACT I) determination for their nitrogen oxide (NOx) and volatile organic compound (VOC) emissions pursuant to the requirements of 25 Pa. Code Section 129, Sections 129.91-129.95 in July 1994, as they are a major NOx and VOC emitting facility with the following actual NOx and VOC emissions from the six (6) combustors.

Table 1. Actual Facility-wide NOx and VOC Emissions

Year	VOC Emissions (ton/yr)	NOx Emissions (ton/yr)
1992	66.4	935
1993	69.7	891
Potential-to-emit	165	2,124

Note: based on annual operating hours and average emission rate of 3.03 lb/hr. Covanta indicated that the potential NOx emissions from the facility are 2124 tons per year. This estimate is based on a value of 180 ppm NOx concentration in the combustor flue gas (permitted NOx emission limit) and continuous operation of 8760 hours per year for the six (6) combustors. The potential emissions per combustor is estimated to be 354 tons per year.

The potential VOC emissions from the facility cannot be accurately projected because they are a result of combusting a non-homogeneous product, municipal waste. During this analysis, Covanta used a VOC emission rate of 3.03 lbs/hr (an average of 10 stack tested VOC emission rate) to determine the potential VOC emissions. The potential VOC emissions for the six combustors are 165 tons per year, 27.5 tons per combustor.

For the Covanta's RACT I VOC analysis, the EPA's Maximum Achievable Control Technology guidance was also used.

Covanta's NOx RACT I analysis included economic evaluation of the cost effectiveness, NOx reduction evaluation, and potential adverse effect of CO and hydrocarbon emission increase for the following NOx control technologies:

- Selective Catalytic Reduction (SCR)
- Gas Reburn (flue gas recirculation)
- Selective Non-Catalytic Reduction (SNCR)
- Combustion Control

Based on their analysis, Covanta concluded:

- the SCR technology and flue gas recirculation technology are more expensive than the SNCR technology;
- there is a potential to increase CO and hydrocarbon emissions as a result of employing SNCR technology;

- the cost per ton of NOx removal ranged from $13,887 per ton for 10% removal to $6,947 ton per for 20% removal.

Covanta proposed that they will comply with nitrogen oxide (NOx) emissions (expressed as NO_2) of 180 ppmdv, on a 24-hour daily arithmetic average, corrected to 7% oxygen on a dry basis. This NOx limit shall be obtained by employing controlled combustion and is consistent with the Department's NOx BAT standard for Large Municipal Waste Incinerators.

The Department evaluated Covanta's RACT I NOx proposal and determined: (1). limiting NOx emissions to **180 ppmv** on a 24 hour-average arithmetic average, corrected to 7% oxygen on a dry basis, 88.56 lbs/hr and 0.42 lbs/MMBtu per combustor, is considered equal to or more stringent than the RACT I NOx standard;

(2). Imposing a limit of 180 ppm NOx emission is a 60% reduction to the Covanta's allowed emission rate as their existing Plan Approval allows for maximum NOx emissions of 300 ppm in a 24-hour average.

Section 1.2 Comments and Responses regarding Draft Title V Permit

Comment 1 **Phone extension numbers**

Covanta requests to remove phone extension numbers for the responsible official and permit contact person.

Response 1 DEP concurs. The extensions have been removed

Comment 2 **Electronic form submittal**

Covanta requests that the following conditions be modified to reflect current electronic submittal requirements:

Section B, Condition #024(b) – Annual certificate of compliance

Section C, Condition #013(a) – Annual certificate of Compliance

Section E, Condition #019(d) – Semiannual report

Response 2 The conditions in Section B remain until Central Office receives EPA's approval for the amendments. However, the facilities have been notified by DEP Operations to submit the reports electronically.

Comment 3 **Condition #015 in Section C (cited under 25 Pa. Code §135.21)**

Covanta states that annual emission statement which includes more than just NOx and VOC emissions.

Response 3 25 Pa. Code Section 135.21 is for only NOx and VOC total emissions. The condition has been removed as DEP has developed a database system which can totalize NOx and VOC emissions based on the annual emissions report required by Condition #031(a), in Section B of the permit.

Comment 4 **Condition #002(1) in Section D, under Source ID 114**

The permittee states that annual operating hours should be 500 hours to comply with 25 Pa. Code §129.97(c)(8).

Response 4 The condition states:

*"(1) For this source, total operating hours, including maintenance checks and readiness testing, shall not exceed **500 hours per year**, calculated as a 12-month rolling sum. [Additional authority of this permit condition is also derived from 25 Pa. Code §129.97(c)(8).]"*

This condition remains.

Comment 5 **Condition #006(a) in Section D, under Source ID 114**

Misspelling for "engine".

Response 5 The correction has been made.

Comment 6 **Condition #003(b) in Section E, Group Source Name: Large MWC**

"CEMs" should be "CEMS".

Response 6 Corrections have been made.

Comment 7 **Condition #010 in Section E, Group Source: Large MWC**

The permittee suggests adding the following condition:

"PM-10 emissions per combustor shall not exceed 0.012 gr/dscf and 6.96 lbs/hr, corrected to 7% oxygen on a dry basis"

Response 7

1. Pursuant to 40 C. F. R. Part 60 Subpart Cb, §60.33b(a)(1)(i),

"before April 28, 2009 the emission limit for particulate matter contained in the gases discharged to the atmosphere from a designated facility is 27 milligrams per dry standard cubic meter, corrected to 7 percent oxygen. On and after April 28, 2009, the emission limit for particulate matter contained in the gases discharged to the atmosphere from a designated facility was reduced to 25 milligrams per dry standard cubic meter, corrected to 7 percent oxygen",

and

2. the Department BAT standard for particulate matter as defined in "Air Quality Permitting Criteria Including Best Available Technology for Municipal Waste Incineration Facilities" (DEP document: 275-2101-007/ February 23, 1996, on Page 4):

"Particulate matter emissions (total filterable PM) shall not exceed 0.010 grains per dry standard cubic foot, corrected to 7% O_2."

3. Each combustor at the facility shall meet the PM standards, whichever is more stringent. Thus, the PM emission limit in gr/dscf is updated to 0.010 gr/dscf, and the PM emission rate in lbs/hr is re-

calculated based on the exhaust rate of 68,679 dscfm [see Condition #005(a)(2) under Group Source: Large MWC].

The condition has been modified as follows:

" (a) Total particulate matter (filterable PM) emissions, discharged to the atmosphere from each combustor, shall not exceed:

- 5.80 lbs./hr, and

- 0.010 gr/dscf (25 mg/dscm), corrected to 7% oxygen [PA BAT standard for Municipal Waste Incinerators, Document No. 275-2101-007/ February 23, 1996 / Page 20]."

Comment 8 **Condition #014(a)(i) in Section E, Group Source: Large MWC**

The permittee requests that the condition be modified as follows:

"Auxiliary burners of each combustor shall be controlled ***manually*** *or automatically to maintain the flue gas at the …*"

Response 8 DEP concurs. The condition has been updated.

Comment 9 **Condition #014(a)(ii) in Section E, Group Source: Large MWC**

The permittee requests that the thermocouple location, "elevation 166 feet, approximately one foot away from the furnace waterwall", be removed.

Response 9 Each combustor has a few of thermocouple ports located at different elevation levels. This condition clearly describes physical location of the thermocouple and where the temperature readings are being collected by the CEMS. Thus, the condition remains.

Comment 10 **Condition #015(f) in Section E, Group Source: Large MWC**

The permittee requests to explain the condition requirements:

" *The permittee shall conduct annual VOC and total dioxin/furan performance tests in a normal operating temperature range, that is annual average combustion temperature ± 200 ºF in the CEMS reports."*

Response 10 The normal operating temperature range during the stack test should be plus or minus 200°F degrees of the averaged combustion temperature reported in CEMs.

The condition remains.

Comment 11 **Condition #021 in Section E, Group Source: Large MWC**

The permittee requests a copy of the State Implementation Plan.

Response 11 A copy of the State Implementation Plan can be found at this link PA DEP BAQ - Plans - Large Municipal Waste Combustors (MWCs) (state.pa.us)

The State Plan was developed in 1998. DEP received conditional approval from USEPA which was later converted to a full approval (dated August 20, 2001, see below):

II. Summary of Pennsylvania's MWC 111d/129 Plan Revision and EPA's Evaluation

On July 7, 2000, PADEP formally submitted the required compliance schedule revisions through the use of amended operating permits. EPA has determined that PADEP has satisfied the condition imposed in the August 23, 1999 conditional approval. In addition, on August 15, 2000, the PADEP provided supplemental information that clarifies certain Lancaster County Solid Waste Management Authority operational requirements for its resource recovery facility's dry lime injection system and the determination of sulfur dioxide and hydrogen chloride percent emission reductions in the combustor units.

III. Final Action

EPA is approving the revision to the Commonwealth's MWC 111d/129 plan submitted by PADEP on July 7, 2000 which requires compliance with the supplemental emissions limits by a date no later than December 19, 2000. As a result of this approval, the conditional nature of EPA's August 23, 1999 approval of the Pennsylvania large MWC 111(d)/129 plan is, hereby, removed and converted to a full approval. Also, EPA accepts the PADEP explanation regarding the operational requirements, noted above, for the Lancaster County Solid Waste Management Authority MWC facility. This action is being published without

Section 2 Comments from USEPA

Section 2.1 EPA Comments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

The Honorable Patrick McDonnell, Secretary
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, Pennsylvania 17105-2063

Via email at pmcdonnell@pa.gov

Dear Secretary McDonnell,

This letter is in regard to the Pennsylvania Department of Environmental Protection (DEP) Clean Air Act Title V Renewal 23-00004 for Covanta Delaware Valley, L.P. (Covanta). Covanta is a waste-to-energy facility located in City of Chester, Delaware County, Pennsylvania. The facility was built in 1991 and is considered a Clean Air Act major source for various criteria air pollutants and hazardous air pollutants. The U.S. Environmental Protection Agency (EPA) has reviewed the draft permit and associated files.

EPA has identified that the location of the Covanta facility raises potential environmental justice and civil rights concerns. This information is based on EPA's use of EJSCREEN online mapping tool (https://www.epa.gov/ejscreen). EJSCREEN indicates the potential presence of vulnerable populations as well as disproportionate environmental impacts in the area around the Covanta facility. EPA recommends that DEP explore methods to avoid, minimize, and/or mitigate adverse environmental impacts to local communities to the greatest extent possible. EPA is committed to advancing environmental justice and incorporating equity considerations into all aspects of our work.

EPA appreciates that DEP has taken actions to engage the community during the title V renewal process: DEP discussed the permitting action with several local organizations, developed a flyer which described the action and how to comment on the action, distributed the flyers to dozens of business located near the facility, developed and distributed an information sheet to the county delegation of elected officials, and scheduled and held a virtual public hearing. Additionally, DEP maintains a community information web page which includes information on how to submit public comment in writing or at the hearing, the information sheet, flyer, application, draft memo, and draft permit. DEP also routinely attends meetings with the Chester Environmental Partnership to discuss environmental issues in the City of Chester, and DEP contacted EPA Region 3 several months ahead of the public notice period alerting us to the pending renewal. Additionally, Covanta shares actual

emissions data from their existing continuous monitoring systems for Carbon Monoxide, Sulfur Dioxide, Nitrogen Oxides, Opacity, and Hydrogen Chloride with the public on its web page.[1]

Though EPA recognizes that the title V renewal process generally does not authorize the direct imposition of substantive emission control requirements, we strongly encourage DEP to utilize all possible permitting, regulatory and discretionary authorities to reduce disproportionate impacts on the communities of potential environmental justice concern.

Our comments and recommendations on the Covanta tile V renewal are included in the attachment to this letter. We highlight a few key comments here. First, we ask DEP to further explain and clarify the underlying regulatory authorities for various limits in the permit. This analysis will better enable EPA and the public to understand the applicable requirements of the facility and to determine if there are any additional regulatory requirements that would apply to the facility.

Next, we encourage DEP to consider if additional monitoring, record keeping or reporting requirements would better ensure compliance for this facility with federally enforceable emissions limits and provide increased transparency to the public. For instance, we ask that DEP consider, among other options, the feasibility of additional continuous emissions monitoring systems for various air toxics emissions and increased monitoring of particulate matter control devices. Increased monitoring could provide insights into the operation of the facility, help to evaluate whether the facility meets the limits at all times, and provide more timely information regarding if corrective action is needed.

Additionally, EPA provides the following recommendations, which are not comments on the permit action at hand. Because the facility is located in an area that is designated as nonattainment for ozone, EPA recommends that DEP assess whether the current emissions limits of those pollutants take into account possible disproportionate impacts on communities, and if there are additional steps DEP might undertake within its existing state authorities to better understand, characterize and limit the effects of pollution in those communities. We strongly support Covanta and DEP's efforts to continue engagement with the local community to address concerns that may not be within the scope of the title V permit.

Thank you again for the opportunity to work with you on this permit renewal. EPA is committed to working together with DEP to address our shared environmental priorities, advance equity, and reduce potential environmental and health impacts on communities such as this one.

