



Powering Today. Protecting Tomorrow.

*Covanta Essex Company
183 Raymond Boulevard
Newark, NJ 07105
Tel: 973-344-0900
Fax: 973-344-4999*

December 30, 2021

Mr. Jeffrey Meyer, Manager
Division of Air Enforcement
Bureau of Air Compliance & Enforcement - Northern
7 Ridgedale Avenue
Cedar Knolls, NJ 07927

Subject: Essex County Resource Recovery Facility
Program Interest (Title V) Number 07736
NEA200001-07736 – Administrative Consent Order
Progress Report #8

Dear Mr. Meyer:

On behalf of Covanta Essex Company and in accordance with the Item #17 under the above referenced Administrative Consent Order (ACO) NEA200001-07736, attached is Progress Report #8 explaining the status of Covanta Essex Company's compliance with the Compliance Schedule required by the ACO.

If you have any questions or need additional information please contact Patricia Earls of my staff at 973-817-7322 or pearls@covanta.com.

Sincerely,

A handwritten signature in black ink that reads "Pat Earls".

Patricia Earls
New Jersey Regional Environmental Manager

Attachments

Mr. Jeffrey Meyer
Page 2

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this letter and all attached documents and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil and criminal penalties, including the possibility of fine or imprisonment or both, for submitting false, inaccurate, or incomplete information."



David Blackmore
Facility Manager

12/30/21
Date

Covanta Essex Company, PI #07736
Progress Report #8
NEA200001-07736 – Administrative Consent Order, Item #17

A. Identification of Site and Reference to ACO

Covanta Essex Company, PI #07736
Administrative Consent Order (ACO) NEA200001-07736

B. Status of Permitting and Planning Approvals, and any work at the site and progress to date

Status of Permitting and Planning Approvals:

Other than the Title V Operating Permit Renewal (BOP170001) and the Solid Waste Operating Permit Renewal (RRF200001), there are currently no other permitting or planning approvals pending or in progress related to the requirements of the ACO.

Work at the site and progress since submittal of Progress Report #7 on November 1, 2021:

- On December 9, 2020, comments were received from Luis Lim of the Bureau of Air Monitoring on the iodine monitoring evaluation report that was submitted to NJDEP on November 6, 2020. A response to Mr. Lim's comments on the report were submitted by Covanta Essex Company to Jeffrey Meyer on April 6, 2021. On May 18, 2021, Mr. Jeffrey Meyer forwarded additional comments from Mr. Lim on the April 6, 2021 response document. To clarify our position that an iodine monitor is not suitable or effective for the purpose of detecting iodine in MSW delivered to the facility, a conference call meeting with NJDEP was requested by Covanta Essex Company and the meeting was held on June 29, 2021. As a result of the meeting, Mr. Frank Steitz requested that Covanta Essex Company submit a report detailing pollution prevention procedures that will be implemented at the facility to prevent waste containing iodine or any other halogens from entering the facility and being processed in the boilers. The report, referred to as the Halogenated Waste Pollution Prevention Plan, was submitted to Mr. Jeffrey Meyer on July 29, 2021. Copies of the report were also submitted by email to Mr. Frank Steitz, Ms. Richelle Wormley, and Mr. Scott Michenfelder of NJDEP. There have been no comments to date from NJDEP on this submittal.
- On June 18, 2021, comments on the Communications and Community Engagement Plan (Plan) submitted by Covanta Essex Company on January 7, 2021 were received from Mr. Jeffrey Meyer of NJDEP Air Enforcement. The Plan was revised to address the comments and was submitted along with specific responses to each comment on July 19, 2021 to Mr. Jeffrey Meyer. On September 15, 2021, Covanta Essex Company received additional comments via phone call from Scott Michenfelder of the NJDEP Division of Air Compliance and Enforcement on the Plan. The Plan was revised to address these comments and was submitted along with specific responses to each comment on September 24, 2021. Copies of the revised Plan and responses to comments were also submitted by email to Ms.

Richelle Wormley and Mr. Scott Michenfelder of NJDEP. Final approval of the Plan was received by email from Mr. Jeff Meyers on November 16, 2021. The Plan is now posted on the Covanta Essex website and is available in English, Spanish and Portuguese.

Implementation of the Plan is ongoing.

- On August 17, 2021, Covanta Essex Company also posted a Hotline number on the facility webpage referenced above. The Hotline is available 24 hours per day, seven days per week and allows the public to call Covanta to obtain the latest information on facility incidents or announcements. Callers can leave a message with the hotline operator which will be immediately emailed to plant management along with the caller's contact information so that a timely response can be provided. The Hotline has the capability to speak to residents in English, Spanish, and Portuguese. To date, there have been no calls received from the public to the hotline.
- On December 16, 2021, a virtual Open Meeting was conducted via a Zoom webinar by Covanta for the Essex facility from 5:00 to 6:00 pm. During the Open Meeting, a presentation was provided by Jack Bernardino, the Area Asset Manager for New Jersey, Dave Blackmore, the Facility Manager for the Essex facility, and Michael Van Brunt, the Vice President of Environmental and Sustainability for Covanta. Participants in the Open Meeting included members of the local community, one member of the NJDEP, a member of the NJ Audubon Society, and some members of local universities and businesses. Some members of local Environmental groups did register for the meeting but did not attend. The presentation has also been posted on the Covanta Essex website and was emailed to all registrants for the Open Meeting. The presentation has also been included with this report as Attachment 1.
- A technical notice of deficiency (NOD) on the Solid Waste Operating Permit Renewal (RRF200001) application were received from the NJDEP Solid Waste Permitting division in a letter dated November 10, 2021. The NOD requested that Covanta Essex Company make changes to the facility O&M manual to incorporate the purple plume prevention procedures from reports submitted pursuant to the ACO requirements. These changes are currently in progress and are due to be submitted by January 10, 2022.

C. Difficulties or problems encountered during the reporting period, and actions taken to rectify any difficulties or problems

There have been no difficulties encountered during this reporting period.

D. Activities planned for the next reporting period

Activities planned for the next reporting period are as follows:

- Covanta will respond to any further comments or requests for additional information from the NJDEP on the final Halogenated Waste Pollution Prevention Plan.

- Covanta is planning to issue the first newsletter for 2022 in January, 2022. The newsletter will be available in English, Spanish and Portuguese and will include updates relating to facility operations, job opportunities, community activities and answers to frequently asked questions.

E. The required and actual completion dates for each item required by this ACO

See the updated table, included as Attachment 2 to this report, that lists action items required by the ACO along with required due dates and actual completion dates where applicable.

F. An explanation of any non-compliance with the compliance schedule

There are no instances of non-compliance with the schedule.

G. Evaluation of all corrective measures implemented to date

Covanta Essex Company continues to implement our Community Outreach efforts and enhanced tipping floor inspection procedures in order to prevent iodinated waste from being combusted in the boilers. The successful identification of the source of the iodinated waste believed to have caused the purple plume events in 2019 and 2020, and subsequent permanent re-direction of that waste to another non-Covanta disposal facility, has resulted in no further purple plume opacity events at Covanta Essex Company since April 7, 2020.

