#### Davis, Christine (DPW)

From:

Boone, Linda <Linda.Boone@fairfaxcounty.gov>

Sent:

Thursday, January 22, 2009 4:04 PM

To:

Hammond, Sybil (DPW)

Cc:

Mitchell, Peter (DPW); Kelley, Katherine (DPW)

Subject:

Plans for Waste Delivery To Covanta Facility

**Categories:** 

**Green Category** 

I contacted your office this afternoon and wanted to followup with you about your waste delivery plans for the week. We noted that DC has not sent any waste to the Covanta facility today and only 63 tons on Wednesday. Monday and Tuesday records also showed very small amounts of waste dellivered. For planning purposes, do you intend to send substantial amounts of waste to the facility this week or next? During this time of year, our waste inventory is harder to manage because of less waste in the system. It would be most helpful for us to know your plans, so we can identify other waste tons to fill our capacity at the facility.

If you would like to contact me, my information is below.

Linda R. Boone, Branch Chief Planning and Resource Recovery Division of Solid Waste Disposal and Resource Recovery 703-324-5045 <a href="mailto:linda.boone@fairfaxcounty.gov">linda.boone@fairfaxcounty.gov</a>

#### Davis, Christine (DPW)

From:

Boone, Linda <Linda.Boone@fairfaxcounty.gov>

Sent:

Wednesday, June 10, 2009 8:29 AM

To:

Clemm, Hallie (DPW); Warren, Larry (DPW)

Cc:

Doughty, Joyce M.; Forbes, Charles D

Subject:

Covanta Over-the-Scale Permit Limit

Categories:

Green Category

Due to several unique things happening simultaneously at the Covanta facility, the facility has bumped up against its new Title V over-the-scales 30-day rolling average for incoming waste coming at the facility. I wanted to advise you of this since I recently authorized you to increase the amount of waste coming to the facility for the next 3 months. I wanted to alert you to the possibility that Covanta could unilaterally at any time cut off deliveries of any waste to the facility, if the facility is again close to its permit limit.

At this time, it appears the situation has worked itself out. Our office will also be monitoring the over-the-scales tons more closely and should be able to provide you with advance notice if the facility again approaches the limit. If you have questions or concerns, please contact me.

Linda R. Boone, Branch Chief Planning and Resource Recovery Division of Solid Waste Disposal and Resource Recovery 703-324-5045 linda.boone@fairfaxcounty.gov

From:

Aidan Murphy [aidanjmurphy@comcast.net]

Sent:

Wednesday, March 24, 2010 1:12 PM

To:

Duckett, Anthony (DPW); Clemm, Hallie (DPW); Bass, Tony (DPW)

Subject:

Thank you

Thank you for taking time out of your schedules to discuss Harvest Power and partnership opportunities. The Harvest Power solution is game changing technology combined with a unique operating model that will change how cities handle compostable material. I look forward to future conversations about how we could deploy this technology in or around DC.

Aidan

Aidan Murphy

Principal

Sustainable Operations Solutions, LLC

Tel: 443-223-8349 Fax: 410-280-5052

aidanjmurphy@comcast.net

From:

Aidan Murphy [aidanjmurphy@comcast.net]

Sent:

Sunday, March 28, 2010 5:09 PM

To:

Clemm, Hallie (DPW)

Subject:

Harvest Power, Power Point Presentation

Attachments:

Harvest Overview March 2010.pdf

Thanks again for your time and setting up the meeting with William Howland. I think there is a very good opportunity for partnership between Harvest Power and DC to partner on a composting project inside the district. I attached the power point presentation we did in the meetings we had with your team. Please contact me if you have questions or need additional information.

#### Aidan Murphy

Principal

Sustainable Operations Solutions, LLC

Tel: 443-223-8349 Fax: 410-280-5052

#### aidanjmurphy@comcast.net

**From:** Sameer Rashid [mailto:SRashid@harvestpower.com]

Sent: Thursday, March 25, 2010 6:34 PM

**To:** Aidan Murphy **Subject:** pitch deck

Aidan,

See attached PDF

From:

Aidan Murphy [aidanjmurphy@comcast.net]

Sent:

Sunday, March 28, 2010 5:12 PM

To:

Clemm, Hallie (DPW)

Subject:

Harvest Power, Vancouver Operation

Attachments:

Vancouver OKs yard composting beginning April 22.pdf

Attached is an article on the composting in Vancouver. Please contact me if you need additional information.

Aidan Murphy

Principal

Sustainable Operations Solutions, LLC

Tel: 443-223-8349 Fax: 410-280-5052

aidanjmurphy@comcast.net

From:

Aidan Murphy [aidanjmurphy@comcast.net]

Sent:

Sunday, March 28, 2010 5:36 PM

To:

Howland, William (DPW); Carter, Michael A. (DPW); Clemm, Hallie (DPW)

Subject:

Thank you

Thank you for taking out of your schedules to meet and talk about the Harvest Power composting solution. Currently there is tremendous pressure in the DC market for food waste composting. As more federal operations employ the new procurement guidelines the pressure will continue to believe. The Harvest Power solution represents game changing technology and partnership opportunities that could make the district a model for sustainability.

Please feel free to contact me if you need additional information or if there is anything I can do to help make these discussions a reality.

Aidan Murphy

Principal

Sustainable Operations Solutions, LLC

Tel: 443-223-8349 Fax: 410-280-5052

aidanjmurphy@comcast.net

From:

Stuart Cooke [contactcooke@gmail.com]

Sent:

Monday, October 25, 2010 1:34 PM

To: Cc: Clemm, Hallie (DPW) igodbey@enviremed.net

Subject:

Re: Gasification information attached

I need to get you to sign a NDA. This is so I can properly register you to be given all information on the system. This will also allow you to be shown the demonstration system. I will have the NDA for your review. The NDA keeps propriety information private.

I will ask EnviRemed Attorney, Mr. Jimmy Godbey, to email you the NDA for your review. This is boiler plate stuff. Every potential customer signs one to get started.

Thanks again for your interest,
Stuart Cooke
EnviRemed Environmental Solutions

Sent from my iPad Stuart Cooke

On Oct 25, 2010, at 11:34 AM, "Clemm, Hallie (DPW)" < hallie.clemm@dc.gov> wrote:

I have reviewed the information you sent my way...You say that there is a 150tpd demonstration project up and running.....please let me know where that is as well as any other locations where you have established an installation.

From: Stuart Cooke [mailto:contactcooke@gmail.com]

Sent: Saturday, October 23, 2010 11:34 AM

**To:** Clemm, Hallie (DPW)

Cc: Joe Robertson; Tripp Sloane

Subject: Fwd: Gasification information attached

Mrs. Clemm,

I just wanted to check back with you to see if you have had a chance to review our waste to energy system information? I know you have been dealing with a tragedy. I don't want to be a bother. I do want to let you know that we will have our experts back in the Washington D. C. area around the 5th of November. I wondered if you would be able to spare a few minutes then?

Again, this is not an incinerator. Our system is closed loop and state of the art. It gasifys MSW, tires, waste water sludge, C/D, yard waste, toxic waste, etc. into green electricity. The best part is it cost you nothing for the system. We just want your trash. Would you have an opening in your day for us on the 5th?

Best regards,

Stuart Cooke

EnviRemed Environmental Solutions

Sent from my iPad Stuart Cooke

#### Begin forwarded message:

From: Stuart Cooke < contactcooke@gmail.com >

Date: October 12, 2010 5:03:08 PM EDT

To: "hallie.clemm@dc.gov" < hallie.clemm@dc.gov>

Subject: Gasification information attached

Thank you for your time today. Please review the attached. I will be near your office on Tuesday, October 19th around one. Would you have any time to share with me then? I need about 20 minutes. Is this possible? We turn MSW, C/D, toxic waste, sludge, yard waste, etc. into green BTUs. A great income stream from a great waste stream with no capitol outlay for you.

Many thanks,

Stuart Cooke

**EnviRemed Environmental Solutions** 

910-616-1795 Cell

Sent from my iPad Stuart Cooke

#### Begin forwarded message:

From: Kelly Godbey < kgodbey@enviremed.net>

Date: October 12, 2010 2:44:35 PM EDT

**To:** STUART COOKE < scooke@enviremed.net > Subject: Gasification information attached

From:

Peter Tien [peter.tien@princetonenvironmental.com]

Sent:

Thursday, October 06, 2011 8:19 PM

kwhited@americaleading.com

To:

Howland, William (DPW); Clemm, Hallie (DPW)

Cc:

Attachments:

A0041047 - Public with Attachments 2-1-2011.pdf; Facility Profile.pdf; Comparison of CPP Ridge Road Air Toxic-HAP Emissions vs Actual CY 2009 Emissions.pdf; CPP Ridge Road

Project - Emissions Comparison Report 3-31-2011.pdf; DRAFT Emissions Comparison

Report.pdf; Emissions from CPP Project vs Other Facilities.pdf

Dear Director Howland and Deputy Administrator Clemm:

It was indeed our pleasure meeting you and your colleagues and thank you for the opportunity to present our process to your office.

