
**Georgia's State Plan for Implementation of the Emission
Guidelines and Compliance Times for Commercial and
Industrial Solid Waste Incineration Units**



Air Protection Branch

June 5, 2020

Executive Summary

This document is Georgia's State Plan for the implementation of 40 CFR Part 60, Subpart DDDD, *Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units*. This plan covers Commercial and Industrial Solid Waste Incineration (CISWI) units and air curtain incinerators that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013. An existing commercial and industrial solid waste incinerator (CISWI) is defined by Subpart DDDD as any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste, and that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013. The emission guidelines set limits on stack emissions of specific pollutants from existing CISWI units.

The state plan is required by 40 CFR Part 60, Subpart B and includes the following components:

- Facility inventory and unit-level emissions inventory
- Emission limits and standards
- Compliance dates and increments of progress for affected units
- Performance testing, recordkeeping, and reporting requirements
- Operator training and qualification requirements
- Documentation of public notification and participation
- Provision for State progress reports to the EPA
- Identification of enforceable state mechanisms for implementing the emission guidelines
- Demonstration of the State's legal authority to carry out the plan
- Requirement for Title V permits
- Waste Management Plan

To meet EPA's requirement for Subpart DDDD, Georgia EPD has promulgated Georgia Rule 391-3-1-.02(2)(ppp) for the regulation of existing CISWI units. This Rule, in conjunction with the State Plan, ensures that existing CISWI units meet performance requirements that are at least as stringent as the CISWI emission guidelines and compliance times.

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List of Acronyms

Acronym	Meaning
ACD	Air curtain destructor
ACI	Air curtain incinerator
CAA	Clean Air Act
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CISWI	Commercial and Industrial Solid Waste Incineration
CPMS	Continuous parameter monitoring system
EG	Emissions guidelines
EPA	Environmental Protection Agency
ERU	Energy recovery unit
mg/dscm	milligram per dry standard cubic meter
ng/dscm	nanogram per dry standard cubic meter
NHSM	Non-hazardous secondary materials
NOV	Notice of Violation
NSPS	New Source Performance Standards
ppmvd	parts per million by volume, dry basis
RCRA	Resource Conservation and Recovery Act

1.0 Introduction

This document is Georgia's State Plan for implementation of the U.S. EPA's *Emission Guidelines (EG) and Compliance Times for Commercial and Industrial Solid Waste Incineration Units* (40 CFR Part 60, Subpart DDDD). This plan covers CISWI units and air curtain incinerators that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013.

A CISWI unit is defined as any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste. In order to determine whether a material used as fuel is solid waste or not, it must satisfy all legitimacy criteria required in 40 CFR Part 241, Subpart B (*Identification of Non-Hazardous Secondary Materials That Are Solid Wastes When Used as Fuels or Ingredients in Combustion Units*).¹ When determining the type of solid waste being burned, the CISWI emission guidelines direct the owner/operator to the legitimacy criteria contained in the RCRA provisions. Essentially what distinguishes a CISWI unit from other boilers is the type of fuel that is burned.

Georgia Rule 391-3-1-.02(ppp) has incorporated by reference the definition of a CISWI unit; therefore, qualifying units will satisfy the criteria above. Qualifying units are divided into four categories: incinerators, energy recovery units, waste burning kilns, and small, remote incinerators. Exempt units or non-qualifying incinerators will not be subject to Georgia Rule (ppp). A list of exempt units can be found in 40 CFR 60.2555 of the emission guidelines.

Air Curtain Incinerators (ACIs) are exempt from CISWI emission guidelines unless the unit burns one of the following types of waste:

- 100% wood waste,
- 100% clean lumber, or
- 100% mixture of only wood waste, clean lumber, and/or yard waste.

If an ACI burns the type of qualifying waste listed, then it is subject to the provisions of 40 CFR 60.2805, 40 CFR 60.2810 through 60.2870, and subparagraph (ppp)1.(ii)(VIII) of the Georgia Rule. Qualified ACIs are required to hold a Title V permit, are subject to an opacity limit, and have testing, monitoring, reporting, and recordkeeping requirements.

¹ § 241.3 (d) Legitimacy criteria for nonhazardous secondary materials.

2.0 Regulation of Air Pollutant Emissions from Existing CISWI Units

Emissions of air pollutants from existing CISWI units are regulated under the CAA as described below. The purpose of this State Plan is to ensure compliance of existing CISWI units with the requirements of the CAA.

2.1 CAA Requirements

CISWI units are regulated as solid waste incinerators under CAA section 129, *Solid Waste Combustion*, and also under CAA section 111, *Standards of Performance for New Stationary Sources* (NSPS). Subsections 129(b) and 111(d) address emissions from existing units and provide for emission guidelines for these units. These statutory requirements are implemented through the following Federal regulations:

- 40 CFR Part 60, Subpart B: *New Source Performance Standards, Adoption and Submittal of State Plans*; and
- 40 CFR Part 60, Subpart DDDD: *Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units* – Final rule promulgated March 21, 2011 and amended June 23, 2016.