The annual Open Meeting that was held virtually on December 16, 2021 from 5:00 to 6:00 pm via a Zoom webinar by Covanta for the Essex facility was a successful event based on the levels of attendance and participation by members of the public and positive feedback received during the meeting. Another in-person Open Meeting will be held by Covanta Essex Company at a local café (Blue Print Café), which will be scheduled for June of 2022.

Going forward, Covanta Essex Company will host two Open Meetings per year. Each December, the Open Meeting will be held virtually to avoid weather issues and allow for a greater level of attendance as observed during the December 2020 and December 2021 meetings. Each June, the Open Meeting will be an in-person event held either at the facility or at the Blue Print Café on Raymond Boulevard in Newark which is within a mile of the facility.

As part of a greater transparency with the local community, Covanta Essex Company has implemented an additional notification procedure whereby the Ironbound Community Corporation (ICC) is contacted by phone and email of any emission exceedance events at the facility. Ms. Maria Lopez-Nunez, who is the Deputy Director, Organizing and Advocacy for the ICC, is notified of each event. Efforts have been made to get other organizations and local residents to sign up for our mailing list on our webpage to also receive notifications of facility events, but no sign ups have been received to date from these groups. We will continue these efforts during the Open Meetings and all correspondence from Covanta.

In 2018, Covanta Essex installed 10 HD digital cameras on the tipping floor. These originally included 2 cameras with additional pan, tilt and zoom (PTZ) capability. In 2019, after the increase in purple plume events, two of 10 HD digital cameras in the overhead location in front of Bays 2 and 13 were replaced with the PTZ cameras for a total PTZ capability for 4 of 10 cameras. This PTZ capability allows for greater visual observation of loads. All recorded video footage by the cameras is stored and available for review for up to 40 days.

Attachment 1

COVANTA

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Covanta Essex Open Meeting | December 16, 2021

Covanta Essex Company

- Opened 1990
- Superior, sustainable waste management for 22 municipalities and the surrounding region, including NYC
- Processes up to 985,500 tons of waste annually, in turn:
 - Eliminate **nearly 1 million tons** of CO₂ emissions
 - Generate enough renewable electricity for approximately **46,000 homes**
 - Recycle enough metal to build **21,000 cars**



