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July 29, 2021

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

Subject: Halogenated Waste Pollution Prevention Plan

Mr. Meyer;

As requested during the meeting held on June 29, 2021 with staff from the NJDEP Bureau of Air Permitting, the NJDEP Bureau of Air Monitoring, and the NJDEP Bureau of Air Enforcement to discuss the feasibility of a gaseous iodine monitor to detect iodine in the municipal solid waste (MSW) delivered to the Covanta Essex facility, the attached Halogenated Waste Pollution Prevention Plan is being submitted for your review. As requested by Mr. Francis Steitz, Director of Division of Air Quality, this plan describes the pollution prevention procedures that will be implemented at the Covanta Essex facility to prevent waste containing iodine or other halogens from entering the facility and being processed in the boilers.

If you have any questions or need any additional information, please contact Patricia Earls of my staff at 973-817-7322 or [pearls@covanta.com](mailto:pearls@covanta.com).

Sincerely,

David Blackmore  
Facility Manager

cc: Francis Steitz, NJDEP via email  
Richelle Wormley, NJDEP via email  
Scott Michenfelder, NJDEP via email

*"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

7/29/21  
Date

# **Covanta Essex Company Halogenated Waste Pollution Prevention Plan**

## **1.0 Introduction**

Pursuant to the requirements of the Administrative Consent Order (ACO) EA ID # NEA200001 – 07736, issued on October 9, 2020, Covanta Essex Company submitted a written report on January 7, 2021 detailing efforts to prevent delivery of iodinated waste to the Covanta Essex Facility (“the Facility”) and procedures and training at the Facility to prevent processing of any iodinated waste delivered and deposited in the tipping floor area. As a result of the meeting held on June 29, 2021 with staff from the NJDEP Bureau of Air Permitting, the NJDEP Bureau of Air Monitoring, and the NJDEP Bureau of Air Enforcement, this Halogenated Waste Pollution Prevention Plan is being submitted which describes the pollution prevention procedures that will be implemented at the Facility to prevent waste containing iodine or other halogens from entering the Facility and being processed in the boilers. This Plan incorporates existing efforts that have been implemented to prevent iodine containing waste from being delivered to the Facility and processed in the boilers with additional procedures included as described in the following sections.

## **2.0 Identification of Sources of Halogenated Waste**

Other halogens besides iodine include bromine, chlorine, fluorine, and astatine. Chlorine is widely used as a water-purification agent, and it is employed in a number of chemical processes including as an ingredient in sodium chloride or table salt. Fluorides are known mainly for their addition to public water supplies to prevent tooth decay, but organic fluorides are also used as refrigerants and lubricants. Bromine is used chiefly to prepare brominated compounds that are used in flame retardants and as general pesticides and in water treatment. Iodine is most familiar as an antiseptic, but can also be used to manufacture antifungal products, some photography chemicals and food colorants.

Astatine is a dangerously radioactive element and is the heaviest of the halogen elements. There are currently no uses for astatine outside of research. The half-life of the most stable isotope is only 8 hours, and only tiny amounts have ever been produced so waste containing this radioactive compound is not expected to be delivered to the Facility. Also, since all the inbound and outbound truck scales at the facility are equipped with radiation detectors, waste containing astatine would be detected prior to a refuse truck entering the Facility.

## **3.0 Outreach and Education**

### **3.1 Distribution of Flyers**

Since 2015, Covanta Essex has been educating haulers, their customers and other generators that iodinated waste is not acceptable at the Facility and that this waste should not be delivered to the Facility. This has been accomplished through the distribution of informational flyers to the Essex County Utility Authority (ECUA) on at least an annual basis. ECUA includes these flyers in their billing invoices to all Essex county haulers to alert them that iodine is not acceptable in waste delivered to the Facility. These flyers were also sent to all the commercial haulers and the

Department of Sanitation of New York (DSNY) that deliver waste to the Facility and this will continue to be done at least annually. The flyers will be expanded to also include examples of other halogenated waste such as flame retardants and pesticides which may contain bromine, refrigerants and lubricants which may contain fluorides, and chlorine used for water purification (i.e. swimming pools, wastewater treatment, etc.).

### 3.2 Essex County Solid Waste Advisory Committee (SWAC) Outreach

A website link has been created by Covanta Essex that lists all waste types that are prohibited from being accepted at the Facility including waste that contains iodine. This link was shared with the ECUA SWAC on December 29, 2020 and has been distributed by the ECUA SWAC to its members via email. The link address is <https://info.covanta.com/prohibited-wastes>. The webpage will be updated to include examples of halogenated wastes to the list of unacceptable waste types.

### 3.3 Outreach via Covanta Invoicing

Covanta Essex created new invoice templates for its non-Essex County commercial waste haulers and other haulers that are billed directly by Covanta which include the above referenced website link for prohibited waste types. These invoice templates have been in use for billing since January 2021. The link address is listed in Section 3.2 above which will now also include examples of unacceptable halogenated waste.