Under Subpart DDDD, an existing CISWI unit is defined as any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding six months, any solid waste and that commenced construction on or before June 4, 2010 or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013. Emission limits and requirements for a state plan for existing CISWI units are discussed below.

2.2 Emission Limits

The pollutant emission limits for existing CISWI units are expressed as emission rates in mass per volume of effluent gas. With the most recent amendment to the emission guideline, subcategories have been created and emission limits have been categorized by emission unit type. The four subcategories are incinerators, energy recovery units, waste burning kilns, and small, remote incinerators. The emission limits are presented in the following table and incorporated by reference into Georgia Rule (ppp).

Table 2-1. Emission Limits that Apply to Incinerators

Pollutant ²	Incinerators	Energy Recovery Units			Small, Remote Incinerators	Waste-Burning Kilns
		L/G ³	BM ⁴	Coal		
Cadmium (mg/dscm)	0.0026	0.023	0.0014	0.0017	0.95	0.0014 ⁵
Carbon monoxide (ppmvd)	17	35	260	95	64	110 (long kilns)/790 (preheater/precalciner)
Dioxins/furans (total mass basis) (ng/dscm) ⁶	4.6	2.9	0.52 ⁵	5.1	4,400	1.3
Dioxins/furans (toxic equivalency basis) (ng/dscm) ⁶	0.13	0.32	0.12	0.075 ⁵	180	0.075 ⁵
Hydrogen chloride (ppmvd)	29	14	0.20	58	300	3.0 ⁵
Lead (mg/dscm)	0.015	0.096	0.014 ⁵	0.057	2.1	0.014 ⁵
Mercury (mg/dscm)	0.0048	0.0024	0.0022	0.013	0.0053	0.011
Oxides of nitrogen (ppmvd)	53	76	290	460	190	630
Particulate matter filterable (mg/dscm)	34	110	11	130	270	13.5
Sulfur dioxide (ppmvd)	11	720	7.3	850	150	600
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period					n/a

² All emission limits are expressed as concentrations corrected to 7 percent oxygen.

³ Liquid/Gas

⁴ Biomass

⁵ If owner/operator is conducting stack tests to demonstrate compliance and performance tests for this pollutant for at least 2 consecutive years can show that emissions are at or below this limit, owner/operator can skip testing according to 40 CFR 60.2720 if all of the other provisions of 40 CFR 60.2720 are met. For all other pollutants emitted from a waste-burning kiln that do not contain a superscript “5”, performance tests for this pollutant for at least 2 consecutive years must show that emissions are at or below 75 percent of this limit in order to qualify for skip testing, with the exception of annual performance tests to certify a continuous emissions monitoring system (CEMS) or PM continuous parameter monitoring system (CPMS).

⁶ Affected sources can comply with either the total mass basis or toxic equivalency basis emission limit for dioxins/furans.

Emission limits for CISWI units are contained in Tables 6 - 9 of 40 CFR Part 60, Subpart DDDD and incorporated by reference in subparagraph (ppp)2.(i)(XIII) of the Georgia Rule.

Georgia Rule 391-3-1-.02(ppp) lists the types of units that are exempt in subparagraphs (ppp)(ii)I. through XI., but it is important to note that some exempt units are still required to provide notifications. Air curtain incinerators are exempt unless the unit burns 100% wood waste, 100% clean lumber, or 100% mixture of only wood waste, clean lumber, and/or yard waste. ACIs that burn the types of waste listed, are required to maintain opacity limits according to 40 CFR 60.2860 and Georgia Rule (ppp)1.(ii)(VIII) with no other emission limits.

2.3 Requirements for a State Plan

Requirements for state plans are included in both 40 CFR Part 60, Subpart B and in 40 CFR Part 60, Subpart DDDD. 40 CFR Part 60, Subpart B contains more general requirements for all new and existing sources, whereas Subpart DDDD is specific to existing CISWI units.

The plan elements required by 40 CFR Part 60, Subpart DDDD are listed in Table 2-2 along with cross-references to the corresponding sections of the Georgia's State Plan.

Table 2-2. Required State Plan Elements

Plan Element	Section of Georgia’s State Plan
Facility inventory	3.1
Unit-level emissions inventory	3.2
Compliance dates and increments of progress for affected units	6.0
Emission limits	2.2
Operating limits	8.0
Operator training and qualification requirements	5.0
Performance testing, recordkeeping, and reporting requirements	7.0
Documentation of public notification and participation	13.1
Provision for State progress reports to the EPA	9.0
Identification of enforceable state mechanisms for implementing the emission guidelines	13.2
Demonstration of the State’s legal authority to carry out the plan	13.3

2.4 Georgia Rule 391-3-1-.02(2)(ppp)

Existing CISWI units must comply with Georgia Rule 391-3-1-.02(2)(ppp), *Commercial and Industrial Solid Waste Incineration Units* (see Appendix A). This rule was promulgated to ensure that affected CISWI units comply with the requirements of the Federal EG (40 CFR Part 60, Subpart DDDD). Georgia’s Rule 391-3-1-.02(ppp) adopts the CISWI EG by reference, with the exception of the compliance times and authorities that remain with the EPA.

