United States Environmental Protection Agency, Region 5
Air Programs Branch
Air & Radiation Division
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Response to Comments on EPA's Proposed Air Pollution Control Title V Permit to Operate No. V-IL-1716300103-2014-10 for

Veolia ES Technical Solutions, L.L.C.
Sauget, Illinois

January 18, 2017

NOTICE

This document contains EPA's responses to all significant comments that EPA received on the draft Clean Air Act Title V Permit No. V-IL-1716300103-2014-10 (Draft Permit) for Veolia ES Technical Solutions, L.L.C., Sauget, Illinois (Veolia). EPA issued the Draft Permit on October 10, 2014 and the public comment period ran from October 10, 2014 to December 19, 2014. EPA held a public hearing on December 3, 2014 in Room 2002 of Building D of the Southern Illinois University Edwardsville- East St. Louis Higher Education Campus at 601 James R. Thompson Boulevard, East St. Louis, Illinois from 3:00p.m. to 7:00p.m. Along with this response to comments document, EPA is issuing the final Title V permit to Veolia.

Due to the variety of comments received, EPA has grouped the significant comments into subject areas, with each subject area focusing on a different aspect of EPA's proposal. While we have made every effort to group the significant comments into subject areas, some comments inevitably overlap multiple subject areas. For comments that overlapped two or more subject areas, EPA assigned the comment to a single subject category based on an assessment of the principal subject of the comment. For this reason, EPA encourages the public to read all of the subject areas specified in this document.

In some cases, EPA has included verbatim the text of comments extracted from the original letter or public hearing transcript. However, to ensure clarity and conciseness, EPA has paraphrased or shortened many of the comments. For each comment, we have provided the name and affiliation of the commenter, the docket document identification number assigned to the comment letter, and the page number(s) from which we extracted the comment. In some cases, the same comment was submitted by two or more commenters. Rather than repeat these comments for each commenter, EPA has listed the comment only once and identified the commenters who submitted the same or a very similar comment. For details on each comment, we refer the reader to the referenced documents under each comment, which are found at www.regulations.gov, docket ID. EPA-R05-OAR-2014-0280.

EPA's responses to comments are generally provided immediately following each comment. However, in instances where several commenters raised similar or related issues, EPA provided a single response. In addition, there are cross-references in some responses to prior responses that address related subject matter.

EPA notes that most commenters included lengthy introductory statements and timelines in their comment documents. These commenters also included sections in their comment documents that they specifically identified as comments on the draft permit. EPA may address some of the introductory statements in the context of responses to specific comments, but is not specifically

addressing the parts of the comment documents that were not identified as comments on the draft permit. EPA's decision to treat these portions of the comment documents in this manner does not in any way suggest that EPA agrees with or endorses the introductory statements or timelines made by these commenters.

Note that EPA's reference, in this or any other document, to any specific commercial product, process, or service by trade name, trademark, or manufacturer does not constitute or imply its endorsement, recommendation, or favoring by EPA.

Copies of this document, the final permit, the Statement of Basis for the draft permit, and other documents associated with this permit action are available by visiting www.regulations.gov, docket ID. EPA-R05-0AR-2014-0280.

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LIST OF ACRONYMS AND ABBREVIATIONS

40 C.F.R.	Title 40 of the Code of Federal Regulations
42 U.S.C.	Title 42 of the Unites States Code
ABC	American Bottom Conservancy
Act	Clean Air Act
AMP	Alternative Monitoring Petition or Plan
AWFCO	Automatic Waste Feed Cutoff
BIF	Boiler and Industrial Furnace
BTU	British Thermal Unit
CAA	Clean Air Act
CEMS	Continuous Emission Monitoring System
CISWI	Commercial/Industrial Solid Waste Incinerator
Cooper	Cooper Environmental Services, LLC, 10180 SW Nimbus Avenue, Suite J6, Portland, Oregon 97223
CPMS	Continuous Parameter Monitoring System
CPT	Comprehensive Performance Test
CPU	Central Processing Unit
CRWI	Coalition for Responsible Waste Incineration
DAHS	Data Acquisition and Handling System
DOC	Documentation of Compliance
DRE	Destruction and Removal Efficiency
EGU	Electric Generating Unit
EJ	Environmental Justice
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-To-Know Act
EPRI	Electric Power Research Institute
EQL	Estimated Quantitation Level
ESP	Electrostatic Precipitators
ETC	Environmental Technology Council

FAP	Feedstream Analysis Plan
Fed. Reg.	Federal Register
FOIA	Freedom of Information Act
FOV	Finding of Violation
HAP	Hazardous Air Pollutant
HCl	Hydrogen Chloride
HWC NESHAP or HWC MACT	National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors 40 C.F.R Part 63, Subpart EEE
ICPMS	Inductively Coupled Plasma Mass Spectrometer
Illinois EPA	Illinois Environmental Protection Agency
LVM	Low Volatile Metals (Arsenic, Beryllium and Chromium)
MATS	Mercury and Air Toxics Rule
MDL	Method Detection Limit
MSDS	Materials Safety Data Sheet
NEIC	National Enforcement Investigations Center
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOC	Notification of Compliance
NOID	Notice of Intent to Deny
NOV	Notice of Violation
NSPS	New Source Performance Standard
OPL	Operating Parameter Limit
ORD	Office of Research and Development
OTM	Other Test Method
Part 71 permit	A permit issued pursuant to Title V of the Clean Air Act and its implementing regulations at 40 C.F.R. Part 71
PCBs	Polychlorinated Biphenyls
PM	Particulate Matter
POHC	Principal Organic Hazardous Constituent
QA	Quality Assurance
QC	Quality Control

QAG	Quantitative Aerosol Generator
RATA	Relative Accuracy Test Audit
RCRA	Resource Conservation and Recovery Act
R&D	Research and Development
RFP	Request for Proposals
RTC	Response to Comment
SBIR	Small Business Innovation Research
SIP	State Implementation Plan
SB	Statement of Basis
SVM	Semivolatile Metals (Lead and Cadmium)
TEAD	Tooele Army Depot
Title V permit	A permit issued pursuant to Title V of the Clean Air Act and its implementing regulations at 40 C.F.R. Part 71
TRI	Toxics Release Inventory
UCADF	U.S. Army Umatilla Chemical Agent Disposal Facility
Veolia	Veolia ES Technical Solutions, L.L.C., Sauget, Illinois
WAP	Waste Analysis Plan
Xact	Xact™ Multi-metals Monitoring Device
XRF	X-Ray Fluorescence

A. GENERAL COMMENTS

1. **Comment:** ***By using the phrase "assure compliance" in section 504(a), Congress provided EPA with authority to 1) impose permit conditions that ensure that an emissions source complies with the Act, and 2) impose monitoring requirements that ensure that an emissions source abides by the permit conditions established by the Agency. Congress, however, limited EPA to requiring only those permit conditions that are essential, or "necessary" to ensuring that a source maintains compliance with the Act. The periodic monitoring requirements of the national emission standards for hazardous waste combustors, 40 C.F.R. Part 63, Subpart EEE (HWC NESHAP) are not inadequate or insufficient such that EPA may impose requirements for a supplemental feedstream analysis plan (FAP) and the temporary use of multi-metals CEMS.***

   See Comments of Veolia ES Technical Solutions, L.L.C., December 19, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0111 (Veolia) at 24-26.

   EPA Response: EPA disagrees with these comments, at least to the extent that they assert that EPA does not have the authority under the HWC NESHAP or Title V of the Act to impose the enhanced FAP and multi-metals monitoring device[1] requirements. EPA has broad discretionary authority under the HWC NESHAP, and a statutory obligation

[1] In the draft permit and Statement of Basis (SB), EPA described the additional monitoring provisions as requiring the temporary use of three multi-metals "continuous emissions monitoring systems (CEMS)" that would be operated as "continuous parametric monitoring systems (CPMS)." SB, p. 54; Draft Title V Renewal Permit Condition 2.1(D)(1)(i). Several commenters, including Veolia, took issue with EPA's description of the monitoring devices in the draft permit. *See* Veolia, p. 33-34 (arguing that the monitoring device cannot be called a CPMS); Coalition for Responsible Waste Incineration (CRWI), p. 2-3 (arguing that the monitoring device is not a CPMS, but is instead, a CEMS). Based on the issues raised in the public comments, EPA acknowledges that confusion may have been caused by referring to the monitoring devices as "multi-metals CEMS" or "CPMS." The mercury, lead, cadmium, arsenic, and chromium emissions that will be measured from the three incinerator units will not be used as a direct measure of compliance with the emission limits for these pollutants in the HWC NESHAP. *See* Final Title V Renewal Permit, Condition 2.1(D)(1)(i). Rather, these metal HAPs concentrations will be measured for a period of at least 12 months to verify that the procedures established in the supplemental FAP are sufficiently robust to ensure (a) that the feedrate operating parameter limits (OPLs) are being met; and (b) that those OPLs are sufficient to ensure continuous compliance with the mercury, SVM, and LVM emission limits in the HWC NESHAP. A "continuous monitoring system," which includes "CEMS" and "CPMS," is defined in EPA's regulations as "monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation." 40 C.F.R. § 63.2. Because these monitors will be used temporarily to ensure that there is a strong correlation between the established metal feedrate OPLs and associated emissions, and not as a direct measure of compliance with emission limits, these devices are not being used as a continuous monitoring system, and are therefore not a CEMS or CPMS. Therefore, EPA has changed this condition in the final permit, and its references to the same in this document, to require a multi-metals monitoring device on each of the three incinerator units for the temporary period of at least 12 months.

under section 504 of the Act, to impose monitoring requirements that assure continuous compliance with all applicable requirements and permit terms and conditions. The enhanced FAP (as compared to the prior FAP in the 2008 Part 71 permit)[2] and the temporary use of multi-metals monitoring devices are necessary to ensure that the operating parameter limits (OPLs) contained in the permit sufficiently control the emissions of metal hazardous air pollutants (HAPs), as described in detail in response to comment (RTC) 2, below.

Section 504 of the Act obligates permitting authorities to incorporate into each Title V permit conditions that are necessary to assure compliance with applicable requirements and permit terms and conditions. Specifically, section 504(a) of the Act provides that each Title V permit must include, among other things, "such other conditions as are necessary to assure compliance with applicable requirements of [the Act]." 42 U.S.C. § 7661c(a). Section 504(c) of the Act provides that each Title V permit "shall set forth … monitoring ... requirements to assure compliance with the permit terms and conditions." *Id.* § 7661c(c). Thus, a Title V permitting authority has an obligation to ensure that the monitoring included in a Title V permit is sufficient to assure compliance with both the underlying applicable requirements of the Act, such as the emissions limits and monitoring requirements in the HWC NESHAP, and with the terms and conditions of the permit itself, such as the OPLs.

EPA has discussed the Act's many section 504 directives, which have also been the subject of federal court decisions, in responses to Title V petitions. *See, e.g., In the Matter of CITGO Refining and Chemicals Company, L.P.,* Petition Number VI-2007-01 (May 28, 2009) (*CITGO*), at 6-7 (http://www.epa.gov/title-v-operating-permits/title-v-petition-database). EPA's Part 71 monitoring rules, found at 40 C.F.R. § 71.6, are designed to satisfy the statutory requirement that "[e]ach permit issued under [Title V] shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." Clean Air Act (CAA) § 504(c), 42 U.S.C. § 7661c(c); *see also Sierra Club v. EPA*, 536 F.3d 673, 680-681 (D.C. Cir. 2008) (stating that the "most reasonable reading" of 40 C.F.R. § 70.6(c)(1), which is identical to 40 C.F.R. § 71.6(c)(1), is that it serves to ensure that "all Title V permits include monitoring 'sufficient to assure compliance with the terms and conditions of the permit.'").

As the Title V permitting authority for Veolia's Sauget facility, EPA must use a three-step analysis to ensure that this permit's monitoring requirements meet its regulations and satisfy the mandates of CAA § 504. First, under 40 C.F.R. § 71.6(a)(3)(i)(A), EPA must

[2] The enhanced feedstream analysis requirements in the final permit are those contained in the draft renewal permit, with several minor revisions based on discussions with Veolia.

ensure that monitoring requirements contained in applicable requirements are properly incorporated into the Title V permit. Second, if the applicable requirement contains no periodic monitoring, EPA must add "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." 40 C.F.R. § 71.6(a)(3)(i)(B). Third, if there is some periodic monitoring in the applicable requirement, but that monitoring is not sufficient to assure compliance with the permit terms and conditions, EPA must supplement monitoring to assure such compliance. 40 C.F.R. § 71.6(c)(1).

The adequacy of monitoring in any particular circumstance is a context-specific determination. The analysis begins by assessing whether the monitoring required in the applicable requirement is sufficient to assure compliance with permit terms and conditions. In many cases, monitoring required in the applicable requirement will be sufficient to assure compliance with permit terms and conditions. EPA has routinely directed permitting authorities to consider the following factors when assessing the adequacy of monitoring: (a) the variability of emissions from the unit in question; (b) the likelihood of a violation of the requirements; (c) whether add-on controls are being used for the unit to meet the emission limit; (d) the type of monitoring, process, maintenance, or control equipment data already available for the emission unit; and (e) the type and frequency of the monitoring requirements for similar emission units at other facilities. *CITGO* at 7-8. These factors are intended to be a starting point, and other site-specific factors may be considered. EPA's analysis of the adequacy of existing monitoring at the Veolia facility, in light of site-specific and other factors, is provided in RTC 2, below.

In determining the appropriate monitoring to include in Veolia's Title V permit, EPA begins with Step 1 of the analysis. Accordingly, EPA must first ensure that the monitoring requirements contained in the HWC NESHAP are incorporated into the permit. The HWC NESHAP includes limits on emissions of mercury, semi-volatile metals or SVM (cadmium and lead), and low-volatile metals or LVM (arsenic, beryllium, and chromium). 40 C.F.R. § 63.1219(a). Under the HWC NESHAP, monitoring for mercury, SVM, and LVM, includes establishing and complying with OPLs on certain key parameters, including: maximum metal feedrates, combustor operating parameters, and control device operating parameters. *Id.* § 63.1209(*l*) and (n). This permit contains such OPLs. Compliance with maximum feedrate OPLs is determined through the implementation of a FAP that describes the analysis a source will perform to determine metal concentrations in the incoming waste, including whether and how the source will perform testing and sampling. *Id.* § 63.1209(c). By default, a source establishes OPLs during a comprehensive performance test (CPT) conducted every five years. *Id.* § 63.1207(b) and (d)(1). Therefore, generally under the HWC NESHAP, compliance with the emission limits for mercury, SVM, and LVM is determined through compliance with

the applicable OPLs, performance of CPTs every five years to re-establish the OPLs, and implementation of a FAP, as opposed to direct measurement of emissions, unless a source petitions EPA to approve the use of a continuous emissions monitor to measure emissions of mercury, SVM, and LVM. *Id.* § 63.1209(g)(1) and (a)(5). EPA has incorporated these standard monitoring requirements in the HWC NESHAP into Veolia's Title V permit as required under Step 1 of the analysis.

In addition to the monitoring requirements outlined above, the HWC NESHAP also provides that "[t]he Administrator may determine, on a case-by-case basis at any time . . . that alternative approaches to establish limits on operating parameters may be necessary to document compliance with the emission standards of this subpart." 40 C.F.R. § 63.1209(g)(2). Thus, as described further in RTC 3 and RTC 5, below, the applicable rule itself authorizes EPA, on a case-by-case basis at any time, to create alternative approaches to establish the OPLs. Consistent with this discretionary authority, EPA has determined that an alternative approach to establishing OPLs, using *both* an enhanced FAP (compared to the prior FAP in the 2008 Part 71 permit) *and* at least 12 months of data from multi-metals monitoring devices to correlate metal feedrates and emissions, is necessary to document compliance with the emission standards of the HWC NESHAP. EPA's explanation of why this alternative approach is necessary to assure compliance is discussed further in RTC 2. Having made this determination, the additional monitoring included in this alternative approach to establish limits on OPLs has been incorporated in Veolia's permit as part of Step 1 of EPA's analysis pursuant to 40 C.F.R. § 71.6(a)(3)(i)(A), and thereby satisfying the Act's section 504(c) mandate that Veolia's Title V permit contains monitoring sufficient to "assure compliance with the permit terms and conditions."

However, if it is determined that EPA's authority under 40 C.F.R. § 63.1209(g)(2) is insufficient to require the temporary use of multi-metals monitoring devices or the enhanced FAP under this alternative approach to establishing OPLs, EPA finds, under Step 3 of the analysis, that it is obligated to include these monitoring requirements in this Title V permit under section 504(c) of the Act and 40 C.F.R. § 71.6(c)(1). As the Title V permitting authority, EPA has an obligation to ensure that the permit's testing and monitoring requirements are sufficient to ensure continuous compliance with the permit's terms and conditions. CAA § 504(c), 42 U.S.C. § 7661c(c); 40 C.F.R. § 71.6(c)(1); *see also In the Matter of Wheelabrator Baltimore, L.P.*, Petition Number 24-510-01886 (April 24, 2010), at 13 (https://www.epa.gov/sites/production/files/2015-08/documents/wheelabrator_decision2009.pdf) (finding that the Title V permitting authority inadequately evaluated whether monitoring requirements were sufficient to assure compliance with short-term emission limits for, among other pollutants, mercury,

cadmium, and lead). Without the data from the temporary use of multi-metals monitoring devices and the enhanced FAP, EPA cannot fulfill its statutory obligation to ensure that this Title V permit includes monitoring that will assure continuous compliance with the metal feedrate OPLs and that these metal feedrate OPLs are sufficiently stringent to assure compliance with the emission limits for mercury and other metal HAPs. Therefore, in order to fulfill the mandate of section 504(c) of the Act, EPA would have an obligation to use the "gap-filling" authority in 40 C.F.R. § 71.6(c)(1) to require the enhanced FAP and the temporary use of multi-metals monitoring devices. Accordingly, 40 C.F.R. § 71.6(c)(1) provides an alternative legal basis for imposing these monitoring procedures in order to fulfill the EPA's obligation under section 504(c) of the Act.

Based on the context and the facility-specific information discussed at length in RTC 2, below, EPA finds that the performance stack tests conducted every five years are inadequate at this time to ensure that the feedrate OPLs and feedstream analysis procedures are sufficient to ensure that Veolia Sauget facility is continuously complying with the short-term emission limits for metal HAPs in the HWC NESHAP. The additional monitoring procedures comprising the alternative approach to set limits on OPLs are necessary to assure compliance with the HWC NESHAP and fulfill EPA's statutory obligation under section 504(c) of the Act. EPA has discretionary authority under 40 C.F.R. § 63.1209(g)(2) to include these requirements. However, to the extent that the EPA's authority under the HWC NESHAP is insufficient to impose these requirements, the standard monitoring requirements in the HWC NESHAP would be insufficient to assure compliance with the permit terms and conditions, and EPA has an obligation under section 504(c) of the Act and 40 C.F.R. § 76.1(c) to include this supplemental monitoring in Veolia's Title V permit.

2. **Comment:** ***EPA has arbitrarily and capriciously exceeded its authority to "assure compliance" under the Act by imposing unnecessary permit conditions requiring Veolia to implement supplemental feedstream analysis and install multi-metals continuous emissions monitoring systems (CEMS). These permit conditions are not necessary to assure Veolia's compliance with either Title V or the HWC NESHAP.***

See Veolia at 24-25, 29, 32.

EPA Response: EPA disagrees with this comment for two principal reasons. First, EPA's legal authority for imposing additional monitoring requirements is firmly grounded in both the HWC NESHAP and the Act. *See* RTC 1. Second, for the site-specific reasons explained in more detail below and in the SB, and based on the information available in the Administrative Record, EPA finds that the permit conditions requiring the enhanced FAP and temporary use of multi-metals monitoring devices are

necessary to fulfill EPA's obligations as the permitting authority. *See also* RTC 3, 5 and 6.

EPA's authority under 40 C.F.R. § 63.1209(g)(2) is derived from authority under section 114(a)(3) of the Act to ensure continuous compliance. *See* 42 U.S.C. § 7414(a)(3); 58 Fed. Reg. 54651-2 (Oct 22, 1993) ("Therefore, *EPA will exercise its section 114(a)(3) authority* to require enhanced monitoring for sources subject to new section 112 requirements" (emphasis added)).[3] Likewise, Congress required all Title V permits to include monitoring requirements that assure continuous compliance with the permit's terms and conditions. CAA § 504(c), 42 U.S.C. § 7661c(c); *see also Sierra Club*, 536 F.3d at 679 (holding that section 504(c) of the Act unambiguously requires permitting authorities to supplement inadequate monitoring requirements). Under both 40 C.F.R. § 63.1209(g)(2) and section 504(c) of the Act, the determination as to whether monitoring is sufficient in particular circumstances is a context-specific determination that is made on a case-by-case basis after evaluating site-specific factors. Given the parallel purposes of the statutory requirement in section 504(c) of the Act and EPA's discretionary authority under 40 C.F.R. § 63.1209(g)(2), and the case-by-case evaluation of site-specific factors under both authorities, it is appropriate to use EPA's previously developed framework to determine whether the standard monitoring in the HWC NESHAP is sufficient, *see CITGO* at 7-8, and to assess the need for an enhanced FAP and the temporary use of multi-metals monitoring devices at the facility.

To determine whether additional monitoring was needed to assure compliance with the permit terms and conditions, EPA considers the following five factors: (1) the variability of emissions from the unit in question; (2) the likelihood of a violation of the requirements; (3) whether add-on controls are being used for the unit to meet the emission limit; (4) the type of monitoring, process, maintenance, or control equipment data already available for the emission unit; and (5) the type and frequency of the monitoring requirements for similar emission units at other facilities. As further discussed below and in the SB, EPA also considers other site-specific information when evaluating whether these additional monitoring requirements are necessary. Based on this site-specific analysis, EPA finds that the enhanced FAP is necessary to better characterize the inlet concentrations of various metals into Veolia's incinerators. In addition, EPA finds that the temporary use of a multi-metals monitoring device on each of the three incinerator units is necessary to establish a better correlation between the inlet and outlet concentrations of metals. These monitoring requirements will allow EPA to determine whether the existing OPLs will document compliance with the emission limits in the HWC NESHAP. EPA's analysis is set forth in more detail below. EPA also summarizes this analysis in Table 1, below.

(1) Variability of emissions from the emission units:

[3] *See id.* at 54652 ("These actions include the general provisions of 40 CFR part 63 and the individual subparts of that new part, *as well as case-by-case permit decisions in certain circumstances*.") (emphasis added). The EPA's authority under 40 C.F.R. § 63.1209(g)(2) is discussed in more detail in RTC 3, below.