Per our discussions, please see all the documents included in our air permit application to Ohio EPA of a 550 tons /day gasification facility as a fixed site source within minor threshold.

Thank you and please feel free to contact this office for any information you may require Peter Tien

#### Comparison of the Proposed Maximum Annual Emission Rates for the CPP Ridge Road MSW Energy Recovery Facility Versus

### Other Operating Emission Sources in Northeast Ohio<sup>1</sup> Prepared by:

Princeton Environmental Group and GT Environmental, Inc.

#### Introduction

This report presents the maximum annual emission rate for each air pollutant identified in the Permit-to-Install (PTI) application submitted by Cleveland Public Power (CPP) for the Ridge Road municipal solid waste (MSW) energy recovery project and compares and contrasts those rates versus actual CY 2009 emissions reported by other emission sources in Cuyahoga County and Northeast Ohio (NE Ohio).<sup>2</sup> The comparisons in this report are based on the following sources of data:

- 1. The CY 2009 Emissions Inventory reports from industrial and utility point sources compiled by Ohio EPA;<sup>3</sup>
- 2. The CY 2009 Toxic Release Inventory (TRI) reports from industrial and utility point sources compiled by Ohio EPA;<sup>4</sup> and
- 3. The inventories of point, area and mobile sources compiled by Ohio EPA for the development of the ozone and PM<sub>2.5</sub> (i.e., particulate matter that is less than 2.5 microns in diameter) State Implementation Plans (SIPs).<sup>5</sup>

The types of air contaminants (or air pollutants) that will be emitted by the proposed CPP Ridge Road MSW Energy Recovery Facility (proposed CPP facility) fall into three general categories:

- 1. The air contaminants for which the United States Environmental Protection Agency (US EPA) has adopted National Ambient Air Quality Standards (NAAQS).<sup>6</sup> The NAAQS pollutants include:
  - Ozone (the precursor pollutants for ozone formation in the ambient air are volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>));
  - Nitrogen dioxide (NO<sub>2</sub>) (approximately 75% of the total NO<sub>x</sub> is NO<sub>2</sub>);
  - Sulfur dioxide (SO<sub>2</sub>);
  - Particulate matter less than 10 microns in diameter (PM<sub>10</sub>);
  - Particulate matter less than 2.5 microns in diameter ( $PM_{2.5}$ ) (the precursor pollutants for  $PM_{2.5}$  formation in the ambient air are  $NO_x$  and  $SO_2$ );
  - Lead (Pb); and
  - Carbon monoxide (CO).
- 2. The air contaminants that are: (a) listed as a Hazardous Air Pollutant (HAP) by the US EPA<sup>7</sup>, including hydrogen chloride (HCl), hydrogen fluoride (HF), cadmium (Cd), mercury (Hg) and dioxin; and/or (b) identified as a toxic air pollutant by the Ohio Environmental Protection Agency (Ohio EPA)<sup>8</sup>, including ammonia (NH<sub>3</sub>) and sulfuric acid (H<sub>2</sub>SO<sub>4</sub>); and

3. The Greenhouse Gas air pollutants designated by US EPA, including carbon dioxide (CO<sub>2</sub>) nitrous oxide and methane, expressed as CO<sub>2</sub> equivalents or CO<sub>2e</sub>.<sup>9</sup>

The performance specifications in the air permit application for the proposed CPP facility result in total potential annual emissions that categorize the facility as a "minor source" under the state and federal New Source Review (NSR) rules. While a minor source under NSR, the lower annual emissions rates for the Title V operating permit program result in the facility being categorized as a "major source" of emissions under the operating permit rules. Regardless of the air permit category, this report demonstrates the maximum annual potential emissions from the proposed CPP facility compare very favorably to the actual emissions rates from other facilities that are currently operating in NE Ohio.

#### Comparison of Emissions for NAAQS Air Contaminants

The following tables compare the *potential annual emissions* of the NAAQS air contaminants emitted by the proposed CPP facility versus *actual annual emissions* reported by other major industrial and utility sources located in NE Ohio. There are several important qualifiers that should be kept in mind when reviewing the data in these tables.

It is likely the actual annual air contaminant emissions from the CPP facility will be less than the amounts presented in these tables. This statement is based on: (1) the fact that the maximum potential annual emissions from the proposed CPP facility presented in these tables assume the four gasifier lines will operate at the maximum allowable hourly emission rate every hour each line is operated; and (2) the actual emissions during many hours of the year will be less than the allowable emission rates because the allowed rate incorporates a safety factor to ensure continuous compliance. The conservative overestimate of the actual emissions resulting from the safety factor employed in these calculations is most pronounced with the total particulate matter (PM) emission rate (i.e., filterable PM + condensable PM or PM (F + C)) and the lead (Pb) emission rate.

A conservative overestimate is included for PM (F +C) because there is limited experience with the US EPA emission test method for condensable particulate emissions at sources that burn syngas produced from MSW and that are equipped with the system of air pollution control equipment that will be employed at the CPP facility (i.e., sorbent injection, baghouse, selective catalytic reduction (SCR) and wet-flue gas desulfurization (FGD).<sup>13</sup> The lead (Pb) emissions estimate for the CPP facility is based on the "worst case" assumption that this air contaminant will be emitted at the maximum rate authorized by the federal New Source Performance Standards (NSPS). It is likely that the actual lead (Pb) emissions will be far less than this amount because the MSW that arrives at the facility will be processed to remove items that are likely to contain lead (e.g., batteries, electronics, etc.) and the air pollution control system that will be installed will likely perform substantially better than the NSPS requires.

Conversely, the CY 2009 actual emissions from other operating facilities in NE Ohio are based on actual emission rates that, in many cases, are less than the allowable emission rates for these facilities. There are two reasons for this: (1) the air pollution control

equipment used at many of these facilities was designed and is operated with a safety factor to ensure continuous compliance; and (2) during CY 2009 almost all of the industrial and utility sources were operated at far less than capacity (i.e., for many facilities, the economic downturn has reduced production rates and emissions by 1/3 or more from normal annual levels).

The emissions tabulated by Ohio EPA annually for any county are significantly less than the total actual emissions for that county. There are two primary reasons for this: (1) the annual emission reports submitted to Ohio EPA by major sources include only those emissions units that have one or more tons of actual emissions (this makes the comparison for air contaminants that will be emitted in very small amounts from the CPP facility, such as lead (Pb), appear to be a much larger percentage of the total actual emissions associated with major sources than they actually represent); and (2) facilities that are classified as minor sources, area sources and mobile sources are excluded from Ohio EPA's mandatory annual emission reporting requirements.

NAAQS Air Contaminant Summary. Table 1 compares the maximum potential annual emissions of each NAAQS air contaminant from the CPP facility versus the actual reported CY 2009 emissions from the major industrial and utility sources that are currently operating in NE Ohio. The proposed CPP facility would emit less than 0.26% of the total NAAQS contaminant emissions from industrial and utility sources in NE Ohio.

Maximum Potential En Emissions fro		from th						2009
	NAAQS Air Contaminants (tons of actual CY 2009 emissions reported by major sources)							
County	VOC	NO <sub>x</sub>	SO <sub>2</sub>	PM (cond)	PM (filt)	СО	Lead (Pb)	Total
Ashtabula County	3,056	1,245	4,833	148	230	59,995	0.02	69,507
Cuyahoga County	973	2,296	5,684	142	776	6,402	2.6	16,276
Geauga County	18	10	6	NR	9	NR	0.004	43
Lake County	196	7,800	52,030	2,839	498	1,494	0.15	64,857
Lorain County	584	5,655	37,608	499	773	826	4.2	45,949
Medina County	174	75	57	16	34	88	0.004	444
Portage County	359	101	24	8	71	148	0.001	711
Summit County	378	426	2,153	18	107	310	0.39	3,392
NE Ohio Total	5,739	17,607	102,394	3,671	5,678	69,264	7.34	204,360
CPP Ridge Road Potential NAAQS Emissions (TPY)	34	187	99	64	36	112	0.25	532
CPP Ridge Road Project % of NE Ohio Major Sources	0.59%	1.06%	0.10%	1.74%	0.63%	0.16%	3.4%	0.26%
NR = None Reported by Major	Sources							-

Table 2 shows the maximum potential annual emissions of VOCs, NO<sub>x</sub>, PM<sub>2.5</sub> and SO<sub>2</sub> from the CPP facility versus the NE Ohio SIP inventories for emissions from existing major industrial and utility sources, area sources, non-road engines, marine and other

mobile sources. The proposed CPP facility would emit less than 0.10% of the total emissions in NE Ohio reflected in the SIP inventories for these four air contaminants.