3.0 Facility and Emissions Inventories

There are three main criteria used to determine if an incineration unit falls under the requirements of the Emission Guidelines⁷.

- Incinerator type
- Date of installation or modification of unit
- Type of waste combusted in unit

Incinerator types include incinerators, small remote incinerators, energy recovery units (ERUs), waste-burning kilns, and air curtain incinerators (ACIs).

There are ten known operable existing CISWI units in the State of Georgia. This includes a combination of waste incinerators and ACIs. In some State of Georgia permits ACIs may be referred to as air curtain destructors (ACDs). In this document, ACDs will be referred to as ACIs. An inventory of the facilities and inventories of CISWI units and ACI emissions of the pollutants are presented below.

This State Plan contains an inventory of facilities and inventories of CISWI unit emissions along with pollutants regulated under the CISWI Emission Guidelines. Should another source be discovered subsequent to this notice, there will be no need to reopen the State Plan. All required items will be reported as agreed in Georgia's Air Planning Agreement⁸ (see Appendix C).

3.1 Facility Inventory

In accordance with 40 CFR 60.2515(a)(1), the state plan must include an inventory of existing CISWI units. The inventory of units by facility and location is presented in Table 3-1. The table also includes the current operating permits for the respective units and the dates that their operation was first permitted. Table 3-2 presents design and operating characteristics, as available, for the existing CISWI units. Table 3-3 presents design and operating characteristics, as available, for the existing ACIs.

All units that are included in Georgia's inventory must comply with Georgia's Rule (ppp) and meet the requirements that are outlined in this plan. If a facility no longer intends to operate a CISWI unit, the unit may be removed from the State's inventory if the State determines that it is inoperable. A unit may be demonstrated to be inoperable by meeting one or more of the following criteria:

- Waste charge door welded shut
- Stack and bypass stack removed

⁷ § 60.2550, §60.2555, § 60.2875

⁸ Georgia's Air Planning Agreement is an annual report demonstrating Georgia's ability to meet its commitments with EPA.

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- Combustion air blowers removed
- Burners or fuel supply removed

These criteria are based on Section 3.3.1 of the EPA document EPA-453/B-10-001: *Hospital/Medical/Infectious Waste Incinerators: Summary of Requirements for Revised or New Section 111(d)/129 State Plans Following Amendments for the Emission Guidelines*, dated October 2010.

A facility must request and receive written concurrence of removal from the inventory from the Georgia EPD. The request must be made in writing to the Branch Chief, Air Protection Branch, Environmental Protection Division, Georgia Department of Natural Resources, Suite 120, 4244 International Parkway, Atlanta, Georgia 30354. The facility should allow 45 days from the date of request for a written response from the EPD. The EPD will remove the unit from the inventory only if one of the inoperability criteria has been met and the facility has also submitted a permit application requesting that the unit be removed from the facility's operating permit. The official inventory will be updated and reported as required by Georgia's Air Planning Agreement (see Appendix C).

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Table 3-1. Existing CISWI Units and ACIs - Inventory

Facility	AIRS No.	City (County)	Current Air Permit No.⁹	Title V Permit?	Type of Incineration Unit	Start of Permitted Operation of CISWI Unit
Ellis Wood Contracting Company (Ellis Wood Contracting)	04-13-031-00055	Statesboro (Bulloch)	1611-031-0055-B-01-0	No	ACI	12-29-2005
Polynt Composites USA, Inc. (Polynt Composites)	04-13-063-00041	Forest Park (Clayton)	2821-063-0041-S-06-0	No	ERU	02-04-1977
Destiny Industries LLC (Destiny Industries)	04-13-071-00063	Moultrie (Colquitt)	2451-071-0063-S-02-0	No	ACI	07-12-2004
Sample & Sons C&D Landfill (Sample & Sons C&D)	04-13-073-00030	Grovetown Columbia	4953-073-0030-S-01-0	No	ACI	12-29-2005
Bartow Pallets Inc (Bartow Pallets)	04-13-123-00020	Ellijay (Gilmer)	2448-123-0020-B-01-0	No	ACI	08-13-1999
North American Container Corp. (North American Container)	04-13-129-00061	Adairsville (Gordon)	2448-037-12058 ¹⁰	No	ACI	08-16-1996
Lanier Pallet Recycling, Inc. (Lanier Pallet)	04-13-157-00041	Commerce (Jackson)	2499-157-0041-B-01-0	No	ACI	02-26-2003
Mock Pallet	04-13-217-00057	Covington (Newton)	2448-217-0057-B-01-0	No	ACI	12-15-1999
Solvay Specialty Polymers USA, LLC (Solvay Specialty Polymers)	04-13-245-00126	Augusta (Richmond)	2821-245-0126-V-05-0	Yes	ERU	1990
Tri-Valley Sales, Inc. (Tri-Valley Sales)	04-13-295-00051	Flintstone (Walker)	2448-295-0051-B-02-0	No	ACI	11-29-1999

⁹ Permit type is indicated by the letter issued in a source's permit number.