Waste Receiving & Tipping



Grapple Cranes



Boiler Charging



Feed Chute



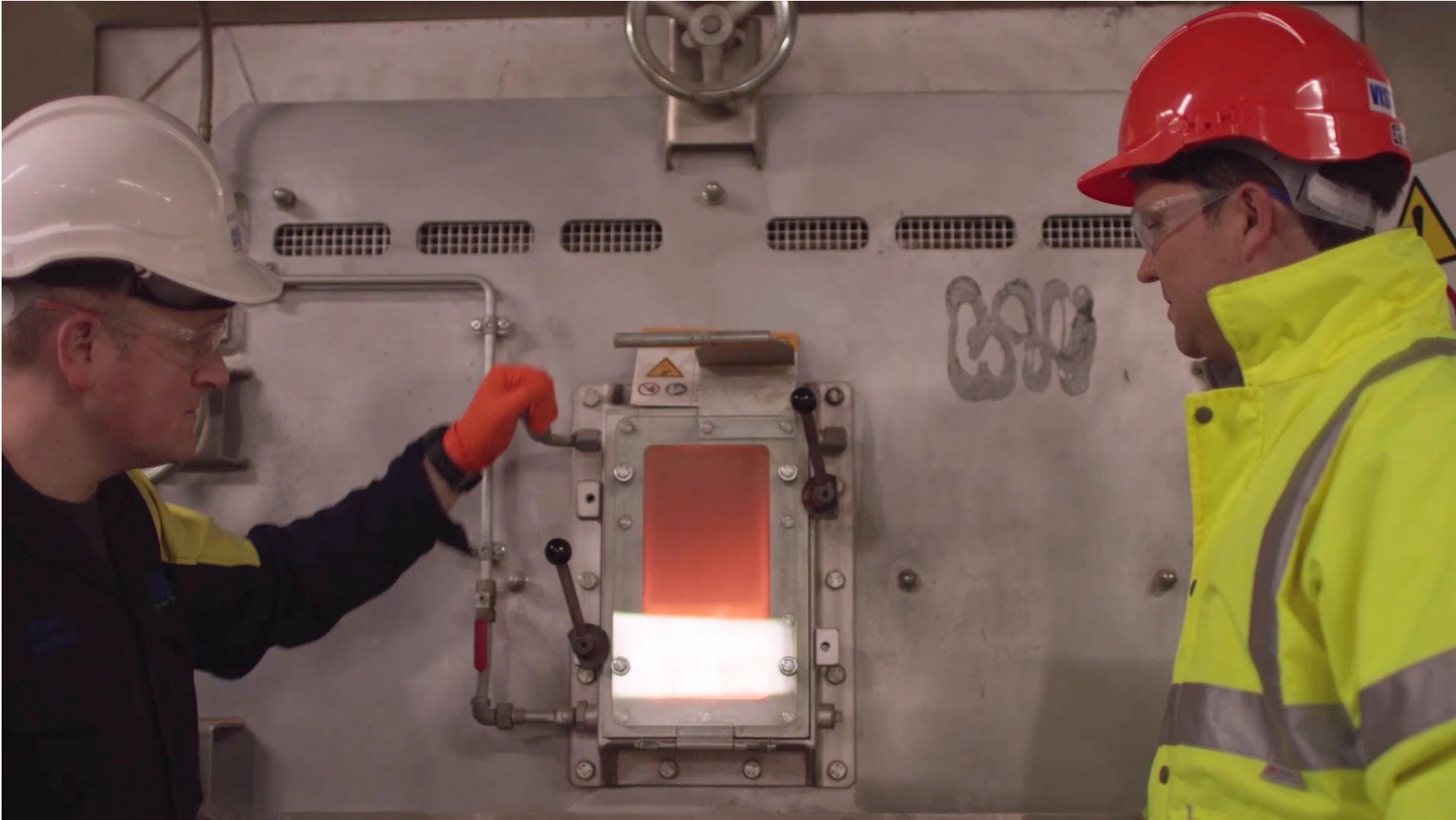
Hydraulic Feed Rams



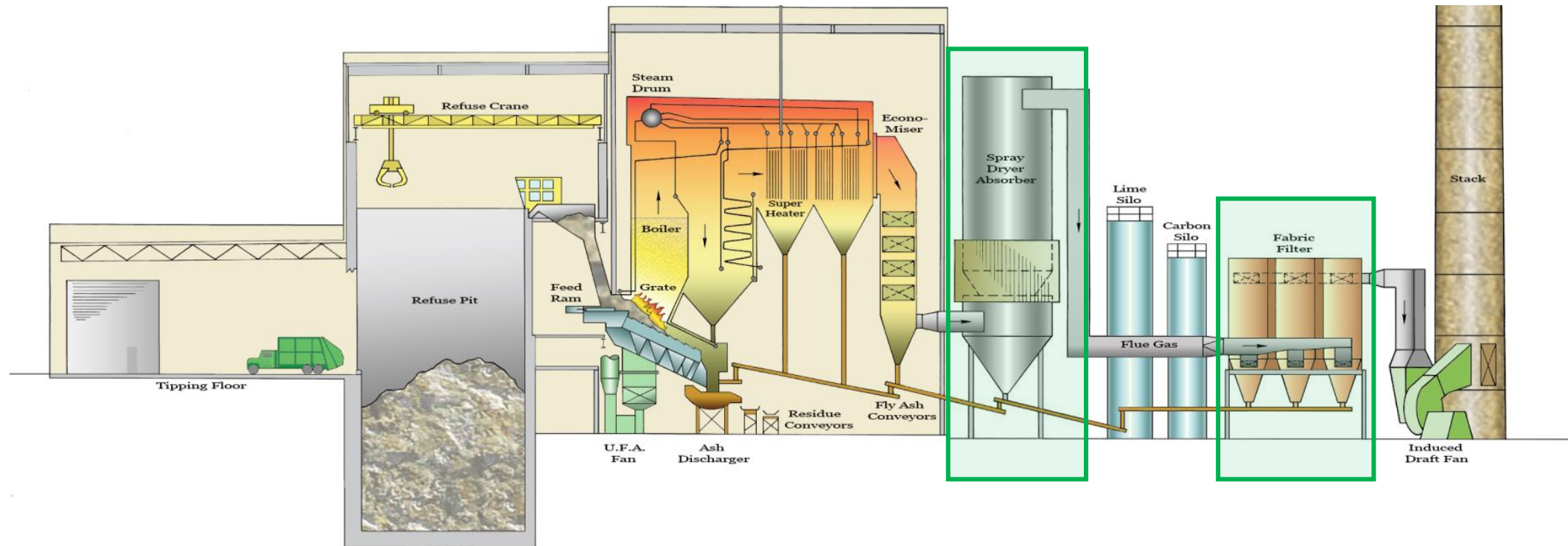
Roller Grate Technology



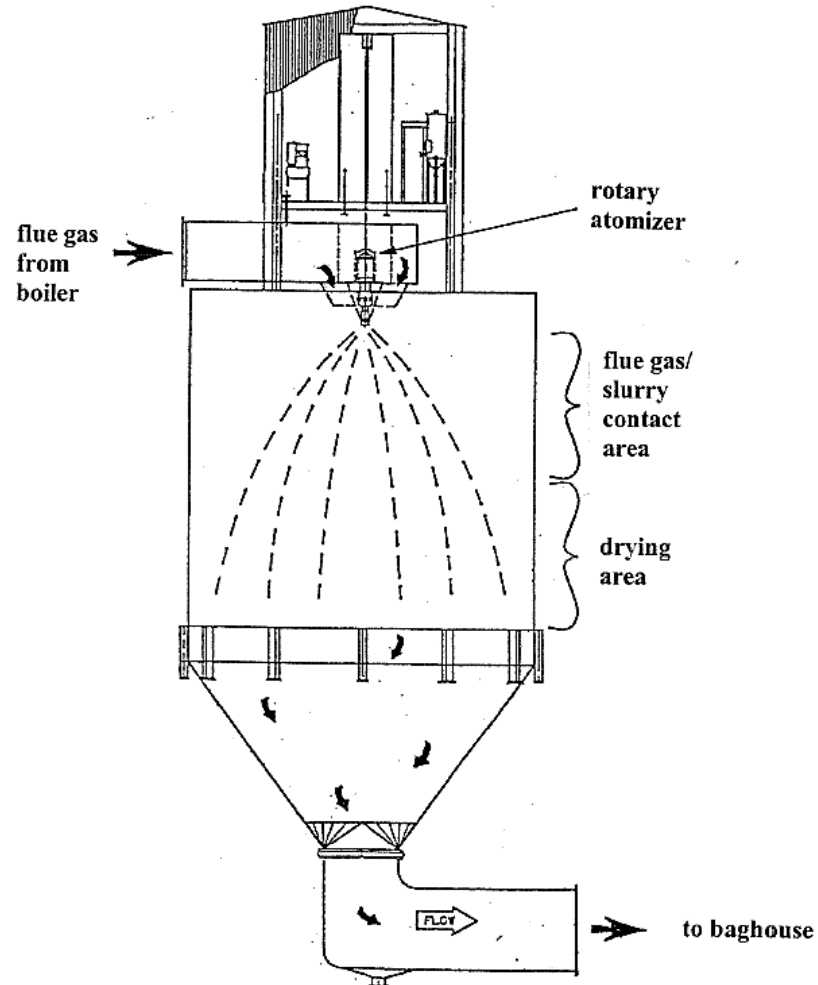
Combustion Process



Plant Design – Emissions Control



Spray Dry Absorbers for Acid Gas Control

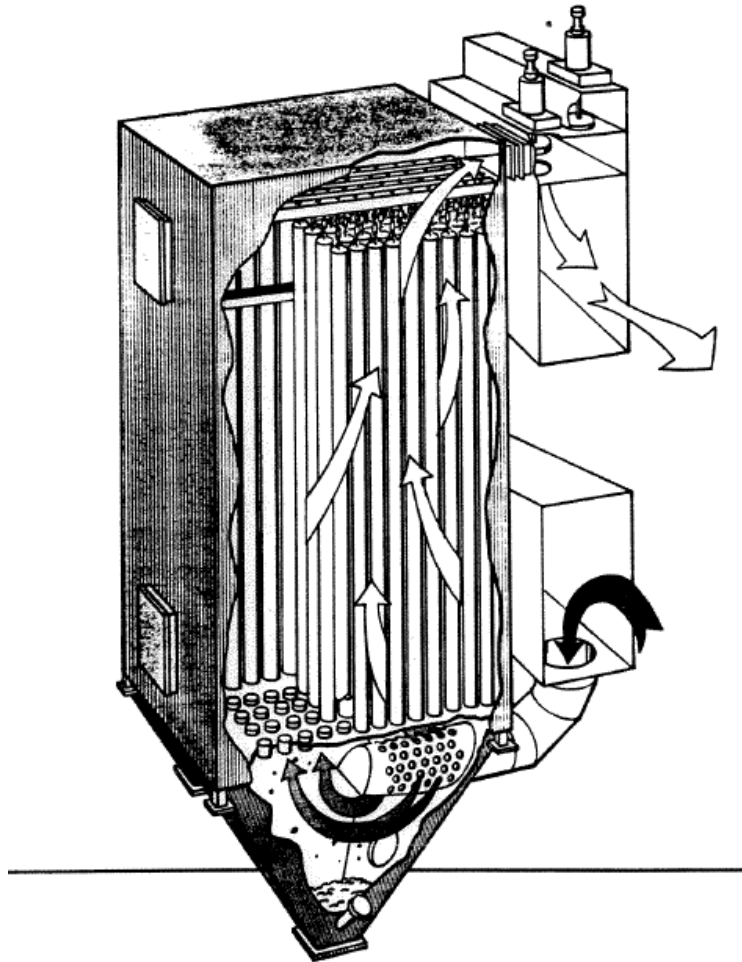


- System neutralizes acid gases using a lime slurry in a scrubber reactor
- Activated carbon is injected into the flue gas for heavy metal capture