Variability of emissions is a critical factor in determining whether additional monitoring is needed to assure compliance. As indicated above, the HWC NESHAP relies primarily on feedrate and other OPLs as the means to determine compliance with the emission limits. Available information shows that Veolia's feedstreams vary at any given time of the day and its previous feedstream analysis procedures were flawed, resulting in wastes not being analyzed and inlet metals concentrations being underestimated. The results from emissions tests show that, even when inlet metals concentrations are known, emissions from the units vary considerably.[4] As described in more detail below, EPA finds that this factor weighs heavily in favor of requiring the additional monitoring.

There are several key facts that EPA relies upon to determine that Veolia's emissions vary, including:

- Veolia's feedstreams (and, likely, associated emissions) vary "minute by minute" due to its incineration of "widely diverse waste streams from unrelated sources." Veolia at 61, 102.

- Of the waste types (also known as "profiles") that Veolia received between 2009 and 2013, nearly 70% of those waste types were distinct wastes[5] and only 30% of the waste that Veolia accepted for incineration during the reporting period was the same as waste it previously had accepted during the reporting period.[6] EPA believes that the extent of the variability of Veolia's waste streams necessarily results in highly variable emissions. *See* EPA's summary of waste receipts collected by EPA's National Enforcement Investigation Center (NEIC) during its 2011 and 2013 inspections of Veolia and Heritage-WTI, respectively (Documents IDs. EPA-R05-OAR-2014-0280-0162 and EPA-R05-OAR-2014-0280-0175).

- An investigation of Veolia's Sauget facility in 2011 by NEIC revealed serious flaws in Veolia's analyses and determinations of metals concentrations in the

[4] This is particularly true for Units 2 and 3, which are identical in terms of heat input, design, and emissions control equipment. Veolia previously has stated that Unit 3 is a mirror image of Unit 2. *See* Veolia's 2013 CPT Plan for Unit 2, Section 2.1. (June 27, 2013), at 2-1 (Document ID. EPA-R05-OAR-2014-0280-0064); *see also* Veolia's 2008 CPT Plan for Unit 2, Section 2.1. (May 2008), Page 1 of 12 (Document ID. EPA-R05-OAR-2014-0280-0124); *see also* Veolia's April 11, 2008 response to EPA memorandum on Veolia's data-in-lieu request at 12 (Document ID. EPA-R05-OAR-2014-0280-0224) ("In addition, even though the waste that these units are incinerating vary considerably, the units themselves perform identically when incinerating them.") Due to their similarity, Veolia had previously requested that future CPTs be conducted on either Unit 2 or Unit 3 but not on both units, and that EPA use the test data on one unit to infer emissions from the untested unit. *See* Veolia's April 11, 2008 response to EPA memorandum on Veolia's data-in-lieu request at 10-12 (Document ID. EPA-R05-OAR-2014-0280-0224). Thus, Veolia's positions would cause one to expect similar feedrates to result in similar emissions from Units 2 and 3, not the widely varying emissions that have been recorded during emissions tests.

[5] This calculation compares the number of different (distinct) waste profiles received during the referenced period to the total number of deliveries of all waste profiles during that period.

[6] In comparison, only 10% of the waste types that Heritage-WTI, a hazardous waste combustor located in East Liverpool, Ohio, received in 2012-2013 (12 months of data) were distinct wastes. Thus, the wastes received by Veolia are significantly more variable than that received by Heritage.

wastes fed into the incinerators, resulting in underestimated feedrates for certain hazardous wastes. *See* Document ID. EPA-R05-OAR-2014-0280-0122.

- Results from several emissions tests, performed at the direction of and under conditions dictated by Veolia, showed that two nominally identical incineration units (Unit 2 and 3), burning waste with the same amount of metals (as calculated using feedstream analyses), produced significantly different metal emissions. During one emission test, the SVM emissions from Unit 2 exceeded the current limit, and during another test, the LVM emissions from Unit 3 exceeded the current limit. In addition, the measured mercury emissions from Units 2 and 3 varied from 37% to 77% of the emission limit during the most recent CPT. Similarly, some of these emissions tests show that emissions from Unit 4 may not be proportional to the reported feedrates. A summary of Veolia's historical metal emissions is provided in the record, but EPA also summarizes these results below.

See Document IDs. EPA-R05-OAR-2014-0280-0162; EPA-R05-OAR-2014-0280-0175; EPA-R05-OAR-2014-0280-0176 and EPA-R05-OAR-2014-0280-0201 through -0206 (Waste Receipts); EPA-R05-OAR-2014-0280-0005 (2013 CPT Report); EPA-R05-OAR-2014-0280-0006 (NOC); EPA-R05-OAR-2014-0280-0247 through -0256 (2002-2008 Test Reports), and EPA-R05-OAR-2014-0280- 0258. Additional waste receipt information is available from Document IDs. EPA-R05-OAR-2014-0280-0151 through 0161 and EPA-R05-OAR-2014-0280-0166.

A deeper analysis of the results from Veolia's emissions tests is warranted because, as emission testing shows, even when Veolia purports to know the concentrations of mercury, SVM, and LVM being fed into its incinerators, emissions from those incinerators vary. Veolia conducted the most recent CPT in October 2013. In its April 2013 application for renewal of its Title V permit and its January 2014 Notification of Compliance (NOC), Veolia proposed, respectively, a FAP and OPLs which, it contends, will demonstrate continuous compliance with the applicable metals emissions limits. However, as discussed more fully in sections 5.2 and 5.3 of the SB, EPA has carefully reviewed Veolia's proposed FAP and other information, including a report from NEIC,[7] and has determined that the FAP proposed by Veolia does not require the level of analysis needed given the varying wastes incinerated by Veolia, and thus, it is insufficient to ensure that Veolia will comply with the feedrate OPLs in its permit. Further, EPA does not have sufficient data to support a determination that Veolia's feedrate OPLs, based only on the mix of wastes and combustion conditions occurring during one CPT

[7] NEIC Multimedia Compliance Investigation Observations Report, Veolia ES Technical Services, NEIC Project No. VP0972, August 2012 (NEIC Report) at 8-9. Available at: www.regulations.gov; document ID. EPA-R05-OAR-2012-0649-0035. NEIC conducted this investigation at the request of EPA Region 5 to determine Veolia's compliance with CAA and Resource Conservation and Recovery Act (RCRA) waste analysis requirements.

conducted by Veolia,[8] are sufficient to assure Veolia's compliance under the variety of mixes of wastes and combustion conditions routinely experienced at the facility.[9]

In addition, EPA finds that historical emissions data from Veolia showing significant variability of emissions at given metal feed concentrations demonstrates the need for the temporary use of multi-metals monitoring devices to ensure that the enhanced FAP and OPLs are sufficient to ensure continuous compliance with the emissions limits in the HWC NESHAP. Veolia's previous stack tests revealed that Units 2 and 3, when fed waste with nearly identical reported metal concentrations, had significantly different metal stack emissions. The differing emissions from the two nominally identical incinerators burning wastes with nearly identical reported metal feedrate concentrations alerted EPA to possible problems with Veolia's ability to demonstrate compliance with the HWC NESHAP emissions limits through the prior FAP and OPLs. In the SB, and as discussed elsewhere in this response to comments document, we explain that a number of factors might be responsible for the test results on Units 2 and 3, including:

(a) possible interference by other chemical species present in the feedstreams;
(b) feedstream sampling and analysis errors;
(c) stack testing errors;
(d) differences in the mix of wastes as fired; and
(e) differences in incinerator operating parameters (residence time, temperature, pressure, etc).

While both incinerators were in compliance with the emission limits during the 2013 CPT, the wide variability of emissions and comparative lack of buffer between the reported results and the emission limits support EPA's determination that, without further monitoring for verification, the current OPLs may be insufficient to document compliance with the emission limits for Units 2 and 3. As noted below, the emissions test results showed that stack concentrations of mercury and other heavy metals were significantly different between Units 2 and 3, despite nearly identical feedrates, emission unit design, and control equipment.

During the October 2013 CPT, the average mercury feedrate to Unit 2 was 0.00212 lb/hr (*see* 2013 CPT Report, Table 2-3, Document ID. EPA-R05-OAR-2014-0280-0005) and the average mercury feedrate to Unit 3 was 0.00221 lb/hr (*see* 2013 CPT Report, Table 2-7). In contrast, the average mercury stack concentrations (emissions) measured at the stacks of Units 2 and 3 were approximately 100 and 48 µg/dscm corrected to 7% O_2, respectively (*see* Tables 1-3 and 1-4 of the 2013 CPT Report, respectively). Thus, despite

[8] The HWC NESHAP requires Veolia to use EPA Reference Method 29 of appendix A to 40 C.F.R. Part 60 when conducting comprehensive performance tests for emissions of mercury, cadmium, lead, arsenic, beryllium and chromium. 40 C.F.R. § 63.1208(b)(2) through (4). Each performance test consists of three or more test runs. 40 C.F.R. § 63.1201(a). A "run" refers to the net period of time during which an air emission sample is collected under a given set of operating conditions. *Id.* A run may be either intermittent or continuous. Test results are generally reported as the average of three valid test runs.

[9] Veolia processes "widely diverse waste streams from unrelated sources," and the composition of the waste it burns can vary "minute by minute." *See* Veolia at 61, 102.

the mercury feedrates to Units 2 and 3 differing by less than 5%, the corresponding stack concentrations differed by more than a 2:1 margin. At 100 µg/dscm, the concentration from Unit 2's stack was approximately 77% of the emission limit, while Unit 3's stack concentration was only 37% of the emission limit.

With respect to emissions of SVM and LVM, past CPTs have resulted in emissions exceeding the current HWC NESHAP emission limits. *See* Document ID. EPA-R05-OAR-2014-0280-0258. During the May 2006 CPT for Unit 3, LVM emissions exceeded the current emission limit due to high arsenic emissions (230 µg/dscm of arsenic emissions, as compared with the current limit of 92 µg/dscm for all LVM). *See* Document IDs. EPA-R05-OAR-2014-0280-0251 and -0252. Although Veolia claimed that the May 2006 arsenic result for Unit 3 may have been due to "contamination from rust/scale from the sampling ports," Illinois Environmental Protection Agency (IEPA) and EPA concluded after a detailed investigation that "contamination" could not have caused the exceedance.[10] Similarly, during the August 2008 CPT for Unit 2, SVM emissions exceeded the current HWC NESHAP emission limit due to high lead emissions (237 µg/dscm of lead emissions, as compared with the current limit of 230 µg/dscm for all SVM). *See* Document IDs. EPA-R05-OAR-2014-0280-0253 through -0256. Veolia claimed that the results for Unit 2 "were not representative of normal performance for Unit 2" because it was using an incorrectly installed spare baghouse on Unit 2 while the primary baghouse underwent maintenance. It is unclear how long Veolia had operated Unit 2 without a properly functioning baghouse. Veolia retested Unit 3 after the May 2006 CPT and Unit 2 after the August 2008 CPT and tested these units again in 2013, and all of these tests resulted in emissions below the current HWC NESHAP emission limits for SVM and LVM.

Notwithstanding the results of subsequent CPTs on Units 2 and 3, EPA does not believe that a reliable feedrate-emissions relationship can be readily ascertained from the available historical emissions and feedrate data for SVM and LVM from these units. Likewise, EPA does not believe that a reliable feedrate-emissions relationship can be readily ascertained from the available historical emissions and feedrate data for mercury, SVM and LVM from Units 2, 3, or 4.

While historical emissions data from Unit 4 appear to suggest that emissions of SVM and mercury vary proportionally with the measured feedrates, the dataset is too limited to draw any definitive conclusions. With respect to LVM, however, the historical emissions data suggests that there is a nonlinear relationship between feedrates and emissions from Unit 4, which makes it difficult to estimate Veolia's emissions based on the measured feedrates. Further, as demonstrated by NEIC's investigation, the FAP in the 2008 Part 71 permit is not sufficient to accurately quantify all of the mercury, LVM and SVM

[10] EPA issued a Finding of Violation/Notice of Violation (FOV/NOV) to Veolia on September 27, 2006, citing, in part, the May 2006 arsenic results. On February 26, 2007, IEPA also referred Veolia to the Illinois Attorney General for alleged violations of the Illinois Environmental Protection Act and the HWC NESHAP due, in part, to the May 2006 arsenic results. There is no indication that a final action has been taken in response to IEPA's referral, and it is unclear whether the cause of the alleged "contamination" has been fully addressed to prevent something similar from occurring in the future.

concentrations in the waste that is fed to Units 2, 3, or 4. If the feed concentration is not accurately quantified, the metal emissions rate cannot be accurately estimated, and compliance with the emission limits at any of the incinerator units cannot be assured.

As illustrated by theoretical studies on other incinerators, a number of factors might explain the nonlinearity between Veolia's emissions and feedrates. Specifically, several studies on other incinerators have found higher concentrations of several volatile metals, including arsenic, cadmium and lead, in submicron particles exiting the stack than in larger particles or in the original waste. *See* Barton, R. G., Maly, P. M., Clark, W. D., and Seeker, W. R. (1988), "*Prediction of the Fate of Toxic Metals in Waste Incinerators*," Proceedings of the 1988 Waste Processing Conference, at 385; available at: http://www.seas.columbia.edu/earth/wtert/sofos/nawtec/1988-National-Waste-Processing-Conference/1988-National-Waste-Processing-Conference-47.pdf (accessed January 17, 2017). The authors further reported that high incinerator temperatures, high cooling rates, high waste chlorine concentrations, and small entrained particles all increase the quantity of metals contained in the small particles emitted into the atmosphere. *Id.*; *see also* Barton, R. G., Clark, W. D., and Seeker, W. R. (1990), Fate of Metals in Waste Combustion Systems, *Combustion Science and Technology,* Vol. 74, pp. 327-342.

In addition, many variables that affect incinerator emissions are controlled by operators, and the combustion conditions that control emission rates may be substantially affected by operator decisions. *See* National Research Council's Committee on Health Effects of Waste Incineration, Board on Environmental Studies and Toxicology Commission on Life Sciences (2000), *Waste Incineration & Public Health*, National Academy Press, Washington D.C., p. 48; available at http://www.ncbi.nlm.nih.gov/books/NBK233629/pdf/Bookshelf_NBK233629.pdf (accessed January 17, 2017). As articulated by the authors:

> Poor operator control either of the furnace (by permitting temperature or oxygen concentration to decrease) or of the stoking operation can cause reduced combustion efficiency. In most incinerators, mixing and charging of waste into the incinerator, grate speed, over-fire and under-fire air-injection rates, and selection of the temperature setpoint for the auxiliary burner are entirely or partially controlled by plant personnel. In addition, the extent of emission control achieved by post-combustion [air pollution control devices, APCDs] depends on how the devices are operated. Suboptimal operation can be caused by poorly trained or inattentive operators, faulty procedures, and equipment failure. Operators must be attentive to the flow rate of waste into the incinerator and furnace operation so as to allow for effective function of APCDs.
>
> Although some of the most-modern incineration equipment has been automated, there will always be a need for operators to deal with unexpected situations. In addition, automated equipment requires calibration and maintenance, and combustor parts can wear out or

> malfunction. Examples of what can go wrong include clogged air injection into the incineration chamber, fouled boiler tubes, a hole in the fabric filters, and a clogged scrubber nozzle.

Id. at 48. Additionally, the effectiveness of mercury control strategies is highly dependent on mercury speciation within the flue gas. In a typical flue gas stream, mercury exists in three forms: elemental form (Hg^0), oxidized form (Hg^{2+}) or particulate form (Hg^P). Oxidized and particulate forms of mercury are more easily removed through traditional control devices (such as scrubbers and particulate control devices) than elemental mercury. Parameters that affect mercury speciation in the flue gas include, but are not limited to: chlorine content in the feedstream, ash composition, combustion conditions (e.g., temperature, residence), and particulate matter control device operating parameters. Thus, the amount of chlorine in the feedstream can complicate efforts to control mercury emissions. *See*, for example, Zhang, L., Wang, S., Wu, Q., Wang, F., Lin, C-J., Zhang, L., Hui, M., Yang, M., Su, H., and Hao, J. (2016), Mercury transformation and speciation in flue gases from anthropogenic emission sources: a critical review, *Atmospheric Chemistry and Physics*, 16, pp. 2417–2433..

In sum, the above-referenced studies support the need to further investigate Veolia's claims that it can maintain compliance with the HWC NESHAP emissions limits by complying with its feedrate and other OPLs, regardless of the mix of wastes or combustion conditions. Given the level and variability of mercury, SVM, and LVM emissions from these incinerators, despite similar reported feedrates, relying solely on the current OPLs may not document compliance with the emission standards and undetected violations may occur. The temporary use of multi-metals monitoring devices, when combined with information collected through implementation of the enhanced FAP, will help document whether existing OPLs are sufficient to assure continuous compliance with the HWC NESHAP emission limits for mercury and other metal HAPs or if new OPLs must be created to document compliance. Finally, EPA finds that temporary multi-metals emissions monitoring is needed on all of Veolia's incineration units simultaneously to develop an accurate understanding of emissions across all of the units during normal operations when feedrate analyses are more comprehensive and accurate.

(2) Likelihood of a violation of the applicable emission limits at the Veolia facility:

There is information in the record showing that violations of the existing OPLs and emission limits are likely to occur (or may not be detected) without the enhanced FAP and the temporary use of multi-metals monitoring devices as set forth in the permit. This information includes:

- The 2006 May CPT showed that the LVM emissions from Unit 3 exceeded the emission standard.

- The August 2008 CPT showed that the SVM emissions from Unit 2 exceeded the current emission standard.[11]

- The 2013 CPT showed that two identical incineration units burning waste with roughly the same amount of metals (as calculated using feedstream analysis) produced significantly different metal emissions. One of the incineration units had a stack concentration of approximately 37% of the standard while the other stack concentration was approximately 77% of the standard.[12]

- There were measurable differences between the metal emissions reported in the 2013 CPT compared to those reported during the 2006 and 2008 CPTs even after accounting for differences in metal feed rates. In all of these tests, known quantities of pure laboratory metals were fed to the incinerators.[13]

- Mercury emissions from two of the three incineration units (Units 2 and 3) are uncontrolled.

- Veolia does not analyze all waste fed into the incinerators and its prior feedstream analysis plan included broad exemptions of wastes from sampling.

- NEIC found that Veolia's prior FAP led to underreporting of certain metals in the feedstream. For example, NEIC found that, for five years, Veolia had reported that Profile AF3753 had a total mercury value of 25 mg/kg, when the profile package listed a total mercury value of 4,140 mg/kg. If the mercury concentration reported in the profile package was present in the waste that was incinerated on August 28 and 29, 2011, Veolia would have violated the feedrate OPLs and emissions for mercury. *See also* RTC 127.

- NEIC also found that Veolia's prior feedstream analysis plan did not provide sufficient analysis of the varying wastes incinerated by Veolia to ensure that Veolia is continuously complying with the feedrate OPLs in its permit.

- Due to the significant flaws in Veolia's feed analysis program as described elsewhere in this document and in Section 5.2.2 of the SB, it is impossible to determine what is fed into the facility's incinerators on a day-to-day basis, making

[11] At the time of the August 2008 CPT, the SVM emission limit in the HWC NESHAP was 240 µg/dscm, corrected to 7 percent oxygen. 40 C.F.R. § 63.1203(a)(3). The current SVM emission limit of 230 µg/dscm became effective after the August 2008 CPT. *Id.* § 63.1219(a)(3).

[12] The results of the 2013 CPT were discussed above with respect to the variability in emissions from Veolia's incinerator units. It is also relevant to this factor in that the emissions from one of the Units were 77% of the emission limit for mercury.

[13] The variability in emissions from Veolia's incinerator units, as demonstrated by the historical CPT data, is discussed in EPA's analysis of the first site-specific factor. The historic variability in emissions, however, is also relevant to assessing the likelihood that Veolia will violate one or more of the metal HAP emission limits, as it shows that it is difficult, if not impossible, to use the variable feedrates to predict emissions.

it practically infeasible to correlate what Veolia burns during the CPT with the day-to-day feedstreams.

- EPA does not have sufficient data to support a determination that feedrate OPLs, based only on the mix of wastes and combustion conditions occurring during one performance test, necessarily can assure compliance under the variety of mixes of wastes and combustion conditions. Given the level and variability of emissions from these incinerators, operating at the current OPLs may not document compliance with the mercury, SVM, and LVM emission limits and undetected violations may occur.

- In three findings of violation issued under section 113 of the Act, EPA has alleged that Veolia violated several requirements, including the certain feedrate OPLs and emission limits, in the HWC NESHAP.

See Document IDs. EPA-R05-2014-0280-0252 (May 2006 CPT), EPA-R505-2014-0280-0253 (August 2008 CPT for Unit 2), EPA-R05-OAR-2014-0280-0075 (2006 FOV), EPA-R05-OAR-2014-0280-0071 (2008 FOV), EPA-R05-OAR-2014-0280-0149 (2012 FOV), EPA-R05-OAR-2014-0280-0122 (NEIC Report), EPA-R05-OAR-2014-0280-0005 (2013 CPT Report), EPA-R05-OAR-2014-0280-0142 (System Removal Efficiency Calculations) and EPA-R05-OAR-2014-0280-0143 (Feedstream Analysis Plan).

In conclusion, the likelihood that Veolia will (or could without detection) violate the metal HAP feedrate and other OPLs and emission limits is well documented in the Administrative Record. The results from emissions tests showed that Veolia has previously exceeded the current emission limits for SVM and LVM and that its mercury emissions from one of the units were 77% of the applicable limit. The NEIC investigation revealed significant flaws in Veolia's previous feedstream analysis program, resulting in feedrates potentially being underestimated. On three separate occasions, EPA has alleged that Veolia violated one or more of the requirement in 2008 Part 71 permit; while these allegations are not proof of an actual violation, they suggest that there is a possibility that Veolia could violate the HWC NESHAP emission limits. This factor supports inclusion of the enhanced FAP and multi-metals monitoring device requirements in Veolia's Title V permit.

(3) Whether or not add-on controls are used:

The current mix of add-on controls used at Veolia's Sauget facility is as follows:

- There are no mercury-specific add-on controls on two of Veolia's three incineration units (Units 2 and 3). Mercury emissions from the third unit (Unit 4) are controlled using activated carbon injection.

- Particulate matter is controlled using fabric filter devices (baghouses) installed on each of the three units.

- Acid gases are controlled by spray dryer adsorbers installed on each of the three units.

- There are no control devices for vapor phase metals emissions at Units 2 and 3, although EPA does not expect significant quantities of LVM metals in the vapor phase. Vapor phase metals emissions (other than mercury) from Unit 4 may be controlled using activated carbon injection.

See Document IDs. EPA-R05-OAR-2014-0280-0007 and EPA-R05-OAR-2014-0280-0008 (Renewal Application).

