IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

United States Sugar Corp., et al.,	)	
Petitioners,	)	
v.	)	No. 11-1108 (and consolidated cases)
United States Environmental Protection Agency,	)	
Respondent.	)	

DECLARATION OF PANAGIOTIS E. TSIRIGOTIS

1. I, Panagiotis E. Tsirigotis, under penalty of perjury, affirm and declare that the following statements are true and correct to the best of my knowledge and belief and are based on my own personal knowledge or on information contained in the records of the United States Environmental Protection Agency (EPA) or supplied to me by EPA employees under my supervision.

2. I am the Director of the Sector Policies and Programs Division (SPPD) within the Office of Air Quality Planning and Standards (OAQPS), Office of Air and Radiation (OAR) at EPA; a position I have held since February 6, 2006. SPPD is the division within OAQPS that has responsibility for, among other things, developing regulations under section 112 of the Clean Air Act (CAA), 42 U.S.C. § 7412.

3. In my current capacity as Director of SPPD, I am responsible for overseeing EPA's promulgation of significant regulations related to the control of hazardous air pollutants. In this capacity, I am familiar with the process required for developing and promulgating major EPA regulations under the CAA.

4. EPA's SPPD is responsible for the development of regulations, policy, and guidance associated with emissions standards under section 112 of the CAA, 42 U.S.C. § 7412. Section 112 addresses the control of hazardous air pollutants (HAP) from stationary sources. Section 112(d)(3) requires EPA to establish emissions standards for new and existing sources of hazardous air pollutants which reflect the maximum degree of emissions reduction that the Administrator determines is achievable, taking certain specified factors into account. These standards are referred to as "maximum achievable control technology" (MACT) standards. Section 112(d)(2) requires EPA to establish MACT standards that are no less stringent than the average emission limitation achieved by the best performing twelve percent of sources within the source category or subcategory for existing sources, and no less stringent than the emission control achieved in practice by the best controlled similar source in the category or subcategory for new sources. For existing source categories or subcategories with fewer than thirty sources, the MACT standard must be no less stringent than the average emission limitation achieved by the best performing five

sources. The standards based on these minimum required stringency levels are referred to as "MACT floor" standards.

5. EPA's SPPD was responsible for the development of emissions standards under section 112(d) for major source boilers and process heaters, issued on March 21, 2011.[1] In that rule, EPA established numeric emissions standards for 18 subcategories for the following four pollutants for new and existing sources in the major source boilers and process heaters source category: particulate matter (PM), carbon monoxide (CO), mercury, and hydrogen chloride (HCl). For mercury and HCl, EPA established a single numeric standard for all solid fuel-fired boilers and process heaters, which includes 7 biomass subcategories and 4 coal subcategories, and a single numeric standard for all liquid fuel-fired boilers and process heaters, which includes 3 liquid fuel subcategories. For CO and PM, EPA established separate numeric standards for subcategories of these boilers and process heaters based on the specific design of the combustion unit but set a single numeric standard for all coal-fired units, which applies to the same 4 coal subcategories. EPA also established separate numeric emissions standards for all four pollutants for gas-fired units which do not combust natural gas.

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[1] The March 2011 rule was revised on January 31, 2013, in response to petitions for reconsideration. 78 Fed. Reg. 7138.

6. There are 33 individual numeric standards for existing sources and 33 individual numeric standards for new sources. In addition, EPA established a total selected metals (TSM) standard as an alternative to the particulate matter standard. There are 12 individual numeric alternative TSM emissions standards for new sources and 12 individual numeric alternative TSM standards for existing sources in the major source boilers rule.

7. The purpose of this declaration is to explain EPA's preliminary analysis of the emissions standards affected by this court's vacatur of major source boiler standards in *United States Sugar Corp. v. EPA*, No. 11-1108 (July 29, 2016). EPA has evaluated the database containing the emissions information on which the major source boilers standards were based to determine which standards would be vacated under the court's opinion.

8. This evaluation involved the following steps. First, we reviewed the emission database prepared during the rulemaking to establish the MACT floor standards. The database includes all emissions data considered in calculating the standards for major source boilers and process heaters. We identified all units combusting at least 10 percent of each subcategory fuel type, since those units meet the applicability criterion of the various subcategories. Next, we ranked the identified units based on each unit's lowest emission test average for each pollutant. We then selected the best performing 12 percent (or top 5 units for

subcategories with fewer than 30 sources) for each existing source subcategory and the best performing unit for each new source subcategory. After identifying these units, we conducted the same UPL analysis that was performed in the rulemaking to determine which emission standards would likely be affected.