Flue Gas Treatment

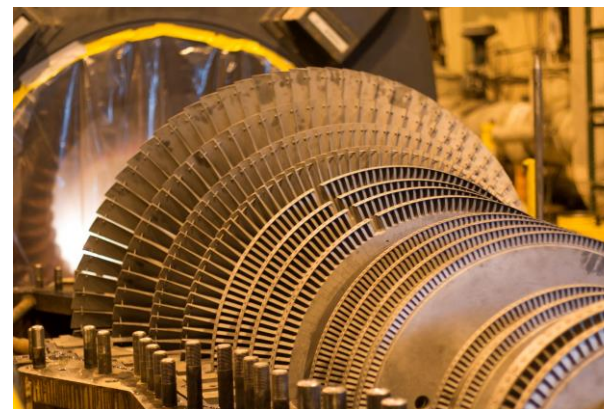


Baghouses – more than particulate control



- Flue gas passes through thousands of long, thin bags
- Cake forms on outside of bag enhancing particulate capture and adsorption
- Cake with carbon contributes to further fine particulate, acid gas, mercury and dioxin control
- Bags are cleaned by pulses of high-pressure air or reverse flow

Turbine Generator – Electricity Generation



Ash & Metal Removal



Continuous Emissions Monitoring and Control

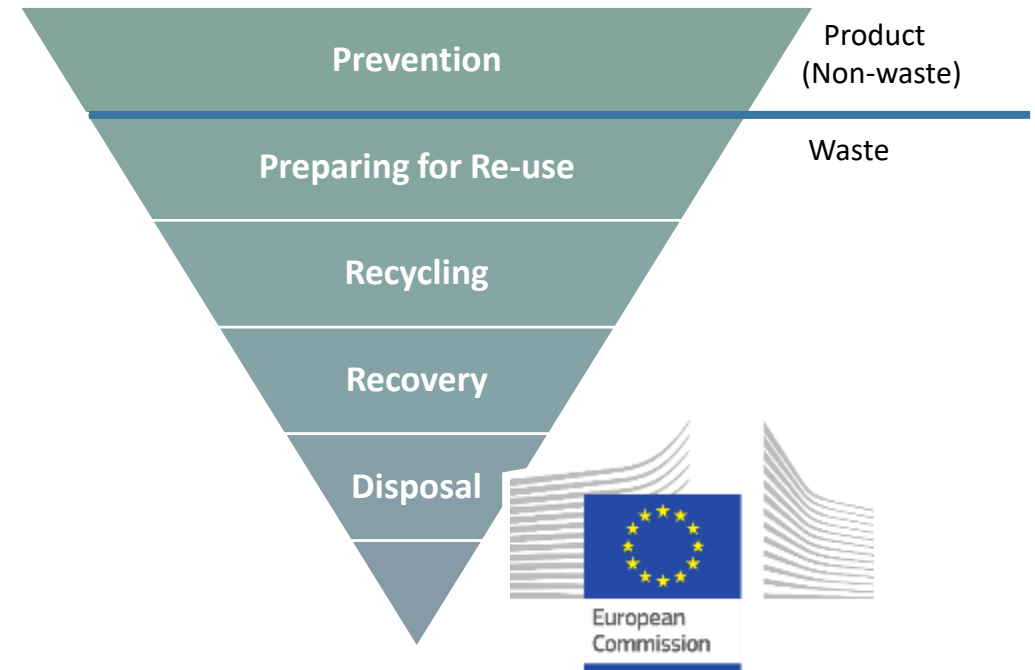
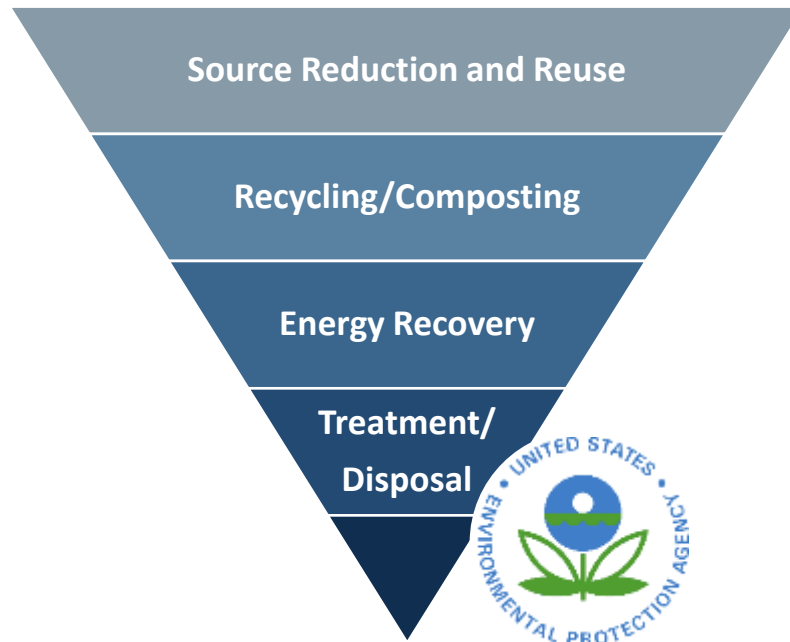


An aerial photograph of a waste-to-energy facility, showing industrial buildings, a yellow excavator, and a blue container. A dark blue semi-transparent rectangle is overlaid on the image, containing the text 'Waste-to-Energy'.