Sincerely,

Digitally signed by Esher, Diana
Date: 2021.10.04 11:14:05 -04'00'

Esher, Diana

Diana Esher
Acting Regional Administrator

enclosure

[1] https://www.covanta.com/where-we-are/our-facilities/delaware-valley

EPA Comments on Pennsylvania Title V Renewal 23-00004
Covanta Delaware Valley, L.P.

I. PERMIT SUMMARY

EPA has reviewed the title V operating permit renewal for Covanta Delaware Valley, L.P. (Covanta) and offers the following comments (Section II below). After the conclusion of the public comment period, please provide to EPA a proposed permit, revised statement of basis and response to significant comments received from all commenters for review. The date we receive these documents will be the first of the 45-day EPA review period.

Additionally, EPA provides the following suggestions or recommendations to assist DEP in providing additional information to the public (identified as such below in Section III and not to be considered as comments).

II. COMMENTS

A. Particulate Matter (PM) Emissions

Covanta is subject to PM emission limits for the following sources:

Source	PM Emission Limit	Control Device for PM Removal	Monitoring, Recordkeeping, and Reporting
Six (6) Rotary Combustors (Source IDs 101-106)	5.8 lbs/hr; 0.010 gr/dscf (25 mg/dscf) corrected to 7% oxygen – total filterable PM per combustor	Pulse-jet fabric filters (6)	Continuous monitoring system (CMS)- flue gas temperature at baghouse inlet; annual performance testing[2]
Lime Storage Silo (Source ID 110)	0.02 gr/dscf	Fabric filter	Operation of the silo fabric filter equipment "below prescribed manufacturer operating pressures during offloading"[3]

Comment A.1. Please discuss and clearly state the underlying regulatory authority for the PM emission limits established for the six (6) rotary combustors and the lime storage silo in the draft title V operating permit. For instance, if they originate from a state-only authority such as DEP Best Available Technology (BAT), a citation to the corresponding section of the Pennsylvania Code (Pa. Code) referencing BAT and the plan approval establishing those emission limits should be included in the permit. Or, for instance, if the emission restrictions originate from a federal requirement such as Best Available Control Technology (BACT) or a New Source Performance Standard (NSPS), the permit should reference the appropriate Code of Federal Regulations and, if applicable, Pa. Code citation. If conditions are state-only requirements, we recommend that permit state that these limits are "state-only."

[2] DEP Technical Review Memo for Title V Operating Permit Renewal 23-00004, August 2021
[3] Draft Title V Operating Permit 23-00004, August 2021, page 32, Condition #002

Comment A.2. Please evaluate and explain how compliance with any federally enforceable PM limits for the sources listed above is ensured as a practical matter and on a continual basis (for those emission limits that are short-term in nature). EPA recommends evaluating incorporation of appropriate parametric monitoring, which could help to ensure that the PM control devices are operating as designed. EPA recommends that the analysis include the correlation between the monitoring of opacity (which is continuously monitored) and PM emissions, consider the monitoring of pressure drop, and consider the use of baghouse leak detection.

Comment A.2.1. Specifically in reference to the six (6) rotary combustors, please evaluate and explain how inlet temperature monitoring ensures the desired performance of the baghouses.[4]

Comment A.2.2. In Section D of the draft permit, Source ID 110, Lime Storage Silo (page 32), please evaluate and explain how the PM emission limits found in Condition #001 are being ensured.

Comment A.2.3. Page 3 of the technical review memo states that Source ID 110 is equipped with a fabric filter. However, pages 4-5 of the draft permit (Site Inventory List and Permit Map) do not identify a fabric filter as a control device for the lime storage silo. Please ensure that the permit map in the draft permit accurately represents the source configuration.

B. Mercury, Dioxin, Furans, and other Toxic Emissions

The six (6) rotary combustors at Covanta are subject to emission limits for mercury, dioxin, furans, and other toxic emissions. Those emission restrictions can be found under the Source Group Restrictions for large municipal waste combustors / rotary waterwall combustors in the draft permit, beginning on page 44, specifically Conditions #002, #005, and #007.

Comment B.1. Similar to Comment A.1., please discuss and clearly state the underlying regulatory authority for the toxic emission limits established for the six (6) rotary combustors. Please see Comment A.1. for further detail.

Comment B.2. Please evaluate and explain how compliance with any federally enforceable toxic emissions limits for the rotary combustors are ensured as a practical matter and on a continual basis (for those emission limits that are short-term in nature).

In section E of the draft permit, under the Source Group Restrictions for Large MWC (page 48), Condition #015(b) states: "The amount and type(s) of waste incinerated during a stack test shall be an adequate representation of the waste processed by the facility."

Given that mercury and other toxic emissions are dependent on the waste that is burned in the combustors, which could be highly variable, please evaluate and explain how compliance is assured on a continual basis in between annual performance tests. For example, how is information relating to the amount, type, and composition of waste used by DEP to ensure compliance with Condition #015(b)? EPA recommends evaluating available methods for ensuring compliance in between annual performance tests including routine feed stream analyses, limits on the use of waste types, and continuous emissions monitoring systems (CEMS) for these pollutants.

Comment B.3. EPA recommends providing the facility's actual reported emissions for the toxic emissions listed as restricted in Conditions #002, #005, and #007 of the Source Group Restrictions for large municipal waste combustors / rotary waterwall combustors (beginning

[4] DEP Technical Review Memo for Title V Operating Permit Renewal 23-00004, August 2021

on page 44 of the draft permit) as part of the permit record and for consideration in evaluating the use of CEMS for these pollutants.

C. Fugitive Emissions

Source IDs such as 107 (Vehicle Traffic on Roads) and 111 (Ash Handling) result in fugitive emissions and the draft permit includes various work practice requirements to reduce these fugitives.

Comment D.1. Similar to Comments A.1. and B.1., please discuss and clearly state the underlying regulatory authority for the fugitive emission restrictions established for these two sources. Please see Comment A.1. for further detail.

Comment D.2. For federally enforceable fugitive emission restrictions, please evaluate and explain how compliance is being ensured. For instance, are the work practice requirements listed in the draft permit components of a dust management plan or something to its equivalent, which the facility has on site and/or is submitted to DEP?

D. Site Level VOC Emission Restriction

Condition #006, found on page 18 of the draft permit under Site Level Requirements, establishes a "shall not exceed" VOC emission limit for the entire facility of 50 tons in any 12-month consecutive month. Please include in the permit record whether the facility is a natural minor for VOCs (meaning that the facility's VOC emissions are naturally less than 50 tons per year) or if this an elected synthetic minor limit. In the case of the later, EPA please evaluate and explain how the synthetic minor limit is being enforced as a practical matter and clearly connecting the 50 tpy emission restriction to adequate monitoring, recordkeeping, and reporting.

III. SUGGESTIONS / RECOMMENDATIONS

A. Past Enforcement Violations

The facility appears to have past enforcement violations that have been resolved, according to EPA's Enforcement and Compliance History Online (ECHO) and the company's title V operating permit renewal application. In order to bolster and enhance the permit record, EPA suggests including a discussion of enforcement and compliance at the facility, a description of past violations (where these violations of an emission standard, administrative violations, etc.?), and resolution.

B. Change in Exhaust Volume

On page 5 of the technical review memo (Permittee Requests), #2 states that the exhaust flow volume for Source IDs 101-106 was adjusted from 45,092 SCFM to 68,914 SCFM. EPA recommends bolstering the permit record to discuss whether or not there were any corresponding changes in the permit resulting from the increase in exhaust flow volume and/or any physical changes related to this adjustment.

Section 2.2 DEP Responses to EPA Comments

Comment A Particulate Matter (PM) Emissions

Covanta is subject to PM emission limits for the following sources:

Source	PM Emission Limit	Control Device for PM Removal	Monitoring, Recordkeeping and Reporting
Six (6) Rotary Combustors (Source IDs 101-106)	5.8 lbs/hr; 0.010 gr/dscf (25 mg/dscf) corrected to 7% oxygen – total filterable PM per combustor	Pulse-jet fabric filters (6)	Continuous monitoring system (CMS) - flue gas temperature at baghouse inlet; annual performance testing[2)]
Lime Storage Silo (Source ID 110)	0.02 gr/dscf	Fabric filter	Operation of the silo fabric filter equipment "below prescribed manufacturer operating pressures during offloading"[3)]

Notes:
2) DEP Technical Review Memo for Title V Operating Permit Renewal 23-00004, August 2021.
3) Draft Title V Operating Permit 23-00004, August 2021, Page 32, Condition #002.

Comment A.1

Please discuss and clearly state the underlying regulatory authority for the PM emission limits established for the six rotary combustors and the lime storage silo in the draft operating permit. For instance, if they originate from a state-only authority such as DEP Best Available Technology (BAT), a citation to the corresponding section of the Pennsylvania Code (Pa. Code) referencing BAT and the plan approval establishing those emission limits should be included in the permit. Or, for instance, if the emission restrictions originate from a federal requirement such as Best Available Control Technology (BACT) or a New Source Performance Standard (NSPS), the permit should reference the appropriate Code of Federal Regulations and, if applicable, Pa.

Code citation. If conditions are state-only requirements, we recommend that permit state that these limits are "state-only."

Response A.1

PM emission limits for six combustors (Source IDs 101-106)

The particulate matter (PM) emission limit of 0.010 gr/dscf corrected to 7% O_2 was established base on the DEP Best Available Technology (BAT) standards for Municipal Waste Incineration Facilities[1]. This PM emission limit is more stringent than the PM emission limit as specified in the State Plan.

The PM mass limit of 5.8 lbs/hr was derived from the PM concentration limit of 0.010 gr/dscf and the flue gas design flow of 68,679 dscf at 7% oxygen [see Condition #005, in Section E, under group name: Large MWC of this permit].

In accordance with DEP Compliance Assurance Policy for Municipal Waste Incinerators, DEP issued plan approvals for construction of the six (6) rotary municipal waste combustors at the Covanta Chester City facility. During the plan approval evaluation process, DEP Best Available Technology (BAT) criteria served as a baseline to determine BAT/Best Available Control Technology (BACT) for Prevention of Significance Deterioration (PSD) requirements [refer to 25 Pa. Code §127.83]. It was determined that the combustors were able to achieve and maintain compliance with all DEP air quality regulations and additional source specific restrictions deemed appropriate. The plan approvals addressed the period up to the first charging of waste in the combustors.

A temporary operating permit (No. OP-23-0004) was issued prior to commencing combustor operation in 1991. This temporary operating permit allowed limited operation for testing, shakedown, and the Departments evaluation of compliance with the conditions and limitations of the plan approvals. The temporary operating permit referred to the plan approvals which contains the BAT/Section 127 requirements along with additional operating restrictions which were deemed necessary.

On December 19, 1995, the U.S. Environmental Protection Agency (EPA) promulgated performance standards for new municipal waste combustors (MWCs) and emission guidelines (EG) for existing MWCs under Sections 111 and 129 of the federal Clean Air Act (CAA). The standards of performance for new stationary sources (NSPS) for new MWCs, and the emission guidelines for existing large MWCs are codified at 40 C. F. R. Part 60, Subpart Eb and Subpart Cb.

[1] DEP MWC BAT document: 275-2101-007/February 23, 1996.

Subpart Eb – Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996

Subpart Cb – Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994

A state plan for large MWC units in the Commonwealth of Pennsylvania was developed in accordance with Sections 111(d) and 129 of the Clean Air Act. The State Plan, as protective as the Subparts Cb and Eb requirements, was approved by the USEPA as indicated in 40 C. F. R. §62.9640:

"The 111(d)/129 plan for municipal waste combustors (MWC) units with a capacity greater than 250 tons per day (TPD) and the associated Pennsylvania Department of Environmental Protection operating permits that were submitted to EPA on April 27, 1998, and as amended on September 8, 1998, and July 7, 2000, including supplemental information dated August 15, 2000. All affected facilities must achieve full compliance with all 111(d)/129 plan requirements on or before December 19, 2000. [66 FR 43511, Aug. 20, 2001]."

In lieu of complying with the subparts Cb and Eb standards, the facility opted to comply with the applicable standards of DEP Municipal Waste Combustor State Plan (State Plan).

There are no applicable regulations under 40 C. F. R. Parts 61 and 63 (NESHAPs).

DEP issued Title V Operating Permit (No. 23-00004) to Covanta in 2002, which contained all applicable standards under the State Implementation Plan and air quality regulations, and BAT/BACT requirements which were deemed necessary at the time.

<u>PM emission limit for Lime Storage Silo (Source ID 110)</u>

The PM emission limit 0.020 gr/dscf for Source ID 110 - Lime Storage Silo (Condition #001, in Section D of the draft permit) is cited under 25 Pa. Code §123.13. Compliance with this permit condition assures compliance with the DEP BAT standard [Ref. 2].