- a. "V" – Title V Permit (e.g. 2821-245-0126-V-05-0)
- b. "S" – Synthetic Minor Permit (e.g. 2821-063-0041-S-06-0)
- c. "B" – Minor Source Permit (e.g. 1611-031-0055-B-01-0)

¹⁰ North American Container is a Minor Source Permit

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Table 3-2. Existing CISWI Units – Characteristics

Facility	Unit ID	Type	Description of Permitted Solid Waste	Solid Waste in dry tons (year of record)	Auxiliary fuels burned	Air Pollution Control (per air permit)
Polynt Composites USA, Inc. ¹¹	TI-1	Energy recovery unit (Waste Heat Boiler)	Solid waste from reactor-mixing tank systems	No data	Fuel Oil ($\leq 0.5\%$ Sulfur)	Backup carbon absorption system: Fume Control System (FCS)
Solvay Specialty Polymers USA, LLC ¹²	00B8	Energy recovery unit (Waste Heat Boiler LM-731)	Combustible Mixed Isomer Stream (MIS)	No data	Natural Gas	Scrubber LT-740 (0C8A) Caustic Scrubber LT-750 (0C8B) Demister (0C7L)

¹¹ Permit No. 2821-063-0041-S-06-0 References – Conditions 2.4

¹² Permit No. 2800-245-0126-V-05-0 References – Conditions 3.1, 3.2.2

Table 3-3. Existing ACI Units – Characteristics

Facility¹³	Unit ID	Description of Permitted Solid Waste	Solid Waste in dry tons¹⁴	Auxiliary fuels burned	Air Pollution Control (per air permit)
Ellis Wood Contracting Company	None assigned	Wood waste, clean lumber, or a mixture of wood waste, clean lumber, and or yard waste	400 tons/yr (max per year)	Diesel	Routine maintenance
Destiny Industries LLC	None assigned	Wood waste and clean lumber	≤ 9900 tons/year ¹⁵ (max per year)	Diesel fuel, virgin oils (kerosene, petroleum oils, etc), natural gas, liquefied petroleum gas (LPG)	Routine maintenance
Sample & Sons C&D Landfill	ACI1	Wood waste and clean lumber	≤ 8688 tons/year ¹⁶ (max per year)	Diesel fuel, virgin oils (kerosene, petroleum oils, etc), natural gas, liquefied petroleum gas (LPG)	Routine maintenance
Bartow Pallets Inc	None assigned	Natural wood products that are clean, untreated, and unpainted	No data	Diesel	Routine maintenance
North American Container Corp.	None assigned	Natural wood products that are clean, untreated, and unpainted.	No data	Diesel fuel, virgin oils (kerosene, petroleum oils, etc), natural gas, liquefied petroleum gas (LPG)	Routine maintenance
Lanier Pallet Recycling, Inc. ¹⁷	None assigned	Natural wood products that are clean, untreated, and unpainted	No data	Diesel fuel, virgin oils (kerosene, petroleum oils, etc), natural gas, liquefied petroleum gas (LPG)	Routine maintenance
Mock Pallet ¹⁸	None assigned	Natural wood products that are clean, untreated, and unpainted	No data	Gasoline ¹⁹	Routine maintenance
Tri-Valley Sales, Inc. ²⁰	None assigned	Wood waste, clean lumber, or a mixture of wood waste, clean lumber, and or yard waste	No data	Diesel fuel, virgin oils (kerosene, petroleum oils, etc), natural gas, liquefied petroleum gas (LPG)	Routine maintenance

¹³Data was found in current permit listed in Table 3-1 unless otherwise indicated.

¹⁴ Per permit due to no actual records data on file.

¹⁵ 825 tons/month * 12 months = 9900 tons/year; Permit 2451-071-0063-S-02-0 Condition 2.4

¹⁶ 724 tons/month * 12 months = 8688 tons/year; Permit 4953-073-0030-S-01-0 Condition 2.5

¹⁷ Permit 2499-157-0041-B-01-0

¹⁸ Permit 2448-217-0057-B-01-0

¹⁹ Memorandum re: App. 1072, November 22, 1999

²⁰ Permit 2448-295-0051-B-02-0

3.2 Emissions Inventory

40 CFR 60.25(a) requires unit-level emissions inventories, in the units of the standard, for each of the designated pollutants. Georgia Rule (ppp) requires the facility not to exceed the standards in EG Subpart DDDD.