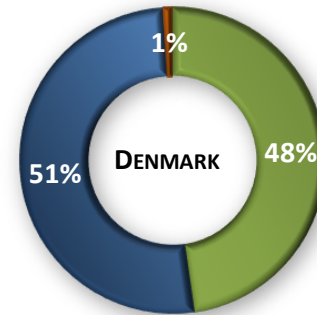
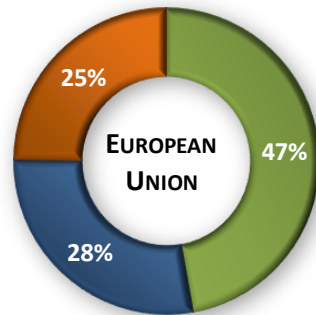
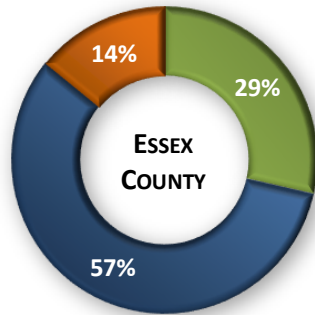
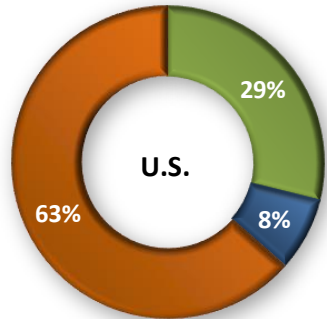
Waste-to-Energy

Waste Management Hierarchy

- The US EPA and the EU have ranked the most environmentally sound strategies for municipal solid waste – disposal in a landfill is considered the worst and final option
- The EU has set a target for all 27 countries to landfill 10% or less of all waste generated by 2035 in its landmark Landfill Directive



Waste-to-Energy: Global Perspective



■ Recycling / Composting ■ Energy Recovery ■ Landfilling

Data Sources: Eurostat, Columbia University, NJDEP

- WTE is implemented in 25 of 27 European Union countries, as well as Norway, Iceland and Switzerland*
- Waste management in Essex County is as sustainable as in the average E.U. country

*Data from Confederation of European Waste-to-Energy Plants



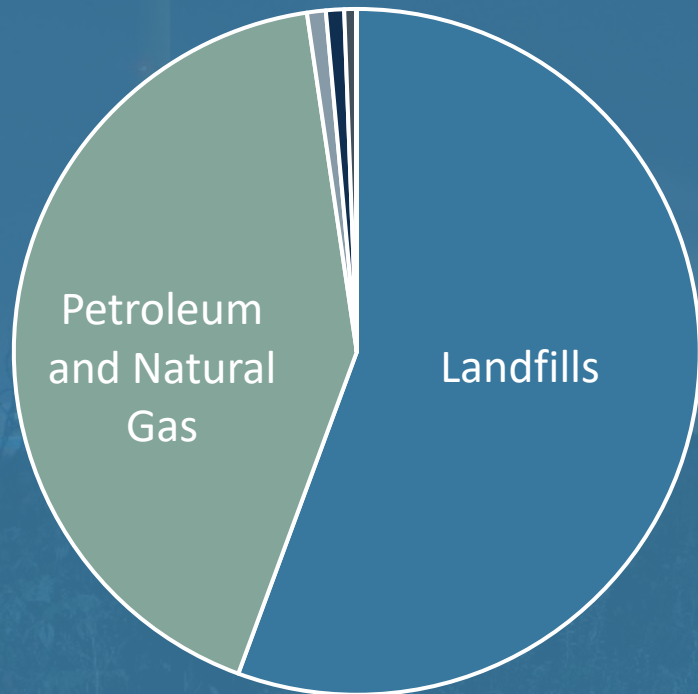
Ivry-Sur-Seine WTE Facility in Paris



SYSAV WTE Facility in Malmö, Sweden

Landfill vs. Waste-To-Energy

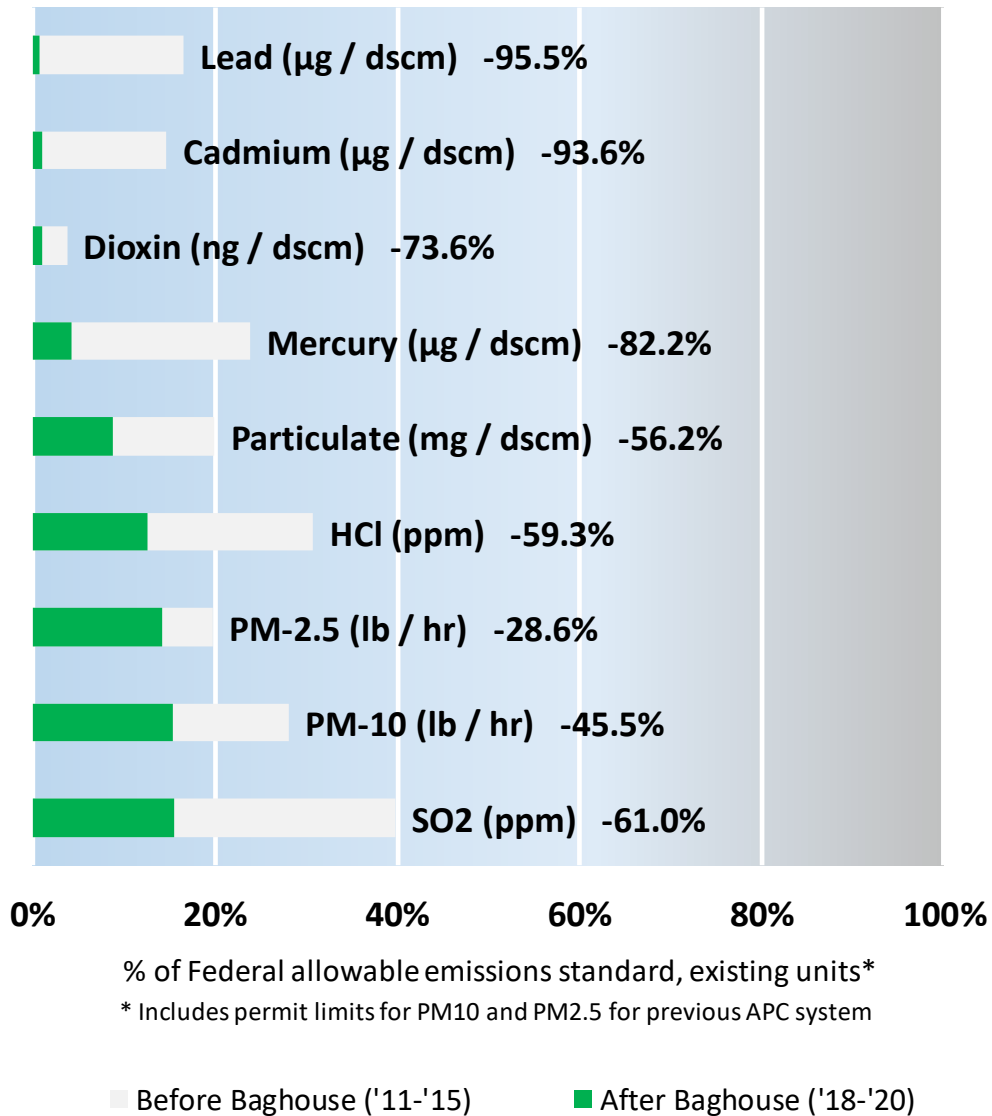
New Jersey Reported Methane Emissions (2020)



- Landfills.....
 - Emit methane – a greenhouse gas (GHG) over 80x more powerful than CO₂
 - NJ Landfills emitted over 900,000 metric tons CO₂ equivalent in 2020*
 - Generates leachate that can contaminate groundwater
 - Creates impacts for 100 years or more
- WTE....
 - Recovers energy from waste: 550 kWh per ton
 - Recovers metals for recycling
 - Only net-negative GHG emission source of energy
 - 22% of NJ's total renewable energy