Comment A.2

Please evaluate and explain how compliance with any federally enforceable PM limits for the sources listed above is ensured as a practical matter and on a continual basis (for those emission limits that are short-term in nature). EPA recommends evaluating incorporation of appropriate parametric monitoring, which could help to ensure that the PM control devices are operating as designed. EPA recommends that the analysis include the correlation between the monitoring of opacity (which is continuously monitored) and PM

emissions, consider the monitoring of pressure drop, and consider the use of baghouse leak detection.

Response A.2

At various facilities in the United States, PM concentration has been correlated to opacity monitor readings, demonstrating that opacity monitoring provides qualitative and reliable PM emission information for various industries. Both Federal and State regulations use opacity as a surrogate for PM emissions since 1995.
Field evaluations were conducted by USEPA for PM CEMS concluding that PM CEMS monitoring for emissions verses manual PM method did not correlate well[2].
Under the DEP MWC State Plan and BAT standards [Ref. 1 and 2], Covanta is required to monitor opacity on a continual basis (using CEMS) for the combustors. The visible emissions from any combustor shall not be emitted in such a manner that the opacity (measured by CEMS) of the emissions is equal to or greater than

(1) 10% for a period aggregating more than three (3) minutes in any one (1) hour; or
(2) 30% at any time.

This opacity limit is cited from the DEP BAT standards, which is more stringent than the State Plan opacity standard [less than 10% (6-minute average)]. Covanta must continuously monitor opacity readings to demonstrate its compliance status. This practice is equivalent to that, "PM emission status is continuously monitored", as opacity reading is a surrogate indicator for PM emissions.

Monitoring baghouse pressure drop and using baghouse leak detection device are good tools for checking PM control device performance. However, these parameters have limited sensitivity to PM emissions and do not correct well with actual PM emissions. Therefore, continuous monitoring of opacity readings (measured by CEMS) are considered as "state-of-art technology presently for PM emission monitoring (or as a PM surrogate indicator).

Comment A.2.1

Specifically, in reference to the six (6) rotary combustors, please evaluate and explain how inlet temperature monitoring ensures the desired performance of the baghouses.

Response A.2.1

Each type of fabric baghouse filters has a specific temperature operating range as fabric material melts and blocks effective surface area at high temperature

[2] USEPA Document EPA-454/R-00-039: "Current Knowledge of Particulate Matter (PM) Continuous emission Monitoring", September 2000.

(or maybe completely burned). Monitoring flue gas temperature at baghouse inlet prevents potential damage to the bags caused by overheating, and therefore, ensures the desired performance of the baghouses.

Both the State Plan and DEP BAT require Covanta to install, operate and maintain at a minimum, one temperature monitor to measure the temperature of the flue gas as it enters the particulate matter air pollution control device.

It was reported[3] that dioxins are formed when flue gas passes through the heat exchanging zone (following the combustion zone) and in the flue gas cooling zone at a temperature range of 400 - 900 °F. Added benefit for this gas temperature monitoring at each baghouse inlet is to ensure that baghouse inlet temperature does not exceed 300 °F and thus to obtain the optimum (desired) dioxin /furan removal efficiency.

This concurs with 40 C. F. R. Section 60.53b(c), which states:

"No owner or operator of an affected facility shall cause such facility to operate at a temperature, measured at the particulate matter control device inlet, exceeding 17 °C above the maximum demonstrated particulate matter control device temperature as defined in § 60.51b, except as specified in paragraphs (c)(1) and (c)(2) of this section. The averaging time is specified under § 60.58b(i). The requirements specified in this paragraph apply to each particulate matter control device utilized at the affected facility."

Comment A.2.2

In Section D of the draft permit, Source ID 110, Lime Storage Silo (page 32), please evaluate and explain how the PM emission limits found in Condition #001 are being ensured.

Response A.2.2

Potential PM emission occurs only during the silo filling process when lime is pneumatically transferred into it. There is no exhaust discharge from the silo stack and no PM emissions when the silo is not being filled. Condition #003 requires the permittee to observe visible (PM) emissions (opacity), and Condition #005 ensures that the permittee takes necessary actions when visible (PM) emissions are observed.
The following permit conditions ensure that this source complies with the PM limit:

- Condition #003: The silo operator shall monitor and record the following for each silo filling process:
    1. visible emissions from Lime Storage Silo stack
    2. loading operating pressure

[3] Grzegorz Wielgosiński; Full article: The Reduction of Dioxin Emissions from the Processes of Heat and Power Generation (tandfonline.com)

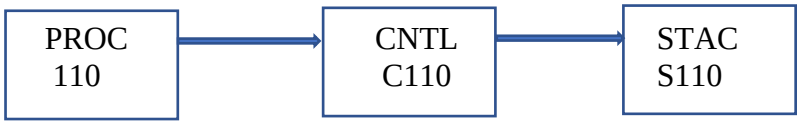
- Condition #005: If visible emissions present during silo loading, the permittee shall
  1. investigate the incident;
  2. take corrective actions if necessary; and
  3. record the date of the incident and specify the corrective actions taken.

Comment A.2.3

Page 3 of the technical review memo states that Source ID 110 is equipped with a fabric filter. However, pages 4-5 of the draft permit (Site Inventory List and Permit Map) do not identify a fabric filter as a control device for the lime storage silo. Please ensure that the permit map in the draft permit accurately represents the source configuration.

Response A.2.3

PA DEP has revised process map for Source ID 110, as shown below:



B. Mercury, Dioxin, Furans, and other Toxic Emissions (for Combustors)

Comment B.1.

Similar to Comment A.1., please discuss and clearly state the underlying regulatory authority for the toxic emission limits established for the six (6) rotary combustors. Please see Comment A.1. for further detail.

Response B.1.

The State Plan set forth emission limits for the following toxic chemicals (see Table 1, page 30 of this document):

- Cadmium
- Lead
- Mercury
- Total dioxin/furans

Other toxic chemical emissions defined in the operating permit, listed below, are not specified in the State Plan.

- Arsenic compounds
- Beryllium compounds
- Hexavalent chromium compounds
- Nickel compound

As shown in Table 1, page 30, emission limits cited in this operating permit are the most stringent emission standards among the State Plan, DEP BAT and regulatory requirements.

Comment B.2.

Please evaluate and explain how compliance with any federally enforceable toxic emissions limits for the rotary combustors are ensured as a practical matter and on a continual basis (for those emission limits that are short-term in nature).

In section E of the draft permit, under the Source Group Restrictions for Large MWC (page 48), Condition #015(b) states: “The amount and type(s) of waste incinerated during a stack test shall be an adequate representation of the waste processed by the facility.”

Given that mercury and other toxic emissions are dependent on the waste that is burned in the combustors, which could be highly variable, please evaluate and explain how compliance is assured on a continual basis in between annual performance tests. For example, how is information relating to the amount, type, and composition of waste used by DEP to ensure compliance with Condition #015(b)? EPA recommends evaluating available methods for ensuring compliance in between annual performance tests including routine feed stream

analyses, limits on the use of waste types, and continuous emissions monitoring systems (CEMS) for these pollutants.

Comment B.3.

EPA recommends providing the facility's actual reported emissions for the toxic emissions listed as restricted in Conditions #002, #005, and #007 of the Source Group Restrictions for large municipal waste combustors/rotary waterwall combustors (beginning on page 44 of the draft permit) as part of the permit record and for consideration in evaluating the use of CEMS for these pollutants.

Response B.2. & B.3.

Dioxin and Furan Emissions

It had been demonstrated that dioxin formation occurred at temperatures above 450 ^{o}C (840 ^{o}F) and was reduced significantly at temperatures above 850 ^{o}C (1562 ^{o}F). The reaction occurring in an incinerator is extremely complex, and there are many factors in addition to combustion temperature influencing dioxin formation. In addition to restriction on waste type and amount processed, DEP BAT standards for control dioxin/furan emissions are to comply with:

- Maintaining combustion temperature greater than 1800 ^{o}F for at least one second; and
- Monitoring and recording combustion continuously for oxygen (CMS).
- Complying with combustion BAT requirements:
- Monitoring and recording combustion temperature continuously (CMS); and
- Monitoring and recording temperature at the baghouse inlet.
- Monitoring temperature decomposition process for total dioxin/furans emissions: According to Gullet and Seeker [4], dioxins are prone to 99.9% destruction just at 700 °C (1300 ^{o}F). Investigations carried out by Hunsinger[5] proved that temperatures greater than 900 °C (1650 ^{o}F) (even under oxygen deficiency condition) bring about a complete decomposition of dioxins/furans.

  Condition #014, in Section E, under group name: Large MWC, requires,
  1. Combustion temperature be maintained greater than 1800 ^{o}F for at least one second
  2. Combustion temperature be continuously monitored (CMS) and be recorded.
  3. Temperature at the baghouse inlet be continuously monitored (CMS) be located at the furnace roof position approved by DEP for each combustor. Each combustor shall be operated to maintain flue gas temperature at greater than 1800 °F for at least one (1) second in furnace combustion zone,

[4] Gullett, B. and Seeker, R. 1997. "Chlorinated Dioxin and Furan Control and Monitoring". In Paper Presented at the ICCR Meeting Research Triangle Park, NC [Google Scholar].
[5] Hunsinger, H., Jay, K. and Vehlow, J. 2000. Formation and Destruction of PCDD/F inside a Grate Furnace. Organohalogen Compd., 46: 86–89.

calculated as an hourly average (1-hour block arithmetic). Auxiliary burners of each combustor shall be controlled automatically to maintain the flue gas at the aforementioned temperature whenever waste is being incinerated.

Toxic Metal Emissions

In addition to the annual testing for mercury and other toxic metals as per 40 C.F.R Section 60.58b and the State Implementation Plan, Covanta is required under their Waste Permit, No. 400593, concerning the toxic metal emissions, to do the following as per respective permit conditions listed below:

a. Under Municipal Waste Management Rules and Regulations:

Condition #6 of the Waste Permit: Keep daily operational records as per 25 Pa. Code Section 283.261 of the Municipal Waste Management Rules and Regulations as follows:

"(a) The operator of a facility subject to this section shall make and maintain an operational record for each day that municipal waste is received, processed or transported offsite.

(b) The daily operational record shall include the following:

(1) The type and weight or volume of the solid waste received.

(2) The county in which the solid waste originated, or if the waste originated outside of this Commonwealth, the state.

(3) The transporters of the solid waste.

(4) The weight or volume of each material recycled or marketed as a result of the process.

(5) For bypassed wastes and waste products, the name and county or state of the facility where the solid waste is ultimately disposed and the weight or volume of waste disposed.

(6) A description of waste handling problems or emergency disposal activities.

(7) A record of deviations from the approved design or operational plans.

(8) A record of activities for which entries are needed in order to comply with the annual operation report required in § 283.262 (relating to annual operation report).

(9) A record of actions taken to correct violations of the act, the environmental protection acts and this title.

(10) A record of rejected waste loads and the reasons for rejecting the loads.

(11) A record of each incident in which radioactive material is detected in waste loads. The record shall include:

(12) For resource recovery facilities, a record of each vehicle, other than a combination, that exceeds 73,280 pounds gross weight and of each combination that exceeds 80,000 pounds gross weight.

(c) The operator shall maintain accurate operational records sufficient to determine whether municipal waste is being stored under Section 285, Subsection A (relating to storage of municipal waste).

(d) Daily operational records shall be retained for the life of the facility bond, or longer if determined by the Department to be necessary to meet the standards of the environmental protection acts, but in no case less than 5 years. These records shall be made available to the Department upon request."

Condition #7 of the Waste Permit: Requires submission of an Annual Operations Report to DEP per 25 Pa. Code Section 283.262 as per Municipal Waste Management Rules and Regulations, which includes daily chemical analysis.

b. Under Residual Waste Management Rules and Regulations:

Condition #28 of the Waste Permit: The annual report (submitted under Condition #7) must include that the analysis certification required under 25 Pa. Code §287.54 of the Residual waste Regulations for chemical analysis of waste for each waste stream from each individual generator.

Condition #32 of the Waste Permit: For Residual Waste accepted by Covanta, each generator must submit the required chemical analysis for the following elements:

Arsenic
Cadmium
Chromium
Barium
Lead
Mercury
Selenium
Silver

Condition #34 of the Waste Permit: Submit Ash Residue Monitoring Report quarterly along with the chemical analysis reports as specified in Condition #32.

Condition #23 of the Waste Permit: Submit quarterly report which shall list all Residual Waste from specific generators.

Condition #25 of the Waste Permit: Restricting the amount of Residual Waste to 10 percent by weight of the total amount of waste accepted that day, or no more than 500 tons per day.

The above listed waste permit conditions provide daily monitoring for each type of residual waste incinerated in the feedstock, quarterly reports for toxic metal content of each waste type and fly and bottom ash analysis. Additionally, the

annual stack testing requires that the amount and type(s) of waste incinerated during a stack test are an adequate representation of the waste processed by the facility.

All of the above conditions, therefore, assures that toxic metal emissions are below the permitted limits (or that are short-term in nature).