Polynt Composites

Polynt Composites is an alkyd and polyester resin manufacturing facility. A solid waste incinerator/waste heat boiler controls emissions from all reactor-mixing tank systems. The unit has a heat capacity of 3.3 MMBtu/hr. Each reactor also has a backup carbon absorption system that has a control efficiency of 90 percent.

The facility currently has a synthetic minor permit and thus is not in compliance with Subpart DDDD. Originally Polynt declared the unit, TI-1 to be an Energy Recover Unit (ERU) and determined it not to be a CISWI unit. The permit was issued under the previous Subpart DDDD when energy recovery units were exempt²¹. No data is available for this facility except for the opacity requirement which was acquired from the most recent permit. In Polynt's most recent submittal, a Waste Management Plan, TI-1 was declared an incinerator. Polynt stated in a phone call with EPD²² that the unit will be used for energy recovery and therefore, TI-1 will be considered an ERU under CISWI provisions.

As required by Georgia Rule (ppp) and EG Subpart DDDD, Polynt must submit initial performance tests for all regulated pollutants. This must be done prior to approval of Georgia's State Plan by EPA. Once the required tests are submitted, Polynt will be compliant with Georgia's State Plan initial performance test requirement.

As an alternative to performance test data, EPA's AP-42 emission factors will be used. AP-42 does not contain emission estimates for waste heat boilers for the type of fuel burned in the TI-1. The closest information found is either the boiler factors for AP-42 Chapter 1.3: Fuel Oil Combustion or AP-42 Chapter 1.4: Natural Gas Combustion. Fuel oil combustion factors will produce more conservative estimates. Using information submitted by the facility and AP-42, Chapter 1.3 Fuel Oil Combustion emission factors, the emission estimates have been calculated and are presented in Table 3-4. Once Polynt submits performance test results Table 3-4 will be updated.

²¹ 70 FR 55568

²² Phone call on 10/3/19 with EPD (Claudette Ayanaba, Elisabeth Munsey, & Sherry Waldron) and Polynt (Natalie Brandeberry & Stanley Ogradnick).

Solvay Specialty Polymers

Solvay Specialty Polymers is a polymer production facility with five different polymer processes. The facility has a Waste Heat Boiler LM-731 (00B8) that was installed for the destruction of byproducts of one of the process streams, making it subject to Georgia Rule 391-3-1-.02(2)(c) – Incinerators. It was permitted in 1990, then subsequently installed in 1991, and is currently still being used. Therefore, the emission guidelines for those incinerators that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010, but no later than August 7, 2013, apply to 00B8. The Solvay Specialty Polymers permit currently complies with the Federal Plan Subpart III.

Solvay Specialty Polymers arranged for emissions sampling on their waste heat boiler in order to comply with EG Subpart DDDD. Sampling was conducted December 12-13, 2017. See Table 3-4 for a summary of the performance test data. Unit 00B8 was found to be in compliance with the new ERU DDDD emission limits.

For both Polynt and Solvay, opacity limits are set at 20% and the opacity is tested using EPA Test Method 9. Opacity monitoring is not required by EG Subpart DDDD. However there is a fugitive ash limit. Units must not emit more than 5% visible emissions from the hourly observation period using EPA Test Method 22. Going forward the CISWI units will need to comply with the 5% fugitive ash limit set out in EG Subpart DDDD. For reference, the opacity permit limits are included in Table 3-4.

Air Curtain Incinerators

There are eight ACIs located throughout Georgia. Each unit is used for clean lumber and yard waste incineration. These are all currently not in compliance as they do not hold Title V permits.

A summary of the air curtain incinerator test data is presented in Table 3-5. Note that the ACI emissions data is expressed in measurement of opacity per 40 CFR 60.2860. Three of the eight facilities with ACIs lack opacity test data. The ACI performance test for Sample & Sons C&D Landfill on July 10, 2017 recorded 10% opacity during steady-state operation. The permit limit (Permit 4953-073-0030-S-01-0 Condition 2.1) states that opacity cannot be equal to or greater than 10% and as a result a Notice of Violation (NOV) was issued for this exceedance. However, despite this NOV, this test result actually complies with the new EG Subpart DDDD emissions limit for air curtain incinerators. It should be noted that the EG Subpart DDDD limits did not apply when these tests were originally performed. Current opacity permit limits that are less restrictive than those required by EG Subpart DDDD will be revised to be at least as stringent as the EG Subpart DDDD limit of less than or equal to 10%.