The temporary use of multi-metals monitoring in the permit addresses metal emissions and whether the OPLs in the final renewal permit are sufficient to assure compliance with the metal emission limits in the HWC. One of the controls listed above (acid gases) controls a different type of emissions (not metals). While particulate metal emissions are controlled at all three units with the use of baghouses, and mercury (a metal) is controlled at Unit 4 with the use of activated carbon injection, the effectiveness of the add-on controls are dependent on how plant personnel operate the add-on controls at a given time. National Research Council, *supra* at p. 48. In addition, there are no mercury-specific add-on controls on two of Veolia's three incineration units (Units 2 and 3). Further, use of these add-on controls does not eliminate the OPL requirements and the requirement to meet the metals emission limits in the HWC NESHAP.

(4) The types of monitoring, process, maintenance, or control equipment data that are already available for Veolia's emission units:

The Veolia Sauget facility is a relatively complex and large operation. The types of monitoring, process, maintenance and control data that the facility currently collects may not be adequate to show that the current OPLs are sufficient to assure compliance with the permit terms and conditions. Veolia's complete process, including a summary of the key design specifications for each of the three incineration units, is discussed in sections 2.1.1 and 2.1.2 of the SB.

The HWC NESHAP requires[14] Veolia to perform the following standard monitoring, process control, maintenance and control equipment data collection:

- Sampling and analysis of waste fed into the incinerators unless the waste is specifically exempted from sampling and analysis due to safety or other specified concerns. Veolia's prior feedstream analysis plan exempted many types of wastes from analysis.
- Compilation and retention of data on control of mercury emissions using activated carbon injection or carbon bed at Unit 4.
- Monitoring of process control data for particulate matter control devices.
- Process control to comply with specific operating parameters.

[14] *See* EPA's RTC 1 for a description of the legal authorities governing EPA's determination to require an enhanced FAP and for the temporary use of a multi-metals monitoring device on each of the three incinerator units.

- Periodic stack testing.

See 40 C.F.R. Part 63, Subpart EEE (HWC NESHAP), and Document ID. EPA-R05-OAR-2014-0280-0143 (Feedstream Analysis Plan).

While the standard monitoring required under the HWC NESHAP may be sufficient under many circumstances, in light of the variability of feed and emissions at this facility and likelihood of a violation, as discussed above, EPA finds that the standard monitoring alone is insufficient to demonstrate continuous compliance with the emission limits in the HWC NESHAP. Therefore, this factor weighs in favor of including the enhanced FAP and temporary use of the multi-metals monitoring devices to determine whether the existing OPLs document compliance with the emission limits.

(5) The type and frequency of monitoring requirements for similar emission units at other facilities:

Hazardous waste incinerators employ the same standard monitoring approaches listed immediately above in factor (4) to monitor compliance with HWC NESHAP emission limits. *See* 40 C.F.R. Part 63, Subpart EEE (HWC NESHAP).

Throughout its comments, Veolia often references the two other commercial hazardous waste incinerators in Region 5: (1) Heritage-WTI, a hazardous waste combustor located in East Liverpool, Ohio; and (2) Ross Incineration Services, Inc. (Ross), a hazardous waste combustor located in Grafton, Ohio. Neither of these facilities treat hazardous waste using multiple incinerator units or use one or more fixed-hearth, dual chamber incinerator units. *See* Heritage-WTI Title V Permit # P0108372, issued July 5, 2011, Document EPA-R05-OAR-2014-0280-0270 (hazardous waste incinerator consists of one rotary kiln hazardous waste incinerator rated at 97.8 mmBtu/hour, equipped with a spray dryer, electrostatic precipitator, and scrubber) and Ross Incineration Services Title V Permit for Facility ID: 02-47-05-0278, issued May 30, 2003, Document EPA-R05-OAR-2014-0280-0271 (hazardous waste incinerator consists of one rotary kiln rated at 24,000 pounds per hour feed, and equipped with a quench chamber, cyclone separator, radial-flow venturi scrubber, a packed bed scrubber, two wet electrostatic precipitators, and an ash management system).[15] Also, EPA does not have information suggesting that the waste incinerated at these other Region 5 facilities varies as much as at the Veolia Sauget facility, which is one reason why a comparison of these facilities' monitoring practices is unlikely to be useful in this instance. In addition, EPA notes that both Heritage-WTI and Ross have been the subject of EPA enforcement actions related to, among other things, alleged violations of the monitoring requirements in the HWC NESHAP. Therefore, a comparison of these facilities' monitoring practices is unlikely to be useful in this matter.

[15] Heritage-WTI's 2011 Title V permit is available at http://wwwapp.epa.ohio.gov/dapc/permits_issued/485350.pdf. Ross' 2003 Title V permit is available at http://wwwapp.epa.ohio.gov/dapc/permits_issued/1074861.pdf.

Other Site-specific Facts Supporting the Need for Multi-Metals Monitoring Devices and Enhanced Feedstream Analysis at Veolia's Sauget facility

As explained in *CITGO*, to determine whether additional monitoring is necessary to assure compliance with the terms and conditions of a Title V permit, EPA may consider other site-specific facts in conjunction with the five factors described above. Analyzing these factors in the context of the current permitting action, EPA considered the additional site-specific facts listed below and in Table 1. These facts include, among other things:

- A site-specific dispersion modeling and risk assessment, conducted by EPA for purposes of RCRA permitting, showed that mercury emissions from the Veolia facility could result in deposition of mercury in and around nearby lakes. Local citizens have claimed in petitions and comments that fishing is common near the Veolia facility, and fish advisories are in place due to high mercury concentrations.

- On April 13, 2009, a continuous ambient metals monitor located less than two miles northeast of Veolia recorded an arsenic concentration of 2,345 nanograms per cubic meter (ng/m^3), a potentially dangerous level that exceeds the National Institute for Occupational Safety and Health's 15-minute occupational exposure limit of 2,000 ng/m^3. *See* Cooper, J.A. *et al.* (2010), Guide for Developing a Multi-Metals, Fence-Line Monitoring Plan for Fugitive Emissions Using X-Ray Based Monitors, available at http://www.epa.gov/ttnemc01/prelim/otm31appH.pdf (*see also* Document ID. EPA-R05-OAR-2014-0280-0269). The authors' analysis of publicly available data determined that Veolia was the probable source of the arsenic, although Veolia has denied responsibility for the observed arsenic concentrations. *See* Advanced Sampling and Data Analysis for Source Attribution of Ambient Particulate Arsenic and Other Air Toxics Metals in St. Louis, EPA Grant XA987912-01, Final Technical Report (St. Louis Study Final Report), Document ID. EPA-R05-OAR-2014-0280-0257, at 42.

- A joint 2002 study conducted by the University of Wisconsin-Madison, Washington University – St. Louis, and the United States Geological Survey and published in 2007 found that Veolia and a now-defunct metal recycler were the primary contributors to mercury concentrations in the study area. *See* Manolopoulos, H., Snyder, D.C., Schauer, J.J., and Krabbenhoft, D.P. (2007), Sources of Speciated Atmospheric Mercury at a Residential Neighborhood Impacted by Industrial Sources, *Environmental Science and Technology*, 41(16): 5626-5633. The authors did not specify the incineration units that might have been responsible for the observed mercury concentrations, nor did they estimate the corresponding stack concentrations based on the ambient air measurements.

- Veolia is located in an area with a significant environmental justice (EJ) population. Approximately two-thirds of all persons living within three miles of Veolia are

> minorities, and at least one-third live below the federal poverty level. *See* SB at 75-77. "Focused attention to the adequacy of monitoring and other compliance assurance provisions is warranted" in areas, such as this, with "a high density of low-income and minority populations and a concentration of industrial activity." *In the Matter of U.S. Steel Corp. – Granite City Works*, Petition Number V-2011-2, at 6 (Dec. 3, 2012).

See Document IDs. EPA-R05-OAR-2014-0280-0119 (EJ Screening Results), EPA-R05-OAR-2014-0280-0207 through 0209 (Ross-Veolia-Heritage EJ Screen Comparison Charts), EPA-R05-OAR-2014-0280-0121 (RCRA Risk Assessment Report), EPA-R05-OAR-2014-0280-0184 and 0185 (EPA Administrator Order Responding to Sierra Club and American Bottom Conservancy Onyx Title V Petition), EPA-R05-OAR-2014-0280-0173 (Sierra Club and the American Bottom Conservancy Notice of Intent to Sue Pursuant to § 304(b)(2) of the Act, including copy of Petition for the Administrator to object to Title V permit) and EPA-R05-OAR-2014-0280-0183 (Manolopoulos *et. al.* (2007) East St Louis Study on Mercury Emissions).

Our review of these site-specific factors lends further support for the determination that additional monitoring is necessary to document that compliance with the OPLs will result in continuous compliance with the emission limits in the HWC NESHAP. EPA is therefore exercising its discretionary authority under 40 C.F.R. 63.1209(g)(2), or alternatively, implementing its statutory mandate under section 504(c) of the Act and 40 C.F.R. § 71.6(c)(1), to require enhanced feedstream analysis and the temporary use of multi-metals monitoring devices. EPA has determined that the permit terms and conditions required in Veolia's final permit are essential to ensure that Veolia maintains continuous compliance with all applicable requirements.

Table 1. Summary of Site-Specific Facts Evaluated by EPA.

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
1. The FAP in the 2008 Part 71 permit is inadequate.	Veolia does not analyze all waste fed into the incinerators.	NEIC report (Veolia has a broad list of exemptions to feedstream analysis)	EPA-R05-OAR-2014-0280-0122
		Prior FAP (documents a broad list of exemptions from sampling and analysis)	EPA-R05-OAR-2014-0280-0143
		WAP (documents a broad list of exemptions from sampling and analysis)	EPA-R05-OAR-2014-0280-0013
	The FAP in the 2008 Part 71 permit can lead to underreporting of certain metals.	NEIC report (documented instances where the reported feed concentrations appeared to significantly underreport actual feed concentrations)	EPA-R05-OAR-2014-0280-0122
2. Veolia's feedstreams are highly variable.	Feedstreams vary from "minute by minute."	Veolia's Dec. 19, 2014 comments on the draft permit (p. 102)	EPA-R05-OAR-2014-0280-0111
	Of the waste types (aka "profiles") that Veolia received between 2009 and 2013, nearly 70% of those waste types were distinct waste profiles. In comparison, only 10% of the waste profiles that Heritage-WTI received in 2012-2013 (12 months of data) were distinct waste profiles.	Summary of waste receipts collected by NEIC during its 2011 and 2013 inspections of Veolia and Heritage-WTI, respectively. Actual (raw) data are classified as confidential business information (CBI).	EPA-R05-OAR-2014-0280-0162; EPA-R05-OAR-2014-0280-0175

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
3. Emissions from Veolia's incinerators cannot readily be estimated from feedrates, even with enhanced feedstream analysis, unless the correlation between feedrates and emissions is confirmed.	The 2013 CPT showed that two identical incineration units burning waste with the same amount of metals (as calculated using feedstream analysis) produced significantly different metal emissions.	2013 CPT plans for Units 2, 3 and 4 ("Unit No. 3 is a mirror image of Unit No. 2…. The only difference being Unit No. 2 is equipped with four (4) baghouse modules, while Unit No. 3 is equipped with three (3) baghouse modules. However, each incinerator is operated identically with only three baghouse modules in service during operation." 2013 CPT Plan for Unit 2, June 27, 2013, at 2-1.)	EPA-R05-OAR-2014-0280-0063 and EPA-R05-OAR-2014-0280-0064
		2008 CPT Plan for Unit 2, May 2008, Section 2.0, Page 1 of 14.	EPA-R05-OAR-2014-0280-0124
		2013 CPT report (the amount of mercury emitted from Unit 2 was more than double the amount emitted from Unit 3)	EPA-R05-OAR-2014-0280-0005
	There were measurable differences between the system removal efficiencies measured in the 2013 CPT compared to those measured during the 2008 CPT. In both tests, known quantities of pure laboratory metals were fed to the incinerators.	Spreadsheet showing a comparison of system removal efficiencies	EPA-R05-OAR-2014-0280-0142

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
	Historical emissions have not always varied linearly with feedrates.	Summary of Veolia's historical emissions	EPA-R05-OAR-2014-0280-0258
4. Although Veolia demonstrated compliance during the 2013 CPT, the CPT is an indicator of compliance only for the conditions and mixes of waste incinerated during the test.	Due to the significant flaws in Veolia's prior feed analysis program, it is nearly impossible to determine what is fed into the facility's incinerators on a day-to-day basis, making it practically infeasible to correlate what Veolia burns during the CPT with the day-to-day feedstream.	NEIC report (2011)	EPA-R05-OAR-2014-0280-0122
		Statement of Basis (summary of deficiencies in the FAP in the 2008 Part 71 permit)	
		Veolia 2012 FOV (alleges multiple violations due to deficient feedstream analysis)	EPA-R05-OAR-2014-0280-0149
		EPA letter to Veolia, September 4, 2013 ("even if Veolia does modify its CPT plan as recommended by EPA in our [July 26, 2013] letter, based on the significant problems with the facility's feedstream analysis program identified in the August 24, 2012 Finding of Violation, the CPT would still not demonstrate that Veolia is in compliance with the HWC NESHAP feedrate limits and ultimately the HWC NESHAP emission standards on a day-to-day basis.")	EPA-R05-OAR-2014-0280-0067

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
		EPA letter to Veolia, September 27, 2013, approving the 2013 CPT ("EPA believes the results of the CPT can demonstrate compliance at the time of the CPT due to the rigorous waste feed sampling conducted prior to and during the test. However, based upon an EPA investigation of Veolia's Sauget facility, it is apparent that this type of comprehensive waste stream sampling is not done on a day-to-day basis at Veolia.").	EPA-R05-OAR-2014-0280-0259
5. Multi-metals monitoring devices are commercially available.	Multi-metals monitoring devices are commercially available through Cooper Environmental Services (Cooper).	Email from Cooper to EPA, July 17, 2013	EPA-R05-OAR-2014-0280-0082
	A multi-metals monitoring device was purchased by Eli Lilly and used as a CEMS.	Eli Lilly Alternative Monitoring Petition (AMP)	EPA-R05-OAR-2014-0280-0081
	The U.S. Army has purchased 3 multi-metals monitoring devices.	Email from Cooper to EPA, July 17, 2013	EPA-R05-OAR-2014-0280-0082
	One multi-metals monitoring device is currently being operated as a process monitor at Quemetco, Inc.'s battery recycler located at the City of Industry, California.	Record of telephone conversation with Dipankar Sarkar, Program Supervisor Science and Technology Advancement, SCAQMD, April 7, 2014	EPA-R05-OAR-2014-0280-0141

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
	The device was initially rented by the South Coast Air Quality Management District (SCAQMD) to monitor metal emissions from the facility but it was later purchased by Quemetco.[16]	Record of Telephone Conversation with Mike Buckantz of Quemetco	EPA-R05-OAR-2014-0280-0260
		Quemetco Site Visit Summary March 2016	EPA-R05-OAR-2014-0280-0261
		SCAQMD Board meeting minutes authorizing a multi-metals monitoring device rental contract with Cooper, March 7, 2014.	EPA-R05-OAR-2014-0280-0128. Also available at: http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2014/2014-mar7-027b.pdf
	A multi-metals monitoring device was recently purchased by Chevron for installation at one of their facilities in Nigeria.	Record of telephone conversation with Mr. Krag Petterson (Cooper), April 7, 2015	EPA-R05-OAR-2014-0280-0150
	Over 28 ambient air versions of the Xact multi-metals monitoring device, which operate using technology identical to the stack monitoring device, have been purchased by customers from all over the world.	Email from Cooper to EPA, July 17, 2013	EPA-R05-OAR-2014-0280-0082
		Xact Model 640 Specification Data Sheet	EPA-R05-OAR-2014-0280-0144
		Xact Model 625 Specification Data Sheet	EPA-R05-OAR-2014-0280-0164
		Other Test Methods (OTM) 31 - Guide for Developing a Multi-Metals, Fence-Line Monitoring Plan for Fugitive Emissions Using X-Ray Based Monitors (Draft), December 2010 at 10-15	EPA-R05-OAR-2014-0280-0269. Also available from EPA's OTM website: http://www.epa.gov/ttnemc01/prelim/otm31.pdf (accessed January 17, 2017)

[16] *See* http://www.aqmd.gov/home/regulations/compliance/toxic-hot-spots-ab-2588/quemetco.

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
		("Contemporary multi-metals FLMs are based on a reel-to-reel filter tape sampling with simultaneous metals determination using X-ray fluorescence (XRF)").	
6. Multi-metals monitoring devices have been demonstrated and determined to be accurate and reliable in conditions similar to or more extreme than those present at Veolia.	Eli Lilly (hazardous waste incinerator) operated a multi-metals monitoring device as a CEMS for over 6 years.	Cooper comments on the draft permit	EPA-R05-OAR-2014-0280-0104
		Lambert and Foster (Eli Lilly) 2011 power point presentation describing the Lilly experience	EPA-R05-OAR-2014-0280-0145
	Multi-metals monitoring devices have been demonstrated at a hazardous waste incinerator, a coal-fired power plant, a secondary metals smelter, and a munitions incinerator.	Hay *et al.* (2005) – an Army Corps of Engineers study of the Xact multi-metals monitoring device performance on Army's hazardous waste incinerators.	EPA-R05-OAR-2014-0280-0140
		Feasibility of using the Xact multi-metals monitoring device as a mercury monitor on coal-fired power plants – presentation given at the EUEC conference in 2011 and documents monitoring device comparison with Method 30B for mercury.	EPA-R05-OAR-2014-0280-0147
		Cooper supplemental comments on the draft permit – provides data on additional studies and	EPA-R05-OAR-2014-0280-0113 and EPA-R05-OAR-2014-0280-0115 (correction of references).

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
		responds to specific technical issues raised by Veolia and others	
		Beach *et al*. (Evonik) power point presentation comparing multi-metals monitoring device data to CPT test results	EPA-R05-OAR-2014-0280-0146
		Feasibility of Monitoring Heavy Metal Emissions from a Coal-Fired Thermal Hazardous Waste Incinerator Using a Multi-Metal Continuous Emissions Monitor, Small Business Innovation Research (SBIR) Phase I Final Report – paper documenting the Xact multi-metals monitoring device performance during an EPA sponsored Small Business Innovative Research grant. The relative accuracy test audit procedures used at Eli Lilly were performed on a coal fired source.	EPA-R05-OAR-2014-0280-0148
	EPA (OAQPS and ORD) have determined the multi-metals monitoring device technology to be proven.	OAQPS Power Point on History of Multi-Metals Monitoring Device Development	EPA-R05-OAR-2014-0280-0131

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
	EPA has independently verified the multi-metals monitoring device through the Environmental Technology Verification (ETV) Program.	Myers *et al*. Multi-Metals Monitoring Device ETV Report (2002)	EPA-R05-OAR-2014-0280-0129
	The multi-metals monitoring device technology has been widely used for ambient air monitoring.	Xact 625 ETV Report – this study was done on an ambient unit but demonstrates the accuracy of the technology.	EPA-R05-OAR-2014-0280-0165
7. Multi-metals monitoring device data are comparable to data collected by EPA Reference Method 29 used in CPTs.	The Tooele Army Depot (TEAD) through EPA's ETV program conducted tests on an early model of the Xact multi-metals monitoring device relative to EPA Method 29 and found very good agreement of lead concentrations with Method 29 with a relative accuracy[17] of 4% and a correlation between Method 29 and the Xact of better than 0.98. (Of the 12 regulated metals tested, lead is the only element that was consistently found in measurable concentrations in the stack gas.)	Cooper Supplemental Submittal, Attachment 2.	EPA-R05-OAR-2014-0280-0115 and EPA-R05-OAR-2014-0280-0113 (attachments)
		Hay *et al*. (2005) XRF-Based Multi-Metals Monitoring Device – U.S. Army Corps of Engineers Publication, pp 54-56.	EPA-R05-OAR-2014-0280-0140
8. Multi-metals monitoring device analytical procedures	Multi-metals monitoring device have been validated using an EPA-approved method.	Yanca *et al*. (2006) - Paper published in the Journal of the Air and Waste Management	Available from the Journal of the Air and Waste Management Association.

[17] The relative accuracy test measured the extent to which the monitoring device data differed from the reference method (Method 29).

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
are acceptable in a permitting context and for the purpose of establishing a correlation between feedrates and emissions.		Association documenting the Method 301 validation of the Xact multi-metals monitoring device.	
	Draft performance specifications for multi-metals monitoring devices exist.	OTMs 16-21	EPA-R05-OAR-2014-0280-0132 through 0137. Also available from: https://www.epa.gov/emc/emc-other-test-methods
	EPA has previously determined that draft performance specifications can be used in a permitting context.	EPA memorandum on the use of draft performance specifications	EPA-R05-OAR-2014-0280-0083
9. Installation and operation of three multi-metals monitoring devices likely will be cheaper than conducting multiple CPTs.	Each multi-metals monitoring device will cost approximately $400,000 to purchase, install and operate for one year, which translates to about $1.2 million for one year for three units.	Xact multi-metals monitoring device price quote provided by Cooper.	EPA-R05-OAR-2014-0280-0038
		SCAQMD Board meeting minutes authorizing a $400,000 multi-metals monitoring device rental contract with Cooper, March 7, 2014	EPA-R05-OAR-2014-0280-0128
		Multi-metals monitoring device purchase and rental cost analysis (excel spreadsheet)	EPA-R05-OAR-2014-0280-0138
	Veolia has previously stated to EPA that each CPT costs Veolia "several hundred thousand dollars." In order to collect sufficient data to establish a	Letter from Veolia to EPA dated June 17, 2008	EPA-R05-OAR-2014-0280-0123

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
	correlation between feedrates and emissions, Veolia would need to conduct many CPTs (at least several dozen), which would translate to millions of dollars.		
10. The Act requires EPA, as Veolia's Title V permitting authority, to ensure that the Title V permit contains monitoring sufficient to assure compliance with each applicable requirement. Consistent with the three-step analysis that must be performed by permitting authorities assessing the sufficiency of monitoring, EPA has either discretionary authority or an obligation to add the necessary monitoring.	EPA has authority under the Hazardous Waste Combustor National Emission Standards for Hazardous Air Pollutants (HWC NESHAP), 40 C.F.R. § 63.1209(g)(2), to require "alternative approaches to establish limits on operating parameters" that are necessary to document compliance with the HWC NESHAP.	40 C.F.R. § 63.1209(g)(2)	
	As the permitting authority, EPA has authority to impose monitoring requirements under Sec. 504(c) of the CAA and 40 C.F.R. § 71.6(c)(1).	CAA Section 504(c) and 40 C.F.R. § 71.6(c); *Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir 2008)	

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
11. Veolia is a key contributor to mercury emissions in the Sauget, Illinois area, an EJ community that uses neighboring lakes for local fishing.	A site-specific dispersion modeling and risk assessment, conducted by EPA for purposes of RCRA permitting, showed that mercury emissions from the Veolia facility could result in deposition of mercury in and around lakes used for fishing downwind of the facility.	RCRA Health Risks Assessment Report (2007)	EPA-R05-OAR-2014-0280-0121
	Local fishing occurs at lakes located within the nearby Frank Holten State Park.	RCRA Health Risks Assessment Report (2007)	EPA-R05-OAR-2014-0280-0121
	A joint 2002 study conducted by the University of Wisconsin-Madison, Washington University in St. Louis, and the United States Geological Survey (and published in 2007) found that Veolia and a now-defunct metal recycler were the primary contributors to mercury concentrations in the area.	Manolopoulos *et al*. East St Louis Study (2007) – article published in *Environmental Science & Technology*.	Available from *Environmental Science & Technology*.[18]
	Approximately two-thirds of all persons living within three miles of Veolia are minorities, and at	EJ Screen Output	EPA-R05-OAR-2014-0280-0119
		US Census data for the area surrounding Veolia	EPA-R05-OAR-2014-0280-0120

[18] *See* Manolopoulos, H., Snyder, D.C., Schauer, J.J., and Krabbenhoft, D.P. (2007), Sources of Speciated Atmospheric Mercury at a Residential Neighborhood Impacted by Industrial Sources, *Environmental Science and Technology*, 41(16): 5626-5633.