*Based on data made available through the US EPA's Greenhouse Gas Reporting Program

Baghouse Emissions Improvements



Continuous Improvement

- Our goal to minimize the impact from the waste society generates
- Recent investments total approximately \$100 million:
 - New Baghouse Installation – reduced emissions up to 90%
 - Low NO_x Systems
 - Natural Gas Fueling Station
 - New Metals Recovery System
- We continuously assess opportunities to increase net environmental benefit for Newark

Overall Performance

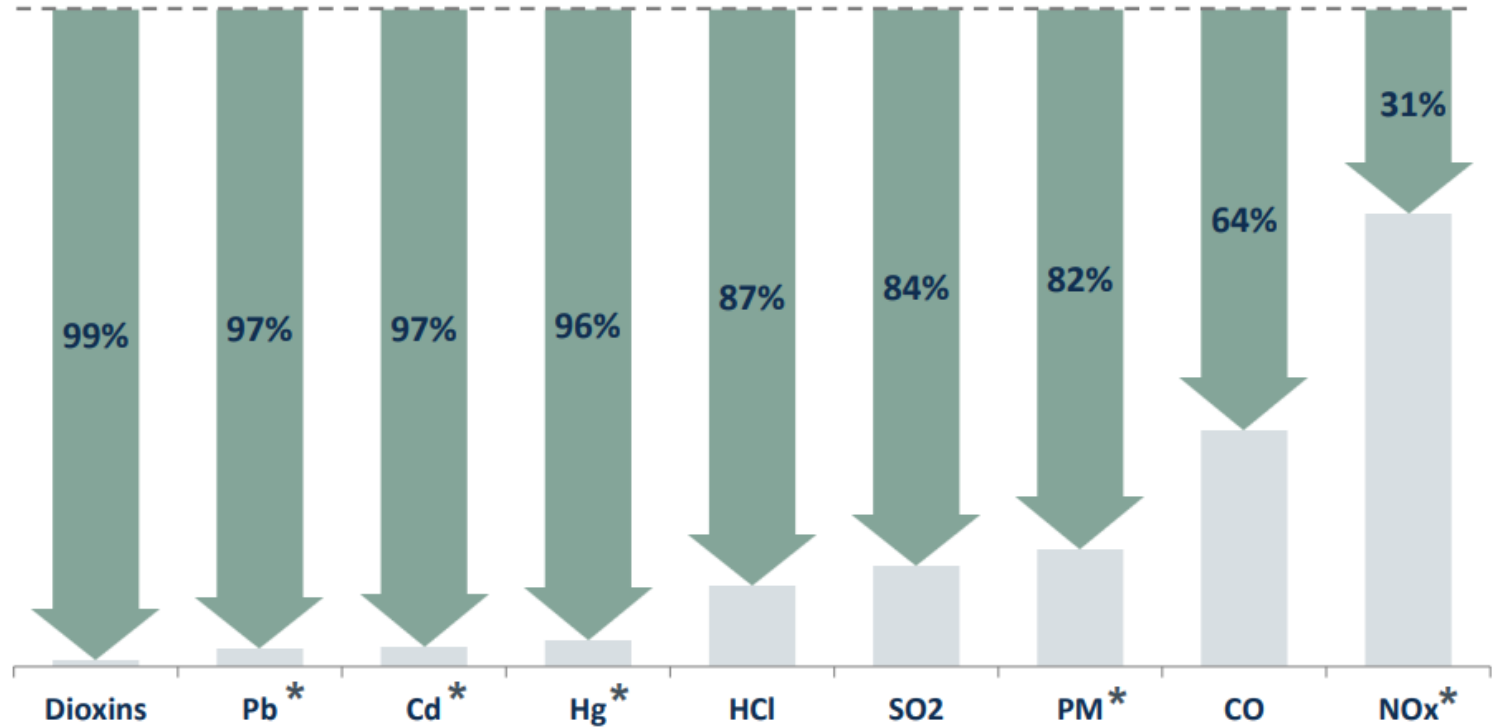
2018-2020 WTE Emissions Compared to Title V Permit

The facility operates up to **99% below** its permitted emissions limits

Emissions compared to Title V emission concentration limits as permitted by the NJDEP.

* Facility permit limit set below federal standard.

% BELOW TITLE V EMISSIONS LIMITS



Community Outreach & Environmental Justice Policy

We are committed to...

Having open, two-way communication with communities on issues which may be of interest or concern to them...

Having an enhanced public participation strategy with communities on major facility permit actions and engage in substantive conversations with community members during the early stages of the permitting process.

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Community Outreach & Environmental Justice Policy

Covanta is committed to engage with and support the communities in which we have or will have facilities. Covanta believes in the meaningful opportunity for all people, regardless of race, ethnicity, color, income, national origin or education level to be knowledgeable and have the right to participate in public decisions and actions which have an impact on their environment and neighborhoods.

To implement this policy consistent with our sustainability objectives, we commit to:

- Reduce discharges and minimize emissions from our facilities and to reduce other potential impacts of our operations, taking into account cumulative impacts
- Identify and engage with individuals and organizations in the communities in which we operate, or in which we may operate, that are interested in our operations
- Have open, two-way communication with communities on issues which may be of interest or concern to them, including environmental and quality of life issues in the community. Such communication shall include participation in meetings with community members or affected groups
- Have an enhanced public participation strategy with communities on major facility permit actions and engage in substantive conversations with community members during the early stages of the permitting process
- Work diligently to respond to issues identified by communities in which we operate
- Promptly and effectively notify the community in the event of situations that may adversely impact the environment or their health

covanta.com

Communication: Environmental Performance

In 2021, we started publishing our continuous emission monitoring performance on-line:

12/11/2021 

Reference Info		Carbon Monoxide (CO) <u>Maximum 4Hr</u>	Sulfur Dioxide (SO2) <u>Maximum 24Hr or Removal Efficiency</u>		Nitrogen Oxides (NOx) <u>Maximum 24Hr</u>	Opacity (stack) <u>Maximum 6min</u>
Permit Limit		100	29	>= 75%	150	10
Actual Data						
12/11/2021	Unit 1	52	9	79.7	133.8	1
12/11/2021	Unit 2	-	-	-	-	-
12/11/2021	Unit 3	66	1.1	99.9	116	1

Link: <https://www.covanta.com/where-we-are/our-facilities/essex>

EJ for Covanta – not just words BUT ACTION!

New Baghouses

- Newark, NJ
- Huntsville, AL
- Hillsborough, FL
- SEMASS, MA

New NOx Controls

- Newark, NJ
- Fairfax, VA (WIP)
- Huntsville, AL
- Alexandria, VA (WIP)
- Stanislaus, CA (in planning)

In Planning/Permitting

- Camden, NJ - Baghouse
- Chester, PA - NOx Reduction



Our 2019 Sustainability Goals include – “We’ve committed to implement five projects by 2023 to further reduce emissions in EJ communities. We will also set a science-based GHG reduction target by 2022 to drive further reductions.”