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Table 3-4. Existing CISWI Emissions

Pollutant	Meas. Units	DDDD Limit - CISWI – ERU	Polynt Composites (TI-1)	Solvay Specialty Polymers Waste Heat Boiler (00B8)²³
Cadmium	mg/dscm	0.023	0.0013	0.0001
Carbon monoxide	ppmvd	35	0.014	0.53
Dioxins/furans (total mass basis) ²⁴	ng/dscm	2.9	n/a	n/a
Dioxins/furans (toxic equivalency basis) ²³	ng/dscm	0.32	n/a	0.0811
Hydrogen chloride	ppmvd	14	n/a	9.96
Lead	mg/dscm	0.096	0.0040	0.0008
Mercury	mg/dscm	0.0024	0.0013	0.0005
Oxides of nitrogen	ppmvd	76	0.034	28.01
Particulate matter filterable	mg/dscm	110	6.4	10.31
Sulfur dioxide	ppmvd	720	0.085	4.12
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period		n/a	n/a
Opacity	Required by permit. required by DDDD. Section 3.3 above.	Not See	Not equal or greater than 20% ²⁵	Not equal or greater than 20% ²⁶

²³ Compliance Air Emissions Test Report; Test conducted December 12-13, 2017; Prepared for Solvay Specialty Polymers USA, LLC on January 17, 2018

²⁴ Affected sources can comply with either the total mass basis or toxic equivalency basis emission limit for dioxins/furans.

²⁵ Condition 2.1 of Permit No. 2821-063-0041-S-06-0

²⁶ Condition 3.4.8 of Permit No. 2800-245-0126-V-05-0

Table 3-5. Opacity Performance Test Results for Air Curtain Incinerators

Facility	DDDD Limit - ACI ²⁷	Opacity (%)	Current Permit Limit ²⁸	Test Date
Ellis Wood Contracting Company	≤10%	9.2	<10%	April 5, 2010
Destiny Industries LLC	≤10%	3.8	<10%	September 8, 2016
Sample & Sons C&D Landfill	≤10%	10	<10%	July 8, 2019
Bartow Pallets Inc	≤10%	No data	<20%	NA
North American Container Corp.	≤10%	No data	<20%	NA
Lanier Pallet Recycling, Inc.	≤10%	8	≤10%	October 9, 2018
Mock Pallet	≤10%	No data	<20%	NA
Tri-Valley Sales, Inc.	≤10%	3	<10%	July 19, 2013

3.3 Summary

Performance test data is available for Solvay and some of the air curtain incinerators but is not available for Polynt Composites and the remaining air curtain incinerators. Solvay testing was conducted in December 2017 and the unit was shown to be in compliance. The actual opacity for 5 out of 8 of Georgia’s incinerators are presented in Table 3-5. The ACIs with available data are compliant. Once Polynt and the remaining ACIs have been tested, the results will be reported as required by Georgia’s Air Planning Agreement (see Appendix C).

²⁷ Or maintain “opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.” 40 CFR 60.2860(b)

²⁸ Please see permit that is referenced in Table 3-1 for data source.

4.0 Model Rule

As part of the 40 CFR Part 60, Subpart DDDD regulation, the EPA has provided a model rule in 40 CFR sections 60.2560 through 60.2875. The model rule addresses the regulatory requirements applicable to CISWI units. Specifically, it addresses the following components:

- Compliance schedules;
- Emission limits, emissions standards, operator training and qualification requirements, and operating limits; and
- Performance testing, recordkeeping, and reporting requirements.

States are free to adopt the model rule or portions of it, or they may formulate their own regulations as long as they are not less stringent than the model rule. Georgia has adopted the model rule with the exception of the compliance times and authorities that remain with the EPA.

5.0 Operator Training and Qualification

40 CFR Part 60, Subpart DDDD requires existing CISWI units to be operated by trained and qualified operators. Incinerator operators are required to complete both initial and annual refresher training. The initial training must include, at a minimum, the following topics:

- Environmental concerns, including types of emissions;
- Basic combustion principles, including products of combustion;
- Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;
- Combustion controls and monitoring;
- Operation of air pollution control equipment and factors affecting performance (if applicable);
- Inspection and maintenance of the incinerator and air pollution control devices;
- Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions;
- Bottom and fly ash characteristics and handling procedures;
- Applicable federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards;
- Pollution prevention; and
- Waste management practices.

In addition, the operator must take and pass an examination designed and administered per 40 CFR 60.2635(b). The operator must be provided with written material covering the training topics that can be used as reference material.

To maintain operator qualification, annual refresher training is required. The training must include the following topics:

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- Update of regulations;
- Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;
- Inspection and maintenance;
- Prevention and correction of malfunctions or conditions that may lead to malfunction; and
- Discussion of operating problems encountered by attendees.

Affected facilities must provide or arrange for the required training, including the training examination, for operators that they will designate as qualified operators. All training documentation must be retained by the facility and available upon request by Georgia EPD. Other elements of a facility's training and qualification program may require State approval at Georgia EPD's discretion.