Maximum Potential E		Table 2 n the CPP Fac for Sources in		zone and PM	I <sub>2.5</sub> SIP
***************************************		ns from Ozon	<del></del>	SIP Inventori	es (tons)
Source Category	VOC	NO <sub>x</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	Total
Major Industrial	3,853	4,796	862	17,760	27,271
Utility	258	23,905	2,158	91,065	117,386
Area	37,045	10,982	1,643	942	50,612
Non-Road	23,710	15,960	787	284	40,741
Marine	443	6,478	52	767	7,740
Mobile	18,512	48,068	596	362	67,538
Total	86,224	113,040	6,352	112,709	318,325
CPP Ridge Road Potential Emissions (TPY)	34	187	99.8	99	320.8
CPP Ridge Road Project % of NE Ohio Major Sources	0.04%	0.03%	1.57%	0.09%	0.10%

Volatile Organic Compound (VOC) Emissions. Table 3 compares the maximum potential annual VOC emissions from the CPP facility versus the CY 2009 actual VOC emissions reported by the existing major industrial and utility sources in NE Ohio. There are at least thirteen existing sources with actual CY 2009 VOC emissions that exceed the potential emissions from the CPP facility.

Table 3  Maximum Potential VOC Emissions from the CPP Facility vs Actual Reported CY 2009  VOC Emissions from Operating Major Industrial and Utility Sources <sup>7</sup>							
Major Industrial/Utility Facility	City	County	CY 2009 VOC (tons)				
Ford Motor Company - Ohio Assembly Plant	Avon Lake	Lorain	258				
North Coast Container	Cleveland	Cuyahoga	121				
Morgan Adhesives Company (MACtac)	Stow	Summit	90				
Alfred Nickles Bakery Inc.	Navarre	Stark	62				
Molded Fiber Glass Companies, Plant 2	Ashtabula	Ashtabula	59				
Plasti-Kote Co., Inc.	Medina	Medina	56				
Joseph Adams Corp.	Valley City	Medina	50				
Avery Dennison	Painesville	Lake	48				
Pechiney Plastic Packaging Inc	Akron	Summit	47				
Automated Packaging Systems	Garfield Heights	Cuyahoga	37				
PPG Industries, Inc Cleveland	Cleveland	Cuyahoga	35				
The Lubrizol Corporation - Wickliffe Facility	Wickliffe	Lake	34				
CPP Ridge Road Potential VOC Emissions (	34						
Heritage Fireplace Equipment Co.	Akron	Summit	28				
Graphic Packaging International, Inc.	Solon	Cuyahoga	24				

Nitrogen Oxides (NO<sub>x</sub>) Emissions. Table 4 compares the maximum potential annual  $NO_x$  emissions from the CPP facility versus the CY 2009 actual  $NO_x$  emissions reported by the existing major industrial and utility sources in NE Ohio. There are at least nine

existing sources with actual CY 2009  $NO_x$  emissions that exceed the potential emissions from the CPP facility. Although additional  $NO_x$  control devices could be required in the future at the electric utility generating units presented in this table (i.e., CEI Eastlake, Avon Lake Power Plant, FirstEnergy Ashtabula, Painesville Municipal Electric Plant and CEI Lake Shore Plant), the future emissions at those facilities will still be significantly more than the maximum potential annual  $NO_x$  emissions from the CPP facility.

Table 4  Maximum Potential NO <sub>x</sub> Emissions from the CPP Facility vs Actual Reported CY 2009  NO <sub>x</sub> Emissions from Operating Major Industrial and Utility Sources <sup>7</sup>							
Major Industrial/Utility Facility	City	County	CY 2009 NO <sub>x</sub> (tons)				
CEI Eastlake	Eastlake	Lake	7,055				
RRI Energy Avon Lake Power Plant	Avon Lake	Lorain	5,113				
FirstEnergy Ashtabula Plant	Ashtabula	Ashtabula	991				
ArcelorMittal Cleveland Inc.	Cleveland	Cuyahoga	635				
Painesville Municipal Electric Plant	Painesville	Lake	531				
CEI Lake Shore Plant	Cleveland	Cuyahoga	418				
Cleveland Thermal LLC	Cleveland	Cuyahoga	248				
Cargill, Incorporated - Salt Division	Akron	Summit	230				
Millennium Inorganic Chemicals, Inc.	Ashtabula	Ashtabula	224				
CPP Ridge Road Potential NO <sub>x</sub> Emissions	(TPY)		187				
The Medical Center Company	Cleveland	Cuyahoga	184				
The Lubrizol Corporation	Painesville	Lake	162				
Ross Incineration Services, Inc.	Grafton	Lorain	155				
Ferro Corporation – Cleveland Frit Plant	Cleveland	Cuyahoga	149				
Lorain County LFG Power Station	Oberlin	Lorain	139				
Southerly Wastewater Treatment Center	Cuyahoga Heights	Cuyahoga	116				

**Sulfur Dioxide (SO<sub>2</sub>) Emissions**. Table 5 compares the maximum potential annual SO<sub>2</sub> emissions from the CPP facility versus the CY 2009 actual SO<sub>2</sub> emissions reported by the existing major industrial and utility sources in NE Ohio. There are at least twelve existing sources with actual CY 2009 SO<sub>2</sub> emissions that exceed the potential emissions from the CPP facility.

Table 5  Maximum Potential SO <sub>2</sub> Emissions from the CPP Facility vs Actual Reported CY 2009  SO <sub>2</sub> Emissions from Operating Major Industrial and Utility Sources <sup>7</sup>							
Major Industrial/Utility Facility	City	County	CY 2009 SO <sub>2</sub> (tons)				
CEI Eastlake Plant	Eastlake	Lake	48,670				
RRI Energy Avon Lake Power Plant	Avon Lake	Lorain	37,160				
FirstEnergy Ashtabula Plant	Ashtabula	Ashtabula	4,807				
Painesville Municipal Electric Plant	Painesville	Lake	3,337				
The Medical Center Company	Cleveland	Cuyahoga	2,346				
Cargill, Incorporated - Salt Division	Akron	Summit	1,308				
CEI Lake Shore Plant	Cleveland	Cuyahoga	1,071				
Cleveland Thermal LLC	Cleveland	Cuyahoga	1,039				
Emerald Performance Materials, LLC	Akron	Summit	842				

Table 5
Maximum Potential SO <sub>2</sub> Emissions from the CPP Facility vs Actual Reported CY 2009
SO <sub>2</sub> Emissions from Operating Major Industrial and Utility Sources <sup>7</sup>

			CY 2009
Major Industrial/Utility Facility	City	County	SO <sub>2</sub> (tons)
DiGeronimo Aggregates LLC	Independence	Cuyahoga	427
ArcelorMittal Cleveland Inc.	Cleveland	Cuyahoga	568
Oberlin College	Oberlin	Lorain	403
CPP Ridge Road Potential SO <sub>2</sub> Emissions (T	PY)		99
Owens Corning Roofing and Asphalt, LLC	Medina	Medina	56

Particulate Matter (PM) Emissions. Table 6 compares the maximum potential annual PM (F + C) emissions from the CPP facility versus the CY 2009 actual emissions reported by the existing major industrial and utility sources in NE Ohio. There are at least seven existing sources with actual CY 2009 PM (F + C) emissions that exceed the potential emissions from the CPP facility.

Table 6	
Maximum Potential Total PM (F + C) Emissions from the CPP Facility	vs Actual Reported
CY 2009 Total PM (F + C) Emissions from Operating Major Industrial a	and Utility Sources <sup>7</sup>

Major Industrial/Utility Facility	City	County	CY 2009 PM (F + C) (tons)
CEI Eastlake Plant	Eastlake	Lake	3,121
RRI Energy Avon Lake Power Plant	Avon Lake	Lorain	824
FirstEnergy Ashtabula Plant	Ashtabula	Ashtabula	255
ArcelorMittal Cleveland Inc.	Cleveland	Cuyahoga	180
Painesville Municipal Electric Plant	Painesville	Lake	167
Elyria Foundry	Elyria	Lorain	163
Lorain Tubular Company LLC	Lorain	Lorain	100
CPP Ridge Road Potential Total PM (F + C	) Emissions (TPY)		99
CEI Lake Shore Plant	Cleveland	Cuyahoga	84
Cleveland Thermal LLC	Cleveland	Cuyahoga	73
Cargill, Incorporated - Salt Division	Akron	Summit	62
The Medical Center Company	Cleveland	Cuyahoga	29

#### Comparison of Emissions for HAP and Air Toxic Air Contaminants

The following tables compare the *potential annual emissions* of the HAP and air toxic contaminants emitted by the proposed CPP facility versus *actual annual emissions* reported by other major industrial and utility sources located in NE Ohio. Just as with the NAAQS air contaminants, there are several important qualifiers that should be kept in mind when reviewing the data in these tables.

First, it is likely the actual annual air contaminant emissions from the CPP facility will be less than the amounts presented in these tables. This statement is based on: (1) the fact that the maximum potential annual emissions from the proposed CPP facility presented in these tables assume the four gasifier lines will operate at the maximum allowable hourly

#### Princeton Environmental Group/ GT Environmental, Inc.

emission rate every hour each line is operated; and (2) the actual emissions during many hours of the year will be less than the allowable emission rates because the requested emission rate incorporates a safety factor to ensure continuous compliance.

Conversely, the CY 2009 actual HAP and air toxic emissions from other operating facilities in NE Ohio are lower than normal emission rates because almost all of the industrial and utility sources were operated at far less than capacity in CY 2009 than normal historical operations (i.e., for many facilities, the economic downturn has reduced production rates and emissions by 1/3 or more from normal annual levels). In addition, operating facilities are not required to report HAP and air toxic emissions unless the amount of raw materials employed exceed specified thresholds. As a result, many facilities that emit the same HAP and air toxic contaminants as the proposed CPP facility are not required to report those emissions.