- The permit condition below restricts feedstock to each combustor on daily basis, including limiting toxic chemical composition and combustion amount, to ensure compliance status for toxic emissions (except dioxin/furans emission).

  Condition #012, in Section E, under group name: Large MWC:

  "(b) Only the following types of waste are permitted to be burned in the combustors:

  (1) municipal waste, as defined in 25 Pa. Code § 287.1;

  (2) municipal-like residual waste, as permitted in the Department's Waste Permit No. 400593, and the Miscellaneous Section of this permit; and

  (3) residual waste, as permitted in the Department's Waste Permit No. 400593, and the Miscellaneous Section of this permit.

  (c) The residual waste (Form R waste list) accepted at the facility shall not exceed the following on a daily basis:

  (1) 10% of the total amount of waste, by weight; or

  (2) 500 tons

  (d) The daily amount of residual waste and total amount of waste must be documented in accordance with the conditions of the Department's Waste Permit No. 400593.

  (e) Any changes to the waste streams or types of waste shall be approved by the *Department."*

- Condition #015, in Section E, under group name: Large MWC:
  "(e) Schedule
  (1) At least 90 days prior to the test, the permittee shall submit to the Department for approval the procedures for the test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples. The test procedure shall also include the following:
  (A) amount of waste to be combusted;
  (B) composition and classification of waste;
  (C) Btu content of waste."

- Condition #6 of the Waste Permit, No. 400593, requires Covanta to keep daily operational records as per 25 Pa. Code Section 283.261 of the Municipal Waste Management Rules and Regulations (see Page 16 of this document)

The above requirements in both Air Quality and Waste Permits ensure that the amount and type(s) of waste incinerated during a stack test are an adequate representation of the waste processed by the facility [as required in Condition #015(b)].

In addition, the permittee is required to record each waste generator information.

The annual performance stack testing in the AQ permit, in conjunction with the monitoring and reporting requirements under the Waste Program permit requirements for daily monitoring/recordkeeping of the combustor feedstock [amount, type(s) and composition] and each waste generator, and frequent heavy metal content analysis [for both fly and bottom ashes], is a verification test to ensure that the heavy metal emissions meet the short term limits (Condition #005 in Section E, under group name: Large MWC). The short-term compliance status of heavy metal emissions is monitored through daily recordkeeping.

In addition, DEP reviewed the possibilities of continuous compliance between the annual stack test for the toxic metals.

Covanta has been monitoring several parameters, such as the roof temperature, the opacity, and steam load. The **opacity** via Continuous Opacity Monitoring System (COMs) and the **steam load** that is monitored continuously to demonstrate compliance with Condition #012 will be used as surrogate to assure compliance with the toxic metal emissions limit, expressed in pound/hour. DEP reviewed the opacity readings that occurred during the 2021 toxic metals Run 3 Method 29 testing. The readings indicated that COVANTA was in compliance with the DEP limit of 10% opacity for 3 discrete minutes in each hour. The low opacity readings correlate well with low metals emissions (both approximately less than 20% of the respective limits). Additionally, both opacity and metals results are significantly below the required emission limits set forth in the Title V Operating permit. However, in the event of any 1-hour opacity spike, the facility will perform an inspection of each baghouse cell (fabric filter bags, cages, tube sheet, etc.), isolate the cell(s) that are in need of maintenance/repair, perform the necessary work and return the cell to service.

Note: An opacity reading that is greater than normal operating range is defined as a COMS reading equal to or greater than 2% for any 1-hour period.

Section E Source Group Large MWC Current Condition #015 addresses the testing for the toxic metals. Condition #005 expressed the toxic metals limit in concentration and pounds/hour. DEP has revised Condition #005.

Current Condition #005 reads as follows:

(a) The toxic metal emissions per combustor shall not exceed any of the following:

(1) Emission concentration, measured in ug/dscm and corrected to 7% oxygen:

Arsenic and Compounds 7.2

Beryllium and Compounds 0.2

Cadmium and Compounds 15.8

Hexavalent Chromium and Compounds 2.3

Nickel and Compounds 25.0

Lead and Compounds 166.0

*** Mercury and Compounds 50.0 ug/dscm or 15% of the potential mercury emission concentration (85-percent reduction by weight), whichever is less stringent.*

(2) Emission rate (lbs/hr) was based on an exhaust rate of 68,679 dscfm, at 7% oxygen.

Arsenic and Compounds 0.00185

Beryllium and Compounds 0.000051

Cadmium and Compounds 0.00406

Hexavalent Chromium and Compounds 0.000591

Nickel and Compounds 0.00643

Lead and Compounds 0.0423

Mercury and Compounds 0.029

(b) Compliance with the emission concentration limits shall be documented through stack tests for each combustor. The results shall be based on ppmdv or ug/dscm, as appropriate, and corrected to 7% oxygen.

Revised Condition #005

(a) The toxic metal emissions per combustor shall not exceed any of the following:

(1) Emission concentration, measured in ug/dscm and corrected to 7% oxygen:

Arsenic and Compounds 7.2

Beryllium and Compounds 0.2

Cadmium and Compounds 15.8

Hexavalent Chromium and Compounds 2.3

Nickel and Compounds 25.0

Lead and Compounds 166.0

*** Mercury and Compounds 50.0 ug/dscm or 15% of the potential mercury emission concentration (85-percent reduction by weight), whichever is less stringent.*

(2) Emission rate (lbs/hr) was based on an exhaust rate of 68,679 dscfm, at 7% oxygen.

Arsenic and Compounds 0.00185

Beryllium and Compounds 0.000051

Cadmium and Compounds 0.00406

Hexavalent Chromium and Compounds 0.000591

Nickel and Compounds 0.00643

Lead and Compounds 0.0423

Mercury and Compounds 0.029

(b) Compliance with the emission concentration limits shall be documented through stack tests for each combustor. The results shall be based on ppmdv or ug/dscm, as appropriate, and corrected to 7% oxygen, expressed in Condition #0015.

(c) Compliance with the emissions, expressed in pound/hour, shall be documented for each combustor, as follows:

- *The Permittee must continuously monitor the load level of each municipal waste combustion unit to demonstrate that that the units are not operating at a load higher than during the annual compliance stack tests or that waste combustion units are not overloaded which could cause higher PM emission rates. The maximum demonstrated municipal waste combustor unit load, as per 40 C.F.R. Section 60.51b, was determined during the initial performance test for dioxins/furans and shall continue to be determined during each subsequent performance test for which compliance with the dioxin/furan emission limit is demonstrated. The maximum demonstrated municipal unit load shall be the highest 4-hour arithmetic average load during four consecutive hours, as per 40.C.F.R. Section 60.58b, during the most recent test during which compliance with the dioxin/furan limit was achieved. The Permittee must not operate a municipal waste combustion unit at loads greater than 110 percent of the maximum demonstrated load (4-hour block average) for that municipal waste combustion unit or 161,000 lbs steam/hour, whichever is less. (Permit Section E, Source Group Larger MWC, Condition #012 for each combustor unit).*
- *The permittee shall continuously monitor Opacity via COMs. In the event of opacity rising above the normal operating range, the facility will isolate the unit's cell(s) to assess the location of the opacity, perform an inspection of each baghouse cell (fabric filter bags, cages, tube sheet, etc.) if needed, complete any necessary system maintenance/repair, and return the cell(s) to service, as applicable.*
- *Note: An opacity reading that is greater than normal operating range is defined as a COMS reading equal to or greater than 2% for any 1-hour period.*

Table 1 Summary of emission limits, and DEP BAT and State Plan emission standards.

Parameters	OP Limits	BAT Standards	State Plan Requirements
PM	0.010 gr/dscf (25 mg/dscm)	<0.010 gr/dscf	25 mg/dscm (0.01 gr/dscf) based on current Subpart Cb standard
Opacity	10% for 3-minute in 1 hour	<10% for 3-minute in any one hour, and <30% at any time	<10% on 6-minute average
CO	100 ppmv, 24-hour block avg.	100 ppmv 24-hour block arithmetic avg, Mass burn rotary water wall	250 ppmv 24-hour block arithmetic avg, mass burn waterwall
HCl	25 ppmv or 95% reduction	25 ppmv or 95% reduction, 24-hour block arithmetic mean	29 ppmv or 95% reduction
SO_2	29 ppmv or 80% reduction, 24-hr geometric mean, whichever is less stringent	30 ppmv or 80% reduction, 24-hour block arithmetic mean Note: operating permit limit for SO2 is a combination of both State Plan and BAT standards.	29 ppmv or 75% reduction, 24-hour geometric mean.
Cadmium & compounds	15.8 ug/dscm	15.8 ug/dscm	0.040 mg/dscm
Lead & compounds	166.0 ug/dscm	166.0 ug/dscm	0.44 mg/dscm
Mercury and compounds	50.0 ug/dscm or 85% reduction by weight, whichever is less stringent	114 ug/dscm, on an hourly basis, or 80% reduction (by weight), whichever is less stringent.	40 C. F. R. 60 Subpart Cb was amended in May 10, 2006. §60.33b(a)(3): "*On and after April 28, 2009, the emission limit for mercury contained in the gases discharged to the atmosphere from a designated facility is 50 micrograms per dry standard cubic meter or 15 percent of the potential mercury emission concentration (85-percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent."* DEP has not revised the MWC State Plan according to the current Subpart Cb standards.
NOx	180 ppmv	180 ppmv 24-hour block arithmetic average BAT & DEP RACT II requirement [25 Pa. §129.97(f)]	250 ppmv 24-hour arithmetic avg (CEMS) for mas burn rotary waterwall
Total dioxin/furans	30 ng/dscm	30 ng/dscm	30 ng/dscm
Arsenic compounds	7.2 ng/dscm	7.2 ng/dscm	N/A
Beryllium compounds	0.2 ng/dscm	0.2 ng/dscm	N/A
Hexavalent chromium compounds	2.3 ng/dscm	2.3 ng/dscm	N/A
Nickel compound	25.0 ng/dscm	25.0 ng/dscm	N/A

1). All emission limits presented in concentration units [ppmv, ug/dscm, ng/dscm, gr/dscf] are expressed at 7 percent oxygen, dry basis.
2). ug/dscm (µg/dscm): micrograms per dry standard cubic meter.

3). ng/dscm: nanograms per dry standard cubic meter.

C. Fugitive Emissions

Source IDs such as 107 (Vehicle Traffic on Roads) and 111 (Ash Handling) result in fugitive emissions and the draft permit includes various work practice requirements to reduce these fugitives.

Comment C.1.

Similar to Comments A.1. and B.1., please discuss and clearly state the underlying regulatory authority for the fugitive emission restrictions established for these two sources. Please see Comment A.1. for further detail.

Comment C.2.

For federally enforceable fugitive emission restrictions, please evaluate and explain how compliance is being ensured. For instance, are the work practice requirements listed in the draft permit components of a dust management plan or something to its equivalent, which the facility has on site and/or is submitted to DEP?

Response to C.1. & C.2.

Please also see responses to Comment A1 and A2.

<u>Fugitive emission limit for Vehicle Traffic on Roads (Source ID 107)</u>

The fugitive emission limit for Vehicle Traffic on Roads (Source ID 107) was established based on the DEP Best Available Technology (BAT) standards for Municipal Waste Incineration Facilities. There is no fugitive emission standard specified in the State Implementation Plan.

Condition #001 under Source ID 107 of this permit requires:

"No person may permit the emission into the outdoor atmosphere of a fugitive air contaminant from a source other than the following:

(a) Grading, paving, and maintenance of roads and streets.

(b) Use of roads and streets. Emissions from material in or on trucks, railroad cars, and other vehicular equipment are not considered as emissions from use of roads and streets.

(c) Stockpiling of materials. "

Condition #010(a) in Section C of this permit requires the permittee to conduct daily monitoring for fugitive emissions from all emitting sources from this facility; and Condition #010(b) in Section C of this permit requires the permittee to take corrective actions.

(a) The permittee shall monitor the facility, once per operating day, for the following:

(1) odors which may be objectionable (as per 25 Pa. Code §123.31);

(2) visible emissions (as per 25 Pa. Code §§123.41 and 123.42); and

(3) fugitive particulate matter (as per 25 Pa. Code §§ 123.1 and 123.2).

(b) Objectionable odors, fugitive particulate emissions, and visible emissions that are caused or may be caused by operations at the site shall:

(1) be investigated;

(2) be reported to the facility management, or individual(s) designated by the permittee;

(3) have appropriate corrective action taken (for emissions that originate on-site); and

(4) be recorded in a permanent written log.

In addition, Condition 10 of the Waste permit limits the number of trucks per day:

This facility shall accept no more than a maximum of 5,700 tons of waste per day on any given day, Monday through Friday, and no more than a maximum of 1420 vehicles trips per day (710 vehicles enter, and 710 vehicles exit, totaling 1420 vehicle trips per day) unless a permit amendment application is submitted to, and approved by, DEP. The facility shall accept no more than a maximum of 3,000 tons

Fugitive emission limit for Lime Storage Silo (Source ID 110)

The PM emission limit 0.020 gr/dscf for Source ID 110 - Lime Storage Silo (Condition #001, in Section D of the draft permit) is cited under 25 Pa. Code §123.13. Compliance with this permit condition assures compliance with the DEP BAT standard [Ref. 2].