6.0 Compliance Dates and Increments of Progress

In two cases 40 CFR Part 60, Subpart DDDD requirements supersede 40 CFR Part 60, Subpart B requirements per 40 CFR 60.2540. State plans must be as protective as the emissions guidelines, and they must require all CISWI units to comply by the dates specified in 40 CFR 60.2580. 40 CFR 60.2580 requires the State Plan to include compliance schedules for CISWI units. The intent is for facilities to demonstrate compliance with the increments of progress as expeditiously as practicable after approval of the State Plan.

Increments of progress is a two-step process. Increment 1 requires the owner/operator to submit a final control plan. For Increment 2 the owner/operator must achieve final compliance by a certain date. The final control plan must include, for each CISWI, a description of the air pollution control devices and/or process changes that will be used to achieve final compliance. It must also include a description of the types of waste to be burned, the maximum design waste burning capacity, and anticipated maximum charge rate. If applicable, the control plan must also include the petition for site-specific operating limits (see 40 CFR 60.2600).

The two-step process would help ensure that sources planning to take more than one year to comply would make some incremental progress toward compliance after the first year. The increments do not require any additional action within one year of approval of a state plan (or promulgation of a federal plan). Final compliance is required no later than 5 years after the effective date of the final CISWI EG (i.e., February 7, 2018) or within 3 years from state plan approval (or promulgation of a federal plan), whichever is earlier (82 FR 3559-3560).

The final compliance date of February 7, 2018 will pass before the State Plan is approved. Therefore, Table 1 in the CISWI EG,²⁹ that contains the Increments of Progress, is not

²⁹ 40 CFR Part 60, Subpart DDDD, Table 1

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included in Georgia Rule (ppp). For reference see the exceptions made in subparagraphs (ppp)2.(i)(I), (II), (VI), (IX), and (XI) of Georgia Rule (ppp).³⁰

Affected units are instructed to follow the 40 CFR Part 62, Subpart III (*Federal Plan Requirements for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or before November 30, 1999*) in place until a state has an approved state plan.

Once the proposed Federal Plan for units for which construction commenced on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010, but no later than August 7, 2013, (82 FR 3554) is finalized, owner/operators must comply with the compliance schedule of 40 CFR Part 62, Subpart III until Georgia's State Plan is approved. For the same reasons as mentioned above, increments of progress are not included in the proposed Federal Plan or the State Plan. Affected facilities are required to be in full compliance with Georgia Rule (ppp) upon EPA approval of Georgia's State Plan.

7.0 Performance Testing, Recordkeeping, and Reporting

Performance testing, monitoring, and calibration requirements are specified in 40 CFR 60.2690-60.2695 (Performance Testing), 60.2700-60.2706 (Initial Compliance Requirements), 60.2710-60.2725 (Continuous Compliance Requirements), and 60.2730-60.2735 (Monitoring). Georgia Rule (ppp)2.(i)(V) – (VIII) incorporates by reference Performance Testing, Monitoring, and Compliance requirements.

Recordkeeping and reporting requirements are specified in 40 CFR 60.2740-2800 (Recordkeeping and Reporting). Georgia Rule (ppp)2.(i)(IX) incorporates by reference recordkeeping and reporting requirements.

As stated in section 3.2 of this State Plan, Polynt will be required to submit initial performance tests for all regulated pollutants. Once the required tests are submitted, Polynt will be compliant with Georgia's State Plan initial performance test requirement.

8.0 Operating Limits and Requirements

Operating limits and requirements for existing CISWI units are specified in subparagraph (ppp)2.(i)(IV) of the Georgia Rule. The adopted operating limits implement the emission guideline requirements of 40 CFR 60.2675. Operators of CISWI units must establish operating limits/requirements that include, but may not be limited to, the following:

- Wet scrubber operation;
- Fabric filter operation;
- Electrostatic precipitator operation;
- Activated carbon sorbent injection;

³⁰ 40 CFR 2580, 2595, 2625, 2705(a), 2755, 2820, 2835 and Table 1.

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- Selective Non-Catalytic Reduction;
- Dry Scrubber; and
- Mass balance.

If a device or method other than those listed above is used to control emissions, the facility must establish appropriate operating limits for such device or method as required by 40 CFR 60.2680 and must petition the EPA Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter.

9.0 State Progress Reports

40 CFR 60.2515(a)(7) and 40 CFR 60.25(e) require the State to submit reports on progress in plan enforcement to the EPA Administrator on an annual basis. The reporting period is the calendar year. The first report must cover the first full calendar year after approval of the State Plan. Each progress report must include:

- Enforcement actions taken against designated facilities;
- Identification of the achievement of any increment of progress;
- Identification of designated facilities that have ceased operation;
- Emissions inventory data for designated facilities that were not in operation at the time of plan development but began operation during the reporting period;
- Submission of additional data as necessary to update the original plan or to update information reported in previous progress reports; and
- Copies of technical reports on all performance testing complete with concurrently recorded process data.

All required items will be reported as previously agreed in Georgia's Air Planning Agreement (see Appendix C).