HAP and Air Toxic Contaminant Summary. Table 7 compares the maximum potential annual total HAP and air toxic contaminant emissions from the CPP facility versus the actual reported CY 2009 total HAP and air toxic contaminant emissions from the major industrial and utility sources that are currently operating in NE Ohio. The proposed CPP facility would emit less than 0.55% of the total HAP and air toxic contaminant emissions from industrial and utility sources in NE Ohio.

Table 7  Maximum Potential Total HAP and Air Toxic Emissions from the CPP Facility vs Actual Reported CY 2009 Total HAP and Air Toxic Emissions from Operating Sources					
County	Total of All Air Toxic and HAP Contaminants (tons of actual CY 2009 emissions reported)				
Ashtabula County	3,085				
Cuyahoga County	272				
Geauga County	24				
Lake County	1,652				
Lorain County	1,264				
Medina County	96				
Portage County	34				
Summit County	654				
NE Ohio Total	7,083				
CPP Ridge Road Potential Total of All HAP and Air Toxic Emissions (TPY)	39				
CPP Ridge Road Project % of NE Ohio Sources	0.55%				

Table 8 compares the maximum potential annual emissions of each HAP and air toxic contaminant emitted by the CPP facility versus the actual reported CY 2009 emissions from the major industrial and utility sources that are currently operating in NE Ohio of the same HAP and toxic contaminants.

Table 8							
Maximum Potential HAP and Air Toxic Emissions from the CPP Facility vs Actual Reported							
CY 2009 HAP and Air Toxic Emissions from Operating Sources							
		A Air Toxic minants	US EPA Hazardous Air Pollutants (HAPs)				
County	Ammonia (NH <sub>3</sub> ) (tons)	Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ) (tons)	Hydrogen Chloride (HCl) (tons)	Hydrogen Fluoride (HF) (tons)	Cadmium (Cd) (lbs)	Mercury (Hg) (Ibs)	Dioxin (lbs)
Ashtabula County	NR	21.4	122	12	NR	437	NR
Cuyahoga County	79	2.2	7	3	20	13	NR
Geauga County	NR	NR	NR	NR	NR	NR	NR
Lake County	6	189.6	1,211	111	NR	275	1
Lorain County	21	103.5	864	82	NR	383	2
Medina County	19	NR	32	NR	NR	NR	NR

NR

62

2,298

8.42

NR

NR.

208

0.80

NR

NR

20

40

53

NR

1,161

180

NR

NR

3

0.05

NR

NR

316.7

9.37

6

132

20.33

NR = None Reported

Portage County

Summit County

NE Ohio Total

(TPY)

CPP Ridge Road Potential Emissions

The ammonia, cadmium and mercury emissions from the proposed CPP facility appear to be relatively large in comparison to the other facilities that are currently operating in NE Ohio. There are several factors that should be considered when reviewing these comparisons, however.

The ammonia emissions from the proposed CPP facility relate to the operation of the Selective Catalytic Reduction (SCR) control units. Ammonia is a catalyst that is injected into the SCR to promote the chemical reactions that reduce NO<sub>x</sub> emissions. Ammonia is injected at a rate that is slightly more than needed to ensure maximum NO<sub>x</sub> removal. This results in a "slip" of ammonia that escapes the SCR and is emitted to the ambient air.

The hydrogen fluoride, mercury and cadmium emissions estimate for the CPP facility are based on the "worst case" assumption that these air contaminants will be emitted at the maximum rate authorized by the federal New Source Performance Standards (NSPS). It is likely that the actual emissions will be far less than these amounts because the MSW that arrives at the facility will be processed to remove items that are likely to contain cadmium and mercury (e.g., batteries, electronics, etc.) and the air pollution control system that will be installed will likely perform substantially better than the NSPS requires.

Finally, the maximum potential annual emissions of each HAP and air toxic contaminant have been evaluated pursuant to the Ohio EPA air toxic policy. The conclusion of that evaluation is that the impacts on local air quality are significantly less than the concentrations that Ohio EPA has determined to be acceptable.

#### Comparison of Greenhouse Gas Air Contaminants

The comparison of greenhouse gas emissions is based on the net change in CO<sub>2e</sub> that will result from the operation of the CPP facility. The net change is based on a comparison of the potential annual emissions of the greenhouse gas air contaminants emitted by the proposed CPP facility versus the greenhouse gas emissions that are avoided due to the construction and operation of the facility. The emissions that are avoided include: (1) emissions from the trucks that transport the MSW from the Ridge Road Transfer Station to the landfill; (2) emissions from the decomposition of MSW and treatment of landfill gases at the landfill; and (3) emissions from the fuels burned to create the equivalent amount of electric power as the proposed CPP facility.

The potential annual CO<sub>2e</sub> emissions from the proposed CPP facility are estimated based on the maximum heat input from the combustion of the syngas produced in the furnaces and heat recovery steam generators (HRSGs). The net CO<sub>2e</sub> evaluations were performed based on an average CO<sub>2e</sub> emission factor derived from the emission factors developed by the US EPA for biogas combustion and MSW combustion.

The net change in annual greenhouse gas emissions or  $CO_{2e}$  is estimated for the period from 2011-2030 (i.e., the estimated remaining working life of the landfill where MSW processed at the Ridge Road Transfer Station is currently disposed) and for the period from 2031-2060. The differences in the net  $CO_{2e}$  savings for these two periods relates to the overall efficiency of the landfill gas collection and treatment system. There is a significant improvement in overall methane gas collection efficiency after the working portions of the landfill are permanently closed. This reduces the amount of gases produced at the landfill that are not captured/incinerated and reduces the  $CO_{2e}$  associated with the MSW disposed at the landfill.

Table 9 presents the estimated net  $CO_{2e}$  emission reductions that will occur as the result of the operation of the proposed CPP facility. There is a net reduction in  $CO_{2e}$  under all of the scenarios evaluated and the net reduction could be as much as 380,556 tons of  $CO_{2e}$  or more each year during the period from 2011 - 2030.

Table 9 Estimated Net Reduction in Annual Greenhouse Gas (CO <sub>2e</sub> ) Emissions from the Operation of the Proposed CPP Facility							
CO <sub>2e</sub> Netting 2011 - 2030 2031 - 2060							
Estimated CO <sub>2e</sub> Emissions from the CPP Project	210,00	210,000					
Estimated CO <sub>2e</sub> Reductions:							
(1) Reduced CO <sub>2e</sub> from transportation to the landfill	3,665	3,665					
(2) Reduced CO <sub>2e</sub> emissions at landfill	319,312	68,965					
(3) Reduced CO <sub>2e</sub> from coal-fired power generation	267,580	267,580					
Total Estimated CO <sub>2e</sub> Reductions 590,556 340,210							
Net Change in Annual CO <sub>2e</sub> Emissions -380,556 -130,210							

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#### Princeton Environmental Group/ GT Environmental. Inc.

#### Reference Notes

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<sup>&</sup>lt;sup>1</sup> The information and data in this comparison report were obtained from the Ohio Environmental Protection Agency (Ohio EPA) Division of Air Pollution Control (DAPC) web site at: <a href="http://www.epa.ohio.gov/Default.aspx?alias=www.epa.ohio.gov/dapc">http://www.epa.ohio.gov/Default.aspx?alias=www.epa.ohio.gov/dapc</a> and the Permit-to-Install (PTI) application filed by the City of Cleveland for the Ridge Road project on March 11, 2011.

<sup>&</sup>lt;sup>2</sup> Northeast Ohio (NE Ohio) includes the eight-county area identified by US EPA and Ohio EPA for State Implementation Plan (SIP) development for ozone (i.e., Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage and Summit Counties). The evaluation of air pollution control strategies for the ozone NAAQS is based on air quality modeling that includes volatile organic compound (VOC) and nitrogen oxides (NO<sub>x</sub>) emissions from major industrial and utility sources, area sources (i.e., minor sources) and mobile sources (e.g., automobiles, trucks, airplane and marine) located throughout this eight-county area. The inclusion of all of these sources over a wide geographic area is necessary because of the distance the air contaminants are transported and the photochemical reactions that occur over time.

<sup>&</sup>lt;sup>3</sup> The CY 2009 Emissions Inventory can be obtained at: <a href="http://www.epa.ohio.gov/dapc/aqmp/eiu/data.aspx">http://www.epa.ohio.gov/dapc/aqmp/eiu/data.aspx</a>.

<sup>&</sup>lt;sup>4</sup> The CY 2009 Toxic Release Inventory can be obtained at: <a href="http://www.epa.ohio.gov/dapc/tri/reptsdb.aspx">http://www.epa.ohio.gov/dapc/tri/reptsdb.aspx</a>.