D. Site Level VOC Emission Restriction

Comment D. Condition #006, found on page 18 of the draft permit under Site Level Requirements, establishes a “shall not exceed” VOC emission limit for the entire facility of 50 tons in any 12-month consecutive month. Please include in the permit record whether the facility is a natural minor for VOCs (meaning that the facility’s VOC emissions are naturally less than 50 tons per year) or if this

an elected synthetic minor limit. In the case of the later, EPA please evaluate and explain how the synthetic minor limit is being enforced as a practical matter and clearly connecting the 50 tpy emission restriction to adequate monitoring, recordkeeping, and reporting.

Response to D.

The facility-wide VOC emissions are not naturally below 50 tons per year (as shown on Page 4 of this document). Covanta proposed to employ optimization of the combustion process as good combustion practices in the RACT I analysis, as recommended by the US EPA and took the VOC emission restriction of 50 tons per year in the RACT I evaluation. In conjunction with the limitation of the amount of waste received expressed in the Waste permit, this assures that the facility will not exceed the VOC limit.

PUBLIC COMMENTS

LIST of COMMENTORS

Name
Margaret Sayvetz
LeRai Martin, RN, MSN
Dr. Will Richan
Daniel Scholnick
Michael Babitch
Knar Gavin
Susan Thompson
Genie Silver
Walter Tsou
Richard Eynon
cheryl whittaker
Susanna Martin
Jill Turco
Roberta Camp
Timothy Duncan
Loretta Dunne
Lori Flanagan-Cato
Lea Stabinski
Steven A.Williams
Chirag Patel
Jseph Bridy
Maria Kiernan
Jim Black

Tina Solak
Alexa Manning
Susan Saltzman
Linda Granato
Russ Allen
LeRai Martin
Victoria English
Eileen Shupak
Susan Babbitt
Johnny Johnson
Pouné Saberi
Marielle Lerner
Jared Cornelia
As Er
Peter Patton
Lorraine Daliessio
Vincent Prudente
Gary Lewis
Sheila Erlbaum
Will Fraser
Edward Thornton
Thomas Nelson
Douglas Nightengale

Richard Cole
Alfred Klosterman
Marilynn Harper
Karen Guarino Spanton
Donna Delany
Beatrice Zovich
Anna Quisel
Jessica Krow
Michael Zuckerman
Diane Fuchs
Melisa Romano
Philip Pegan
Glenn Gawinowicz
Sheldon Isaac
Victoria Jenkins
Amy Edelman
Linda Rubiano
Fran DeMillion
Holly Cross
Sharon Newman
Vaughn Campbell
Mike DellaPenna

Priscilla Mattison
Francis Olivieri
Nancy Harkins
Tina Horowitz
Eve Miari
Joyce Bell
Sarah Collier
Paul Nielsen
Meredith Stone
John Colgan-Davis
bridget mccullough
Jeannette Lucey
Al Vazquez
Elizabeth Seltzer
Cynthia Jama
Janet Cavallo
Daniel Palmer
Karen Kolkka
Louise Giugliano
Lauretta Linsalata
Joseph McCullough
Eric Larson
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Michael Miller Jr
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David Ringle
Debra Marge
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Kathy Carr
Carl Gershenson
Heather Nelson
Liz Robinson
Maryanne Tobin
Sharon Levin
Mary Kupferschmid
Naomi Miller
Barbara Bradshaw
Cynthia Gilman

John Scanlon
Sarah Collier
Tracey DePasquale
Lauren Brown
Stacey Dembele
Ted Reed
Kathleen Reifke
Harry Zabetakis
Loretta Ottinger
Kathryn Grossman
Ann-Marie Christopher
David Skellie
Martha Diffey
D. Burnett
Joan Nikelsky
Rich Conti
Jon Wilson
Susanna Throop
Knar Gavin
Watson Olszewski
Meredith Stone

Molly Grace
Sharon Hoffman
Doug Krause
David Gunyuzlu
Jennifer Clark
Sid Amster
Jeffrey Wentzel
Paloma Vila
Carolin Schellhorn
Victoria Cox
Robert Morgan
Marc Henry
Cynthia Vanda
Nancy McCullough
Ransome Weis
Linda Stevens
Darren Strain
Terri Yeager
Dan Pepin
Barbara Silbert
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Marilynn Harper

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Jane Eisenstein
Steven Weinberg
Sidney Kahn
Heidi Fimognari
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Edward Suchy
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Cory Reyman
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Anna Heilmayr
Richard Tregidgo
Nicholas Scheman

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Nancy Tate
Stephen Burns
Dorothy Briscoe
Michael Giansiracusa
Paul Hagedorn
Steven Lubin
Arline Schoenberger
Bonnie Nickle
Irene Bucko
Morgan Folger
Elizabeth Shober
Gregg Whitlock
Melissa Benson
Kathryn Westman
Douglas Roberts
Naomi Cohen
Stephanie Stern
Barbara Sonies
Barbara Nigriini

Melinda Robinson-Paquette
JoAnn Williams
Robert Depew
Anne Marie Smith
Betsy Amber
Emily Petrucci
Kenda Hammer
Therese MacKenzie
Linda Porter
David Nichols
Jean Wiant
Christopher Lankenau
Sue Soraruf
Ian Notte
Paula Capaldo
Janet Dingle
Kathryn Stevens
James Staszewski
Frank Ferguson
Leigh Cressman
Anna Tangi

Donna Smith
Rev. J. Howard Cherry
Lori Geraci
Karen Belli
Karen Gruen
Claudette Kulkarni
Robert Buncher
Lynne Hurd
Allen Krantz
Dody Yingling
Jennie Niedelman
Veryl Frye
John Cooke
Patricia Rossi
Leslie Patrick
Jeffrey Bartholomew
Catherine Shelton
W. Andrew Stover
Daniel Mink
Paula Daley
Aggie Perilli
Brian Fink

Craig Conn
Brett Green
Dan Schwartz
Nuiko Wadden
Phyllis Blumberg
Tony DiPietro
Angela Leventis
Ruth Prince
Macyle Candela
Nancy Chernett
Youping Xiao
Susan Fineman
Marie Allsman
Rev. Daniel Festog
Carrie Swank
Geneva Butz
Bennett Helm
Sheri DeOrio
Isabel Melvin
George Mostoller
Catherine Poynton
Shirley Neff

Kathleen Nicholas
Derek Gilliam
Dorothy Li Calzi
Kate Benson
Eugene Mariani
Carolyn Cooper
Diane Leos
Sherlene Evans
Kim O'Donnell
Jeff Tucker
Joyce Durkin
Priscilla M Becroft
Howard Filtz
Eric Selvage
Stephen Starr
John Belch
Patricia R. Wendell
Pauline Rosenberg
Michael Balsai
Michael Siwy
Dan Volpatti
Suzanne Camp

Ed Gahres
Brian Moloney
John Smith
Molly Stewart
Thomas Josephi
Julie Kiene
Judith Parker
Wendy Smith
Maureen Madden
Wesley G. Finkbeiner
Catherine Raymond
Alberto Bressan
Brian Garvin
Linda Russo
Janet Whittaker
T. Foster
Jack Dunham
Shirley and Rick Stark
Bruce Kiesel
Evan Dull
Bonnie Witmer
Edward Sykes

Michael Meyer
Robert Rossachacj
Elisa McCool
Megan Anderson
James McKeon
Bonnie Miller
Donna Bookheimer
William Gleason
Patricia Libengood
Jason Crawford
Thom Franz
David Zabriskie
William Palmer
Silvio Fittipaldi
Elizabeth Rotz
W. Bruce Dunkman
Judy Meyer
Barbara Brigham
Paris Blackwell
Tim Miller
Tammy Williams
Liana Lang
Mary McKenna

Leslie Mitchell
Betsy DeLisle
Donna Gayer
John Trout
John t Guandolo
David Clemens
Shelley Ross
Ben Mainwaring
Mary Jo Knox
Edward Jasiewicz
John Brown
Carolyn Shaffer
John Spinella
Sarah Newman
Zsuzca Palotas
Peter Adams
David Stermer
Daryl Rice
George Stewart
Daniel Salmen
Cindy Sproat
Paul Paluba

Brian Earley
Rich Matusz
Sheryl Schultz
Kimberly De Woody
Helen Navaline
David Kutish
James Farrell
J.M. Lavassaur
Ben Kreider
Al Nagy
Rob McClimon
Steve Sears
Constantina Hanse
Pam Komm
Jeri Schroeder
Kenneth Nitchman
Anne W.
Stephanie Mory
Vincent Gilhool
James McBride
Rhonda Patterson
Paul Montell
Deborah Polk

Diane Fries
Matthias Hess
Kaylene Schultz
Caroline Cotugno
David Casker
Michele Johnson
Jane Klein
John Dulik
Barbara Nigriini
Zane Cannon
Ryan Joyce
Mary McMahon
Tom Gauntt
Denise Foehl
Claire Hadida
Craig Cheselske
Veronica Eronica Litras
John Ryan
Gary Coller
Brenda Norris
Michael Rusli
Vickie McMurray

Suzanne Day
Brian Cooke
Mary Durando
Elaine Strause
Linda Castagna
Kathleen Doctor
Jonathan Turban
Sam Simon
Pamela Snyder
Devorah Soodak
Anne Dzamba
Suzanne Roose
Josephine Fitts
Edna Scheifele
Cheryl Pinto
Fonda Hollenbaugh
Jeanne Held-Warmkessel
Cody Cowper
George Malcolm
Hugh Watkins
Sherwood Johnson
Joan Pelc

Wayne Fisher
Kathy Turner
Kathy Testoni
James Keenan
Marian Nasuti
David Harris
Jim Kippen
Beth Dzwil
Jeffrey Shuben
Janelle Cooney
Mark Waltzer
Susan Curry
Barbara Miller
Judy Morgan
Maryanne Zakreski
Diana Hulboy
Merle Savedow
Priscilla Taylor-Williams
Thom Nixon
Sharon Jaye
Carl Balis
Marjorie Greenfield

Elizabeth McColm
Jo Weiss
Marisa Wilson
Jean-Pierre Dolle
Matthew O'Donnell
Karen Melton
Robert Steininger
Susan Worrell
Megan White-Marley
David Mindel
Natalie Short
S Weinberg
Kelsey DeCerchio
Mark Barbash
Alex Bomstein
James Salom
Margaret Reinhart
Denise Bonk
Rachel Kelly
Patricia Libbey
Greg Trader
Rob McMonagle
Eleanor Dill
Alan Peck

Shawn Megill Legendre
Patricia Zirin
David Calloway
Karen Jones
Kearni Warren
James Myers
Ira Josephs
Simone Stern
Serena Levingston
Henry Frank
Heather Shultz
Rebecca Ferguson
Joan Gunn Broadfield
Michael McQuown
Vivian Murray
Mary Lydon
Andrew Rutherford
Jessica Ram
Margaret Salamon
Donna Browne
Jean Alfonsi
Ellen Reese
Tajuana Evans
Jo9 Magid

David Morgan
Tom Owen
Shawn Hogan
Chris Ozbun
Carol Blum
Jeanne Weber
Nafis Hasan
Carol Fleischman
Lucia Schlossberg
Don Knieriem
Paula Kline
Mary Ferrell
Jeff Zhang
Sheila Siegels
Katie Ferguson
Ryan Schott
Spencer Koelle
Dale Harris
Sister Dominica Lo Bianco
Sandra Folzer
Brandon Robilotti
Bruce Birchard

Paul K. Johnson
Scott Van Bramer
Rosemary Fuller
L Alexander Hamilton
Barbara Gorman
Deirdre DeVine
Flora Cardoni
Jennifer Tobin
Rebecca Johnson
Sue Brubaker
Beverly Foster
Christopher Ulmer
Louis Kyle
Andrew Kalan
Bonnie Eisenfeld
Richard Kleiner
Lamont Foxworth
Martin Johnson
Catherine Nelly
Frank Fletch
Kathleen Drucker
Kaylene Irwin
Kaylene McCool
Amanda
Molly Heckman
Amanda Heckman
Jim Simon
Karen Sawyer

Julia Stone
Cindy M. Dutka
Linda Maslin
Michael Ruzzo
Kevin Foskett
Rose Paddison
Maria Duca
Anne McCormick
Jessica Bellwoar
Carol Aronoff
William Foster
Kerry Robinson
Deborah Robbins
Nancy Artus
Thomas Campanini
James Castellan
Nora Ziegler
karen Williams
Janice Peischl
Helen Nadel
Mark Leeson
Kathleen Davis
Gina LoBiondo