Basis for Enhanced Feedstream Analysis and Multi-Metals Device Requirements	Factual Evidence or Other Support	Documents Included in the Permit Record	Document ID as Posted in www.regulations.gov (Docket ID. EPA-R05-OAR-2014-0280)
	least one-third live below the federal poverty level.	2010 U.S. Census data by Block Group.	Available through EPA's EJ SCREEN website: https://www.epa.gov/ejscreen

3. **Comment:** ***Veolia's existing feedstream analysis procedures, which are identical in every respect to the provisions of 40 C.F.R. § 63.1209(c), are sufficient, and EPA has far exceeded its authority by arbitrarily and capriciously determining otherwise. In promulgating the HWC NESHAP, EPA already expressly established what feedstream analysis procedures are required to assure compliance with the CAA. The provisions of 40 C.F.R. § 63.1209(c)(2)-(4) appear verbatim in Veolia's FAP, and Veolia has complied with the requirements in full (citing an EPA staff memorandum by Charles Hall, VES 0001293). EPA's supplemental requirements are therefore not essential or necessary to ensure compliance with the CAA – the essential terms are already set forth in the HWC NESHAP and included in Veolia's current FAP. EPA must remove the supplemental FAP requirements from the 2014 draft permit.***

See Veolia at 27.

EPA Response: Veolia discusses at length in its comments its view that the standard monitoring requirements contained in 40 C.F.R. § 63.1209(c) are adequate without supplemental monitoring. EPA is hopeful that with an enhanced FAP, and after a statistically sound correlation has been established between feedrate and other OPLs and emissions from each of the incinerators through the temporary use of multi-metals monitoring devices, the monitoring procedures in 40 C.F.R. § 63.1209(c) will be sufficient to enable Veolia to demonstrate compliance with the applicable HWC NESHAP emissions limits.

Veolia mistakenly asserts that compliance with the provisions of 40 C.F.R. § 63.1209(c)(2)-(4) is all that is essential or necessary to ensure compliance with the Act (or the emission limits of the HWC NESHAP). Contrary to these assertions, EPA was explicit in the HWC NESHAP that there may be instances where, on a case-by-case basis, additional monitoring requirements may be needed. For instance, while not requiring ten-minute averaging periods in the original HWC NESHAP, EPA explained "that there may be site-specific circumstances that warrant averaging periods shorter than one hour in duration, including possibly instantaneous measurements. . . [and] [t]he provisions in § 63.1209(g)(2) authorize the regulatory official to make such a determination." Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors 64 Fed. Reg. 52828, 52920 (Sept. 30, 1999). The original final rule mentioned several other, non-exclusive, examples where use of the discretionary authority by a permit writer under 40 C.F.R. § 63.1209(g)(2) could be appropriate. These included when a source cannot demonstrate a worst-case scenario for all operating parameters, *id.* at 52923, where batch feeding may require additional operating parameters, *id.* at 52939, or where including additional operating parameters in a CPT is necessary because of naturally occurring inhibitors, *id.* at 52942. Subsequently, EPA has explicitly cited the authority within 40 C.F.R. § 63.1209(g)(2) to allow permitting authorities to implement alternative sampling methods, 70 Fed. Reg. 59402, 59429 (Oct.

12, 2005), or to adopt additional operating parameters to document compliance with the emission standards, 66 Fed. Reg. 24270, 24271 (May 14, 2001).

While Veolia is correct that EPA did not *specifically* say in promulgating the HWC NESHAP in either 1999 or 2005 that 40 C.F.R. § 63.1209(g)(2) provides authority to require the specific enhanced FAP or a multi-metals monitoring devices required in this permit, this misses the point of the inclusion of case-by-case authority to require additional monitoring. The text of 40 C.F.R. § 63.1209(g)(2) is not limited to only alternatives EPA has mentioned in the past.

For many sources, compliance with the standard monitoring requirements included in the HWC NESHAP will be sufficient to document compliance with the emission limits. However, because there may be site-specific circumstances that negate this general proposition, EPA explicitly included discretionary authority in 40 C.F.R. § 63.1209(g)(2) to provide for such circumstances to be addressed on a case-by-case basis.[19] EPA has determined in this case that site-specific factors require an alternative approach to setting the OPLs that includes monitoring to establish a reliable correlation between compliance with the OPLs and compliance with the emission limits in the HWC NESHAP. *See* RTC 5, below, for additional discussion on our authority under 40 C.F.R. § 63.1209(g)(2). Alternatively, if EPA's discretionary authority in 40 C.F.R. § 63.1209(g)(2) is insufficient to impose the enhanced FAP and the temporary use of multi-metals monitoring devices, EPA finds that they are needed to assure continuous compliance with the HWC NESHAP and the permit's terms and conditions and are thus required under section 504(c) of the Act and 40 C.F.R. § 71.6(c)(1). *See also Sierra Club*, 536 F.3d at 677 (according to section 504(c) of the Act "a monitoring requirement insufficient to 'assure compliance' with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards").

As discussed elsewhere in this response to comments and the SB, EPA has determined that the FAP in the 2008 Part 71 permit is not sufficient to fully characterize the metal concentrations in its feedstreams, and thus cannot assure compliance with the feedrate OPLs for mercury and other metals. Approximately 70 percent of the waste profiles that Veolia receives are distinct, or different from, profiles of any other waste Veolia receives. *See* Document ID. EPA-R05-OAR-2014-0280-0175. Veolia receives that waste from a wide variety of waste suppliers (also called "generators")[20] and does not consistently "obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits" prior to feeding the material into its incinerators as required by

[19] This will not be the first time a permitting authority has used the discretionary authority under 40 C.F.R. § 63.1209(g)(2) to add additional requirements to a source's permit. For instance, permitting authorities in New York, Ohio, and Oregon have all used the authority of 40 C.F.R. § 63.1209(g)(2) to add conditions to HWC permits. *See* Title V Permit for Red-Rochester LLC, Permit # 8-2699-00126/00001; *In re Ross Incineration Services Inc.*, Notice and Finding of Violation, EPA-5-11-OH-04 (2010) (noting the additional required monitoring and the establishment of an additional permit condition pursuant to 40 C.F.R. § 63.1209(g)(2)); Oregon Title V Permit for U.S. Army Umatilla Chemical Depot, Permit # 25-0024-TV-01.

[20] Based on our review of all available data (including our interactions with Veolia), Veolia has a more diverse waste profile base than other hazardous waste combustion facilities in Region 5. *See*, e.g., Veolia at 61, 102 and Table 4.

40 C.F.R. § 63.1209(c). Specifically, as discussed in section 5.2 of the SB, the FAP in place during the NEIC investigation is the FAP required under Veolia's current Title V permit (issued in 2008, which this final renewal permit replaces). The NEIC investigation raised a number of questions regarding the FAP in the 2008 Title V permit, for example, the FAP included an overly broad list of exemptions from sampling and analysis, and Veolia may be underreporting concentrations in certain situations when a feedstream has low metal concentrations. Therefore, EPA concludes that the FAP in the 2008 Title V permit cannot be said to document compliance with the feedrate OPLs for mercury, LVM and SVM. As discussed in the SB and in this response to comments document, the variability of the waste that Veolia processes, and Veolia's failure to adequately analyze all incoming waste, are two of the factors that support EPA's addition of an enhanced FAP and the temporary use of multi-metals monitoring devices.

Because the enhanced FAP is authorized under the applicable regulation, these requirements are properly included in Veolia's Title V permit pursuant to 40 C.F.R. § 71(a)(3)(i)(A). In the event that EPA's authority under the applicable regulation is insufficient to impose these monitoring requirements, EPA has determined that it must supplement the periodic monitoring requirements of the applicable regulation under section 504(c) of the Act and 40 C.F.R. § 71.6(c).

4. **Comment:** ***Section 114 of the Act does not authorize EPA's permitting decision to require the installation or operation of CEMS. EPA does not explain why multi-metals CEMS are necessary for the purpose of "carrying out" any provision of the Act, thus section 114 of the Act does not authorize EPA's permitting decision. Section 114(a)(1) of the CAA is a general provision relating to the authority of the EPA to request information necessary for developing plans and standards, determining whether any person is in violation of any standard or requirement of a plan, and "carrying out any provision of this chapter" (quoting 42 U.S.C. § 7414(a)(1)). EPA previously has rejected requiring CEMS to assure compliance pursuant to sections 114(a) and 504(a) of the Act. Section 114(a) does not authorize the requirement of a multi-metals CEMS because the purpose of the multi-metals CEMS is not to determine whether Veolia is in violation of the HWC NESHAP, but rather to determine whether the OPLs are sufficient.***

See Veolia at 32-33; Comments by the Coalition for Responsible Waste Incineration, December 19, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0105 (CRWI) at 4-5; Comments by Ross Environmental Services, Inc., on behalf of Ross Incineration Services, Inc., December 19, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0107 (Ross) at 2.

EPA Response: EPA does not agree with the commenters' characterization of Section 114(a)(1), the standard for using Section 114(a)(1), or EPA's previous decisions

regarding Section 114(a)(1). The requirement to use the multi-metals monitoring devices is fully consistent with EPA's authority under Section 114(a)(1). However, EPA has determined that the requirement to use the multi-metals monitoring devices is provided by the HWC NESHAP itself, 40 C.F.R. § 63.1209(g)(2), or if not provided in the HWC NESHAP, is necessary to assure compliance with the HWC NESHAP and the permit's terms and conditions and thus required under section 504 of the Act and 40 C.F.R. § 71.6(c)(1). *See also* EPA's RTC 1 and 2. We therefore are not relying on Section 114(a)(1) as a justification for the requirement for the temporary use of multi-metals monitoring devices or for the enhanced FAP requirement at this time. Condition 2.1(D)(1)(i) of the permit has been revised accordingly.

5. **Comment:** ***The monitoring requirements of the HWC NESHAP are sufficient. The essential testing and monitoring requirements of the HWC NESHAP are CPTs, OPLs, and a source's FAP. Although 40 C.F.R. § 63.1209(a) requires that sources use certain types of CEMS, it does not require the use of multi-metals CEMS, and 40 C.F.R. § 63.1209(g) does not authorize EPA to force Veolia to install them. The condition was imposed in the draft permit notwithstanding the fact that the HWC NESHAP does not require, or even mention, multi-metals CEMS as an acceptable form of monitoring. EPA drafted the HWC NESHAP carefully to ensure that sources implemented only CEMS that were technically ready to produce accurate results. Section 63.1209(g) is restricted to "alternative monitoring requirements other than continuous emissions monitoring systems," and subsection 63.1209(g)(2) allows the Administrator to impose additional or modified operating parameters but does not give the Administrator the authority to require a facility to install and operate a multi-metals CEMS. The CEMS does not establish alternative limits in the FAP nor does it have any present effect on any of the other operating parameters set forth in Veolia's Title V permit.***

See Veolia at 27-32; CRWI at 3-4; Ross at 2.

EPA Response: EPA disagrees with this comment. As discussed elsewhere in this response to comments document and in the SB, EPA's authority to require the temporary use of multi-metals monitoring devices comes from the HWC NESHAP, specifically at 40 C.F.R § 63.1209(g)(2), and section 504(c) of the Act and its implementing regulations at 40 C.F.R § 71.6(c)(1)). *See* RTC 1 and 2. Based on the site-specific analysis for Veolia's Sauget facility discussed above, EPA determined that more accurate and comprehensive metal feedrate information obtained through implementation of the enhanced FAP and that at least 12 months of actual emissions data collected during

Veolia's day-to-day operations by the multi-metals monitoring devices,[21] are needed to correlate metal feedrates with emissions.

The commenter misreads 40 C.F.R. § 63.1209(g). The first subsection, 40 C.F.R. § 63.1209(g)(1), allows the owner or operator of a source subject to the HWC NESHAP to request that the Administrator approve the use of proposed alternate operating parameter monitoring requirements, but provides that, if the source wishes to request approval to use a continuous emissions monitoring system to document compliance with emission limits, it must make the request pursuant to 40 C.F.R. §§ 63.1209(a)(5) and 63.8(f). On the other hand and as explained in detail elsewhere in response to other comments, 40 C.F.R. § 63.1209(g)(2) allows EPA to determine on a case-by-case basis, at any time, that "alternative approaches to establish limits on operating parameters may be necessary to document compliance with the emission standards of [the HWC NESHAP]." The quotes from the *Federal Register* preambles, Technical Support Document and Response to Comments that Veolia and CRWI included in their comments address EPA's authority to require a source to establish or comply with additional or alternative operating parameters under the first clause of 40 C.F.R. § 1209(g)(2), *i.e.*, the clause that allows the Administrator to determine that its necessary to "limit additional or alternative operating parameters." However, they do not address the second clause of 40 C.F.R. § 63.1209(g)(2), which provides EPA with authority to require Veolia to operate monitoring devices as an alternative approach either to establish more restrictive OPLs or to verify that the current OPLs are adequate to document continuous compliance with the HWC NESHAP emissions limits.

EPA explained in the SB that the purpose for requiring the multi-metals monitoring devices is to collect data that EPA will use to verify the adequacy of Veolia's feedrate OPLs to assure continuous compliance with the emissions limits in the HWC NESHAP for mercury and other metal HAPs. Consistent with 40 C.F.R. § 63.1209(g)(2), EPA is requiring Veolia to use the monitoring devices - an alternative to the once-per-permit term CPT approach specified in the HWC NESHAP - to verify that the OPLs in the permit are adequate or to establish more stringent OPLs, if necessary, to assure that Veolia is in continuous compliance with the HWC NESHAP emissions limits. A single CPT can demonstrate only that the OPLs are adequate to assure compliance under the specific combustion conditions and with the specific mix of wastes that existed at the time of the stack test. EPA believes it is reasonable and necessary to require the temporary use of the monitoring devices to verify the adequacy of and possible need to strengthen the OPLs as an appropriate alternative to the establishment of OPLs through

[21] See footnote 1 for an explanation of why the multi-metals monitoring devices required in Permit Condition 2.1(D)(i). are not "CEMS," "CPMS," or "CMS" as those terms are defined in 40 C.F.R. § 63.2.

the use of a CPT because of the variety of the waste burned by Veolia and the other site-specific facts discussed in this response to comments document.

6. **Comment:** ***Section 504(b) of the Act, which states that "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance," does not require Veolia to install multi-metals CEMS. It is inappropriate to use a Title V permit to require a facility to install a multi-metals CEMS.***

See Veolia at 32; CRWI at 4-5; and Ross at 2.

EPA Response: Although the Act does not specifically require installation of a multi-metals monitoring device, the HWC NESHAP, along with section 504(c) of the Act, authorizes and obligates the Title V permitting authority to add monitoring to a Title V permit if necessary to assure compliance with all terms and conditions of the permit. *See Sierra Club*, 536 F.3d at 678. EPA has not made a determination in this permit action that multi-metals monitoring devices must always be required as an alternative approach for establishing OPLs or to assure compliance with the permit terms and conditions. As discussed above, EPA must consider site- and other source-specific facts when determining the adequacy of monitoring in each situation; thus, the determination of whether temporary use of multi-metals monitoring devices is appropriate in a particular circumstance is a context-specific determination.

EPA agrees that where alternative methods are available that provide sufficiently reliable and timely information for determining compliance, EPA may require those methods in lieu of CEMS. In this case, although the multi-metals monitoring devices are not being used as CEMS, *see* footnote 1, above, EPA has determined that temporary operation of multi-metals monitoring devices will provide continuous metal emissions or surrogate information that EPA can use to establish a correlation between metal feedrates and emissions at the Veolia facility. The data collected by these devices will enable EPA to determine whether the OPLs in Veolia's Title V permit are appropriately established such that they can assure continuous compliance with the HWC NESHAP emissions limits for mercury and other heavy metals. *See also* RTC 2, above, and RTC 7, below. Thus, it is reasonable for EPA, among other things, to require Veolia to install and temporarily operate the multi-metals monitoring devices to collect data necessary to establish this correlation.

7. **Comment:** ***In adopting the CAM rule, EPA rejected the proposed Enhanced Monitoring Rule (58 Fed. Reg. 54648 (October 22, 1993)), which had a perceived bias of requiring CEMS as the only appropriate method for assuring continuous***

compliance. Region 5's focus on CEMS may be a result of a misunderstanding of the methodology the EPA has established for determining compliance with emissions limits. The SB misquotes information from AP-42 by inappropriately holding CEMS results to be superior to results of an applicable performance test. In addition, the SB sets up a situation in which Veolia must use CEMS data if available to determine whether it is complying with the relevant emissions limits, but unfairly allows others to use credible evidence under the Credible Evidence Rule to challenge Veolia's compliance with the HWC NESHAP.

See Veolia at 32-33 and footnote 17; Ross at 2.

EPA Response: EPA has not misunderstood the methodology established in the HWC NESHAP for demonstrating compliance. In light of the site-specific facts discussed in this response to comments and the SB, EPA believes that a demonstration that Veolia's OPLs are appropriately established such that they assure continuous compliance with the HWC NESHAP emissions limits is necessary. In the case of Veolia, EPA believes that a multi-metals monitoring device is the only monitoring method that can provide this demonstration because of the nature of the data collection. A single compliance test cannot provide sufficient information to show if there is a correlation between compliance with OPLs and compliance with the HWC NESHAP emissions limits on a continuous basis because it is limited to demonstrating compliance only with the mix of wastes and combustion conditions under which it was conducted. Because of the extreme variability of waste that Veolia incinerates, the limited demonstration available through a performance stack test is not sufficient to assure compliance with the HWC NESHAP emissions limits on a continuous basis.

Further, EPA is not making a determination in this permit action that the use of a multi-metals monitoring device is the only appropriate method for assuring continuous compliance with the HWC NESHAP emissions limits. EPA is not addressing in this permitting action the use of CEMS or any other credible evidence for purposes of direct evidence of compliance with the HWC NESHAP emissions limits. Rather, for purposes of this permit, the multi-metal monitoring device data serve as indicators of performance to demonstrate the adequacy of the OPLs. Once a correlation between compliance with the OPLs and compliance with the HWC NESHAP emissions limits is established (it is EPA's expectation that will be possible with 12 months of emissions data, combined with more accurate and comprehensive feedrate information), Veolia may continue to demonstrate compliance with the HWC NESHAP emissions limits through enhanced FAP and compliance with the OPLs included in the permit or any revised OPLs determined as a result of the feedrate-emission correlation.

8. **Comment:** ***The courts have made it clear that compliance can only be shown using the same methods used to develop the standards (Portland Cement Association v. Ruckelshaus, 486 F.2d 375, 396 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974)). Since Method 29 was used to develop the data used to set the metal standards in the HWC NESHAP, Method 29 is the only way a facility can show compliance unless the Agency approves an alternate monitoring application.***

   See CRWI at 13.

   EPA Response: EPA is not changing in this permit the compliance method to be used by Veolia to demonstrate compliance with the metal emissions standards. Veolia will continue to use Method 29 to conduct the CPTs required by the HWC NESHAP for the purpose of establishing OPLs and demonstrating compliance with the HWC NESHAP emissions limits. For purposes of this permit, the monitoring device data serve as indicators of performance to demonstrate the adequacy of the OPLs. Once a correlation between compliance with the OPLs and compliance with the HWC NESHAP emissions limits is established, Veolia may continue to monitor compliance with the HWC NESHAP emissions limits through the enhanced FAP and compliance with the OPLs included in the permit or revised OPLs determined as a result of the feedrate-emission correlation.

   Scientifically, if a test method is "method-defined," that is, that the results of the method are dependent on the procedures of the method (e.g., Method 5 for filterable particulate matter (PM)), then it is important that compliance be determined using the same method used to develop the standards. We note, however, that, if the result of the method is based on calibration with a reference material, it is reasonable to assume that methods can be interchangeable. For example, we believe it is reasonable to use Method 29 to set a total mercury limit, and then demonstrate compliance with Method 29, Method 30B, or ASTM 6784, or to set a lead permit limit with Method 29 and show compliance with Method 12. Similarly, it would be appropriate to allow a source to use a CEMS to demonstrate compliance even though Method 29 was used to set the limit because the performance specifications for the CEMS require calibration with a reference aerosol. However, we would not allow a source to set a PM limit with Method 5 but demonstrate compliance with Method 5B because these two methods include fundamentally different definitions of the pollutant (as defined by the method).

9. **Comment:** ***Veolia is the only commercial hazardous waste incinerator in the country that has an EPA region as its permitting authority. EPA is using this unique opportunity to attempt to address what it wrongly believes are problems with the way the HWC NESHAP requires sources to show compliance, i.e., CPTs and the creation***

of OPLs and a FAP. EPA is not evaluating Veolia's renewed permit so much as it is using Veolia (at Veolia's expense) to exploit what it sees as issues with the HWC NESHAP. This is unlawful, unfair, and arbitrary and capricious as applied to Veolia. EPA is also acting in an arbitrary and capricious manner by selecting Veolia to pay for an experimental CEMS to benefit EPA so that the Agency can obtain more information about the technology and determine whether multi-metals CEMS technology can operate and accurately provide multi-metals analysis when used in commercial hazardous waste incinerators. This is likewise unfair as applied to Veolia. EPA cannot unlawfully make Veolia its "guinea pig" with regard to the multi-metals CEMS just because it has the opportunity to do so.

See Veolia at 37.