<sup>&</sup>lt;sup>5</sup> The ozone emission inventory (i.e., inventories for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) emissions) can be obtained at: <a href="http://www.epa.ohio.gov/portals/27/SIP/eis/Table\_3\_2009\_oz\_nonattain\_area.pdf">http://www.epa.ohio.gov/portals/27/SIP/eis/Table\_3\_2009\_oz\_nonattain\_area.pdf</a> and the PM2.5 emission inventory can be obtained at: <a href="http://www.epa.ohio.gov/portals/27/SIP/eis/Tables\_8\_Appendix\_A.pdf">http://www.epa.ohio.gov/portals/27/SIP/eis/Tables\_8\_Appendix\_A.pdf</a>.

<sup>&</sup>lt;sup>6</sup> The NAAQS are set at levels determined by the US EPA to be necessary to protect the most sensitive persons from the adverse effects of air pollution and are found at: <a href="http://epa.gov/air/criteria.html">http://epa.gov/air/criteria.html</a>.

<sup>&</sup>lt;sup>7</sup> The original HAPs designated in the federal Clean Air Act are identified at: <a href="http://www.epa.gov/ttn/atw/orig189.html">http://www.epa.gov/ttn/atw/orig189.html</a> with modifications to this list found at: <a href="http://www.epa.gov/ttn/atw/pollutants/atwsmod.html">http://www.epa.gov/ttn/atw/pollutants/atwsmod.html</a>.

<sup>&</sup>lt;sup>8</sup> The Ohio air toxic pollutants are identified at: <a href="http://www.epa.ohio.gov/portals/27/regs/3745-114/3745-114-01f.pdf">http://www.epa.ohio.gov/portals/27/regs/3745-114/3745-114-01f.pdf</a>.

<sup>&</sup>lt;sup>9</sup> The Greenhouse Gases designated by US EPA are found at: <a href="http://www.epa.gov/climatechange/emissions/downloads09/GHG-MRR-Full%20Version.pdf">http://www.epa.gov/climatechange/emissions/downloads09/GHG-MRR-Full%20Version.pdf</a> (74 FR 56388 (10/30/2009).

<sup>&</sup>lt;sup>10</sup> The Ohio EPA New Source Review (NSR) rules define the term "major source" in Ohio Administrative Code (OAC) rule 3745-31-01 (LLL). A copy of this rule can be obtained at: <a href="http://www.epa.ohio.gov/portals/27/regs/3745-31/3745-31-01f.pdf">http://www.epa.ohio.gov/portals/27/regs/3745-31/3745-31-01f.pdf</a>.

<sup>&</sup>lt;sup>11</sup> The Ohio EPA Title V operating permit rules define the term "major source" in OAC rule 3745-77-01(X). A copy of this rule can be obtained at: <a href="http://www.epa.ohio.gov/portals/27/regs/3745-77/3745-77-01">http://www.epa.ohio.gov/portals/27/regs/3745-77/3745-77-01</a> Final.pdf.

<sup>&</sup>lt;sup>12</sup> Total particulate matter emissions (i.e., filterable PM + condensable PM or PM (F + C)) is particulate matter that is measured by US EPA Test Method 5 (the filterable particulate emissions component) plus particulate matter that is measured by US EPA Test Method 202 (the condensable emissions component).

<sup>&</sup>lt;sup>13</sup> Test Method 202 was updated on December 21, 2010 (75 FR 80118). A copy of the revised Method 202 can be found at: <a href="http://www.gpo.gov/fdsys/pkg/FR-2010-12-21/pdf/2010-30847.pdf">http://www.gpo.gov/fdsys/pkg/FR-2010-12-21/pdf/2010-30847.pdf</a>.

# Maximum Potential Annual VOC Emissions from the Proposed CPP Project vs Actual Reported CY 2009 VOC Emissions from Other Facilities in NE Ohio

Company	Address	City	County	CY 2009 Emissions	
Ford Motor Company - Ohio Assembly Plant	650 Miller Road	Avon Lake	Lorain	258	
North Coast Container	8806 Crane Ave	Cleveland	Cuyahoga	121	
Republic Storage Systems LLC	1038 Belden Ave N.E.	Canton	Stark	119	
Morgan Adhesives Company (MACtac)	4560 Darrow Road	Stow	Summit	90	
Alfred Nickles Bakery Inc.	26 North Main Street	Navarre	Stark	62	
Molded Fiber Glass Companies, Plant 2	2925 MFG Place	Ashtabula	Ashtabula	59	
PLASTI-KOTE CO., INC.	1000 LAKE ROAD	Medina	Medina	56	
Joseph Adams Corp.	5470 Grafton Road	Valley City	Medina	50	
Avery Dennison	Avery Dennison		Lake	48	
Pechiney Plastic Packaging Inc	1972 AKRON PENINSULA RD.	AKRON	Summit	47	
Automated Packaging Systems	Automated Packaging Systems, Inc.	Garfield Heights	Cuyahoga	37	
PPG Industries, Inc Cleveland 3800 West 143rd Street		Cleveland	Cuyahoga	35	
The Lubrizol Corporation - Wickliffe Facility	29400 Lakeland Boulevard	Wickliffe	Lake	34	
Potential Annual VOC Emissions from the Prop	osed CPP Ridge Road Project			34	
Heritage Fireplace Equipment Co.	1874 Englewood Ave	Akron	Summit	28	
GRAPHIC PACKAGING INTERNATIONAL, INC	6385 Cochran Road	Solon	Cuyahoga	24	

### Maximum Potential Annual $\mathrm{NO_x}$ Emissions from the Proposed CPP Project vs

Actual Reported CY 2009 NO<sub>x</sub> Emissions from Other Facilities in NE Ohio

Company	Address	City	County	CY 2009 Emissions
CEI EASTLAKE PLANT	10 ERIE ROAD	Eastlake	Lake	7,055
Avon Lake Power Plant	33570 Lake Road	Avon Lake	Lorain	5,113
FirstEnergy Generation Corp., Ashtabula Plant	2133 Lake Road	Ashtabula	Ashtabula	991
ArcelorMittal Cleveland Inc.	3060 Eggers Avenue	Cleveland	Cuyahoga	635
PAINESVILLE MUNICIPAL ELECTRIC PLANT	325 Richmond Street	Painesville	Lake	531
Cleveland Electric Illuminating Co., Lake Shore Plant	6800 South Marginal Road	Cleveland	Cuyahoga	418
Cleveland Thermal LLC	1921 Hamilton Avenue	Cleveland	Cuyahoga	248
Cargill, Incorporated - Salt Division (Akron, OH)	2065 Manchester Road	Akron	Summit	230
Millennium Inorganic Chemicals, Inc.	Middle Road	Ashtabula	Ashtabula	224
Potential Annual NO <sub>x</sub> Emissions from the Prop	osed CPP Ridge Road Project	4	:	187
The Medical Center Company	2250 Circle Drive	Cleveland	Cuyahoga	184
East Ohio Gas - Robinson Station	5433 West Blvd	Canton	Stark	181
The Lubrizol Corporation			Lake	162
Ross Incineration Services, Inc.	36790 Giles Road	Grafton	Lorain	155
FERRO CORPORATION - CLEVELAND FRIT PLANT	4150 East 56th Street, P.O. Box 6550	Cleveland	Cuyahoga	149
Lorain County LFG Power Station	43502 Oberlin-Elyria Road	Oberlin	Lorain	139
Southerly Wastewater Treatment Center	6000 Canal Road	Cuyahoga Heights	Cuyahoga	116

### Maximum Potential Annual SO<sub>2</sub> Emissions from the Proposed CPP Project vs Actual Reported CY 2009 SO<sub>2</sub> Emissions from Other Facilities in NE Ohio

Company	Address	City	County	CY 2009 Emissions
CEI EASTLAKE PLANT	10 ERIE ROAD	Eastlake	Lake	48,670
Avon Lake Power Plant	33570 Lake Road	Avon Lake	Lorain	37,160
FirstEnergy Generation Corp., Ashtabula Plant	2133 Lake Road	Ashtabula	Ashtabula	4,807
PAINESVILLE MUNICIPAL ELECTRIC PLANT	325 Richmond Street	Painesville	Lake	3,337
The Medical Center Company	2250 Circle Drive	Cleveland	Cuyahoga	2,346
Cargill, Incorporated - Salt Division (Akron, OH) Cleveland Electric Illuminating Co., Lake Shore	2065 Manchester Road	Akron	Summit	1,308
Plant	6800 South Marginal Road	Cleveland	Cuyahoga	1,071
Cleveland Thermal LLC	1921 Hamilton Avenue	Cleveland	Cuyahoga	1,039
Emerald Performance Materials, LLC	240 West Emerling Avenue	Akron	Summit	842
ArcelorMittal Cleveland Inc.	3060 Eggers Avenue	Cleveland	Cuyahoga	568
DiGeronimo Aggregates LLC	8900 Hemlock Road	Independence	Cuyahoga	427
OBERLIN COLLEGE	173 W. Lorain St.	OBERLIN	Lorain	403
Potential Annual SO <sub>2</sub> Emissions from the Prop	osed CPP Ridge Road Project			99
Marathon Petroleum Company LLC - Canton		(	:	
Refinery	2408 Gambrinus Avenue SW	Canton	Stark	98
Canton Drop Forge	4575 Southway Street S.W.	Canton	Stark	87
Owens Corning Roofing and Asphalt, LLC	890 W. Smith Road	Medina	Medina	56