Hope Punnett
Dan Cush
Peter Syre
James Morrow
Diane Krassenstein
Madeline Miller
Don Murtaugh
Sheila Erlbaum
John Lawson
John Monserrat
Kathleen Miller
Laura Prushinski
Orysia Dagney
Rex Grubb
Lynnette Saunders
Cathie Forman
Roni Feierstein
Barbara Noone
Michael Fratangelo
Catherine Kenworthy
Shawn McMurtry
Ruth Sheets
Barry Cutler
Joann Marotto

Ira Josephs
Mark Levin
J. Allen Feryok
Rocco Malerbo
John Stofko
David Citron
Jessie Dull
Kimberly Egresits
Stephanie Ulmer
Tom Fonda
Arianne Allan
Frank Ayers
Leann Turley
Jocolyn Bowser-Bostick
Jenny Ruckdeschel
Abigail Homison
Joseph Belcastro
Desiree Carbone
Rich Surdyk
Ann Bryan
Kelli Nachbar
Brian Kaltreider
Tamara Clements
Sandy Kavoyianni

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Jay McCahill
David Meade
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Joseph Hedekker
Michael Fite
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Al Guarente
Jennifer Breen
Christina Penrose
Joyce Morrison
Rosemary Huf
Carolyn Hughes
Dianna Holland
Victoria Mars
Anne Marie Cohen
Donna Engle
Barbara Gunsel
E Stewart
Ruth Seeley
Kristine Hunt
Steve Chiolo

Eileen Flanagan
Ces Corbelli
Barbara Parker
Denise Costello
Beverly Rae
Keya Gibbons
Al Luque
Tricia Satifka
Daniel Orfe
Genevieve Santalucia
Mary Kowalski
Lori DeWalt
Carl Martin
Heather Wiggins
June Bricker
Dolores McDonnell
Ashley Kopeck
Evrim Artman
Christine Dolle
Russ A.
Robert Smith
Sandy Kuritzky
Anne Peniazk
Jack Miller

Kathy Thrapp
Jennifer Hotaling
Rina Malerman
Gary Aull
Tina Durakov
Sharon Rigatti
Myra Kazanjian
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Janet Cavallo
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Christine Talley
Robert Errett
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Nicole Groff
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David Somers
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Peg Church
Katie Wenger

Holly Altenderfer
Barbara H Bruce
Margery Rutbell
Sharon Reganato
William Edelman
Susan D. Mulligan
Mark Terwilliger
Alexa and Kevin Manning
Eric Matuszak
Donna Holloway
Anne Wootten
Rory Maruschak
Rebecca Lieberman
Kathryn Gabig
Sheila McNamee
David Reid
David Kronheim
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Shawn Megill Legendre
Cindy March
Eugene Miller
Joanna Ward

Linda Granato
Carl Anderson
Neena Deibler
Mitzi Deitch
Mike James
Erin Hayes
Brophy Lee
Don Naragon
Harry Robbins
Kristin Roehl
Glenn Wood
Peter Kabatek
Sabrina Wojnaroski
Robin Mann
Nancy Boxer
Patricia Libbey
Sandra Sudofsky
Francesco Ferraro
Amy Morrisroe
Deb Horan
Karen Reever
Sarah Panullo

Roger Latham
Glenn Davis
Mary Desmone
Will Willis
Karla McNamara
Mark Sentesy
James Dyer
Celeste Bish
Erika Gidley
Peggy Greenfeld
Janet Roslund
Gwen Gilens
Peter Lynch
Glenn Schlippert
Stephen Disch
Mary Ann Wolf
Shan Griffin
Tina DeCarla
Dennis Schaef
Richard McNutt
Donna Carswell
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Juan Llarena
Lucila Corpuz
Gail Newbold
Damon Fields
Cindy M. Dutka
Branislava Balorda-Simic
John Wohlberg
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Roger Latham
Kathleen Rothhouse
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Rebecca Stallings
James Eisenstein
Catherine Van de Ruit
Julie DiCenzo
Cindy Nuss
John Brown
Carole Soskis
Judith Roberts
Donna Delany
Daniel Dunn

Alice Wells
Anne Newman
Deb Wood
Mary Ann Kirby
Sharon Cowdery
Judith Inskeep Brett Schultz
Susan Stedman
Jen Bentzel
Wayne Olson
Doug Raihall
Michelle Hoff
Cameron Wood
Jacqueline Pickering
Paul Brown
Michelle Sheridan
Allison Santana
James Foskett
Ed Mcconnell
Michelle Sirianni
Donald Bosworth
Sandra Foehl

Melody Farrin
Brandee Blasi
Valerie Monick
Francine Locke, MS
Katherine Urbaniak
Karen Michalczyk
Jim Mc Graw
Homer Robinson
Linda Blythe
Sharon Lee
Jim Burtt
Erica Simon
Paloma Vila, PE
Karen Kolkka
Rozalyn Landisburg
MJ Stigliano
Randall Tenor
John Frederick
Tracey DePasquale
Laura Murillo
Amy McCready

Jerene Schroeder
William Silverstein
Julie Butche
Lois Rothenberger
T.B. Watts
Justin Luzar
Laura Lupovitz
Raymond Coccia
Trina Gribble
Kyla van Buren
Christopher D. Ahlers
Mike Ewall
Caroline Mendis
Anne Cecil
Joan Schooley
Beth Adams
Bronwen Hartranft
Tracy Lira
Barbara Brock
Carol Troisi
Michael Swanson
Katherine Volin
Keu Gatemoyer

Teri Dignazio
Gloria Cameron
Susan Kovaleski
Kelli Parsons
Christopher Milani
Onnolee Jansen
Orly Zeewy
Marilyn Burke
Cheryl Ambrozetes
Jill Goodwin
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Dale Kinney
Elizabeth Seltzer
John Confer
Linda Bowers
Marjorie Greenfield
Barry Blust
Susan Porter
Beth Winarski
Christine Talley
Nancy L Bella

Thom Fistner
Gary Kendall
Patrick Vogelsong
Leel Dias
Linda Sander
Thomas Dunlap
Jim Black
Roslyn Taylor
Joel Hnatow
Sherry McNeil
William Henry
Bernie Flinchbaugh
Don St. John
Jean Kammer
Alana Balogh
Alan Peterson

Public Comments for Covanta Delaware Valley [TVOP 23-00004 (2021)]

This portion of the Comment and Response Document summarizes the comments submitted to DEP from individuals and organizations during the public comment period (Sept to Oct 2021) on the Covanta Delaware Valley Title V Operating Permit 23-00004 Renewal and provides the Department's responses to those comments. The respective commentators are listed on pages 33 through 73 of this document. Some comments were received outside of the comment period. However, these comments are also addressed in this document as they were similar to other comments received.

This section is organized such that each comment and response is grouped according to topic. The transcript from the public hearing and the written public comments can be found on Southeast Community website at Covanta Del Val Renewal (pa.gov)

A. Pollutants

Comment A1. From 2019 to 2020, NOx pollution emissions increased at this facility by 137 tons.

Response to Comment A1:

The increase in emissions from 2019 to 2020 reflects the actual NOx emissions that was emitted by the facility, the actual emissions vary from year to year based on the amount of waste combusted, for example in 2019 Covanta combusted approximately 617,000 tons of waste while in 2020 approximately 630, 000 tons of waste that were combusted. The actual emissions, expressed in tons per year, from 2017 and 2020 reflect that Covanta operated within their NOx allowable emission limit that is in their permit, as shown in Table 2 below.

Table. 2 Annual NOx emissions (in ton/year)

Year	MW1	MW2	MW3	MW4	MW5	MW6	Total
2020	192.5	211.5	176.4	221.6	184.2	175.5	**1161.7**
2019	179.1	191.9	163.2	185.1	163.3	148.0	**1030.6**
2018	206.9	207.1	197.2	192.9	174.1	190.1	**1168.3**
2017	222.7	226.6	202.1	192.0	186.1	207.2	**1236.7**

Comment A2. Covanta is not always within their permit limit. They have violations both for exceeding permit limits and for their continuous monitors being down for too long. When monitors are down, more violations accrue undetected.

With the exception of four pollutants that are monitored continuously, carbon monoxide, NOx, hydrochloric acid and sulfur dioxide. Covanta only tests for about 11 other pollutants and that's only once per year. This self-administered test is conducted under ideal operating conditions that underestimate actual emissions. The most toxic emissions, dioxins, are tested for only 12 hours per year – Increase testing frequency.

Response to Comment A2:

DEP agrees that there have been non-compliance issues with Covanta. The facility acknowledges and addresses these non-compliance issues in a timely manner through abatement plans. The cumulative air pollution impact studies are required when the facility has submitted Prevention of Significant Deterioration (PSD) application either when there is significant modification of an existing source or an installation of new source(s) that the emission(s) has/have exceeded the PSD thresholds. However, Covanta conducts annual ambient air analysis and has displayed their real-time emissions recorded by Continuous Emission Monitoring system on their website Delaware Valley | Covanta (https://www.covanta.com/where-we-are/our-facilities/delaware-valley) under View Emissions button. This allows the public to view the facility's emissions at any time.

According to the DEP permitting procedures[6] , at that time before the construction of the combustors, the facility triggered PSD for PM, NOx, CO, VOC, and SOx emissions; thus, a cumulative air pollution impact studies were required and reviewed by DEP under their plan approval permit. During the period of 1998 to 2002, the facility conducted many stack tests at different seasons (weather conditions) and studied air pollution impact using air dispersion modeling tools with actual testing data input. The modeling results are presented as air pollution concentration at different locations in Covanta surrounding area.

During the current renewal period, Covanta did not report any changes and/or modifications to the facility, so cumulative air pollution impact studies is not required at this time. 2020 quarterly averaged NOx concentration, expressed in parts per million, by volume (ppmv), from all six combustors are shown in Table 3, showing compliance with the allowable limit.

Table 3. 2020 Quarterly NOx average emission (measured by CEMS, in ppmv)

Quarter No.	MW1	MW2	MW3	MW4	MW5	MW6	Permit limit
1	110	120	105	127	98	81	180
2	116	117	105	123	108	116	
3	118	143	105	131	125	114	
4	126	133	105	122	116	117	
Average	117.5	128.3	105	125.8	111.8	107	-

Comment A3. DEP has not assessed the cumulative air pollution impacts of this facility and other permitted facilities in Chester, must conduct such analyses to inform its decision-making on this permit

Response to Comment A3:

There have been no changes or modifications at the Covanta Delaware Valley during the term of the operating permit therefore cumulative air pollution impact study is not required. However, DEP operates the Commonwealth of Pennsylvania Air Monitoring System (COPAMS) to continuously monitor pollutant levels. There is one located in the Chester area. The purpose is to evaluate compliance with national and state ambient air quality standards, provide real-time monitoring of air pollution episodes, develop data for trend analysis, develop and implement air quality regulations and provide information to the public on daily air quality conditions in your area.

[6] DEP Document No. 273-4000-003 (July 1989, and revisions)

B. DEP must impose the following pollution reducing requirements

Comment B.1 DEP shall require Covanta to install equipment capable of reducing NOx emissions to the modern limit of 45 parts per million, as met by the new incinerator Covanta operates in West Palm Beach, Florida.

Response to Comment B1:

There have been no changes or modifications at the Covanta Delaware Valley during the term of the operating permit and the sources are classified as existing sources. When Covanta installs new sources, DEP shall implement that the emission of air pollutants are controlled to the maximum extent, consistent with the best available technology at the time of installation.

Currently, Covanta has submitted an application for the installation of an air cleaning device (selective non catalytic reactor) to reduce the nitrogen oxides to meet the applicable presumptive RACT III requirements.

Comment B.2 DEP shall require Covanta to install an activated carbon injection system (best available technology) to reduce emissions of dioxins and mercury, and achieve a standard of 15 parts per million.

Response to Comment B2:

All toxic metals emission concentration limitations are expressed in microgram/ dry standard cubic meter, corrected to 7 percent oxygen (dry basis), except dioxin which is expressed in nanogram/ dry standard cubic meter, corrected to 7 percent oxygen (dry basis).
The current toxic metals emission concentration limitations in their Title V Operating permit are listed in the table below and have been converted to ppm, assuming that 1 dscm air = 1.29 kg. The current limits expressed in the permit are more stringent than the proposed limit of 15 ppm.

Table: Current toxic metals limits expressed in ppm.

	concentration		**vs**	**mass limit**		**ppm**
Arsenic	7.2	ug/dscm	=	**0.00185**	lbs/hr	**0.006**
Beryllium	0.2	ug/dscm	=	**0.000051**	lbs/hr	**0.0002**
Cadmium	15.8	ug/dscm	=	**0.004055**	lbs/hr	**0.012**
Hexavalent Cr	2.3	ug/dscm	=	**0.000590**	lbs/hr	**0.002**
Nickel	25	ug/dscm	=	**0.006416**	lbs/hr	**0.019**
lead	166	ug/dscm	=	**0.042604**	lbs/hr	**0.129**
mercury	50	ug/dscm	=	**0.012832**	lbs/hr	**0.039**
dioxin/furan	0.03	ug/dscm	=	**0.000008**	lbs/hr	**0.00002**
	30	NG/dscm				

> Comment B.3 DEP shall require Covanta to use continuous emissions monitoring technology to measure compliance with standards for particulate matter, dioxins/furans, and toxic heavy metals, including arsenic, cadmium, chromium (VI), lead, mercury, and nickel.
>
> In addition, the continuous emissions monitoring should be transparent and readily available to the public.