EPA Response: As the Title V permitting authority for Veolia's Sauget facility, EPA has the obligation to include in the Title V permit monitoring necessary to assure Veolia's compliance with all applicable requirements and permit terms and conditions. 42 U.S.C. § 7661c(a) and (c). As discussed elsewhere in this response to comments and the SB, because of the variability of Veolia's feedstreams and the unexplained results of the various CPTs, among other factors, EPA believes that the information provided by the temporary operation of the multi-metals monitoring devices is necessary to determine whether the OPLs in Veolia's permit can assure continuous compliance with the HWC NESHAP metals emissions limits.

EPA is not making a determination in this permitting action that the standard monitoring in the HWC NESHAP is not sufficient in all situations. As discussed above, the enhanced monitoring requirements in Veolia's permit are based on EPA's analysis of site-specific factors at Veolia. EPA is also not making a determination that there are 'problems' with the monitoring in the HWC NESHAP. As discussed in RTC 3, EPA foresaw that site-specific factors may require a permitting authority to "limit additional or alternative operating parameters" or specify an "alternative approach[] to establish limits on operating parameters . . . [to] document compliance with the emission standards of [the HWC NESHAP]." 40 C.F.R. § 63.1209(g)(2). In this permitting action, after considering relevant site-specific factors, EPA has determined that such an alternative approach to establish limits on operating parameters is necessary. Alternatively, and after considering the same site-specific factors that led EPA to exercise is discretionary authority under 40 C.F.R. § 63.1209(g)(2), EPA finds that it is required to impose the monitoring requirements comprising this alternative approach under section 504(c) of the Act and 40 C.F.R. § 71.6(c)(1), if it is determined that 40 C.F.R. § 63.1209(g)(2) does not authorize the imposition of these monitoring requirements.

The Title V permits for other hazardous waste combustor facilities are not within the scope of this permitting action. However, Title V permitting authorities must consider, as EPA has in this permitting action, site-specific factors to determine whether the monitoring in a Title V permit is adequate to demonstrate continuous compliance.

B. MULTI-METALS MONITORING DEVICES

10. **Comment:** ***We fully support EPA's proposed provisions requiring Veolia to install, calibrate, maintain, and operate a multi-metals CEMS on each of its three incinerators and believe that such action is justified by the significant variability shown in Veolia's recent CPT test results and the April 2009 high arsenic concentration reading by an ambient metals monitor located less than two miles northeast of Veolia. Direct emissions monitoring using CEMS will give Veolia early warning of when its emissions start to rise, allowing it to adjust feedrates or other operating parameters to prevent exceedances of the HWC NESHAP standards. We believe that, fundamentally, the most critical action required to protect the health of the population surrounding Veolia is the installation of multi-metals stack monitors, as described in the SB and Title V permit.***

    See Comments by the Interdisciplinary Environmental Clinic at Washington University School of Law, on behalf of American Bottom Conservancy, December 19, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0106 (ABC) at 6-7; Comments by Alana Siegel, on behalf of American Bottom Conservancy, at the Veolia Public Hearing in East St. Louis, IL, on December 3, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0102 (Siegel/Hearing) at 17-18; Comments by Cooper Environmental Services, LLC, December 10, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0104 (Cooper) at 39-42.

    EPA Response: EPA notes these comments.

11. **Comment:** ***The Xact multi-metals CEMS has been tested on numerous facilities including three coal-fired power plants and two hazardous waste incinerators, which had a wide range of temperature and moisture conditions, using the Ontario-Hydro Reference Method, EPA Method 301, and EPA Method 29. The results of these tests met all applicable method parameters.***

    See Cooper at 1-38.

    EPA Response: EPA notes the observations made in this comment.

12. **Comment:** ***The Xact CEMS operated on Eli Lilly's hazardous waste incinerator (T149) for over 6 years starting in 2004, with approval for compliance monitoring received in January of 2006 following extensive validation testing. The Xact passed all quarterly and annual compliance audits between 2006 and 2010. Ultimately, the Xact was found***

by both Eli Lilly and Evonik to be a viable approach for compliance performance testing on a hazardous waste incinerator. The Xact has demonstrated 1) stable, reliable operation; 2) accuracy; 3) operation in a wide variety of sampling conditions; and 4) wide measurement range that is more than adequate to meet the monitoring requirements of Veolia's Title V permit. Cooper Environmental Services is confident that it is feasible to use this technology to measure source emissions from Veolia's incinerators.

See Cooper at 1-38.

EPA Response: EPA notes the observations made in this comment.

13. **Comment:** ***The requirement to operate the CEMS for a period of "no less than 12 consecutive months" should be clarified. In the event that a CEMS unit needs maintenance, or be shut down for some other unpreventable need, when does the 12-month clock restart? How long must the CEMS be inoperable before the 12-month clock restarts?***

See ABC at 12.

EPA Response: To address this comment, EPA has clarified Condition 2.1(D)(1)(i)(iv) to specify that Veolia must operate the monitoring devices for 12 months with complete data as specified in Conditions 2.1(D)(1)(i)(iv)(B) and (C) of the final permit. To ensure that Veolia collects a sufficient amount of data as intended by the draft permit, EPA has defined "complete data" as a minimum of 95 percent valid data capture of one-hour data for each month, based on source operating time. This data completeness rate accounts for equipment downtime for maintenance, calibration, etc. EPA will not count towards the total operating period for the monitoring devices any month in which the minimum data completeness rate was not met.

14. **Comment:** ***As required in the draft permit, the multi-metals instrument is a continuous emissions monitor, not a continuous parameter monitoring system because it requires the CEMS to be calibrated. The multi-metals CEMS as imposed on Veolia is not a parametric monitor because it does not work off the traditional premise of parametric monitoring: a known correlation between variables. EPA cannot simply call the multi-metals CEMS something that it is not (a continuous parameter monitoring system) in order to legalize its implementation. EPA does not treat the multi-metals CEMS as a temporary CPMS in the 2014 Draft Permit and to suggest that the multi-metals CEMS is a temporary CPMS without further explanation demonstrates bad faith and***

improper behavior by the Agency. It is unprecedented for EPA to require the inclusion of multi-metals CEMS as a "parametric monitor" for the FAP.

See CRWI at 2-3; Veolia at 33-34, 66-68; Ross at 4; Comments and Affidavit of Dennis J. Warchol in Support of Veolia ES Technical Solutions, L.L.C., December 19, 2014; available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0108 (Warchol) at 1.

EPA Response: As noted above in footnote 1, based on public comments, EPA acknowledges that characterizing the temporary operation of the multi-metal monitoring devices as a CEMS or a CPMS may have caused confusion. Both CEMS and CPMS are types of "Continuous monitoring system (CMS)." 40 C.F.R. § 63.2. A CMS is used for demonstrating compliance with an applicable regulation. *Id.* As EPA has explained above, the monitoring devices are being used as part of an alternative approach to setting limits on operating parameters to serve as indicators of performance, demonstrate the adequacy of the OPLs, and establish a correlation between compliance with the OPLs and compliance with the HWC NESHAP emissions limits. However, the OPLs, not data from the monitoring devices, will continue to be the method by which Veolia will demonstrate compliance with the HWC NESHAP emission limits when the devices are in operation. EPA has therefore changed references within the final permit to properly refer to the requirement to require a multi-metals monitoring device on each of the three incinerator units for the temporary period of at least 12 months, not to require the use of a CEMS or CPMS.

15. **Comment:** ***It is not appropriate to require Veolia to fund a research and development (R&D) project for multi-metals CEMS. EPA drafted the HWC NESHAP carefully to ensure that sources implement only CEMS that are technically ready to produce accurate results. In contrast, EPA has arbitrarily and unreasonably imposed an experimental multi-metals CEMS on Veolia.***

See CRWI at 5-6 and 12-13; Veolia at 28-29.

EPA Response: EPA disagrees that our proposal amounts to a requirement for Veolia to fund an R&D project for multi-metals monitoring devices. EPA is not proposing to conduct an R&D project at Veolia, given the extensive testing that has already been conducted on the Xact multi-metals monitoring devices.

Since EPA approved the first multi-metals monitoring device for installation and operation at Eli Lilly[22] for compliance purposes (making it a multi-metals CEMS), enough data about the reliability of the multi-metals monitoring device has been collected to support its use at Veolia for the purpose of demonstrating the adequacy of the OPLs. Although Veolia's operation of multi-metals monitoring devices will add to the body of experience with multi-metals monitoring devices, this permit is not an R&D project. EPA is not requiring Veolia to perform additional Method 301 testing. The performance specifications and quality assurance (QA) and quality control (QC) procedures are already written and are sufficient to show the accuracy and stability of the monitoring devices. EPA is confident in the ability of the multi-metals monitoring devices to accurately measure metals emissions, and so believes that they are a reliable means to accomplish the purposes for which EPA is requiring them in this permit action.

16. **Comment:** ***EPA has not provided support for its statement that without a CEMS, most emissions excursions from combustion of Veolia's heterogeneous feedstreams would go undetected. See SB at 57. If this were true, one would assume multi-metals CEMS would be required in NESHAP rules, but they have not.***

See CRWI at 6-7.

EPA Response: As discussed elsewhere in this document, because Veolia's waste stream constantly changes, it is impossible for the operator to continuously adjust combustion parameters such as temperature, pressure, and residence time to assure optimum combustion at all times. Therefore, the OPLs must be sufficiently stringent to assure that Veolia can maintain compliance with the emissions limits in the HWC NESHAP even if the combustion conditions are not optimal for total destruction of the metals.

The feedstream analysis procedures specified in the HWC NESHAP are designed to characterize the amount of metals fed into the incinerators and not the quantity of metals emitted through the stack. To assure compliance with the HWC NESHAP emissions limitations, there also must be an adequate correlation between feedrates and actual stack emissions. At a source with a homogeneous feedstream, or a feedstream that does not vary on a "minute by minute" basis, this can be accomplished by periodically conducting a CPT to establish the OPLs; however, because of the variability of Veolia's waste stream, and other site-specific factors discussed in RTC 2, a single CPT is insufficient to

[22] As mentioned in Table 1, above, the SCAQMD recently also approved the temporary use of a multi-metals CEMS to monitor lead emissions at a secondary lead smelter operated by Quemetco. Quemetco continues to operate the multi-metals CEMS as a process monitor. *See* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/quemetco/quemetco_062316pm_presentation.pdf?sfvrsn=2 and Document ID. EPA-R05-OAR-2014-0280-0141.

demonstrate that the OPLs can assure compliance with the HWC NESHAP emissions limits at all times.

By design, the multi-metals monitoring devices directly measure exhaust stack emissions; therefore, measurements obtained by the monitoring devices can be directly compared to the applicable emissions limits. Properly installed and operated multi-metals monitoring devices would be expected to be as accurate as, and less expensive than, multiple stack tests that would be necessary to measure the actual levels of emissions under the wide variety of conditions that exist at Veolia.

Based on the site-specific factors related to the Sauget facility, including the wide variability of the waste stream, EPA believes that there is a great likelihood - which may not necessarily exist at other facilities - that the emissions from this facility could exceed the mercury and heavy metals emissions limits in the HWC NESHAP. Because the multi-metals monitoring devices will measure emissions on a continuous basis, they can detect short term emissions excursions caused by any variability in metal concentrations in the feedstream. Therefore, EPA believes that the combination of the enhanced feedstream analysis provisions included in the permit and temporary installation and operation of multi-metals monitoring devices is necessary to ensure that Veolia's compliance with its OPLs can assure continuous compliance with the metal emissions standards at Veolia's Sauget facility.

17. **Comment:** ***It is misleading and inappropriate for EPA to cite to the preamble to the proposed Commercial/Industrial Solid Waste Incinerators (CISWI) rule to state that EPA has evaluated multi-metals CEMS against EPA Method 29. While the statement in the preamble is an accurate quote from the proposed CISWI rule, it does not mean that the statement is correct. In fact, in the final rule, EPA declined to require multi-metals CEMS in spite of extensive comments submitted by the developer of the Xact system. The rationale EPA provided was that it had not promulgated a performance standard. It should be noted that other test method (OTM) 16 and OTM 20 existed at that time but were not recognized as valid performance specifications. Thus, EPA cannot use them now in Veolia's circumstance.***

See CRWI at 8-10.

EPA Response: The CISWI proposal cited by the commenter explains that "EPA believes multi-metals CEMS can be used in many applications, including CISWI. EPA has monitored side-by-side evaluations of multi-metals CEMS with EPA Method 29 of Appendix A–8 of 40 C.F.R. Part 60 at industrial waste incinerators and found good correlation. EPA also approved the use of multi-metals CEMS as an alternative

monitoring method at hazardous waste combustors." 75 Fed. Reg. 31938, 31962 (June 4, 2010).

The results of one such side-by-side evaluation referenced by EPA in the CISWI proposal can be found at http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA433778 (*See* Document ID. EPA-R05-OAR-2014-0280-0140). The fact that the multi-metals CEMS were not required by the final CISWI rule was not a reflection on the technology since information received by EPA regarding multi-metals monitoring devices prior to promulgation of the CISWI final rule was generally positive. Many factors are used to determine the monitoring requirements in a rulemaking proceeding. Although EPA chose not to require the use of multi-metals CEMS for purposes of the CISWI rule, EPA has determined that, in a situation such as Veolia's, in which the feedstream is extremely variable, temporarily using the multi-metals monitoring devices allows EPA to establish a correlation between compliance with OPLs and actual metals emissions.

We disagree with the commenter's statement that OTM 16 and 20 cannot be used at Veolia because they have not been promulgated. EPA has not promulgated OTM 16 and OTM 20 as the performance specifications and ongoing QA and QC for multi-metals monitoring devices because EPA believes that there needs to be additional work done to develop more universally applicable performance specifications with respect to both the monitoring equipment and the emission sources. However, as evidenced by the Eli Lilly AMP approval, the agency has found the use of OTM 16 and 20 or similar performance specifications and/or quality assurance procedures acceptable for application in individual cases. *See* Document ID. EPA-R05-OAR-2014-0280-0193 (Category C methods such as OTM 16 and 20 "may be considered for use in Federally enforceable State and local programs (e.g., Title V permits, State Implementation Plans (SIPs)) provided they are subject to an EPA Regional SIP approval process or permit veto opportunity and public notice with the opportunity for comment.") Title V of the Act does not prohibit EPA from requiring the use of QA and QC procedures that have not been universally promulgated, provided EPA has determined that those procedures are applicable to the specific source being evaluated. *See* Document ID. EPA-R05-OAR-2014-0280-0083 (EPA Memorandum on Use of Draft Performance Specifications).

18. **Comment:** ***In both the Portland Cement MACT reconsideration rule and CISWI rule, EPA declined to use OTMs during the rulemaking or declined to require CEMS because there was no promulgated performance specification for that instrument. It is inconsistent for the Agency to now decide that these two OTMs are adequate without any additional review of the circumstances associated with the Veolia site.***

See CRWI at 10 and Ross at 3.

EPA Response: EPA generally has promulgated performance specifications for CEMS before they are used for compliance monitoring. See, for example, 40 C.F.R. § 63.8(a)(2), which specifies that, for the purposes of 40 C.F.R. Part 63, "all [continuous monitoring systems] required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator." However, as discussed previously, EPA is not requiring the multi-metal monitoring devices to be used as a CEMS or CPMS. *See* footnote 1 and RTC 14. We believe imposition of continuous monitoring requirements when there is no promulgated performance specification is acceptable in situations where, as here, the required monitoring devices would not be operated as "CEMS" used for direct compliance with emission standards.

In addition, EPA can impose continuous monitoring requirements under Title V without a promulgated performance specification, provided that EPA includes appropriate QA and QC procedures within the permit. *See* the McNally Memo (the permitting authority is required to incorporate into the Title V permit acceptable performance specifications for the continuous monitoring system, and may rely on a draft performance specification to develop such performance specifications).[23]

19. **Comment:** ***While EPA's statement that Yanca et al. evaluated both the Xact and the quantitative aerosol generator (QAG) is accurate, it was only evaluated for the conditions and the flue gas conditions at the Evonik hazardous waste combustor. It has not been verified anywhere else. Additionally, the sampling system used by Evonik is different than the current system being used by the Xact. EPA is assuming the QAG would work the same way using a different sampling system. An acceptable validation of any installed Xact® CEMS must be appropriately performed on a unit-specific basis.***

See CRWI at 12; Veolia at 60; Comments by TestAmerica and Focus Environmental, Inc., December 9, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0103 (TestAmerica and Focus Environmental (2014)) at 11; and Comments by TestAmerica and Focus Environmental, Inc., April 8, 2015, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0117 (TestAmerica and Focus Environmental (2015)).

[23] Dianne J. McNally, Air Toxics Coordinator, EPA Region III to Tamera Thompson, Virginia Department of Environmental Quality, May 30, 2001 (the permitting authority is required to incorporate into the Title V permit acceptable performance specifications for the continuous monitoring system used to comply with the Pulp and Paper MACT standard, and may rely on a draft performance specification to develop such performance specifications). (McNally Memo). Available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0083.

EPA Response: Yanca *et al*. (*See* Document ID. EPA-R05-OAR-2014-0280-0082) used Method 301 to determine the precision, accuracy and bias of the Xact multi-metals CEMS at the Eli Lilly facility. Method 301 is EPA's validation method and is not the same as the OTMs which are the suggested test methods for sources. Method 301 should not determine different precision, accuracy or bias at other incinerators. Based on the publicly available information discussed in this response to comments document, and in the SB, we believe that multi-metals monitoring devices would perform at Veolia in a similar manner to the ones at Eli Lilly or TEAD.

Note that while more validation, particularly on different sources, is preferable, EPA is not required to perform validations on multiple facilities before deeming a technology acceptable. For example, section 17.1.1 of Method 301 explains that if the alternative test method has been validated at another source and a source can demonstrate to the Administrator's satisfaction that the affected source is similar to that source, then the Administrator may waive the requirement to validate the alternative test method.[24] We believe that the Eli Lilly facility is sufficiently similar to the Veolia facility, therefore, for purposes of this permit action, we can reasonably rely upon the Method 301 validation testing conducted at the Eli Lilly facility.

20. **Comment:** ***The use of the Xact monitor for fenceline, ambient air monitoring is not a valid comparison to requiring a multi-metals CEMS to be installed on a stack.***

See CRWI at 12.

EPA Response: This comment suggests a misunderstanding of EPA's purpose for including the cited narrative in the SB. The statement cited by the commenter was never intended to suggest that ambient monitoring is similar in scope or complexity to stack sampling and measurement. The SB explains that EPA has recently evaluated the use of the multi-metals monitoring *technology* for ambient fenceline multi-metals monitoring for compliance determinations, ambient health exposure studies, and for locating and evaluating unknown sources of metals emissions. SB at 61, fn 61. While ambient fenceline monitoring technology often varies significantly from stack sampling and measurement technology, the technology employed in the Xact 625 fenceline monitor is an outgrowth of the multi-metals monitoring technology for stack monitoring and is only slightly different. In discussing in the SB the fact that similar technology now exists for fenceline monitoring, EPA was demonstrating that the multi-metals monitoring *technology* has been replicated for ambient monitoring purposes because it has been found to be viable.

[24] 76 Fed. Reg. 28664, 28673 (May 18, 2011) (*See* Document ID. EPA-R05-OAR-2014-0280-0194).

21. **Comment:** ***EPA has not published performance specifications for multi-metals CEMS. Without this, one cannot know the precision and accuracy of the instrument, thus it is nearly impossible to understand the value of the data generated by the instrument.***

See CRWI at 13.

EPA Response: EPA generally has promulgated performance specifications for CEMS before they are used for compliance monitoring. We believe imposition of continuous monitoring requirements when there is no promulgated performance specification is acceptable in situations where, as here, the required monitoring devices would not be operated as "CEMS" used for direct compliance with emission standards. However, as discussed previously, EPA believes that it can impose continuous monitoring requirements under Title V without a promulgated performance specification, provided that EPA includes appropriate QA and QC procedures within the permit.[25] Although we believe the OTMs need additional support to ensure they are more universally applicable before we would promulgate and generally require them, such as in a MACT, we believe they are appropriate to apply on a case-by-case basis. Moreover, OTMs 16 and 20 have been validated using Method 301 which is EPA's method for validating test methods and determining precision and bias. *See* section 3.1 of Method 301.

22. **Comment:** ***OTMs 16 and 20 were written specifically for Lilly's source and instruments and one may not be able to assume that either could be used at another facility without significant modification, especially since Lilly used a different sample transport system than would likely be used at Veolia. Additionally, Lilly spent considerable time and resources in developing the lab and stack test data underlying the methods and it is likely that Veolia would be required to spend significant time to develop a QAG appropriate for their site.***

See CRWI at 13-14.

EPA Response: While we agree that OTMs 16 and 20 were written for the Lilly multi-metals CEMS, we disagree with the commenter's assertion that OTMs 16 and 20 are site-specific and not applicable to Veolia's Sauget operations. EPA recognizes that it may need to revise OTMs 16 and 20 if future experiences with multi-metals monitoring devices reveal that modifications are necessary. However, that does not negate the applicability of OTMs 16 and 20 to Veolia or any other facility at which a multi-metals monitoring device is installed in the future. The appendix to the Lilly AMP discusses the

[25] See McNally Memo. Available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0083.

broad range of sources and conditions to which the Xact has been successfully applied. *See* "*Method 301 Evaluation of Candidate Conditional Methods: X-Ray Based Filter Method (XFM); Multi-Metals Instrumental Analyzer Procedure (Xact-IAP); Quantitative Reference Aerosol Generator (QAG)*," prepared by Cooper Environmental Services, LLC for Eli Lilly (June 2005) (Method 301 Evaluation Report) at 55-67.[26]

Although OTMs 16 and 20 were developed at Lilly's stack, there is nothing in these procedures that is specific to Lilly's stack. Instead, they provide a general procedure that can be applied in many locations. In fact, the Xact and its procedures have been successfully applied to coal combustion sources equipped with a baghouse and a wet scrubber under a SBIR project. *See* SBIR Phase I Final Report: Feasibility of Monitoring Heavy Metal Emissions from a Coal-Fired Thermal Hazardous Waste Incinerator Using a Multi-Metal Continuous Emissions Monitor; EPA Contract No.: EP-D-07-026, Cooper Environmental Services, LLC, August 30, 2007.[27] As we have previously stated, OTMs may be considered for use in permitting and development of SIPs provided they are subject to an EPASIP approval process or permit veto opportunity and public notice with the opportunity for comment.[28]

23. **Comment:** ***EPA cannot use a one-hour block average as an indicator of a deviation when 40 C.F.R. § 63.1209(n) allows for a 12-hour rolling average. Even though a deviation is not defined as a violation, the permit requires Veolia to undertake analysis and corrective actions when a deviation occurs. Thus, basing a deviation on a one-hour block average is more restrictive and not allowed without justification.***

See CRWI at 14-15.