### 3.4 Use of Virtual Drive-By Procedure to Identify Potential Sources of Halogenated Waste

Covanta Essex has developed a detailed procedure to identify potential generators/sources of iodinated wastes in the Facility’s service area. This procedure will be expanded to include generators/sources of halogenated waste in the Facility’s service area. These steps are summarized below:

Step	Action	Output	Covanta Essex Responsibility
1	<p>Conduct Virtual Drive-By using Google Maps and going street by street and documenting:</p> <ul style="list-style-type: none"> <li>• the location (town, city)</li> <li>• business name and type</li> <li>• website address</li> <li>• contact information</li> <li>• list of products that may contain iodine, bromine, fluorine, or chlorine.</li> </ul>	<p>List of businesses that potentially use iodine, bromine, fluorine, or chlorine in their operation. Business types may include:</p> <ul style="list-style-type: none"> <li>• Large scale chemical companies;</li> <li>• Hospitals/Medical Labs</li> <li>• Printing companies</li> <li>• Veterinary clinics</li> <li>• College chemistry labs</li> <li>• Research facilities</li> <li>• Photography studios</li> <li>• Pesticide manufacturers</li> <li>• Refrigerant or lubricant manufacturers</li> </ul>	Covanta support staff

2	Use the New Jersey's Community Right To Know database to check the list of target businesses generated from step 1 for halogenated compounds	Confirmation of halogen-containing compounds on site	Environmental Specialist
3	Identify businesses that have their waste delivered to the Facility	Smaller pool of companies/haulers to investigate	Business Manager
4	Contact hauler/generator to confirm if they do generate halogen-containing waste. If confirmed, then develop a plan to re-route their waste to a transfer station or ban their deliveries to the Facility.	Confirmation of sources of halogenated waste	Business Manager
5	Update waste screening protocols and train Covanta business units in screening non-residential waste approvals for targeted businesses and halogen containing wastes	Updated waste approvals	Covanta Business Units/Environmental Specialist

### **3.4.1 Distribution of Flyers to Businesses Identified in Virtual Drive-By**

The flyers described in Section 3.1 above would also be distributed to identified local businesses as described in section 3.4 above to educate them on halogen-containing materials and remind them that waste containing any halogens are not acceptable at the Facility, and Covanta will offer assistance to interpret any reagent Safety Data Sheets. The flyers will be distributed at least once per year.

## **4.0 Waste Inspections at the Covanta Essex facility**

### **4.1 Increased Waste Load Inspections**

Since November 2019, all MSW loads received from hospitals are subject to inspection to check for iodine-containing material in the waste. The procedure for inspecting hospital loads includes pictures of typical items that may be found in hospital waste that could contain iodine to educate and train tipping floor operators. In addition to hospital load inspections, Covanta Essex also performs throwdown inspections on 10% of all waste loads received at the Facility each day. The procedure for all throwdown inspections will be updated to include pictures of items that may contain bromine, fluorine, and chlorine in addition to items that may contain iodine.

#### **4.1.1 Covanta Essex Solid Waste Inspection Throwdown Form**

The form that is used to document the throwdown inspections on a minimum of 10% of all waste loads per day will be modified to include halogen-containing waste as unacceptable waste.

#### **4.2 Covanta Profiled Waste Approvals**

Profiled waste is accepted at the Covanta Essex facility as Type 27 waste after review of the Material Characterization Form (MCF) that is submitted by the customer to our Covanta Environmental Services (CES) division as part of their request for a delivery. The MCF already requires that customers identify whether the waste contains bromine, chlorine, fluorine or iodine so that if any of these compounds are identified as constituents of the waste, it will not be accepted for delivery to the Facility.

### **5.0 Employee Training**

#### **5.1 Training for Monitoring Truck Deliveries and Unloading**

As required by the Title V Operating Permit for the Covanta Essex facility, under OS Summary, Ref. # 128, the facility maintains an operating manual called the Environmental Compliance Operating Manual (ECOM) that addresses 11 elements of municipal waste combustor unit operation. The ECOM includes a section on procedures for receiving, handling and feeding MSW as one of the 11 elements. Training is conducted annually by the Environmental Specialist to review all sections of the ECOM and is provided to all Covanta Essex employees who have responsibilities affecting the operation of the Facility, including, but not limited, to shift supervisors, control room operators, tipping floor operators, refuse crane operators, and maintenance personnel. Section 3 of the ECOM covers types of waste that are acceptable and unacceptable at the Facility, and will now include waste with iodine, bromine, fluorine, and chlorine. It also includes required procedures for inspecting waste loads on the tipping floor, handling any unacceptable waste that is identified on the tipping floor, and management of the refuse pit by the refuse crane operators. The waste inspection procedures to identify halogenated waste will also be included with this section of the annual training.