9. Based on this preliminary analysis, EPA has identified 11 existing source standards and 9 new source standards that would be affected by the court's decision. The tables below identify the standards affected by the court decision as well as those our analysis shows are not affected:

Table of Emission Standards Affected By Court Decision

Subcategory	Pollutant
Existing Solid fuel	HCl
Existing Solid fuel	Hg
Existing Coal Stokers	CO
Existing Wet biomass Stokers	CO
Existing Wet biomass Stokers	PM
Existing Biomass Fluidized bed	CO
Existing Biomass Fluidized bed	PM
Existing Biomass Suspension burners	PM
Existing Liquid fuel	HCl

Existing Liquid fuel	Mercury
Existing Heavy liquid	PM
TOTAL	(11)
New Solid fuel	Hg
New Pulverized coal boilers	CO
New Coal Stokers	CO
New Biomass Fluidized bed	CO
New Biomass Fluidized bed	PM
New Biomass Suspension burners	PM
New Biomass Hybrid suspension grate	CO
New Liquid fuel	HCl
New Heavy liquid	PM
TOTAL	(9)

Table of Emission Standards <u>Not</u> Affected By Court Decision

Subcategory	**Pollutant**
Existing Coal	PM
Existing Pulverized coal boilers	CO
Existing Coal Fluidized bed	CO

Existing Coal Fluidized bed units with heat exchanger	CO
Existing Dry biomass Stokers	CO
Existing Dry biomass Stokers	PM
Existing Biomass Suspension burners	CO
Existing Biomass Dutch Ovens	CO
Existing Biomass Dutch Ovens	PM
Existing Biomass Fuel cell	CO
Existing Biomass Fuel cell	PM
Existing Biomass Hybrid suspension grate	CO
Existing Biomass Hybrid suspension grate	PM
Existing Heavy liquid	CO
Existing Light liquid	CO
Existing Light liquid	PM
Existing Liquid fuel - non-continental units	CO
Existing Liquid fuel - non-continental units	PM
Existing Gas 2 (process gases)	CO
Existing Gas 2 (process gases)	HCl
Existing Gas 2 (process gases)	Mercury

Existing Gas 2 (process gases)	PM
TOTAL	(22)
New Solid fuel	HCl
New Coal	PM
New Coal Fluidized bed	CO
New Coal Fluidized bed units with heat exchanger	CO
New Wet biomass Stokers	CO
New Wet biomass Stokers	PM
New Dry biomass Stokers	CO
New Dry biomass Stokers	PM
New Biomass Suspension burners	CO
New Biomass Dutch Ovens	CO
New Biomass Dutch Ovens	PM
New Biomass Fuel cell	CO
New Biomass Fuel cell	PM
New Biomass Hybrid suspension grate	PM
New Liquid fuel	Mercury
New Heavy liquid	CO
New Light liquid	CO

New Light liquid	PM
New Liquid fuel - non-continental units	CO
New Liquid fuel - non-continental units	PM
New Gas 2 (process gases)	CO
New Gas 2 (process gases)	HCl
New Gas 2 (process gases)	Mercury
New Gas 2 (process gases)	PM
TOTAL	(24)

10. The vacatur of these standards would result in the loss of emissions benefits. We have not yet determined the total amount of benefits lost. However, we have performed a preliminary evaluation regarding the impacts of the vacatur for two specific emissions standards – the standards for mercury and hydrogen chloride (HCl) for the existing source solid fuel subcategory. The solid fuel subcategory includes many boilers combusting coal as well as all boilers combusting biomass (an estimated 1,100 sources nationwide, over half of the existing sources which are subject to numeric emissions standards). Vacatur of these standards would result in an estimated loss of emissions reductions of potentially 37,000 tons of HCl per year, 0.5 to 1.5 tons of mercury per year, and

570,000 tons of sulfur dioxide (a collateral benefit of the standards) per year. Further, we have determined that the level of these standards would change approximately 4 percent for the solid fuel mercury standard and 10 percent for the solid fuel HCl standard. The projected change in these emission standards will not likely impact the controls needed to comply with the revised standards.

11. In addition, we estimate that the vacatur of the PM standards identified in the table above would result in the loss of approximately 120 tons per year of emissions reductions of non-mercury metals and 15,800 tons per year of collateral reductions of particulate matter.

SO DECLARED:

P. Tsirigotis

PANAGIOTIS E. TSIRIGOTIS

Dated: 9/12/16