EPA Response: As discussed in response to other comments, below, EPA has revised Condition 2.1(D)(1)(i)(ix) to specify that any 1-hour block measurement outside of the indicator range would be considered an "excursion" as defined at 40 C.F.R. § 64.1. An excursion means a departure from an indicator range established for monitoring, consistent with the averaging period specified for averaging the results of the monitoring. A deviation, on the other hand, means a departure from some term or condition of the permit. A 1-hour block average provides Veolia with an opportunity to make the necessary adjustments to its operations before a violation potentially occurs. If EPA were

[26] The Method 301 Evaluation Report is available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0082 (attachment). The Lilly AMP is also available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0081.

[27] Available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0082 (attachment).

[28] https://www.epa.gov/emc/emc-other-test-methods#Other Test Methods (*See* Document ID. EPA-R05-OAR-2014-0280-0193).

to define an excursion as an exceedance of the 12-hour rolling average concentration, Veolia would not be in position to make the necessary adjustments to its operations in time to avoid causing a potential violation. The multi-metals monitoring device alerts the operator that a violation might occur unless actions are taken to avoid it.

24. **Comment:** ***Since the Xact cannot measure beryllium, Veolia will be required to create a CEMS-like estimate of emissions using metals feedrate, system removal efficiency and stack gas data pursuant to page 34 of the draft permit. As a result, Veolia will need a Feedstream Analysis Plan, real-time feedrate monitoring, and OPLs for metals, even assuming that the facility is able to get CEMS to operate properly. This is not fair.***

See CRWI at 15.

EPA Response: The requirement for temporary installation and operation of multi-metals monitoring devices does not replace any provision of the HWC NESHAP, including the requirement to develop and comply with a FAP sufficient to document the concentrations of beryllium in each feedstream. The multi-metals monitoring device requirements do not require Veolia to conduct more frequent analysis of its feedstreams for beryllium than required under the FAP. This is because EPA is not requiring the multi-metals monitoring devices to directly monitor compliance with the emission standards of the HWC NESHAP. Therefore, Veolia will continue to use the feedstream analysis data it collects under the FAP to quantify beryllium emissions as required by the HWC NESHAP. EPA is requiring Veolia to operate the monitoring devices temporarily to establish that compliance with the OPLs can assure continuous compliance with the HWC NESHAP metals emissions limits. However, consistent with the permit and the HWC NESHAP, Veolia may petition the Administrator at any time to allow permanent operation of the multi-metals monitoring devices in lieu of continuing with feedstream analysis and compliance with OPLs.

25. **Comment:** ***The Portland Cement MACT does not provide support for CEMS in this context. The purpose of the CEMS in the Portland Cement MACT, like parametric monitoring in other contexts, is to ensure that the PM control is operating properly. The Portland Cement MACT does not provide any support for using the CEMS as a way to "assess whether the identified parameters and operating parameter levels are adequate to assure compliance with the emission limits set forth in the HWC MACT" (Statement of Basis at 53).***

See Ross at 2.

EPA Response: This comment suggests a misunderstanding of the purpose for which EPA referenced the Portland Cement NESHAP rulemaking in the SB. EPA was merely providing an example of a recent rulemaking in which EPA used CEMS technology as an alternative monitoring technology, in that case a CPMS. Similarly, EPA is requiring technology that can and has been used as CEMS to be used in a non-CEMS manner as part of an alternative approach to establish limits on operating parameters to ensure compliance with the HWC NESHAP emission limits. As discussed in response to other comments above, *see* footnote 1 and RTC 14, EPA is no longer referring to the monitoring devices as CPMSs.

26. **Comment:** ***EPA is arbitrarily and capriciously requiring the use of an unproven technology (i.e. a multi-metals CEMS) to verify a proven and required means of compliance (i.e. the OPLs and FAP) and the agency has improperly modified the process for alternative monitoring.***

See Ross at 2-3.

EPA Response: The requirement for temporary installation and operation of the multi-metals monitoring devices does not eliminate or modify the AMP process of 40 C.F.R. § 63.7(f). As discussed elsewhere in this document, for purposes of this permit, EPA is not requiring Veolia to install and temporarily operate the monitoring devices in lieu of compliance with the monitoring requirements of the HWC NESHAP. Instead, because of the variability of the waste incinerated by Veolia, among other reasons, EPA believes that actual emissions data are necessary to ensure that the OPLs established in the permit can assure continuous compliance with the HWC NESHAP emissions limits. The multi-metals monitoring devices are part of an alternative approach under 40 C.F.R. § 63.1209(g)(2) to establish limits on operating parameters, or alternatively, are imposed pursuant to the mandate of section 504(c) of the Act and 40 C.F.R.§ 71.6(c)(1). The AMP provisions of 40 C.F.R. § 63.7(f) and the HWC NESHAP will continue to be available to Veolia, both during and after the period in which it operates the multi-metals monitoring devices.

27. **Comment:** ***EPA abdicated its regulatory obligation to determine whether the Xact CEMS technology will effectively protect human health and the environment. EPA has predetermined that the Xact CEMS is going to be required at Veolia and transferred the obligation to justify this predetermined answer to Veolia.***

See Ross at 3.

EPA Response: EPA disagrees with this comment. As discussed elsewhere in this response to comments and in the SB, EPA worked with Eli Lilly for 3 years verifying this technology and approving it for use on Lilly's Tippecanoe facility, where it operated without any major issues for more than 6 years. The Xact multi-metals monitoring device, used as a CEMS at Lilly, reliably recorded real-time metal emissions data from Lilly's stack for more than 6 years, which helped ensure that emissions standards were not exceeded.

EPA believes that the data which can be obtained from the multi-metals monitoring devices is essential to protecting human health and the environment in the Sauget area. Currently, neither Veolia nor EPA can be sure that emissions from Veolia's operations continuously comply with the HWC NESHAP emission limits. Veolia incinerates waste from thousands of sources, and the waste that it incinerates varies "minute by minute."[29] For that reason, EPA has reasonably determined that it is necessary to require an alternative approach to establish that Veolia's compliance with the OPLs in the permit can assure continuous compliance with the applicable HWC NESHAP emissions limits under all combustion conditions and when burning any mix of wastes.

28. **Comment:** ***The CEMS data will be too unreliable to accomplish EPA's objective of correlating the CEMS and the feedrate concentrations.***

See Ross at 3.

EPA Response: EPA disagrees with this comment. As discussed more fully in responses to other comments, below, EPA believes that the multi-metals monitoring devices will be reliable for measuring real-time concentrations of specific metals as they are emitted through the stack. At the same time, the enhanced feedstream analysis provisions will ensure that the Permittee will have the information it needs to document concentrations of metals in each feedstream. EPA and Veolia will use this information to determine whether the necessary correlation exists.

29. **Comment:** ***Comprehensive Performance Tests produce the best data for compliance because they are run under the worst case operating conditions. EPA cannot just now discount CPTs as a valid measure of compliance, in view of the CPT's central importance to demonstrating compliance under the HWC MACT. Under the HWC MACT, sources can only use Method 29 or proven alternative to demonstrate compliance. Method 29 is the 'gold standard' not multi-metals CEMS.***

[29] Veolia at 102.

See Ross at 3-4.

EPA Response: The commenter appears to misunderstand the purpose for which EPA is requiring installation and temporary operation of the multi-metals monitoring devices. The data collected during the 12-month period during which the Permittee operates the multi-metals monitoring devices will be used to establish a correlation between actual emissions and the feedrates. If the monitoring device data show excursions from applicable emissions limits, EPA can use the data in making a determination whether the OPLs are sufficiently stringent to assure continuous compliance with the HWC NESHAP emissions limits. The Permittee will continue to demonstrate compliance with the applicable emissions standards using CPTs and other compliance provisions of the HWC NESHAP.

30. **Comment:** ***There are no promulgated performance specifications for the multi-metals CEMS and EPA cannot establish them by just posting them on its website.***

See Ross at 4; Veolia at 63.

EPA Response: The commenter correctly notes that EPA has not promulgated performance specifications or quality assurance procedures for multi-metals monitoring devices. However, EPA has posted to its website (https://www.epa.gov/emc/emc-other-test-methods), in the "Other Test Methods" category, performance specification OTM 16 and quality assurance procedures OTM 20 for multi-metals monitoring devices. We believe that these are appropriate for use at the Veolia incinerators.

EPA often proposes performance specifications (or revisions to existing performance specifications) at the same time as the standard that proposes to require the use of technology to which the specific performance specifications apply (e.g., NESHAP or New Source Performance Standard, NSPS). For example, in 1996, EPA proposed Performance Specifications 10 and 12, for multi-metals CEMS and mercury CEMS, respectively, in conjunction with the original HWC NESHAP, but did not promulgate either performance specification. However, EPA recently promulgated Performance Specification 12A for mercury CEMS in conjunction with amendments to the Portland Cement national emissions standards. *See* http://www.epa.gov/ttn/emc/perfspec/ps-12A.pdf (Document ID. EPA-R05-OAR-2014-0280-0197). Performance specifications for CEMS are designed to establish initial accuracy by measuring CEMS performance against a reference standard or against a reference method, and establish operating requirements and ongoing QA/QC procedures specific to the associated CEMS. Performance specifications ensure that each person who must comply with the applicable standard determines compliance using exactly the same procedures. Performance

specifications simply ensure that measurement results are comparable among sources, and that data is collected through the same process used to set the standard (or the process that was envisioned when the standard was set).

Although OTMs are not promulgated, permitting agencies have traditionally used them in Title V permits. In fact, EPA has encouraged their use in Title V permits: "[OTM] methods may be considered for use in Federally enforceable State and local programs (e.g., Title V permits, SIPs) provided they are subject to an EPA Regional SIP approval process or permit veto opportunity and public notice with the opportunity for comment." *See* EMC Other Test Methods, https://www.epa.gov/emc/emc-other-test-methods#Other Test Methods; Document ID. EPA-R05-OAR-2014-0280-0193. Under Title V, regardless of whether the monitoring is taken directly out of a NESHAP or NSPS, the permitting authority is still required to verify that the existing monitoring and any associated performance specifications are adequate to assure compliance with the applicable requirements. *See* 42 U.S.C. § 7661c(a) (requiring each Title V permit to contain, among other things, such other conditions as are necessary to assure compliance with applicable requirements).

EPA believes that the Act authorizes a permitting agency to include in a Title V permit site-specific performance specifications developed by the agency, or revised portions of existing performance specifications if the agency determines that those portions are not applicable to the specific source being evaluated, supplemented to account for facts specific to the source or to assure compliance with the applicable requirement. *See* McNally Memo.[30] Additionally, the Act does not prohibit a permitting agency from requiring in a Title V permit the use of performance specifications that EPA has previously reviewed and approved for use in a similar facility even if those performance specifications have not yet been promulgated if it can determine that those specifications are applicable to the specific source being evaluated.

Further, although multi-metals monitoring device performance specifications have not yet been subjected to a formal rulemaking process, EPA has published specifications and quality assurance procedures for the multi-metals monitoring devices on its website as OTM 16 and 20. As historical practice indicates, OTM specifications and procedures can be used for compliance purposes with the approval of the permitting authority. EPA believes that these OTMs can certainly be used when, as here, EPA is not requiring Veolia to use the data from the multi-metals monitoring as a direct measure of compliance with the emission limits. As the Title V permitting authority for Veolia's Sauget facility, EPA believes that the specifications and procedures published as OTM 16

[30] Available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0083.

and 20 are appropriate for the multi-metals monitoring devices. In addition, these specifications and procedures were reviewed and approved by EPA under 40 C.F.R. § 63.7(f) as part of the Eli Lilly AMP approval process. The commenter has not identified any specific inadequacies in these performance specifications.

31. **Comment:** ***The Xact multi-metals CEMS has never been tested or installed on incinerators such as those at Veolia.***

See Ross at 4.

EPA Response: As discussed elsewhere in this document, the appendix to the Lilly AMP discusses the broad range of sources and conditions to which the Xact has been successfully applied. EPA believes that the broad range of conditions described in the appendix to the Lilly AMP encompasses the stack conditions expected at Veolia's stacks. Although the QA/QC procedures in OTMs 16 and 20 were developed based on testing conducted at Lilly, EPA believes that those procedures are applicable at other commercial and non-commercial incinerators, including Veolia. In fact, based on information available to EPA as further discussed elsewhere in this document, the Xact and its procedures have already been successfully applied to other sources.

Sampling modules and transport lines for the Xact have been developed for many different sampling conditions including those existing at Lilly (downstream of a wet scrubber and a natural gas fired source); at coal fired power plants (downstream of multiple control devices including baghouses in combination with wet scrubbers, electrostatic Precipitators (ESPs) alone, and downstream of ESPs and wet scrubbers), and with bituminous, sub-bituminous and lignite fuels at munitions incinerators (diesel fired source downstream of a baghouse). Appropriate transport systems were installed at all of these locations.[31]

32. **Comment:** ***Method 29 rigorously requires the sample that is analyzed be collected isokinetically at multiple points across the stack to ensure that a representative sample of the stack gas is collected, including both aerosol and gas-phase constituents. However, operating data for installed and evaluated Xact CEMS do not report the isokinetic sampling rate. Following collection of the Method 29 sample, the entire sampling train is rinsed (with reagents specified in the method), and all the components recovered from the sampling train (from the nozzle to the impingers used to collect gas-phase metals) are analyzed for metals in a laboratory (using methods***

[31] *See* Pall Corporation Comments on the Secondary Lead Smelter MACT Rule at 10; Document ID. EPA-R05-OAR-2014-0280-0082 (attachment).

specified in Method 29). By comparison, while different sample collection configurations are found for applications of the Xact multi-metals CEMS, the sample acquisition systems always include a transport line, and may include a stilling chamber, water trap, and/or drying chamber. None of the components from the sample acquisition system are recovered or analyzed for inclusion in the results for a multi-metals CEMS.

See Ross at 4.

EPA Response: EPA recognizes that multi-metals monitoring devices and Method 29 are two different measurements, with different sampling systems, and EPA is not making the assertion that the multi-metals monitoring device is identical to Method 29. Method 29 provides the requirements and procedures that a source must follow in conducting a stack test for heavy metals. The operation of the multi-metals monitoring devices is not intended to, and does not, alter Veolia's obligation to perform CPTs and to follow Method 29 during those tests. However, we believe, based on the Eli Lilly experience and other tests described elsewhere in this document, that measurements made by the multi-metals monitoring devices will be comparable to Method 29 measurements.

33. **Comment:** ***EPA's belief that a correlation can be determined between the multi-metals CEMS data and the feedrate concentrations reported through feedstream analysis is wrong and unsupported. Veolia believes metals will accumulate in the test probe and umbilical and metals will not be sampled by the multi-metals CEMS contemporaneously with the material being incinerated creating results that are unreliable.***

See Veolia at 53-56.

EPA Response: As discussed elsewhere in this document, previous comparisons between the Xact multi-metals monitoring device and EPA Method 29 readings at other facilities have demonstrated excellent comparability between the results reported by the two test methods. If significant uncertainty were to result from metals accumulating in the test probe and umbilical of the monitoring device, as the comment alleges, the previous comparative tests would not have shown comparable results between Method 29 and the multi-metals monitoring device measurements. The commenter has not provided any evidence that this problem has occurred at other facilities that have operated the multi-metals monitoring devices or explained why it would occur at the Veolia facility.

Cooper has provided the following additional information to explain why material buildup will not cause unreliability in the Xact multi-metals monitoring device measurements:

> Firstly, the Xact samples a subsample from the full emission stream and then collects another smaller subsample of that sample. [The large chunk] of built-up PM on the transport wall would have to be extremely well distributed across the entire transport line to have the possibility of falsely impacting the Xact's filter and detector. Secondly, [Cooper] uses a heated transport line, so the argument that cooling gas emissions would deposit particulate on transport walls is simply not an issue. The temperature of the transport line is approximately 190°C, which is quite close to the maximum temperature at Veolia prior to pollution controls of 204-216°C.... The temperature may cool after pollution control treatment, but it will not cool (or only cool negligibly) in the Xact's transport system....
>
> The sampling module and transport line of the Xact operate under high temperatures to prevent condensation of stack gas. Both the main line and the subsample line are continuously heated. The Xact 640 requires external heater controls for ensuring that the sample transport line is properly heated. The sample line heater controller must be [set to] 190°C which allows for the transport of oxidized mercury species, as well as preventing the condensation of water and acid vapors, [and] reducing the likelihood of particulate condensation on the transport line walls. In addition, the Xact samples a small subsample from the central flow through the transport line, so the large particles that might break or flake off from the transport line's wall, unlikely as that may be, would be extremely unlikely to have an impact on the concentration reading of the Xact.

See Cooper Environmental Services Supplemental Submittal, March 27, 2015; available at regulations.gov, document ID. EPA-R05-OAR-2014-0280-0115 (Cooper Supplemental Submittal) at 6-8. *See also* document ID. EPA-R05-OAR-2014-0280-0113 (attachments).

34. **Comment:** ***The challenges with the HWC MACT that EPA presents in section 5.3.2 of the SB were present when the HWC MACT was developed and would be more***

appropriately addressed in a revision to the MACT than to Veolia's permits. Multi-metals CEMS have not been approved for use in the HWC MACT nor Title V or its implementing regulations.

See Veolia at 56-57 and CRWI at 6-7.

EPA Response: EPA disagrees with the notion that one must first have a nationally promulgated standard that requires a multi-metals monitoring device for compliance before a permitting authority can include in a Title V permit a requirement to use a multi-metals monitoring device at any specific source. This notion ignores the fact that there can be significant variability between facilities such that increased monitoring necessary at one facility to assure compliance with applicable requirements is not necessarily needed at other facilities to achieve the same level of compliance assurance. As discussed above, EPA has authority under the HWC NESHAP and an obligation under Title V to consider those site-specific factors to determine whether the monitoring requirements are sufficient. By evaluating site-specific facts discussed above, EPA has determined that additional feedstream analysis is necessary to assure Veolia's compliance with its OPLs, and additional measures are necessary to establish that the OPLs will assure Veolia's continuous compliance with the emission limits in the HWC NESHAP. Therefore, EPA is requiring enhanced FAP in the final permit to assure accurate characterization of the waste streams and installation and temporary operation of multi-metals monitoring devices on each of the three incinerators to verify the adequacy of the OPLs.

35. **Comment:** ***Multi-metals CEMS technology has not been analyzed and verified by EPA. EPA's assertion that uncertainties caused by feedstream analysis can be largely resolved by use of a well-maintained and operated CEMS, is not supported and unwarranted.***

See Veolia at 56-57 and CRWI at 7.

EPA Response: As discussed elsewhere in this document and the SB, EPA's main purpose for imposing the requirement to install and temporarily operate the multi-metals monitoring devices is to verify whether Veolia's OPLs will assure continuous compliance with the emissions limits in the HWC NESHAP. However, as discussed in the SB, by revealing unexpected emissions of mercury or other heavy metals, the monitoring devices could also expose problems with Veolia's analysis of its feedstreams.

As stated in EPA's website describing metals and mercury emissions monitoring,[32] the Army installed a multi-metals monitoring device at its chemical demilitarization facility in Tooele, Utah, and evaluated the device's performance while combusting expired chemical munitions containers in its hazardous waste combustor. Moreover, a subsequent version of that multi-metals CEMS was approved in 2006 to demonstrate compliance with the HWC NESHAP at Eli Lilly's Tippecanoe facility. A copy of that permit (number 157-22717-00006) can be viewed at the following internet address: http://permits.air.idem.in.gov/22717f.pdf (*see* Document ID. EPA-R05-OAR-2014-0280-0225). In addition, the multi-metals monitoring device has been validated using EPA Method 301, which is EPA's validation method for test methods.

36. **Comment:** ***In section 5.3.3 of the SB, EPA incorrectly views as a deficiency the fact that Veolia's October 2013 comprehensive performance tests revealed that Veolia's three incineration units have significantly different emissions that may not be linear.***

See Veolia at 57.

EPA Response: As explained in the SB, the October 2013 test results showed that, despite nearly identical feedrates, emission unit design, and control equipment, stack concentrations of mercury and other metals were significantly different between Units 2 and 3. As Veolia has previously explained (emphasis added):

> The two fixed hearth units are rated at 16 million Btu/hr each. *Unit 3 is a mirror image of Unit 2*. Both of these units have their own waste handling systems as described in the following sections. The only difference being Unit 2 is equipped with four (4) baghouse modules, while Unit 3 is equipped with three (3) baghouse modules. However, *each incinerator is operated identically with only three baghouse modules in service during operation*.[33]

In fact, Veolia has previously requested that future CPTs be conducted on either Unit 2 or Unit 3 but not on both units, and that EPA use the test data on one unit to infer emissions from the untested unit. *See* Veolia's April 11, 2008 response to EPA memorandum on Veolia's data-in-lieu request at 10-12 (Document ID. EPA-R05-OAR-2014-0280-0224). During the 2013 CPT, the average mercury feedrate to Unit 2 was 0.00212 lb/hr (*see*

[32] https://www.epa.gov/emc/emc-metals-and-mercury-emissions-monitoring

[33] *See* Veolia's 2013 CPT Plan for Unit 2, Section 2.1. (June 27, 2013), at 2-1 (Document ID. EPA-R05-OAR-2014-0280-0064). Also, *see* Veolia's 2008 CPT Plan for Unit 2, Section 2.1. (May 2008), Page 1 of 12 (Document ID. EPA-R05-OAR-2014-0280-0124). *See also*, Veolia's April 11, 2008 response to EPA memorandum on Veolia's data-in-lieu request at 12 (Document ID. EPA-R05-OAR-2014-0280-0224) ("In addition, even though the waste that these units are incinerating vary considerably, the units themselves perform identically when incinerating them.")

2013 CPT Report, Table 2-3, Document ID. EPA-R05-OAR-2014-0280-0005) and the average mercury feedrate to Unit 3 was 0.00221 lb/hr (*see* 2013 CPT Report, Table 2-7). In contrast, the average mercury stack concentrations measured at the stacks of Units 2 and 3 were approximately 100 and 48 µg/dscm corrected to 7% O_2, respectively (*see* Tables 1-3 and 1-4 of the 2013 CPT Report, respectively). Thus, despite the mercury feedrates to Units 2 and 3 differing by less than 5%, the corresponding stack concentrations differed by more than a 2:1 margin. These emission levels correspond to 37% and 77% of the emission limit for mercury. *See also* RTC 2 and Summary of Historic Emissions, EPA-R05-OAR-2014-0280-0258 (showing variability in SVM and LVM emissions from the incinerator units).