Response to Comment B3:

In addition to annual stack testing and continuous monitoring of various parameters, the facility has proposed to use the continuous monitoring of the steam load and opacity as a surrogate to assure compliance for the toxic metals on a continuous basis between annual stacktestings.

Also, the facility has publicly posted their daily facility CEMS emission data on Covanta.com since July 2021.

> Comment B.4 DEP shall require Covanta to install improved controls and implementation of evolving best management practices.

Response to Comment B4:

Covanta has installed all the required regulatory controls. DEP will continue to work with Covanta as they investigate additional controls to reduce emissions from their facility.

> Comment B.5 Reduce emissions to a healthy and safe level of mercury and dioxins that is zero.

Response to Comment B5:

Covanta has all the required regulatory controls in place. DEP will continue to work with Covanta as they investigate additional controls to reduce emissions from their facility. In addition, the facility has proposed to use the continuous monitoring of the steam load and opacity as a surrogate to measure compliance for the toxic metals.

C. Reject the Operating Permit for Covanta Delaware Valley, TVOP No. 23-00004 because of the following reasons…

- This facility is located in a low-income community and an EJ area.
- This facility is a major air pollutant emitter in the community.
- The permit emission limits are not based on health and safety.
- This facility shall meet "modern" emission standards.
- Based on the National Air Toxic Assessment, Chester is routinely in the top one to two percent of air pollution that cases cancer and other health effects.
- DEP is largely responsible for this environmental racism. It is morally obligated to remedy the situation.
- DEP has not assessed the cumulative air pollution impacts of this facility and other permitted facilities in Chester and at the very least, must conduct such analyses to inform this decision-making on this permit.
- In order to protect the health and safety of Chester residents, and improve air quality throughout Delaware County, DEP shall reject the Operating Permit for Covanta Delaware Valley, No. 23-00004.
- 25 PA Code Section 127.412(g) states that if a company shows a lack of intention or ability to comply with its permit conditions, DEP will place the lack of intention or ability to comply on the compliance docket. Subsection 8 requires that an open permit, like the one being considered here, will not be issued to the applicant that appears on this compliance docket. So how many violations does the company have to have until DEP determines that they don't intend to comply with the permit conditions? Is 320 from Covanta not enough?

Response to Comment C:

DEP is aware that the Covanta facility is a major air pollutant emitter located in an environmental justice area. Consequently, DEP has applied the Environmental Justice Public Participation Policy throughout reviewing this application. DEP has worked to ensure the local community plays its important role in the permitting process and that its concerns are heard and considered.

From the issuance of the plan approval which authorized the construction of this facility through the issuance of the Title V Permit, and the review of this renewal application, DEP has required Covanta to meet the most modern emissions standards. As pollution control technology improves and new regulations are promulgated, DEP requires Covanta to keep up and meet the new requirements such as the RACT III regulation governing NOx emissions. This application is to renew the Title V Permit and does not request making any modifications to the existing facility. There are no proposed changes to the emission limits in the permit.

Like most major facilities, Covanta has had some exceedances of its permit limits. DEP addresses each violation and ensures Covanta returns to and stays in compliance. Covanta's compliance history does not meet the high bar for placing a company on the compliance docket which prevents the issuance or renewal of any permit to any facility the company owns in Pennsylvania.

D. Support issuance of the Operating Permit for Covanta Delaware Valley, TVOP No. 23-00004 because …

Comment D1. The facility recovers significant amount of steel/metals each year.

Response to Comment D1:

Covanta does recover metals as part of the Sustainable Materials Management Program. USEPA municipal solid waste program has an USEPA's Sustainable Materials Management (SMM)[7] program. This program is an approach to serving human needs by using/reusing resources productively and sustainably throughout their life cycles, generally minimizing the amount of materials involved and all associated environmental impacts. This is found at https://19january2021snapshot.epa.gov/smm/sustainable-materials-management-basics_.html 'The Resource Conservation & Recovery Act (RCRA) provides the legislative basis for EPA's Sustainable Materials Management (SMM) Program, setting a strong preference for resource conservation over disposal. EPA's 2002 report, issued in "*Beyond RCRA: Waste and Materials Management in the year 2020"* made the argument for focusing efforts on materials management, and the report, SMM: The Road Ahead (2009) provided recommendations and an analytical framework for moving toward sustainable materials management. The Road Ahead serves as the foundation for the SMM Program. In addition, EPA's waste hierarchy continues to provide guidance, highlighting source reduction/waste prevention & reuse over recycling and composting, energy recovery, and treatment & disposal.
USEPA's waste hierarchy is as follows:

source reduction & waste reuse → recycling and composting → energy recovery → treatment & disposal

Comment D2. The facility meets regularly with the community to address any issues and to support the CEP's efforts to protect the health and welfare of our community

Response to Comment D2:

Covanta does meet regularly with various community outreach, including Chester Environmental Partners (CEP), to address issues and to protect the health and welfare of their community as summarized in the table below.

[7] U.S. EPA Sustainable Materials Management Program Strategic Plan (Fiscal Year 2017-2022)

Community Stakeholder	Description	Event Date
Environmental Justice	Appearance on Making A Change Facebook Live event	Jan-21
Residents	Save Your Soles-an educational program to help seniors in Chester fight diabetes	Feb-21
Environmental Justice	Sponsorship PA EJ Symposium	Apr-21
Environmental Justice	EJ Symposium Planning	Apr-21 (Monthly)
Chester Upland	Chester Environmental Partnership (CEP) Scholarship Program $20k in scholarships to Chester High School	May-21
Delaware County	Support and participate in quarterly Household Hazardous Waste (HHW) collection. HHW collections sponsorship- 2,322 residents dropped off 135,538 pounds of HHW.	Apr-21 June-21 Sept-21 Oct-21
Rev. Strand, Chester Environmental Partnership	Bi-monthly meetings with CEP	Ongoing
Local, County, State Government, Chester Residents, Chester Business Community Outreach/Dialogue	Residents and City Council with Mayor Kirkland; County Executives with Sustainability Committee; Mayor Kirkland and Clergy; Riverfront Alliance; Phila Union; and PA State elected officials	Ongoing
Environmental Advisory Board	Attendance at municipal meetings	Ongoing
Chester Upland/ Environmental Justice	Go Green Initiative in the Chester Upland School District	Ongoing
Residents	CRC Watershed Association	Various

E. DEP Permitting

Comment E1. Shortening the operating permit term since more and more alternatives to both incineration and landfills are being developed at this time, five years is not short term anymore.

Response to Comment E1:

Covanta is currently in compliance with the Clean Air Act. The permit term will not be shortened as the Pennsylvania Air Pollution Control Act Section 6.1(b.2) states " A permit issued or reissued under subsection (b) of this section shall be issued for a five (5) year term unless a shorter term is required to comply with the Clean Air Act and regulations promulgated thereunder or the permittee requests a shorter term, except that a permit for acid deposition control shall be issued for a five (5) year term."

Comment E2. DEP's mission statement is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of this citizens through a cleaner environment. The citizens of Chester and surrounding areas, more than ever, are in need for this mission.

Covanta is the largest municipal incinerator facility in the nation. DEP must not only consider the pollution one company like Covanta which emits pollution into an environment, but also the total impact of all emissions from nearby companies, adversely on the health of a community.

Response to Comment E2:

DEP continues to uphold to its mission statement. For Covanta and all facilities, DEP requires that each facility installs, maintains, and operates pollution control technology that would reduce emissions as new regulations are promulgated, such as the RACT III regulation governing NOx emissions.

For further monitoring, DEP has a Marcus Hook ambient air monitoring station near Chester City. The air pollutant concentration data collected at this station show total impact of all pollution emitted from nearby companies, including Covanta, as well as to evaluate compliance with national and state ambient air quality standards, provide real-time monitoring of air pollution episodes, develop data for trend analysis, develop and implement air quality regulations and provide information to the public on daily air quality conditions in your area.

Comment E3. The Department should abandon the notion that it "must" grant an application for a Title V Operating Permit that meets minimum requirements.

E3.1. The law does not compel the Department to approve an application for an operating permit.

E3.2. The Department's policy that it must grant an application that meets all applicable regulatory and statutory requirements is unlawful as a matter of law.

Response to Comment E3:

Covanta is required to have an operating permit pursuant to Title V of the Federal Clean Air Act. During the review of this renewal application, DEP updates Federal and State applicable requirements so that Title V Operating permit contains practically enforceable conditions.

Comment E.4. The Department should disapprove the permit application in the absence of any analysis that it will not cause "Air Pollution" as defined in state law and regulation.

E.4.1. Federally-enforceable state regulations require the Department to disapprove an application for an operating permit if it determines that the source "is likely to cause air pollution."

E.4.2. The Department should disapprove the application because the Applicant and the Department have not performed any analysis whether the Facility will harm human health.

E.4.3. The Department should disapprove the application because the Applicant and the Department have not performed any analysis whether the Facility unreasonably interferes with the comfortable enjoyment of life and property.

E.4.4. The Department's responsibilities under 25 Pa. Code 127.402 and 127.422 to deny permits to facilities that will cause "Air Pollution" may form the basis for a petition for objection to the Environmental Protection Agency.

Response to Comment E4:

Covanta has had non-compliance issues which have been addressed. Covanta conducts annual stack testing and has demonstrated compliance with the emission limits in the Title V operating permit. Covanta has initiated an engineering feasibility evaluation for the installation of a carbon injection system to achieve further emission reductions and has publicly posted their daily facility CEMS emission data that shows real-time emission data. In accordance with the regulations, DEP may issue an operating permit to an applicant for a stationary air contamination source requiring construction, assembly, installation, reactivation or modification when the requirements of this article related to operating requirements have been met and there has been performed upon the source a test or evaluation which satisfies the Department that the air contamination source will not discharge into the outdoor atmosphere an air contaminant at a rate in excess of that permitted by applicable regulations under this article, or in violation of a performance or emission standard or other requirements established by the EPA or the Department for the source, and will not cause air pollution.

F. Draft Permit

The terms of the Draft Permit are insufficient to meet applicable legal requirements and/or to protect public health and the environment.

Comment F1. The federal Title V regulations require the Department to revise the Draft Permit to identify the origin of and authority for each term or condition therein.

Response to Comment F1:

The header that is located above each condition is the origin and authority of the requirements.

Comment F2. Federal law requires that the Department revise the Draft Permit and the Draft Review Memo to identify federal regulations to which the Municipal Waste Combustor Units are subject.

Response to Comment F2:
During the review of this renewal application, DEP updates Federal and State applicable requirements so that Title V Operating permit contains the most current as well as practically enforceable conditions.

Comment F3. The Department should revise the Draft Permit to require more frequent monitoring to assure compliance with the hourly limit for Particulate Matter and the Department should require use of a Continuous Emissions Monitoring System (PM CEMS) for this purpose.

Response to Comment F3:

Covanta has Continuous Emissions Monitoring System for opacity which serves as a surrogate for particulate matter emissions.

Comment F4. The Department should revise the Draft Permit to include a Compliance Assurance Monitoring plan for the hourly PM and SO2 limits.

Response to Comment F4:

The CAM establishes monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected for pollutant whose uncontrolled emissions are above the threshold. For Covanta, the uncontrolled PM emissions are above the threshold of 100 tons. They have installed COMS to monitor their opacity which is surrogate for PM. However, uncontrolled SOx emissions are below the threshold of 100 tons, therefore CAM is not required.

Comment F5. The Department should revise the Draft Permit to provide for a permit reopener to incorporate the new NOx limit issued per the Department's current rulemaking within 60 days of EPA's approval of that limit.

Response to Comment F5:

DEP does have the right to reopen an operating permit prior to its expiration and revise or add applicable requirements under the Clean Air Act that has become applicable to a facility.

Comment F6. To address particular harm from the Facility, the Department should impose requirements more stringent than federal regulations, including emissions monitoring for dioxins.

Response to Comment F6:

The facility has proposed to use the continuous monitoring of the steam load and opacity as a surrogate to assure compliance for the toxic metals on a continuous basis.

G. Public participation and notification

Comment G1. Public documents should be easy to find on DEP's website. Any virtual hearing should to be on Zoom, which is more accessible and more widely used.

In an in-person hearing, DEP should allow people to walk-in late and to testify. In virtual hearings, DEP should allow people to testify at the end of hearing, who does not sign up in advance. Limiting public comment to one presenter per organization is inappropriate.

Attendance list should be available as a public record, not just sharing those who are speaking.