### Maximum Potential Annual PM (F+C) Emissions from the Proposed CPP Project vs

Actual Reported CY 2009 PM (F+C) Emissions from Other Facilities in NE Ohio

Company	Address	City	County	CY 2009 Emissions
CLEVELAND ELECTRIC ILLUMINATING CO.,				
EASTLAKE PLANT	10 ERIE ROAD	Eastlake	Lake	3,121
Avon Lake Power Plant	33570 Lake Road	Avon Lake	Lorain	824
FirstEnergy Generation Corp., Ashtabula Plant	2133 Lake Road	Ashtabula	Ashtabula	255
Marathon Petroleum Company LLC - Canton Refinery	2408 Gambrinus Avenue SW	Canton	Stark	202
ArcelorMittal Cleveland Inc.	3060 Eggers Avenue	Cleveland	Cuyahoga	180
PAINESVILLE MUNICIPAL ELECTRIC PLANT	325 Richmond Street	Painesville	Lake	167
Elyria Foundry	120 Filbert Street	Elyria	Lorain	163
Republic Engineered Products, Inc.	2633 Eighth Street NE	Canton	Stark	150
Lorain Tubular Company LLC	2199 E. 28th Street	Lorain	Lorain	100
Potential Annual PM (F+C) Emissions from the	Proposed CPP Ridge Road Pro	ject		99
Cleveland Electric Illuminating Co., Lake Shore				
Plant	6800 South Marginal Road	Cleveland	Cuyahoga	84
Cleveland Thermal LLC	1921 Hamilton Avenue	Cleveland	Cuyahoga	73
Cargill, Incorporated - Salt Division (Akron, OH)	2065 Manchester Road	Akron	Summit	62
The Medical Center Company	2250 Circle Drive	Cleveland	Cuyahoga	29

### PTI/PTIO Application A0041047 Cleveland Public Power - Ridge Rd 1318008750 February 01, 2011

This Public Version of the Permit-to-Install (PTI) application has been prepared in the Ohio EPA e-Business/Air Services system by Princeton Environmental Group (PEG) pursuant to the MSWE Agreement between the City of Cleveland and PEG.

This Public Version of the PTI application has been reviewed and approved for submission by the City of Cleveland designated Project Administrator for the MSWE Agreement with PEG:

 signature	date			
 			-	
printed name	tit	le		

#### **Division of Air Pollution Control**

Feb 1 2011, 11:44:03

#### Application for Permit-to-Install or Permit-to-Install and Operate

This section should be filled out for each permit to install (PTI) or Permit to Install and Operate (PTIO) application. A PTI is required for all air contaminant sources (emissions units) installed or modified after January 1, 1974 that are subject to OAC Chapter 3745-77. A PTIO is required for all air contaminant sources (emissions units) that are not subject to OAC Chapter 3745-77 (Title V). See the application instructions for additional information.

For OEPA use only:	х	Installation	Х	Request Federally enforceable restrictions
		Modification		General Permit
		Renewal		Other

1. Please summarize the reason for this permit application. This text will be in the public notice that will appear in the newspaper of the county where the facility is located.

This PTI application is for a Municipal Solid Waste (MSW) energy recovery facility. The facility will employ Kinsei Sangyo technology and utilize MSW as a feedstock to batch gasifiers to produce synthetic gas, combust the syngas and generate steam and electric power. The facility will include front-end Material Recovery Facility (MRF) equipment to prepare the MSW prior to use in the batch gasifiers. The facility is a minor source for new source review and will be subject to the Title V Operating Permit requirements.

The summary attachment to this application includes:

- (1) A description of the processes that will be installed;
- (2) A general Process Flow Diagram for the facility;
- (3) An analysis of the applicability of state and federal air pollution control rules;
- (4) A description of the Best Available Technology (BAT) that will be employed; and (5) A summary of the air quality modeling analyses that support approval of this

Is the purpose of this application to transition from OAC Chapter 3745-77 (Title V) to OAC Chapter 3745-31 (PTIO)?

2. Establish PER Due Date - Select an annual Permit Evaluation Report (PER) due date for this facility (does not apply to facilities subject to Title V, OAC Chapter 3745-77). If the PER has previously been established and a change is now desired, a PER Change Request form must be filed instead of selecting a date here.

PER not applicable (Title V) or due date already established

3. Federal Rules Applicability

application.

New Source Performance Standards (NSPS) New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary

Sources.

Subject to subpart:

AAAA - Small Muni, Waste Combustion Units After Aug. 30, 1999 or Modified After June 6, 2001

National Emission Standards for Hazardous Air Pollutants (NESHAP)

National Emissions Standards for Hazardous Air Pollutants

are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Maximum Achievable Control Technology (MACT)

The Maximum Achievable Control Technology standards are listed under 40 CFR 63 and OAC rule 3745-31-28.

Prevention of Significant Deterioration (PSD) These rules are found under OAC rule 3745-31-10 through

OAC rule 3745-31-20.

Non-Attainment New Source Review

These rules are found under OAC rule 3745-31-21 through OAC rule 3745-31-27.

112 (r) - Risk Management Plan

These rules are found under 40 CFR 68.

Not affected

Not affected

Not affected

Not affected

Not affected

Title IV (Acid Rain Requirements)
These rules are found under 40 CFR 72 and 40 CFR 73.

Not affected

4. Express PTI/PTIO - Do you qualify for express PTI or PTIO processing?

No

5. Air Contaminant Sources in this Application - Identify the air contaminant source(s) for which you are applying below. Attach additional pages if necessary. Section II of this application and an EAC form should be completed for each air contaminant source.

Emissions Unit ID	Company Equipment ID (company's name for air contaminant source)	<b>Equipment Description</b> (List all equipment that are a part of this air contaminant source)
TMP166499	Gasifier/Furnace/HRSG No. 1	
TMP166500	Gasifier/Furnace/HRSG No. 2	
TMP166501	Gasifier/Furnace/HRSG No. 3	
TMP166502	Gasifier/Furnace/HRSG No. 4	

The Emissions Unit ID would have been created when a previous air permit was issued. If no previous permits have been issued for this air contaminant source, leave this field blank. If this air contaminant source was previously identified in STARShip applications as a Z source (e.g., Z001), please provide that identification and a new ID will be assigned when the PTI/PTIO is issued.

6. Trade Secret Information - Is any information included in this application being claimed as a trade secret per Ohio Revised Code (ORC) 3704.08?

Yes

7. Permit Application Contact - Person to contact for questions about this application:

Ivan Henderson		Commissioner
Name		Title
1300 Lakeside Avenue	Cleveland, OH	44114
Street Address	City/Township, State	Zip Code
2166643922		ihenderson@cpp.org
Phone	Fax	E-mail

#### 8. Application Attachments

Description	Туре	EAC Form Type	Public Document Id
Emission Calculations	Synthetic Minor strategy/facil ity-wide PTE analysis		440938
Basis for Trade Secret Request	Trade Secrets not supported by Air Service		440977
Project Summary and Basis for Approval	Other		438891

#### Davis, Christine (DPW)

From:

Clemm, Hallie (DPW) < hallie.clemm@dc.gov>

Sent:

Tuesday, May 31, 2011 1:17 PM

To:

Carl Newby

Subject:

RE: District generated waste at the WTE

Categories:

Green Category

Thank you very much.

From: Carl Newby [mailto:Cnewby@arlingtonva.us]

Sent: Tuesday, May 31, 2011 12:56 PM

To: Clemm, Hallie (DPW)

Subject: RE: District generated waste at the WTE

I left a message for him. I will let you know what I hear back.

From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.gov]

**Sent:** Tuesday, May 31, 2011 12:14 PM

To: Carl Newby

Subject: RE: District generated waste at the WTE

If it is not too much effort, yes please.

From: Carl Newby [mailto:Cnewby@arlingtonva.us]

Sent: Tuesday, May 31, 2011 12:14 PM

**To:** Clemm, Hallie (DPW)

Subject: RE: District generated waste at the WTE

Hi.....I do not know of any waste from haulers that comes from DC to our plant. I think our gate rate is too high for most. Want me to check with the Covanta business manager.?

From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.qov]

**Sent:** Tuesday, May 31, 2011 10:45 AM

To: Carl Newby

Subject: District generated waste at the WTE

Good morning Carl....do you have any idea how much waste from DC is making its way to the Arlington/Alexandria WTE facility? | am interested in haulers who take their materials there directly, not through Tony Lash.

Preventing terrorism is everybody's business.

If you SEE something, SAY something.

Call the Metropolitan Police Department at (202) 727-9099 or email at <u>SAR@DC.GOV</u> to report suspicious activity or behavior that has already occurred.

Call 911 to report in-progress threats or emergencies.

To learn more, visit <a href="http://www.mpdc.dc.gov/operationtipp">http://www.mpdc.dc.gov/operationtipp</a>.