As described in more detail elsewhere in this document, EPA believes an evaluation of unit-specific emissions is warranted. Although the observed significant differences in emissions may not indicate a "deficiency" in the manner in which the units are being operated, it, along with the heterogeneity of the feedstreams and other factors discussed in the SB and this response to comments, show that a single CPT is an insufficient means of predicting Veolia's emissions or to ensure that its OPLs are adequate to assure continuous compliance with the HWC NESHAP emissions limits. The test results illustrate that a simple linear calculation does not appear to be appropriate for estimating metal stack concentrations from the emission units. Considering this information, and the other site-specific factors, *see* RTC 2, EPA has determined that a there is a likelihood of a violation of the HWC NESHAP emission limits. This is one of the factors that led to EPA's determination that the enhanced FAP and temporary operation of multi-metal monitoring devices were necessary as an alternative approach to establish limits on Veolia's operating parameters.

37. **Comment:** ***Veolia's CPT results demonstrate compliance while generating emissions under the worst case operating conditions for the particular combination of wastes incinerated and combustion conditions at the time of the test. By EPA's own admission, Veolia's CPT tests have established OPLs that represent the highest emission levels Veolia would typically emit under reasonable anticipatable circumstances and worst case operating conditions. It is unreasonable for EPA to question the representativeness of the test when the testing emission levels are typically the highest levels the source emits and when EPA approved of the test plan and the accuracy of Veolia's results. EPA states that installation of multi-metal CEMS are necessary to verify that the feedrate limits and the supplemental feedstream analysis procedures assure compliance with the HWC NESHAP emission limits. If Region 5 really believed that the supplemental feedstream analysis procedures proposed in the 2014 draft permit did not assure compliance with the HWC NESHAP, USEPA should have proposed additional procedures until it has such assurance.***

See Veolia at 58 and 110-111.

EPA Response: The HWC NESHAP requires Veolia to conduct its CPTs under operating conditions that represent the extreme range of normal conditions. Thus, if Veolia burned homogeneous feedstreams, demonstrating compliance with the emission standards at the extreme range of normal operating conditions would also demonstrate compliance at normal feedrate and operating conditions. However, because of the factors discussed in the SB and elsewhere in this response to comments document, particularly the "minute by minute" variability of the waste streams incinerated by Veolia, along with the variability in emissions from the incinerator units, and the ever-changing nature of Veolia's waste supplier base, EPA is not confident that the mixes of waste and operating conditions during the CPT represented the extreme range of normal conditions or resulted in worst case emissions. Further, because of the site-specific factors discussed throughout this document, EPA does not believe that CPTs conducted every 5 years can, by themselves, demonstrate compliance during normal daily operations.

Even if conducted under the worst case operating conditions, a CPT conducted once every 5 years provides only a snapshot of Veolia's emissions "for the particular combination of wastes incinerated and combustion conditions at the time of the test." *See* Veolia at 58. Because of the variability of its waste streams, among other things, the CPTs do not necessarily represent actual emissions with respect to all feedstreams burned by Veolia throughout the year. In addition to the amounts of metals in the waste stream, the constant variation in the combination of metals and other components of the waste stream can affect Veolia's ability to adjust combustion conditions at appropriate intervals, and, thus, levels of emissions. As the commenter notes, EPA could have required Veolia to conduct multiple CPTs or feedstream analysis procedures for a variety of wastes and under differing combustion conditions. However, requiring Veolia to conduct multiple CPTs to account for the "minute by minute" variations in metal feedrates and other operating conditions would be infeasible and unreasonably expensive.[34]

38. **Comment:** ***Contrary to EPA's statements, multi-metals CEMS are not commercially available. EPA cannot identify any multi-metals CEMS currently in existence on any commercial hazardous waste incinerator in the United States. Further, neither the Crane Naval Surface Warfare Center in Crane, Indiana, nor Krag Petterson of Cooper***

[34] As stated in Table 1, above, each multi-metals monitoring device will cost approximately $400,000 to purchase, install and operate for one year, which translates to about $1.2 million for one year for three units. Veolia has previously stated to EPA that each CPT costs Veolia "several hundred thousand dollars." *See* EPA-R05-OAR-2014-0280-0123. In order to collect sufficient data to establish a correlation between feedrates and emissions, Veolia would need to conduct many CPTs (at least several dozen), which would translate to significantly more than $1.2 million.

Environmental Services provided evidence of operational multi-metals CEMS. No multi-metals CEMS is currently in use as a parametric monitor or in any other capacity on a commercial hazardous waste incinerator.

See Veolia at 58; CRWI at 7; Ross at 3; Warchol at 1-2; Fuchs at 9-10.

EPA Response: As discussed more fully in Section 5.3 of the SB, the multi-metals monitoring device technology, which is the same technology that has been used to measure mercury and other metals, is proven and commercially available. Cooper is the company that developed, first commercialized, and currently markets the Xact series of monitors.[35] EPA is not aware of any other commercially available multi-metals monitoring devices; however, Veolia is free to obtain reliable multi-metals monitoring devices from other sources of which it might be aware. While EPA is not aware of a multi-metals monitoring device that is currently operational at a commercial hazardous waste incinerator as a parametric monitor or in any other capacity, EPA expects to see many installations of multi-metals monitoring devices in the near future due to the technological advances gained with multi-metals monitoring device technology.

According to Cooper, the Xact Model 640 multi-metals monitoring device has been sold to Eli Lilly (one unit); U.S. Army (three units); and Cooper has used a demonstration unit for testing sponsored by various organizations including EPA, the Electric Power Research Institute (EPRI) and Eli Lilly. Cooper also recently leased a multi-metals monitoring device to the SCAQMD for installation at specific metal recycling and recovery facilities[36] and has sold one more multi-metals monitoring device to Chevron for installation at a Chevron facility in Nigeria. *See* Document IDs. EPA-R05-OAR-2014-0280-0039, EPA-R05-OAR-2014-0280-0141, EPA-R05-OAR-2014-0280-0150, and EPA-R05-OAR-2014-0280-0141. To our knowledge, the Chevron unit has not yet begun operating. None of the units are currently being used for compliance purposes.

Additionally, Cooper has sold a number of ambient air monitoring versions of the Xact (Xact Models 620/625) for compliance determinations, ambient health exposure studies, and for locating and evaluating unknown sources of metals emissions to a number of clients, including Korea (six units purchased by National Institute of Environmental Research); China (nine units purchased by various Environmental Monitoring Centers); Canada (eight units purchased by Ontario Ministry of Environment, Environment

[35] Prior to March 2013, the Xact™ was being marketed by Pall Corporation (25 Harbor Park Drive, Port Washington, New York 11050); however, Cooper Environmental Services now holds the exclusive manufacturing and marketing rights for the Xact™.
[36] This monitoring device was subsequently purchased by Quemetco, Inc. and is currently installed and being operated as a process monitor at Quemetco's City of Industry, California, facility.

Canada, Quebec Ministry of Environment, University of Toronto, University of Dalhousie, and a smelting facility); New Zealand (one unit purchased by a secondary lead smelter); Australia (one unit purchased by Queensland Environmental Protection Agency); University of Massachusetts (one unit); Missouri Department of Environmental Quality (one unit) and EPA (one unit). *See* email from Krag Petterson, Cooper, to David Ogulei, EPA, July 17, 2013, Document ID. EPA-R05-OAR-2014-0280-0082. The continuous ambient fenceline multi-metals monitors that have been sold to the above clients employ the same technology as the multi-metals stack monitoring device. SB at 62, fn 61. While ambient fenceline monitoring technology employed by other manufacturers often varies significantly from stack sampling and measurement technology, the technology employed in the Xact 625 fenceline monitor is an outgrowth of the multi-metals monitoring device technology and is only slightly different.

The U.S. Army Umatilla Chemical Agent Disposal Facility (UCADF) in Umatilla, Oregon, previously installed and operated a mercury CEMS on its hazardous waste incinerator. The mercury CEMS used the same analytical principles as the Xact multi-metals monitoring device. The UCADF completed its chemical disposal mission in 2011.[37]

EPA notes that within the last several years, the United States has entered into Consent Decrees that require the installation of mercury CEMS at several facilities, including facilities owned and operated by Northern Indiana Public Service Company (Civil Action No. 2:11-cv-00016; Document ID. EPA-R05-OAR-2014-0280-0228), East Kentucky Power Cooperative, Inc. (Civil Action No. 04-34-KSF; Document ID. EPA-R05-OAR-2014-0280-0227), Alabama Power Company (Civil Action 2:01-cv-00152-VEH; Document ID. EPA-R05-OAR-2014-0280-0226), among others. Even though there are key differences between a mercury-only monitoring devices and a multi-metals monitoring device, a multi-metals monitoring device works on similar principles as a mercury-only CEMS. Both mercury-only and multi-metals monitoring devices available today from Cooper and other sources include: 1) a sample interface for sample acquisition, transport and conditioning, or protection of the monitor from the effects of the stack effluent; 2) a pollutant analyzer that senses the metal concentrations and generates a proportional output; and 3) a data recorder that provides a record of the analyzer output.

39. **Comment:** ***Contrary to EPA's statements, multi-metals CEMS have not been proven to be reliable at a hazardous waste incinerator such as Veolia.***

[37] *See* http://www.cma.army.mil/umatilla.aspx (accessed February 23, 2015) (Document ID. EPA-R05-OAR-2014-0280-0200).

See Veolia at 58; Ross at 4; CRWI at 7-8.

EPA Response: The Xact multi-metals monitoring devices operated reliably for more than 6 years at the Eli Lilly Tippecanoe Laboratories hazardous waste incinerator, and for an additional year under Evonik. Based on discussions with Lilly staff, EPA understands that Evonik elected not to complete a required repair on the Xact because there was not a regulatory requirement to operate the instrument. In addition, similar multi-metals monitoring devices have been successfully installed and certified on U.S. Army hazardous waste incinerators.

The commenters also expressed concerns that moisture at Veolia's stacks varies greatly in short periods of time, and that the Xact multi-metals monitoring device is not designed to detect these variations and immediately adjust the dilution air. This assertion is incorrect. As is typical with all emissions monitoring devices, the dilution ratio will be set to account for the maximum moisture content and once the dilution ratio is determined, it will not change. The Xact multi-metals monitoring device will pull in as much air as necessary to maintain the desired dilution ratio.

Tables 2 and 3, below, show summaries of the Xact's XRF audit and relative accuracy test audit (RATA) results during its operation at Lilly. *See also* Pall Corporation Comments on the Secondary Lead Smelter MACT Rule at 8-9. Document ID. EPA-R05-OAR-2014-0280-0082 (attachment). Under the Lilly AMP, the Xact was limited to less than 10% error on quarterly audits for each regulated element (chromium (Cr), arsenic (As), cadmium (Cd), mercury (Hg) and lead (Pb)) and less than 10% flow error for each audit. Table 2 shows the data for every flow and XRF audit for which data was available. For the audit years 2007 through 2010, the overall average XRF audit error ranged from 1.22% (lead) to 2.16% (arsenic) and the overall average flow error was 1.77%. Both the XRF audit error and flow error were consistently below the AMP limit of 10% error.

Table 2. Xact Quarterly Audit Results

Audit Year	Quarter	Audit Date	Flow Error	XRF Audit Error				
				Cr	As	Cd	Hg	Pb
2007	1	3/1/2007	3.04%	1.46%	2.18%	2.84%	1.75%	2.34%
	2	5/25/2007	3.13%	3.32%	0.13%	4.23%	2.60%	2.96%
	3	8/29/2007	0.68%	-3.74%	2.18%	-4.13%	2.36%	2.76%
	4	12/26/2007	1.42%	6.50%	0.36%	7.36%	4.18%	0.40%
2008	1	2/15/2008	NA	0.22%	0.11%	1.20%	-0.99%	0.87%
	2	3/17/2008	1.07%	1.93%	0.66%	1.82%	2.16%	2.34%
	3	5/20/2008	0.53%	2.96%	2.61%	3.30%	2.53%	0.68%

Audit Year	Quarter	Audit Date	Flow Error	XRF Audit Error				
				Cr	As	Cd	Hg	Pb
	4	10/20/2008	1.37%	1.77%	0.72%	1.48%	0.56%	1.06%
2009	1	1/7/2009	2.10%	0.60%	2.94%	1.52%	3.45%	0.46%
	2	5/6/2009	3.67%	1.49%	4.09%	1.07%	1.78%	0.30%
	3	7/9/2009	0.84%	2.00%	5.43%	2.78%	0.72%	0.22%
	4	NA	NA	NA	NA	NA	NA	NA
2010	1	1/12/2010	NA	1.60%	5.13%	0.45%	0.71%	2.11%
	2	4/25/2010	NA	1.61%	5.92%	1.12%	4.00%	0.96%
	3	7/13/2010	1.68%	-3.47%	-0.92%	-2.82%	-2.42%	-2.11%
	4	12/10/2010	NA	2.00%	0.82%	2.70%	1.83%	2.91%
AVERAGE			**1.77%**	**1.35%**	**2.16%**	**1.66%**	**1.68%**	**1.22%**

NA – Data Not Available

Table 3 shows the results of annual RATAs conducted at Eli Lilly from 2006 through 2010. The annual RATAs consisted of challenging the Xact with a reference aerosol containing each of the five metals regulated at the facility (Cr, As, Cd, Hg and Pb). *Id.* at 9. The reported Xact concentration was plotted against the reference aerosol concentration for each metal and the slope, intercept and correlation coefficient for each fit was determined. *Id.* Table 3 shows the slope of the best fit line for each of these RATAs. The slope is an indication of the accuracy of the instrument over a range of concentrations. The results show excellent agreement between the reference aerosol and the Xact reported metal concentrations for all RATAs performed.

Table 3. Xact RATA Results

Year	Slope					
	Cr	As	Cd	Hg	Pb	Average
2006	0.83	0.90	0.85	0.82	0.85	0.85
2006 (Quarterly)	0.91	0.77	0.95	0.92	0.93	0.89
2007	0.84	0.82	0.88	0.84	0.81	0.84
2008	0.96	0.71	0.98	0.99	0.97	0.92
2009	0.96	0.99	0.99	1.10	1.00	1.01
2010	0.97	1.06	1.11	1.02	1.04	1.04
Average	**0.91**	**0.87**	**0.96**	**0.95**	**0.93**	**0.93**

40. **Comment:** ***EPA's assertion that multi-metals CEMS were evaluated against EPA Method 29 contains no reference or documentation. In fact, multi-metals CEMS have never been demonstrated to be reliable against EPA Method 29. When the publicly***

available data are understood, no testing to date shows a direct correlation of the Xact® CEMS with the EPA Reference Method 29 on a well-controlled hazardous waste incinerator. Concurrently generated data under conditions where metals are at measureable levels in the stack gas such that precision, accuracy, and bias relative to the reference methods can be assessed simply does not exist or has not been made publicly available. In most cases, the Xact® CEMS fails when directly compared to Method 29. The Xact® CEMS is not and cannot consistently produce comparable results with the precision and accuracy of Method 29.

See Veolia at 59, 68-71; Ross at 3; Affidavit of Michael Fuchs, December 19, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0109 (Fuchs) at 2-3; TestAmerica and Focus Environmental (2014) at 3-5, 16; TestAmerica and Focus Environmental (2015).

EPA Response: EPA disagrees with this comment. As explained in the 2010 proposed CISWI rule, 75 Fed. Reg. 31938, 31962 (June 4, 2010), EPA has observed side-by-side evaluations of multi-metals monitoring devices with EPA Method 29 of 40 C.F.R. Part 60, Appendix A–8, at industrial waste incinerators, and found good correlation. The results of one such side-by-side evaluation referenced by EPA in the CISWI proposal can be found at http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA433778 (Document ID. EPA-R05-OAR-2014-0280-0140).

In addition, Cooper has presented to EPA results of extensive testing it performed on the Xact multi-metals monitoring device's performance with regard to mercury and other candidate method comparisons. *See* Cooper Supplemental Submittal at 12 and Attachment 2. In one Method 29 comparison test, in 2002, the Xact multi-metals monitoring device was evaluated against EPA Method 29 at the U.S. Army's chemical demilitarization facility in Tooele, Utah, while combusting expired chemical munitions containers in the facility's hazardous waste combustor. The tests showed the ability of the Xact multi-metals monitoring device to accurately measure metal concentrations up to approximately 2000 µg/dscm. *See* Cooper Supplemental Submittal at Attachment 2. Also, the U.S. Army sponsored a series of tests in January 2005 to evaluate a mercury-optimized Xact at a coal-fired power plant that uses dry air pollution control equipment. For those tests, mercury and arsenic were spiked into a stack gas stream and measured by both the Xact and Method 29.

While EPA has not conducted concurrent Method 29 and Xact multi-metals monitoring device measurements at a commercial hazardous waste incinerator, EPA believes the extensive testing already performed on the Xact multi-metals monitoring devices at other

facilities demonstrates that the Xact multi-metals monitoring devices can provide reliable data needed to establish a correlation between feedrates and emissions.

41. **Comment:** ***EPA's use of the Mercury and Air Toxics Standards (MATS) rule option that allows facilities to use a HAP metals CEMS as an alternate means of compliance as support for requiring multi-metals CEMS at Veolia is unjustifiable and misleading. The term "multi-metals CEMS" does not appear in MATS. Assuming that a "HAP metals CEMS" is functionally equivalent to a "multi-metals CEMS," under the MATS rule, a facility that wishes to use that alternative has the burden of selecting the CEMS, and developing the site-specific testing procedures. The MATS rule contains no performance specifications for the HAP metals CEMS, despite the fact that OTM 16 and OTM 20 existed at the time the MATS rule was issued.***

See Veolia at 59.

EPA Response: Although it is correct that the MATS rule uses the term "HAP metals CEMS" instead of "multi-metals CEMS," it is clear from the supporting documentation accompanying that rule that EPA was referring to "multi-metals CEMS" when it allows subject facilities the option to use "HAP metals CEMS" for compliance purposes. *See*, for example, EPA's Responses to Public Comments on EPA's *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units,* Volume 1 of 2 (December 2011) at 709 ("In the final rule, facilities would be allowed to petition the Administrator under CAA section 63.8(f) of subpart A of part 63 for an alternative to use multi-metal CEMS at a specific site in lieu of required monitoring in the final rule").[38] While multi-metals CEMS are not specifically required for demonstrating compliance with the metals emissions limits of the final MATS rule, there is no reason to dismiss the likelihood of EPA approving their use based on an individual request or requiring them in the future through individual permitting, enforcement, rulemaking or other situations.

EPA and industry conducted extensive concurrent metals and PM testing for standard-setting purposes.[39] The MATS rule Response to Comments document states that the results of this testing provided ample evidence that non-mercury HAP metals were

[38] Available at http://www.epa.gov/ttn/atw/utility/mats_rtc_chapters_foreword-1-2-3-4_121611.pdf (Document ID. EPA-R05-OAR-2014-0280-0195).

[39] EPA and industry conducted concurrent metals and PM testing on at least 220 emissions units, including 170 units from the "coal-fired units, mercury and other non-mercury metallic HAP" category and 50 units from the "coal-fired units, other" category. *See* Information Collection Request For National Emission Standards For Hazardous Air Pollutants (NESHAP) For Coal- and Oil-Fired Electric Utility Steam Generating Units; Part B of the Supporting Statement; at 6-8. Available at http://www.epa.gov/ttn/atw/utility/g1/eu_mact_icr_part_b.pdf (Document ID. EPA-R05-OAR-2014-0280-0196).

invariably present in PM from coal- and oil-fired electric generating units (EGUs) and that the non-mercury metals emissions generally track the control efficiencies associated with PM emissions from EGUs. This body of evidence, coupled with the experience the electric utility industry has gained from the installation of over 100 PM CEMS and the relative low levels of metals in both fuel and emissions, helped inform the decision in the MATS rule to allow PM to be used as a surrogate for non-mercury metals at this time; thus, there was not a need to require the use of multi-metals CEMS to measure metals emissions levels for MATS purposes.

42. **Comment:** ***EPA's statement that, "EPA recently evaluated, at several facilities, a commercial version of multi-metals CEMS capable of measuring up to 20 or more HAP metals in real time" (SB at 59) is not supported, does not include key information, and absent such information provides no support to the Statement of Basis.***

See Veolia at 59.

EPA Response: As discussed elsewhere in this response to comments and in the SB, EPA worked with Eli Lilly for 3 years verifying this technology and approving it for use on Lilly's Tippecanoe facility, where it operated without any major issues for more than 6 years. In addition, the U.S. Army installed and evaluated a multi-metals monitoring device at its chemical demilitarization facility in Tooele, Utah, while combusting expired chemical munitions containers in its hazardous waste combustor. Also, Cooper has operated a demonstration unit for testing sponsored by various organizations including EPA and EPRI. *See* Document ID. EPA-R05-OAR-2014-0280-0129 and email from Krag Petterson, Cooper, to David Ogulei, EPA, July 17, 2013 (Document ID. EPA-R05-OAR-2014-0280-0082).

Furthermore, the technology employed by Cooper's multi-metals monitoring device is being used by the fenceline monitoring version of Cooper's Xact. *See* Document ID. EPA-R05-OAR-2014-0280-0164. The fenceline model of Cooper's Xact is currently widely used around the world and has been evaluated by EPA and found to be reliable. *See* Document ID. EPA-R05-OAR-2014-0280-0165. Cooper has informed EPA that it has sold a number of its fenceline monitors (Xact Models 620/625) to Korea (six units purchased by National Institute of Environmental Research); China (nine units purchased by various Environmental Monitoring Centers); Canada (eight units purchased by Ontario Ministry of Environment, Environment Canada, Quebec Ministry of Environment, University of Toronto, University of Dalhousie, and a smelting facility); New Zealand (one unit purchased by a secondary lead smelter); Australia (one unit purchased by Queensland Environmental Protection Agency); University of Massachusetts (one unit); Missouri Department of Environmental Quality (one unit) and EPA (one unit). *Id.*

The commenter incorrectly avers that EPA did not support the statement that the Xact monitoring devices can measure 20 or more hazardous air pollutants at one time. The multi-metals monitoring device deployments discussed in section 5.3.4 of the SB, including the Eli Lilly experience and the ETV study discussed in Document ID. EPA-R05-OAR-2014-0280-0129, demonstrated that Cooper's multi-metals monitoring devices can measure 20 or more metals that are considered hazardous air pollutants. Therefore, EPA's statement in the SB is factually correct.

43. **Comment:** ***EPA's SB relies upon materials that Cooper developed or contributed to as support. EPA offered no evidence that EPA independently verified the claims made by these entities and EPA has not considered Cooper's vested interest in reporting the CEMS were a success.***

See Veolia at 59-60.

EPA Response: EPA disagrees with the suggestion that reliance on publicly available materials provided by the developer and vendor of a commercially available instrument is somehow improper. Consistent with EPA's past practice when other new uses of technologies are proposed, EPA worked with the developer of the multi-metals monitoring device to verify that the instrument worked as claimed. As part of the Lilly AMP approval, EPA carefully reviewed all of the reliability tests and other data submitted by both Lilly and Cooper. Even if Cooper had a vested interest in promoting its instruments as the comment asserts, EPA does not have any information indicating that Lilly had a similar interest or that the information provided by Cooper incorrectly stated or overstated the Xact's reliability.