10.0 Title V Permits

Georgia Rule 391-3-1-.02(ppp) requires each owner or operator of an existing CISWI unit whose operation is not permitted in a Title V permit to submit a Title V application for the subject unit's operation. The application must be submitted to the EPA Administrator no later than the compliance dates described in Section 6.0 of this State Plan. Those facilities that have Title-V permitted CISWI units which need to add air pollution controls to comply with the emission limits will need to submit Title V applications for the controls. These applications must be submitted in time to obtain a final permit modification prior to EPA's approval of Georgia's State Plan. The permits of facilities that have Title V permits but do not need to add controls will be amended to address Georgia's State Plan in accordance with the typical practice of the EPD's Stationary Source Permitting Program. Table 3-1 shows which facilities have Title V permits as of the cover date of this plan.

11.0 Waste Management Plan

40 CFR 60.2625 requires each owner or operator of an existing CISWI unit to develop and submit a Waste Management Plan (WMP). The WMP is a written plan that ensures that methods are used by the facility to reduce or eliminate toxic emissions from the incinerated waste stream. The WMP must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. It also must identify any additional waste management measures. Lastly, it must implement those measures considered practical and feasible, based on effectiveness of waste management measures already in place, costs of additional measures, emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

Affected facilities are required to have a Waste Management Plan submitted upon EPA approval of Georgia's State Plan.

12.0 Air Curtain Incinerators

Air curtain incinerators are also covered by this State Plan. Air curtain incinerator describes an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floors. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.) ACI subject to CISWI are only required to comply with an opacity limit of 10%, maintain a Title V permit, and follow the recordkeeping and reporting requirements. Requirements are contained in subparagraph 2(i)(XI) of Georgia Rule (ppp).

Air curtain incinerators that burn only the materials listed below are only required to meet the requirements under 40 CFR 60.2805 and under "Air Curtain Incinerators" (40 CFR 60.2810 through 60.2870):

- (1) 100 percent wood waste;
- (2) 100 percent clean lumber; and
- (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

According to 40 CFR 60.2865, Air Curtain Incinerators must use Method 9 to comply with the opacity limits.

13.0 Other Plan Requirements

Other plan requirements include:

- Documentation of public notification and participation;

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- Identification of enforceable state mechanisms for implementing the emission guidelines; and
- Demonstration of the State's legal authority to carry out the plan.

These requirements are addressed below.

13.1 Documentation of Public Notification and Participation

Public notice of changes to Georgia Rule (ppp) and the opportunity to comment on it was posted on November 8, 2017. A public hearing on the incorporation of CISWI requirements into the Georgia Rules for Air Quality Control was held at 2:30 p.m. on December 11, 2017, at the Environmental Protection Division Training Center, Atlanta Tradeport, 4244 International Parkway, Suite 116, Atlanta, GA 30354. No comments were received from the public.

On March 18, 2019, EPA finalized CISWI Technical Amendments in the Federal Register. These changes necessitated additional changes to Georgia Rule (ppp). The public notice and the opportunity to comment on these changes was posted as a part of Georgia's Miscellaneous Rule Package on May 23, 2019. A public hearing on the Miscellaneous Rule changes of the Georgia Rules for Air Quality Control was held at 2:00 p.m. on June 25, 2019, at the Environmental Protection Division Training Center, Atlanta Tradeport, 4244 International Parkway, Suite 116, Atlanta, GA 30354. No comments were received from the public.

Public notice of the proposed State Plan and the opportunity to comment on it was posted on November 1, 2019. A public hearing on the State Plan was held at 2:30 p.m. on December 2, 2019, at the Environmental Protection Division Training Center, Atlanta Tradeport, 4244 International Parkway, Suite 116, Atlanta, GA 30354.

13.2 Identification of enforceable state mechanisms for implementing the emission guidelines

40 CFR Part 60, Subpart DDDD, *Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units* was adopted as Georgia Rule 391-3-1-.02(2)(ppp) of the Georgia Rules for Air Quality Control. The rule became effective on March 28, 2018.

13.3 Demonstration of the State's legal authority to carry out the plan

In Appendix D, Georgia EPD demonstrates that it has adequate legal authority to carry out all aspects of Georgia's State Plan to implement and enforce the *Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units* codified at 40 CFR Part 60, Subpart DDDD.

14.0 Plan Revisions by the State

Requirements for plan revisions by the State are addressed in 40 CFR 60.28. A revision of the plan is subject to a public hearing [reference 40 CFR 60.23(c)] and to approval by the EPA [reference 40 CFR 60.28(c)].

15.0 References

Code of Federal Regulations, Title 40: Protection of Environment, Part 60-Standards of Performance for New Stationary Sources: Subpart DDDD—Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units.

State of Georgia, Rules for Air Quality Control, Rule 391-3-1-.02(2)(ppp): Commercial and Industrial Solid Waste Incineration Units Constructed On or Before June 4, 2010.