Hurricane Ida

- Severity of storms are increasing
- Importance of local disposal in disaster recovery

Covanta Essex Workforce Proximity to Facility



- 57% of our employees at Covanta Essex live within 10 miles of the facility
- 30% of our employees in NJ, live within 5 miles of where they go to work





Covanta in the Community

2021 Activities:

- Boys & Girls Club of Newark – 5k for Wellness
- Salvation Army Ironbound Boys & Girls Club of Newark – Earth Day Recycling Class
- Ironbound Ambulance Squad
- Riverfront Park Cleanup
- Branch Brook Park Cleanup
- City of Newark
 - Quarterly E-waste collection events
 - Adopt-A-Lot Program
- Essex County Turtleback Zoo
- Newark Public Schools – Go Green Initiative – Silver Certification for First Avenue School – Sustainable Jersey for Schools



First Avenue Achieves Silver Certification in Sustainable Jersey for Schools Initiative

Posted on [November 12, 2021](#)

[Newark, NJ – November 12, 2021] The Newark Board of Education is proud to announce the achievement of First Avenue School for being awarded Silver Certification in Sustainability by Sustainable Jersey for Schools. Sustainable Jersey For Schools is a certification program for New Jersey public schools that want to go green, conserve resources and take steps to create a brighter future, one school at a time. Serving as a non-profit organization that provides tools, training, and financial incentives to support and reward schools as they pursue sustainability programs.

All certified schools were honored during a Virtual Awards Ceremony held on October 20, 2021. Schools were also awarded a certification plaque to commemorate the achievement. The certification holds for three years, ending in August of 2024. Schools earn this certification through consideration by their peers, professional associations, experts, and civic organizations in New Jersey, to be among the leading schools in the state.



Covanta in the Community



G. Venessa Jones, School Librarian
 Hawkins Street School
 8 Hawkins Street
 Newark, New Jersey 07108

Twice a year Hawkins Street School participates in an amazing program called My Very Own Library. Every student at Hawkins Street School receives 10 free books to create and expand their home libraries. My Very Own Library was the brainchild of Anne Feeley who felt every child should have their very own library at home with literacy accessible to them at all times. Hawkins Street School is one of many schools in Newark to participate in this program. My Very Own Library is sponsored by University of Chicago, Scholastic and United Way of Essex and Hudson County.

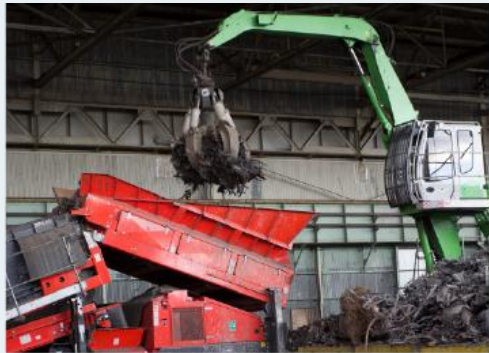


2021 Activities Continued

- Held annual Open Meetings for the public with Blueprint Café.
- Hawkins Street Elementary School
 - 100 Healthy Meals Distribution in June
 - 100 Healthy Thanksgiving Meals Distribution in November
 - Supplied hats and scarves for all 750 students under the My Very Own Library program
 - Distribution of Seabra gift cards to Hawkins Street families



Q&A



Attachment 2

Covanta Essex Company ACO Requirements

Requirement	Description	Deadline	Required Due Date	Actual Completion Date
Phase I a)	COVANTA ESSEX COMPANY ("COVANTA") shall hire an independent public relations consultant or other similarly qualified consultant to develop a formal public outreach program and/or review and supplement as necessary, COVANTA's existing program if one either formally or informally exists. A plan, detailing the program, shall be developed and shall include, but not be limited to, procedures to provide timely updates on any operational upsets that result in permit excursions, periodic notifications to local community groups, including electronic and other agreed to forms of communication and the establishment of a website link. COVANTA shall reach out to local community groups to determine notification schedules and deliverables for purposes of planning and program development.	Within 30 calendar days of effective date of ACO	11/9/2020	11/6/2020
Phase I b)	The plan and program shall also provide that COVANTA conduct a community outreach event to communicate with local community groups on a bi-annual basis.	Bi-annual	Ongoing	6/16/2021
Phase I c)	COVANTA shall complete and submit the plan to the Department for comment.	Within 90 calendar days of effective date of ACO	1/7/2021	1/7/2021
Phase I c)	Within fourteen (14) calendar days after addressing any modifications to the plan, COVANTA shall initiate the planned program.	Within 14 calendar days of addressing NJDEP comments on Community Outreach plan	11/16/2021	11/16/2021 - Plan implementation was already in progress
Phase I d)	COVANTA shall hire an independent waste operations consultant to review and develop new protocols or supplement as necessary, COVANTA's existing waste receipt, inspection and handling protocols. Protocols shall include but are not limited to items listed below under Phase I d)i through v.	Within 30 calendar days of effective date of ACO	11/9/2020	11/6/2020
Phase I d)i	Procedures to increase education and outreach to all customers and haulers via direct communications with responsible entities and printed messaging on all invoice bills regarding acceptable/prohibited waste types.	Within 90 calendar days of effective date of ACO	1/7/2021	1/7/2021
Phase I d)ii	Specific procedures to address iodinated wastes including methodologies to identify potential generators/sources of these wastes, development of proactive steps to ensure these wastes are not included in the waste streams coming to the facility and inspection/interception protocols to ensure these waste types are not processed through the facility.	Within 90 calendar days of effective date of ACO	1/7/2021	1/7/2021
Phase I d)ii	As a potential measure for enhancing COVANTA's iodine waste inspection/interception protocols, iodine monitors shall be evaluated for their potential effectiveness to monitor vapor phase iodine. The evaluation shall be submitted to the Bureau of Air Monitoring within thirty (30) calendar days of the effective date of this ACO.	Within 30 calendar days of effective date of ACO	11/9/2020	11/6/2020