Response to Comment G1:

The applicant, the protestors and other participants were notified of the time, place and purpose of the hearing, in writing, by publication in a newspaper and the *Pennsylvania Bulletin*, which included the steps for registering and/or speaking at the virtual hearing. As there was huge interest in the public hearing for Covanta and to allow the hearing to conducted in a timely manner, DEP limited to a representative per organization so that all concerns would be heard.

Comment G2. Outreach should have been done to the door of each resident living near the facility. DEP needs to do better in notifying and informing those most impacted.

Response to comment G2:

The hearing occurred during the COVID pandemic and with many restrictions, and in addition to publication in a newspaper and the *Pennsylvania Bulletin*, DEP did notify the public in-person and via community webpage

H. Global warming

Comment H1. Combustion of municipal solid waste generates large amount of greenhouse gases in a short time. Covanta is contributing significantly to global climate disasters.

Response

Covanta is a major facility for greenhouse gas emissions, is required to report GHG emissions. In addition, EPA created the Waste Reduction Model (WARM), found at https://www.epa.gov/smm/sustainable-materials-management-tools#warm, to help solid waste planners and organizations track and voluntarily report greenhouse gas (GHG) emissions reductions from several different waste management practices. WARM calculates and totals GHG emissions of baseline and alternative waste management practices—source reduction, recycling, anaerobic digestion, combustion, composting and landfilling.

I. Monitoring Requirements

Comment I1. On top of what violations DEP has caught, what is DEP doing to ensure that Covanta does not rig their emissions tests? Additionally, in the annual stack tests at multiple incinerators, Covanta has stockpiled waste that burns cleaner to use for the annual stack test and the DEP has not caught on to this. So what is the DEP doing to ensure independent monitoring since they cannot be trusted to do it properly themselves?

Response to Comment I1:

To ensure that Covanta does not rig their emission test DEP performs a protocol test review and randomly observes stack tests. DEP reviews test protocols as well as the facility's records to ensure that sufficient information is provided to verify the source conditions existing at the time of the test and where adequate data is available to show the manner in which the test was conducted. Stack test information submitted to DEP shall include, as a minimum, all of the following:

(i) A thorough source description, including a description of air cleaning devices and the flue.

(ii) Process conditions, for example, the charging rate of raw material or rate of production of final product, boiler pressure, oven temperature and other conditions which may affect emissions from the process.

(iii) The location of the sampling ports.

(iv) Effluent characteristics, including velocity, temperature, moisture content, gas density (percentage of CO, CO_2, O_2 and N_2), static and barometric pressures.

(v) Sample collection techniques employed, including procedures used, equipment descriptions and data to verify that isokinetic sampling for particulate matter collection occurred and that acceptable test conditions were met.

(vi) Laboratory procedures and results.

(vii) Calculated results.

Comment I2. The continuous emissions monitoring data need to be quickly reported and easily available to the public.

Response to Comment I2:

Covanta has been displaying their real-time emissions recorded by Continuous Emission Monitoring system on their website Delaware Valley | Covanta (https://www.covanta.com/where-we-are/our-facilities/delaware-valley) under View Emissions button since July 2021.

Comment I3. Covanta is the number one industrial air pollution source of toxins and sulfur dioxide emissions, and is number two in fine particulate matter, hydrochloric acid emissions. What are the measures for preventing dust emissions?

Response to Comment I3:

Covanta monitors their emissions continuously by Continuous Emission Monitoring as well as various parameters, such as steam load and temperature, and submits quarterly reports to DEP for review. These reports provide the amount of emissions emitted at any time. Covanta shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions include, but not be limited to, the following:

(1) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads or the clearing of land.

(2) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.

(3) Paving and maintenance of roadways.

(4) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

J. EPA Inspection

Comment J1. Ms. Horgan, of USEPA inspector, conducted an inspection at Covanta in March 2009. Ms. Horgan inquired Covanta about installing pollution controls for nitrogen oxide. Covanta's environmental engineer explained that installing NOx control device(s) costs a lot of money and would create a lot of operational issues. It is not an acceptable answer, elaborate.

Response to Comment J1:

At the time of the inspection, Covanta was in compliance with the current NOx allowable emission limit. The reduction of emissions is EPA's and DEP's concern. EPA has on-going research that provides the critical science to develop and implement Clean Air Act regulations that protect the quality of the air we breathe, such as National Ambient Air Quality Standards. DEP develops more stringent requirements, such as presumptive RACT requirements for different industries and general RACT for all facilities which is reviewed and approved by EPA. Covanta and all facilities are required to demonstrate compliance with the new emission limitations or provide alternate compliance which will be reviewed and approved by both DEP and EPA.

K. DEP's rights/obligations to deny a permit

Comment K1. DEP is required to deny an application for a permit where the project will cause air pollution that can harm public health.

Response to Comment K1:

DEP agrees with this comment. If DEP determines that issuing a permit will result in unacceptable harm to public health it will deny the application. DEP will deny applications for permits it determines would emit excessive pollution and/or cause harm to the health of Pennsylvania citizens. This application has been reviewed carefully to ensure the resulting additional emissions from the existing Covanta facility will not cause harm to the public health. Essentially, every permitted facility in Pennsylvania emits some air pollution; it is DEP's job to make sure the amount of air pollution is within safe limits for the public and the environment. DEP has determined that the consequences of issuing this permit renewal will not cause harm to the public's health.

Comment K2. DEP has an affirmative duty to look at impacts of its decisions on racial minorities and to not act in a way that would be discriminatory.

DEP has a constitutional obligation under the Pennsylvania Environmental Rights Amendment to not violate people's rights to clean air.

DEP cannot argue that simple compliance with air pollution permits means that there is no air pollution or that discriminatory impacts are not possible.

Response to Comment K2:

There is no argument or disagreement that DEP has an obligation under the Pennsylvania Environmental Rights Amendment to protect and preserve the natural resources of our Commonwealth. DEP takes this obligation very seriously and reviews and acts on every application with this obligation in mind. Minority and low-income Pennsylvanians have been bearing a disproportionate share of adverse environmental impacts for many years. DEP recognizes its duty is to ensure that all Pennsylvanians are meaningfully involved in the decisions that affect their environment and that no community is unjustly and/or disproportionally burdened with adverse environmental impacts. DEP's Environmental Justice Public Participation Policy was developed and followed with the goal of ensuring every community has the right and opportunity to be heard concerning decisions affecting their environment. DEP has followed that policy in this case, providing the local community with opportunities to be heard and involved in the permitting process. DEP has discussed the permitting action with several local organizations, developed a flyer which described the action and how to comment on the action, distributed the flyers to dozens of business located near the facility, developed and distributed an information sheet to the county delegation of elected officials, and scheduled and held a virtual public hearing. Additionally, DEP maintains a community information webpage which includes information on how to submit public comments in writing or at the hearing: Covanta Del Val Renewal (pa.gov)

DEP and Covanta have not relied upon just simple compliance with the law. Covanta has done the following list of items above and beyond the legal requirements applicable to the facility:

1. The facility voluntarily initiated a field-testing program to evaluate the feasibility and effectiveness of ammonia injection (selective non-catalytic reduction-SNCR) for the reduction of NOx emissions. A test program was initiated prior to the Department's proposed RACT III NOx limit of 110ppm for MWCs.

2. It replaced existing opacity monitors to ensure ongoing reliability and data accuracy.

3. Although the facility performs very well in terms of mercury emissions, Covanta initiated an engineering feasibility evaluation for the installation of a carbon injection system to achieve further emission reductions.

4. Covanta is planning for the replacement of their outlet Continuous Emission Monitors (CEMS) for NOx, CO, O2, HCL and SO2 in 2024/2025 to ensure continued reliability and data accuracy.

5. Covanta relocated the NYC waste container storage area away from the facility fence line to minimize off-site impacts.

6. Covanta is publicly posting their daily facility CEMS emission data on Covanta.com.

DEP is focused on minimizing adverse environmental impacts and ensuring that no community is unjustly and/or disproportionally burdened with adverse environmental impacts. DEP is working to ensure citizens have meaningful involvement and a voice in decision-making process. DEP is also working to enable environmentally responsible economic development within communities and to build collaborations and relationships with the community and industry.

Comment K3. Title Six of the Civil Rights Act of 1964 requires that any federally-funded entity, such as DEP, not take any action that has a discriminatory effects on racial minorities. DEP must deny this Title V Air Permit Renewal on both state, constitutional and federal Civil Right Act grounds.

Response to Comment K3:

DEP agrees that it is required to comply with Title VI of the Civil Rights Act of 1964 and takes its obligation to do so very seriously. Title VI dictates that recipients of federal financial assistance cannot discriminate on the basis of race, color, or national origin. DEP recognizes that compliance with environmental laws alone does not automatically ensure compliance with Title VI, and that DEP is required to operate their programs in compliance with the non-discrimination requirements of Title VI and EPA's implementing regulations. DEP has reviewed Covanta's application with these obligations in mind and has determined that issuing this permit renewal for the existing Covanta facility does not violate the important restrictions imposed by Title VI.

Comment K4. DEP has an ethical obligation to stop issuing permit to Covanta.

Response to Comment K4:

DEP is aware that the Covanta facility is a major air pollutant emitter located in an environmental justice area. Consequently, DEP has applied the Environmental Justice Public

Participation Policy throughout reviewing this application. DEP has worked to ensure the local community plays its important role in the permitting process and that its concerns are heard and considered.

From the issuance of the plan approval which authorized the construction of this facility through the issuance of the Title V Permit, and the review of this renewal application, DEP has required Covanta to meet the most modern emissions standards. As pollution control technology improves and new regulations are promulgated, DEP requires Covanta to keep up and meet the new requirements such as the RACT III regulation governing NOx emissions. This application is to renew the Title V Permit and does not request making any modifications to the existing facility. There are no proposed changes to the emission limits in the permit.

Like most major facilities, Covanta has had some exceedances of its permit limits. DEP addresses each violation and ensures Covanta returns to and stays in compliance. Covanta's compliance history does not meet the high bar for placing a company on the compliance docket which prevents the issuance or renewal of any permit to any facility the company owns in Pennsylvania.

L. Waste incineration does not conserve landfill capacity.

Comment L1. The EPA conservatively estimates the ash content of municipal solid waste (MSW) at 15-25% while other scholarly articles have concluded that after incineration, 30% of MSW is left as ash. This ash still must be landfilled and disperses pollutants at a far greater rate than un-combusted MSW.

Comment L2: Waste incineration harms the environment and public health.

Response to Comment L1 and L2:

According to USEPA report [Energy Recovery from the Combustion of Municipal Solid Waste (MSW) | US EPA]:

"The amount of ash generated ranges from 15-25 percent (by weight) and from 5-15 percent (by volume) of the MSW processed. Generally, MSW combustion residues consist of two types of material: fly ash and bottom ash. Fly ash refers to the fine particles that are removed from the flue gas and includes residues from other air pollution control devices, such as scrubbers. Fly ash typically amounts to 10-20 percent by weight of the total ash. The rest of the MSW combustion ash is called bottom ash (80-90 percent by weight). The main chemical components of bottom ash are silica (sand and quartz), calcium, iron oxide, and aluminum oxide. Bottom ash usually has a moisture content of 22-62 percent by dry weight. The chemical composition of the ash varies depending on the original MSW feedstock and the combustion process. The ash that remains from the MSW combustion process is sent to landfills. Visit EPA's Landfill Methane Outreach Program for additional information on how facilities recover energy from landfills."

In addition, Condition 15 of Waste permit instructs Covanta on how to manage the ash generated at the facility, from recovery, storage, reduction of ash by venting to the baghouse to removal from the facility. This will assist to reduce emissions to the atmosphere and protect the environment and public health.

M. Environmental justice policy and Department of Environmental Protection (DEP)

Comment M1. The DEP has an obligation to protect health and welfare of all citizens of Pennsylvania, particularly those in an environmental justice community.

Comment M2. The Tishmann (the new school) designs for social justice [See this link Tishman Environment and Design Center (tishmancenter.org)] (This was mentioned in DEP letter)

Response to Comments M1 and M2:

DEP's current Environmental Justice Public Participation Policy is implemented by agency personnel to ensure Pennsylvanians within Environmental Justice Areas have a respected voice in the review process of specific projects in their communities.

DEP recognizes the importance of ensuring every citizen of Pennsylvania is safeguarded from illegal pollution and environmental harm. The agency is committed to the fair treatment and meaningful involvement of all people with respect to the identification of environmental issues, and the development, implementation, and enforcement of environmental policies, regulations, and laws. DEP is bound to uphold its regulatory, statutory, and constitutional obligations of protecting Pennsylvania's air, land and water from pollution and providing for the health and safety of its citizens through a cleaner environment. The reality is certain communities, which are often predominately low-income or people of color, have experienced a disproportionate impact of environmental burdens. DEP is committed to doing all within its legal power to address environmental injustice.

The current Environmental Justice Public Participation Policy was followed in the review of the Covanta permit renewal. DEP engaged in outreach efforts to provide residents in the communities around the site with information on the facility and how to submit public comments and attend public hearings regarding its permit renewal. This Comment and Response document has been developed and shared with local communities around the facility.