### **Davis, Christine (DPW)**

From:

Clemm, Hallie (DPW) <hallie.clemm@dc.gov>

Sent: To: Tuesday, July 19, 2011 1:47 PM Joyce.Doughty@fairfaxcounty.gov

Subject:

Re: Your call

Categories:

Green Category

Thank you

From: Doughty, Joyce M. <Joyce.Doughty@fairfaxcounty.gov>

To: Clemm, Hallie (DPW)

**Sent**: Tue Jul 19 13:34:58 2011

Subject: FW: Your call

Hallie, the e-mail train below seems to be a follow on from a conversation. Brian, from the County's Budget Office, states below that he didn't know the context of what Jason was writing.

From:

Berlin, Michael [MBerlin@CovantaEnergy.com]

Sent:

Friday, October 19, 2012 10:38 AM

To: Subject: Clemm, Hallie (DPW) RE: TAC Transfer Operation

Hallie,

Thanks very much. Both Covanta and Fairfax are very appreciative.

Best regards,

Mike

#### Michael K. Berlin Business Manager

### ENERGY for a cleaner world

Covanta Fairfax, Inc. 9898 Furnace Rd. Lorton, VA 22079

Tel: 703.690.6860 Ext: 603

Cell: 571.535.6270 Fax: 703.690.4223

Email: mberlin@covantaenergy.com

www.covantaenergy.com

From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.gov]

Sent: Friday, October 19, 2012 10:36 AM

To: Berlin, Michael

Subject: RE: TAC Transfer Operation

Thanks Mike...we will include a provision that requires the automatic tarping systems within one year from contract award.

From: Berlin, Michael [mailto: MBerlin@CovantaEnergy.com]

Sent: Friday, October 19, 2012 9:44 AM

**To:** Clemm, Hallie (DPW)

Subject: RE: TAC Transfer Operation

Hallie,

- 1. If the contract hasn't been bid yet, then suggest the trailers in the new contract have the automatic roofs (or similar) that are on Fairfax County trailers.
- 2. If Tony Lash's company has a long-enough contract w/ DC; maybe his contract can be modified so he (or his sub-contractors) can be paid to modify, retro-fit, upgrade or switch their trailers, over a reasonable period of time.

3. "Switching" the trailers to a different make & model, over time, may not require a financial adjustment to the contract.

Mike

#### Michael K. Berlin Business Manager



Covanta Fairfax, Inc.

9898 Furnace Rd. Lorton, VA 22079

Tel: 703.690.6860 Ext: 603

Cell: 571.535.6270 Fax: 703.690.4223

Email: mberlin@covantaenergy.com

www.covantaenergy.com

From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.qov]

Sent: Friday, October 19, 2012 9:31 AM

To: Berlin, Michael

Subject: RE: TAC Transfer Operation

So what other options are you suggesting?

#### Grade.DC.gov has expanded!

Now you can grade the DC Public Library, Police, Fire and EMS, the Office of Unified Communications (311/911) and the Office on Aging.

Check out www.grade.dc.gov today.

**From:** Berlin, Michael [mailto:MBerlin@CovantaEnergy.com]

Sent: Friday, October 19, 2012 9:29 AM

To: Clemm, Hallie (DPW)

Subject: TAC Transfer Operation

#### Hallie,

At our Client meeting yesterday w/ Charlie Forbes, the "manual tarp unwrapping procedure" on the TAC trailers was discussed.

It was viewed as both a delay issue on the tipping floor and a potential safety hazard. (The drivers walk the length of the trailer, walking on top of the trash, un-teathered, 12 feet off the concrete floor.)

I recall that you (?) told me that the hauling operation would be going out to bid soon. Is that still the case? If so, I thought you may want to review this procedure before the operation is bid.

Don't hesitate to call or visit here if you have any questions.

Thank you.

Regards,

Mike

### Michael K. Berlin Business Manager



Covanta Fairfax, Inc. 9898 Furnace Rd. Lorton, VA 22079

Tel: 703.690.6860 Ext: 603 Cell: 571.535.6270

Fax: 703.690.4223

Email: mberlin@covantaenergy.com

www.covantaenergy.com

From:

Berlin, Michael [MBerlin@CovantaEnergy.com]

Sent:

Friday, October 19, 2012 9:29 AM

To: Subject: Clemm, Hallie (DPW) TAC Transfer Operation

Hallie,

At our Client meeting yesterday w/ Charlie Forbes, the "manual tarp unwrapping procedure" on the TAC trailers was discussed.

It was viewed as both a delay issue on the tipping floor and a potential safety hazard. (The drivers walk the length of the trailer, walking on top of the trash, un-teathered, 12 feet off the concrete floor.)

I recall that you (?) told me that the hauling operation would be going out to bid soon. Is that still the case? If so, I thought you may want to review this procedure before the operation is bid.

Don't hesitate to call or visit here if you have any questions.

Thank you.

Regards,

Mike

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From:

Berlin, Michael [MBerlin@CovantaEnergy.com]

Sent:

Tuesday, December 11, 2012 7:41 AM

To: Subject:

Clemm, Hallie (DPW) DC MSW Volume

### Good morning Hallie,

I know DC generates about 215,000 tons of MSW annually; can you tell me approximately how much commercial volume is generated in the District?

Thank you very much.

Have a happy & safe holiday season.....

Mike

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Email: mberlin@covantaenergy.com

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From:

Berlin, Michael [MBerlin@CovantaEnergy.com]

Sent:

Wednesday, February 20, 2013 3:58 PM

To: Subject: Clemm, Hallie (DPW) RE: BBC News Inquiry

No problem.....Hope all is well w/ you Hallie.

#### Michael K. Berlin Business Manager

## COVANTA

for a cleaner world

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From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.gov]

Sent: Wednesday, February 20, 2013 3:56 PM

To: Berlin, Michael; Doughty, Joyce M.

Cc: Forbes, Charles D.

Subject: RE: BBC News Inquiry

Thanks Mike....we appreciate your cooperation on this.

From: Berlin, Michael [mailto: MBerlin@CovantaEnergy.com]

Sent: Wednesday, February 20, 2013 3:55 PM

To: Doughty, Joyce M.

Cc: Forbes, Charles D.; Clemm, Hallie (DPW)

Subject: RE: BBC News Inquiry

Thanks Joyce & Hallie, I'll contact our corporate communications folks and get them in the loop.

Mike

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**From:** Doughty, Joyce M. [mailto:Joyce.Doughty@fairfaxcounty.gov]

Sent: Wednesday, February 20, 2013 3:48 PM

**To:** Berlin, Michael **Cc:** Forbes, Charles D.

Subject: FW: BBC News Inquiry

Mike, it looks like the BBC is wanting to visit a facility and discuss lead pollution. You may get a call.

From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.gov]

Sent: Wednesday, February 20, 2013 3:45 PM

**To:** Grant, Linda P. (DPW) **Cc:** Doughty, Joyce M.

**Subject:** RE: BBC News Inquiry

I would send her to Mike Berlin...the Covanta business manager at the Fairfax County plant....His number is 703-690-6860. I've copied Joyce Doughty on this email so she can alert Mr. Berlin to expect her call.

From: Grant, Linda P. (DPW)

Sent: Wednesday, February 20, 2013 3:25 PM

**To:** Clemm, Hallie (DPW) **Subject:** FW: BBC News Inquiry

Hi, there: What do you think about putting her in touch with the waste-to-energy people to illustrate the industry's contemporary POV re the value of trash and how technology now allows capturing the energy so that lead pollution is reduced? If you agree, please provide the contact name(s) and number(s). Thanks. Linda

Linda Grant
Public Information Officer
DC Department of Public Works
2000 14th Street, NW, 6th Floor
Washington, DC 20009
202/671-2375/desk
202/497-1080/cell
202/671-0642/fax

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From: Jennifer Aidoo [mailto:pas.Aidoo@bbc.co.uk]
Sent: Wednesday, February 20, 2013 2:21 PM

**To:** Grant, Linda P. (DPW) **Subject:** BBC News Inquiry

#### Dear Ms Grant,

I am contacting you from the BBC Washington bureau to request your assistance in illustrating a television piece for our Persian Service on lead pollution. As we understand it, various measures have been put in place over the years on the both the state and national level that has aided in decreasing lead pollution in the atmosphere. We hope to visit a plant or municipal waste facility that would provide a good visual illustration of the procedures taken in creating a safer environment. If you can help in any way or perhaps point me in the right direction, I would be most grateful. Please contact me at your earliest convenience for further information regarding this request.

Thank You,
Jennifer Aidoo
BBC Washington
Jennifer.aidoo@bbc.co.uk
(202) 355-1768

#### http://www.bbc.co.uk

This e-mail (and any attachments) is confidential and may contain personal views which are not the views of the BBC unless specifically stated.

If you have received it in error, please delete it from your system.

Do not use, copy or disclose the information in any way nor act in reliance on it and notify the sender immediately.

Please note that the BBC monitors e-mails sent or received.

Further communication will signify your consent to this.

#### Davis, Christine (DPW)

From:

Clemm, Hallie (DPW) < hallie.clemm@dc.gov>

Sent:

Wednesday, March 07, 2012 10:59 AM

To:

Boone, Linda; Doughty, Joyce M.; Forbes, Charles D.