Requirement	Description	Deadline	Required Due Date	Actual Completion Date
	Response to NJDEP comments on iodine monitor evaluation received on 12/11/20	No required deadline for response	NA	4/6/2021
	Response to NJDEP comments on iodine monitor evaluation received on 5/18/21	No required deadline for response	NA	Call held on 6/29/21 to discuss comments
	Submittal of Halogenated Waste Pollution Prevention Plan report to NJDEP by July 30, 2021 pursuant to agreement made on call on 6/29/21	7/30/2021	7/30/2021	7/29/2021
Phase I d)ii	If the Department deems that the monitors are effective in monitoring vapor phase iodine, the monitors shall be installed, in accordance with Department review and approval, within 60 calendar days of such approval.	Within 60 calendar days of effective date of ACO	TBD	Awaiting NJDEP final feedback
Phase I d)iii	Installation of Digital Cameras at appropriate locations throughout the facility to monitor waste streams being tipped in the transfer house and being conveyed into the boilers. The Digital Cameras should have recording capability and data retention that can record for 30 days.	Within 90 calendar days of effective date of ACO	1/7/2021	1/7/2021
Phase I d)iv	Additional dedicated training to employees responsible for 1) monitoring truck deliveries and unloading and 2) operating the grapples used to mix waste in the pit and transfer waste from the pit to the feed hopper for each boiler, to train the employees to identify inappropriate waste material.	Within 90 calendar days of effective date of ACO	1/7/2021	1/7/2021
Phase I d)v	Enhanced employee training program to ensure compliance with COVANTA's Solid Waste and Air Permits, applicable Best Management Practices, and procedures for identifying and preventing iodine from entering the Facility.	Within 90 calendar days of effective date of ACO	1/7/2021	1/7/2021
Phase I e)	Within ninety (90) calendar days of the effective date of this ACO, excepting the Iodine monitor evaluation noted in d)ii. above, COVANTA shall provide the protocols and procedures outlined above for Department comment.	Within 90 calendar days of effective date of ACO	1/7/2021	1/7/2021
Phase I e)	Within fourteen (14) calendar days after addressing any modifications to the protocols and procedures, COVANTA shall implement same. COVANTA is encouraged to proactively implement any enhanced protocols and procedures outlined above prior to the required 90-day due date	Within 14 calendar days of addressing NJDEP comments on Waste Receipt, Inspection and Handling protocols	1/10/2022	Modification of O&M manual to include procedures in progress per SW Operating Permit NOD
Phase II a)	Identification and estimation of air pollutant emissions and the air dispersion modeling of the impacts of the identified purple plumes shall be performed by an independent third party, and reports containing the air dispersion modeling results shall be submitted to the Department detailing the estimated potential health impacts associated with the purple plume events. Modeling shall include the impact of iodine associated acid gases with an estimation of emissions. Modeling reports shall be provided to the DEP by a qualified thirdparty modeling expert acceptable to the Bureau of Evaluation and Planning.	Within 45 days of protocol approval	7/23/2021	7/20/2021

Requirement	Description	Deadline	Required Due Date	Actual Completion Date
Phase II a)1.	Prior to conducting and modeling or health risk assessment COVANTA ESSEX COMPANY shall provide detailed estimates of all emissions associated with the purple plumes including, but not limited to, iodine and other associated acid gases and, the methodologies used to estimate the amount and duration of the emissions within 45 calendar days of the Effective Date of this ACO.	Within 45 calendar days of effective date of ACO	11/23/2020	11/19/2020
Phase II a)2.	Within 90 calendar days of the Effective Date of this ACO but prior to conducting and modeling or health risk assessment COVANTA ESSEX COMPANY shall submit a written protocol that is prepared by an independent third party for DEP approval to the Bureau of Evaluation and Planning that is consistent with a) Technical Manual 1002 Guidance on Preparing an Air Quality Modeling Protocol b) Technical Manual 1003 Guidance on Preparing Risk Assessment for Air Contaminant Emissions.	Within 90 days of effective date of ACO	1/7/2021	1/7/2021
	Response to NJDEP comments on air quality modeling protocol received on 2/26/21	Within 60 days of receipt of comments	4/26/2021	4/21/2021
Phase II a)3.	Once reviewed and approved by the Department, an independent third party shall conduct the modeling and risk assessment consistent with the protocol approval and submit results within 45 calendar days of Department approval.	Within 45 calendar days of protocol approval	7/23/2021	7/20/2021
Phase II a)4.	If upon completion of DEP's review of the modeling and risk assessment identified in Phase 2, Paragraph a.3 of this ACO, there are verified findings that the emission of the purple plumes caused a non-negligible health impact (See NJDEP Division of Air Quality Technical Manual 1003) to the public, Covanta shall disclose the findings to the public. In doing so, Covanta is encouraged to include posting the findings on its website. Covanta will disclose the non-negligible health impact within 5 days of receiving the verified findings.	Within 5 days of receiving non-negligible health impact results	NA	No non-negligible health impacts identified
Phase II b)	A mitigation plan shall be submitted to the Department for inclusion into COVANTA ESSEX COMPANY's Solid Waste and Title V permits. The mitigation plan shall consider findings from the evaluation of waste generators and how tipping floor procedures can be adjusted to improve a visual assessment of waste deliveries. Upon approval, the mitigation plan shall be referenced in the pending Title V Operating Permit renewal (BOP170001) under review by the Department and shall be incorporated into the renewal of the current Solid Waste Facility Permit (RRF190001) which expires February 23, 2021.	Plan shall be submitted upon approval by the Department of the protocols and procedures required to be submitted under Phase I e) within 90 days of effective date of ACO	1/10/2022	Modification of O&M manual to include procedures in progress per SW Operating Permit NOD. This will also be incorporated in the Title V renewal.
Phase II c)	COVANTA ESSEX COMPANY shall provide a written report detailing efforts made at the facility located in Lancaster PA and operated by Covanta Lancaster, Inc. The report shall include information that explains the formation of purple plumes including the estimated iodine feed rate where the creation of a plume event has been made.	Within 60 calendar days of effective date of ACO	12/8/2020	12/7/2020

Requirement	Description	Deadline	Required Due Date	Actual Completion Date
Item 14	All reports submitted to the Department shall be made available on COVANTA ESSEX COMPANY's website within one week of being submitted to the Department. This requirement shall exclude the report required and identified in Phase II, paragraph c.	Within 1 week of submittal of any required report to NJDEP.	Ongoing	Completed as applicable.
Item 17	<p>COVANTA ESSEX COMPANY shall submit progress reports to the Department by the first calendar day of every other month beginning 30 calendar days from the Effective Date of this ACO. Each report shall explain the status of COVANTA ESSEX COMPANY's compliance with the Compliance Schedule required by this ACO and shall include, but not be limited to, the following:</p> <p>A. identification of the site and reference to this ACO;</p> <p>B. the status of permitting and planning approvals, and any work at the site and progress to date;</p> <p>C. difficulties or problems encountered during the reporting period, and actions taken to rectify any difficulties or problems;</p> <p>D. activities planned for the next reporting period;</p> <p>E. the required and actual completion dates for each item required by this ACO;</p> <p>F. an explanation of any non-compliance with the compliance schedule; and</p> <p>G. evaluation of all corrective measures implemented to date.</p>	First calendar day of every other month beginning 30 calendar days from the effective date of ACO.	11/1/2021	12/30/2021 (Next report due by 3/1/22)
Item 18	In settlement of the violations cited in the above findings, COVANTA ESSEX COMPANY shall pay a penalty of \$24,400 (Twenty Four Thousand, Four Hundred Dollars) by check made payable to the "Treasurer, State of New Jersey" and remitted to the Division of Revenue at the address stated on the enclosed invoice(s) within thirty (30) calendar days of the Effective Date of this ACO.	Within 30 calendar days of effective date of ACO	11/9/2020	11/5/2020