Subject:

RE: Invoice and Documentation

Categories:

Green Category

Perfect....I will cut and paste the response. Thank you all.

----Original Message----

From: Boone, Linda [mailto:Linda.Boone@fairfaxcounty.gov]

Sent: Wednesday, March 07, 2012 10:58 AM

To: Clemm, Hallie (DPW)

Subject: RE: Invoice and Documentation

Per the Dvirka and Bartilucci Consulting Engineers' (our independent engineering company) Annual Operations Monitoring Report of October 2011, the 21-year average net electric generation (Kwh/ton) per ton has been 524.61. However, the last few years we have been generating slightly above the historic averages.

Let me know if you need any other data.

----Original Message----

From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.gov]

Sent: Wednesday, March 07, 2012 9:05 AM

To: Boone, Linda

Subject: RE: Invoice and Documentation

As our city council is considering the extension of the agreement, one asked what is the net energy generated by one ton of trash burned at the facility? Can you provide me with this information?

Thanks.

Join Mayor Gray's One City \* One Hire - 10,000 Jobs Campaign "Putting District Residents Back to Work - One Hire at a Time"

Learn more at <a href="http://onecityonehire.org">http://onecityonehire.org</a>

----Original Message-----

From: Boone, Linda [mailto:Linda.Boone@fairfaxcounty.gov]

Sent: Wednesday, March 07, 2012 8:36 AM

To: Clemm, Hallie (DPW)

Subject: Invoice and Documentation

Attached is the invoice and documentation for the work to remove the timbers and CDD from the Covanta tipping floor. Let me know if you need anything else.

Linda R. Boone, Branch Chief Planning and Resource Recovery Division of Solid Waste Disposal and Resource Recovery 703-324-5045

#### Davis, Christine (DPW)

From:

Clemm, Hallie (DPW) < hallie.clemm@dc.gov>

Sent:

Monday, March 11, 2013 10:07 AM

To:

Ted Michaels

Subject:

RE: waste-to-energy

Categories:

Green Category

Absolutely. I am in the office today and tomorrow most of the day.....Please call when it is convenient....maybe later this afternoon? My phone number is 202-645-0744.

----Original Message----

From: Ted Michaels [mailto:tmichaels@energyrecoverycouncil.org]

Sent: Monday, March 11, 2013 9:58 AM

To: Clemm, Hallie (DPW) Subject: FW: waste-to-energy

#### Hallie,

I received your contact information from the Sustainable DC office. I am going to testify at the City Council hearing next week on waste-to-energy. I represent the Energy Recovery Council, which is the national trade association for waste-to-energy in the U.S. We support communities that pursue WTE as a sustainable waste management option. Would it be possible to speak on the phone this week prior to the hearing. I'd like to get a better understanding of the steps your office has taken to look into WTE.

Thanks,

Ted

Ted Michaels
President
Energy Recovery Council
1730 Rhode Island Avenue, N.W.
Suite 700
Washington, DC 20036
202-467-6240
tmichaels@energyrecoverycouncil.org

----Original Message-----

From: Future, Sustainable (DDOE) [mailto:Sustainable\_Future@dc.gov]

Sent: Tuesday, February 26, 2013 9:01 AM

To: Ted Michaels

Subject: RE: waste-to-energy

Hello Ted.

The person to contact at DPW is Hallie Clemm (<a href="mailto:hallie.clemm@dc.gov">hallie.clemm@dc.gov</a>). She will be able to better answer your questions. Thank you for your inquiry.

Best,

The Sustainable DC Planning Team

Grade.DC.gov has expanded again! Check out which five additional agencies can now be rated. Visit <a href="https://www.Grade.DC.gov">www.Grade.DC.gov</a> today to log your feedback on any of 15 D.C. Government agencies.

From: Ted Michaels [tmichaels@energyrecoverycouncil.org]

Sent: Monday, February 25, 2013 1:05 PM

To: Future, Sustainable (DDOE) Subject: waste-to-energy

My name is Ted Michaels and I serve as President of the Energy Recovery Council, the national trade association representing the companies and communities engaged in the waste-to-energy sector. I am very interested in learning more about the District's interest in waste-to-energy and discussing how my organization could help support your efforts. Could you please let me know who in the DPW I could speak with regarding the role of waste-to-energy in the Sustainable DC initiative?

Thank you, Ted

Ted Michaels
President
Energy Recovery Council
1730 Rhode Island Avenue, N.W.
Suite 700
Washington, DC 20036
202-467-6240
tmichaels@energyrecoverycouncil.org

[cid:image001.jpg@01CE1358.BA5A4150] renewable energy from waste

#### Davis, Christine (DPW)

From:

Howie, Bruce <Bruce.Howie@hdrinc.com>

Sent:

Thursday, March 14, 2013 2:03 PM

To:

Clemm, Hallie (DPW)

Cc:

Johnson, Gena (DPW); Smith, Adele (DPW); Hammond, Sybil (DPW)

Subject:

RE: DC Solicitation Doc 97300

Categories:

Green Category

Thank you. I will contact Adele shortly.

From: Clemm, Hallie (DPW) [mailto:hallie.clemm@dc.gov]

Sent: Thursday, March 14, 2013 1:43 PM

To: Howie, Bruce

Cc: Johnson, Gena (DPW); Smith, Adele (DPW); Hammond, Sybil (DPW)

**Subject:** RE: DC Solicitation Doc 97300

Good afternoon Bruce.....

I am unable to discuss the solicitation with you. However, please contact Adele Smith – our procurement specialist handling this solicitation - with your questions and request. I have included Ms. Smith on this email and you may reach her directly on 202-671-2389 and she is expecting to hear from you.

The DC Office of Tax and Revenue is offering free tax assistance in your community this month. For more information, contact the OTR Customer Service Center at (202) 727-4TAX or visit www.taxpayerservicecenter.com.

**From:** Howie, Bruce [mailto:Bruce.Howie@hdrinc.com]

**Sent:** Thursday, March 14, 2013 12:05 PM

**To:** Clemm, Hallie (DPW)

Subject: DC Solicitation Doc 97300

Hallie,

I hope you are well. The Amendment to the aforementioned solicitation you sent out on Monday finally got to me Tuesday night. HDR is really interested in pursuing this work, and I think our experience doing Zero Waste Management Plans for Los Angeles and Austin, as well as our master plan and WTE expertise applied to other major cities would really benefit D.C. Our experts have also worked with major cities on the west coast and in Canada with implementing organics collection and processing programs.

Unfortunately, this amendment was the first notice I received about your solicitation, and we would be hard pressed to make the March 20<sup>th</sup> deadline. Would it be possible to talk to you this afternoon (if it doesn't put you in a awkward spot)? I'd like to know if it's possible to get an extension, or at least get the list of vendors that attended the preproposal meeting to see if there are teaming opportunities for us.

Thank you for your time.

#### Regards,

#### Bruce

#### BRUCE J HOWIE, P.E.

#### HDR

Vice President, Professional Associate Practice Leader for Energy from Waste Consulting Services

711 Westchester Avenue | White Plains, NY 10604 914.993.2062 | c: 917.902.1727 bruce.howie @hdrinc.com | hdrinc.com

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From:

Berlin, Michael [MBerlin@CovantaEnergy.com]

Sent:

Tuesday, March 19, 2013 12:55 PM

To: Cc: Smith, Adele (DPW) Clemm, Hallie (DPW)

Subject:

RE: Solid Waste Management Consulting Services Solicitation

Many thanks Adele.

Mike

#### Michael K. Berlin Business Manager



Covanta Fairfax, Inc.

9898 Furnace Rd. Lorton, VA 22079

Tel: 703.690.6860 Ext: 603

Cell: 571.535.6270 Fax: 703.690.4223

Email: mberlin@covantaenergy.com

www.covantaenergy.com

From: Smith, Adele (DPW) [mailto:adele.smith@dc.gov]

Sent: Tuesday, March 19, 2013 10:13 AM

To: Berlin, Michael

Cc: Clemm, Hallie (DPW)

**Subject:** Solid Waste Management Consulting Services Solicitation

Good Morning, Mr. Berlin

The solicitation is attached as requested. The bid opening date is extended to March 27, 2013. In order for your company to bid on the solicitation, your company will have to be register on line. The proposal must be submitted electronically. Please go to OCP.DC.GOV and click on the link that says vendor registration. Once you have registered, please let me know and I will invite your company to the solicitation. If you have problems registering for the event, please send an email to the OCP Helpdesk Ocp.helpdesk@dc.gov with the following information:

The error message being received:

Company Name:

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Point of Contact Email:

<u>ocp.helpdesk@dc.gov</u> will allow OCP to view the solicitation as a vendor to help with problems submitting bids. If you need additional assistance please contact Antoinette M. Goins, IT Specialist, Office of Contracting and Procurement on 202/724-4063.

Adele E. Smith, CPPB
Contract Specialist
Department of Public Works
Office of Contracting and Procurement
2000 14th Street, N.W., 6th Floor
Washington, D.C. 20009

Phone: 202-671-2389 Fax: 202-671-0629

Email: Adele.Smith@dc.gov

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