While Veolia and others have alleged hypothetical circumstances under which the multi-metals monitoring devices could allegedly fail while being temporarily used at Veolia's Sauget facility, the commenters have not provided any factual data (such as independent verifications) in support of their assertions. EPA's confidence in the multi-metals monitoring device's ability to reliably operate at this facility is based primarily on the Method 301 validation test results conducted on the Xact multi-metals monitoring devices along with the more than 6 years of data generated at the Eli Lilly facility.

44. **Comment:** ***EPA failed to consider problems that may arise if Cooper provides both the available performance specifications and calibration gases.***

See Veolia at 60.

EPA Response: The commenter has not explained what types of problems it expects may arise as the result of Cooper providing both the performance specifications and calibration gases. As part of the Lilly AMP approval, EPA independently reviewed the QA/QC procedures in OTMs 16 and 20 and determined that those procedures were acceptable. Because there is nothing in those procedures that is specific to the Lilly facility, EPA believes that the author of the procedures is irrelevant. Additionally, OTMs 16 and 20 do not specify the supplier of calibration gases. Veolia is free to purchase calibration gases from any supplier provided the calibration gases comply with the specifications in OTMs 16 and 20.

45. **Comment:** ***EPA's description of the use of the Xact CEMS at the former Eli Lilly facility as a success is inaccurate. In reality, the Xact CEMS failed on Eli Lilly due to software and firmware problems and was removed from service. When it was used, it was used rarely and was found to be costly in terms of time and maintenance.***

See Veolia at 60-61; CRWI at 7; Ross at 4.

EPA Response: EPA understands that Evonik installed incompatible software on its multi-metals CEMS which rendered the multi-metals CEMS inoperable after more than 6 years of successful use. According to Mr. Rick Lambert of Lilly, the number of maintenance issues that Lilly experienced for the start-up and operation of the multi-metals CEMS between 2004 and 2010 (the years Lilly had ownership of the incinerator), was no higher for the multi-metals CEMS than it was for its PM CEMS or Hydrogen Chloride (HCl) CEMS. When Lilly did have a maintenance issue, it was normally a power supply, detector tube, or pump. Mr. Lambert noted that it was important to do routine maintenance along with each quarterly audit (as with the other CEMS). When Lilly did this, the unit ran for over 6 years with only a few minor part-related problems.

Mr. Lambert related that the problem with the Xact CEMS occurred in 2010 after Evonik purchased the facility, and the monitoring device and incinerator had been shut down for several months. When starting up, the central processing unit (CPU) on the control computer of the multi-metals CEMS broke down and was replaced; however, Evonik uploaded the wrong software version to the unit. This started a spiral of software-related issues that Evonik never completely resolved. Mr. Lambert also pointed out that when the unit was sent back to Cooper and they installed a previous CPU unit and matching software, the unit functioned smoothly. He observed that, had appropriate versions of software been installed and backed up, the problems would not have occurred. It is our understanding that the unit never experienced any mechanical failure during its operation at Eli Lilly.

46. **Comment:** ***EPA failed to consider the differences between the former Eli Lilly incinerator and Veolia's incinerators. Veolia receives widely diverse waste streams from unrelated industries which results in a heterogeneous waste stream. Due to the variety of feedstreams Veolia accepts, the significant variance in metals content would likely affect the ability of multi-metals CEMS to produce valid data over an extended period.***

See Veolia 61.

EPA Response: It is incorrect to suggest that EPA failed to consider the differences between the Lilly incinerator and Veolia's incinerators. A multi-metals CEMS operated reliably for more than 6 years at the Lilly Tippecanoe Laboratories incinerator, as well as for an additional year under Evonik. EPA understands that Evonik elected not to complete a required repair on the monitor because there was not a regulatory requirement to operate the instrument.

Although Eli Lilly operated a non-commercial incinerator, it does not follow that the Xact multi-metals monitoring device would not be applicable to, or reliable for, Veolia's commercial incinerators. All available information shows that the Xact multi-metals monitoring devices should have no problem operating at the conditions in Veolia's stacks. As we have previously explained, performance and reliability tests conducted on the Xact multi-metals monitoring devices show that the Xact is accurate and reliable over a wide range of metal concentrations and operating conditions. As noted in the appendix to the Lilly AMP,[40] the Xact has operated at a wide range of temperature and moisture conditions. It has operated successfully on saturated stacks such as those that exist at coal-fired power plants equipped with wet scrubbers. *See*, for example, the SBIR Phase 1 Report, which describes operation at a coal fired power plant.[41] More specifically, the Xact has demonstrated operation at temperatures up to about 500 degrees Fahrenheit (demilitarization incinerator) and in flue gases saturated at 140 degrees Fahrenheit.

[40] *See* Method 301 Evaluation Report at 55-67. Available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0082 (attachment).
[41] *See* Document ID. EPA-R05-OAR-2014-0280-0082 (attachment).

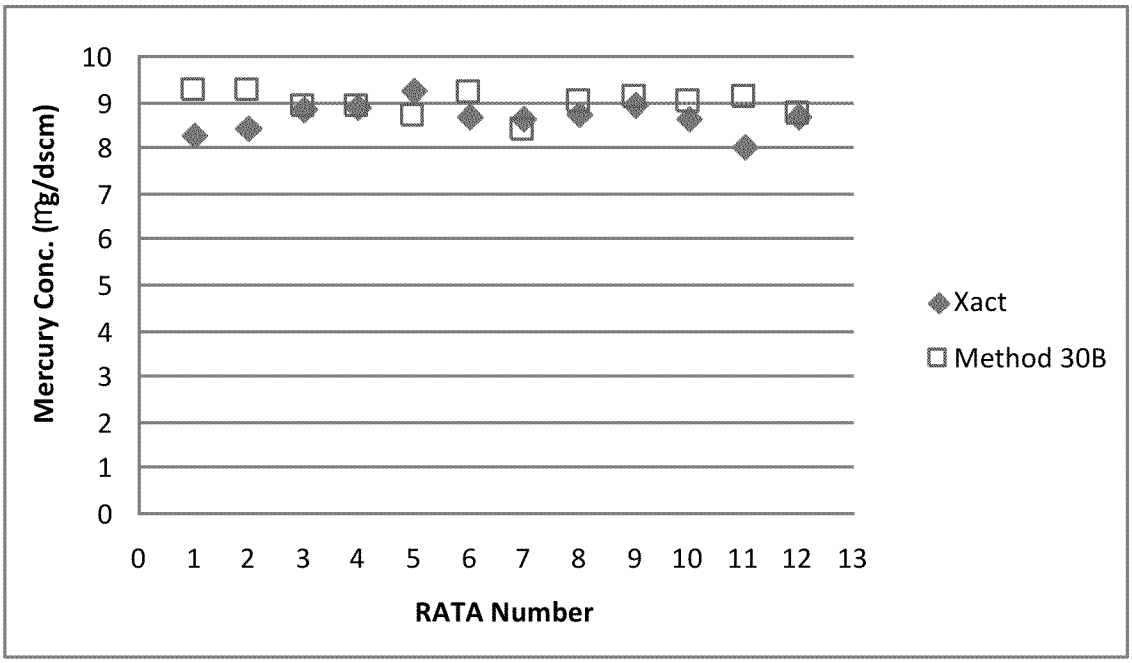

Figure 1. Results of a comparison of mercury results reported by EPA Reference Method 30B and the Cooper Xact.

Figure 1, above, shows the results of a comparison of mercury results reported by EPA Reference Method 30B and the Xact.[42] These data were collected at a coal-fired utility boiler operating with dry controls at about 350 degrees Fahrenheit.[43] EPA believes that these results plus those in the appendix to the Lilly AMP clearly show that the Xact has demonstrated its ability to operate accurately and reliably for extended periods of time under a wide range of stack conditions, including those likely to be found in the Veolia stack. Also, the Xact multi-metals monitoring device successfully passed RATA testing on at least two Army hazardous waste facilities in Utah, thus demonstrating the accuracy of this unit for the conditions at a munitions incinerator.[44]

We note that the heterogeneity of the waste that the commenter stresses is a significant reason that we have proposed in the renewal permit action that Veolia install and operate multi-metals monitoring devices on each of its incinerators. Because CPTs can provide information only for the specific blend of wastes and combustion conditions that exist at the time of the tests, the performance tests alone cannot demonstrate that the metals OPLs

[42] *See* Pall Corporation Comments on the Secondary Lead Smelter MACT Rule at 13-14 (Document ID. EPA-R05-OAR-2014-0280-0082 (attachment).
[43] *Id.*
[44] Available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0082. *See also* Method 301 Evaluation Report at 55-67; document ID. EPA-R05-OAR-2014-0280-0082 (attachment). And, Pall Corporation Comments on the Secondary Lead Smelter MACT Rule at 13-14; document ID. EPA-R05-OAR-2014-0280-0082 (attachment).

in Veolia's permit can assure continuous compliance with the HWC NESHAP metals emissions limits when Veolia incinerates different mixes of wastes under differing combustion conditions at the three incinerators. The multi-metals monitoring devices will allow EPA and Veolia to determine whether the OPLs will assure compliance with the HWC NESHAP emissions limits under all conditions.

47. **Comment:** ***EPA's claim on page 60 of the SB that multi-metals CEMS can work effectively in moisture laden environment of the stacks of Veolia has no true, tested support; rather it is based on an untested "assurance" from Cooper. Veolia has countered Cooper's assurance with evidence from experts in the field that the Xact will not work at Veolia. No data or objective evidence exist in the record to demonstrate that the Xact multi-metals CEMS can operate at moisture contents at or above 40 percent.***

See Veolia 61.

EPA Response: This comment suggests that the concentration of moisture in the gas in Veolia's stacks will likely have a detrimental effect on the monitoring device's ability to operate reliably; however, the commenter does not provide any factual support for that opinion. Based on our Lilly experience and discussions with Cooper, we believe that the Xact multi-metals monitoring devices would have no problem operating at the conditions in Veolia's stacks as long as the probe and filter remain above the water vapor dew point. One of the strengths of the Xact multi-metals monitoring device is that the sample collection is separated from the XRF analysis. This means that the more sensitive components of the analysis system are never exposed to stack effluent.[45] The Xact multi-metals monitoring devices has previously operated at a wide range of temperature and moisture conditions, including moisture conditions of at least 20%, and Cooper has informed us that the Xact multi-metals monitoring devices can operate in even higher moisture contents, including moisture contents as high as 45%. It has operated successfully on saturated stacks such as those that exist at coal-fired power plants equipped with wet scrubbers. *See* Method 301 Evaluation Report at 55-67.[46] EPA has not found any data that support the commenter's assertions.

48. **Comment:** ***The Army is not using its three Xact units at all, much less for compliance purposes. The Statement of Basis misleadingly leaves the impression that the units are or have been successfully operated at the site.***

See Veolia 62; CRWI at 7-8 and 11.

[45] *See* Email from Krag Petterson, Cooper, to David Ogulei, EPA, July 17, 2013 (Document ID. EPA-R05-OAR-2014-0280-0082).
[46] This report is available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0082 (attachment).

EPA Response: We agree with the commenters that the U.S. Army is no longer operating any of the Xact multi-metals monitoring devices it purchased or installed. Although we stated in the SB that the U.S. Army had successfully installed and evaluated a multi-metals monitoring device on one of its hazardous waste incinerators, we did not claim anywhere in the SB that the Army was currently operating its Xact units. The Army's units were not required by a regulatory or permitting requirement, and they were not installed for purposes of monitoring compliance with the Act.

49. **Comment:** ***Unlike EPA, the South Coast Air Quality Management District (SCAQMD) recognizes that the project to install a multi-metals CEMS on a secondary lead smelter will be a "demonstrative program." The goal was to install the CEMS by December 2014, but to date, the CEMS is not operational. Additionally, it is not appropriate to compare use of a multi-metals CEMS at a lead smelter to use at Veolia. Unlike SCAQMD, EPA assumes that HWC MACT does not work and disregards the FAP/OPLs monitoring requirements, and starts with the presumption that the CEMS technology accurately calculates multi-metals information for Veolia's emissions. Even if the Xact was operational at the secondary lead smelter, its use at a facility which deals primarily with only a few metals is not comparable to its use in the Veolia incinerators which would involve numerous metals as well as other waste streams.***

See Veolia 62.

EPA Response: The multi-metals monitoring device that is installed and operated by Quemetco at its City of Industry, California, secondary lead smelter serves a different purpose than the multi-metals monitoring devices proposed by EPA. *See* EPA-R05-OAR-2014-0280-0261. This device was initially required by SCAQMD to study emissions from the facility, but Quemetco subsequently purchased the device, after the study concluded, and voluntarily continued to operate it as a process monitor. *Id.* The Act does not preclude a regulatory agency from conducting a "demonstrative program" at any time using any commercially available and demonstrated emissions monitoring system for the purpose of determining whether that monitoring system can provide the data it needs for a specific regulatory purpose. However, the fact that the SCAQMD required installation of a multi-metals monitoring device as a demonstration program does not prevent EPA from relying on available information regarding the reliability of multi-metals monitoring devices to determine that the monitoring device is appropriate for the purpose described in the SB and this response to comments. The commenter does not provide any support for its conclusion that it is not appropriate to compare the use of a multi-metals monitoring device at a lead smelter to use at Veolia.

50. **Comment:** ***EPA did not provide enough information about the use of the multi-metals CEMS at the Nigerian company (SB at 61), for it to be supportive of the claim that the Xact CEMS is successfully in use or would be comparable to the use at Veolia.***

See Veolia 63.

EPA Response: We did not provide information regarding the use of the Xact at the Nigerian company because we were unable to obtain such information from Cooper due to contractual obligations between Cooper and its client. EPA is not aware whether that commercial transaction has been completed. However, EPA included the fact that the Nigerian company had purchased the Xact to further demonstrate the availability of the monitoring devices.

51. **Comment:** ***Under the HWC MACT, Method 29 is the only approved method to demonstrate compliance. EPA is arbitrarily and capriciously requiring Veolia to use an alternative method that is not approved under the HWC MACT. EPA has no authority to require Veolia to use an alternative monitoring technology that Veolia has not requested.***

See Veolia at 63.

EPA Response: EPA is not changing the compliance method to be used by Veolia to demonstrate compliance with the metal emissions standards. Veolia will continue to use Method 29 to conduct the CPTs required by the HWC NESHAP. For purposes of this permit, the multi-metals monitoring devices will be used to establish a correlation between the metal emissions and feedrates to ensure that the OPLs are sufficiently stringent to assure continuous compliance with the HWC NESHAP emission limits.

As the Title V permitting authority, EPA has an obligation under section 504(c) of the Act, 42 U.S.C. § 7661c(c) to include in Veolia's Title V permit any monitoring necessary to assure compliance with all permit terms and conditions. In the case of Veolia's Sauget facility, EPA has determined that data from the multi-metals monitoring devices are necessary to satisfy that mandate. Therefore, EPA is using its discretionary authority under 40 C.F.R. 63.1209(g)(2) to require this alternative approach which is then incorporated into the Title V permit as monitoring requirements of the applicable requirement. Alternatively, in the event that EPA's authority under the HWC NESHAP is insufficient, EPA has an obligation under Title V and its implementing regulations to supplement the monitoring in this permit to include these requirements. *See Sierra Club v. EPA*, 536 F.3d at 677. EPA's legal authority is discussed in more detail in section A of this response to comments.

52. **Comment:** ***Pursuant to 40 C.F.R. § 63.7(f), an affected facility may petition EPA to use an alternative test method; however, the multi-metals CEMS is parametric monitoring and Veolia has not requested it to be used at its facility. EPA does not have authority to establish OTM specifications for parametric monitoring that has not been requested by Veolia.***

See Veolia at 63 and Ross at 3.

EPA Response: EPA agrees that 40 C.F.R. § 63.7(f) and the HWC NESHAP at 40 C.F.R. § 63.1209(a)(5) allow an affected facility to petition to use alternative methods to directly monitor compliance. EPA's action does not supersede these provisions, as EPA is not imposing a monitoring method to replace the HWC NESHAP requirements for purposes of monitoring compliance. Veolia may petition the Administrator for approval to use alternative compliance methods consistent with 40 C.F.R. §§ 63.7(f) and 1209(a)(5) if it chooses to do so.

As discussed in RTC 1 and 2 and the SB, the purpose of the multi-metals monitoring devices is to establish a correlation between the OPLs and actual emissions to ensure that the OPLs are stringent enough to assure continuous compliance with the HWC NESHAP emissions limits.

53. **Comment:** ***EPA has never promulgated or approved OTM 16 and OTM 20 as performance specifications and quality assurance procedures for multi-metals CEMS. These documents are stamped "draft" and authored by Cooper.***

See Veolia 63-64.

EPA Response: While we agree that we have not promulgated OTMs 16 and 20, we believe that we can impose monitoring requirements under Title V of the Act without a promulgated performance specification, provided that we include appropriate QA and QC procedures within the permit. As discussed elsewhere in this document, EPA believes that the QA/QC procedures in OTMs 16 and 20 are sufficient to accomplish the purposes for which EPA is requiring the multi-metals monitoring devices.

Although Category C test methods (including OTMs 16 and 20) have not yet been subject to the federal rulemaking process, each has been reviewed by the Emission Measurement Center staff and found to be potentially useful to the emission measurement community. The types of technical information reviewed include field and laboratory validation studies; results of collaborative testing; articles from peer-reviewed journals; peer-review

comments; and QA/QC procedures in the method itself. Some of the methods, where are generally submitted by parties outside the Agency, are stamped "draft" so as to encourage the public to submit additional supporting field and laboratory data as well as comments in regard to the methods.

These methods may be considered for use in permitting situations and as candidates to be alternative methods to meet federal requirements under 40 C.F.R. Parts 60, 61, and 63. As explained in the McNally Memo (document ID. EPA-R05-OAR-2014-0280-0083), the permitting authority must incorporate into the Title V permit acceptable performance specifications for the continuous monitoring system, and may rely on a draft performance specification to develop such performance specifications.

54. **Comment:** ***The SB is contradictory and does not support the conclusions contained therein. EPA finds that Veolia's CPT testing, OPLs and FAP, as supplemented in the 2014 Draft Permit, are adequate for HWC MACT compliance but also determines that Veolia's CPT testing, OPLs and FAP, as supplemented, are inadequate for HWC MACT compliance in order to justify the installation of three multi-metals CEMS—both findings cannot be simultaneously true.***

See Veolia 110-113.

EPA Response: To illustrate its comments, the commenter points to EPA's discussions on pages 39-40, 47-48 and 53-54 of the SB where EPA explained that the emission levels achieved during CPTs are typically the highest emission levels a source emits under reasonably anticipatable circumstances and worst case operating conditions. However, the discussion on page 39 of the SB was a general discussion on CPTs and OPLs and not a discussion of how Veolia conducted its CPT. While EPA explained on page 40 of the SB that Veolia's CPT results were acceptable for the purpose of establishing OPLs, this does not indicate that Veolia's FAP is adequate. It simply means that Veolia analyzed its feedstreams pursuant to its prior inadequate FAP and showed that, at the proposed metal feedrate OPLs, compliance would be demonstrated under the combustion conditions and while burning the specific mix of wastes that existed at the time of the CPT. It also means that, based on the prior FAP, the proposed metal feedrate OPLs represent the "worst case" operating conditions as required by the HWC NESHAP. However, EPA is requiring enhanced feedstream analysis in the final renewal permit because Veolia's FAP in the 2008 Part 71 permit was not sufficient to characterize all of the widely varied waste accepted by Veolia for incineration. Similarly, although Veolia demonstrated through its October 2013 CPT that it was in compliance with the HWC NESHAP emissions limits, as discussed in detail elsewhere in this document, a CPT provides compliance information only for the particular combination of waste and combustion conditions at

the time of the stack tests. Because of the extreme variability of the waste that Veolia processes, the monitoring devices required in the final permit are necessary to provide data to demonstrate that the OPLs in the permit are adequate to assure continuous compliance with the HWC NESHAP emissions limits, regardless of the mix of wastes or combustion conditions.

The commenter also suggests that EPA contradicts itself with its justification on pages 53-54 of the SB, which explains that the 2013 CPT results demonstrated, among other things, that the emissions from the three units were significantly different, despite the fact that Veolia had incinerated similar wastes during the tests. The commenter believes that EPA should have rejected the CPT results if it believed that Veolia's CPT test results were flawed. We do not agree that rejecting the results was appropriate in this case since, as explained above, we believe that Veolia conducted the tests according to its FAP and other requirements of the HWC NESHAP. By pointing out the significant difference in emissions between Units 2 and 3, EPA is not making the determination that the 2013 CPT results were flawed. Instead, based on the observations from the 2013 CPT, as well as other observations as detailed in the SB and elsewhere in this response to comments, EPA has determined that enhanced monitoring is necessary and appropriate.

55. **Comment:** ***It is unprecedented for EPA to endorse the use of a specific vendor of equipment in a mandated regulatory or enforcement circumstance or in lieu of a performance test***.

See Warchol at 1; Fuchs at 10.

EPA Response: EPA is not endorsing the use of a specific vendor of equipment in this permit action. While it is correct that the administrative record only refers to one specific model of a multi-metals monitoring device, this is because EPA is aware of only one model of a multi-metals monitoring device that is currently commercially available. However, the performance specifications and QA/QC procedures in OTMs 16 and 20 are written in a general format to allow use of any x-ray-based multi-metals monitor. EPA would allow other vendors' equipment to be used if the equipment meets the requirements of the performance specifications and QA/QC procedures. The performance specifications and QA/QC procedures in OTMs 16 and 20 have been available on EPA's website for more than 10 years and were subject to a federal approval process under 40 C.F.R. § 63.7(f) - the alternative test method approval provisions - in this case for site-specific application at Eli Lilly. Any new technology would have to pass the criteria for accuracy in the performance specifications.

EPA's decision to require monitoring equipment that is currently distributed or manufactured by one vendor is not unprecedented. For example, the Ferroalloys NESHAP (40 C.F.R. Part 63, Subpart XXX) requires the use of a digital camera opacity technique (DCOT) that meets the performance standards of ASTM D7520-13. Currently, EPA is aware of only one vendor that markets a DCOT camera that can meet the requirements of ASTM D7520-13. EPA's requirement for multi-metals monitoring devices does not provide or imply an endorsement or validation of any specific vendor's hardware or software.

56. **Comment:** ***While OTMs 16-21 were produced using the cumulative knowledge garnered by Cooper Environmental Services on the operating requirements and nuances of the Xact™ multi-metals CEMS, those methods were prepared specifically for, and in support of, the Alternative Monitoring Petition for the use of the Xact™ to monitor metals emissions on the hazardous waste incinerator at Eli Lilly. The Xact™ multi-metals CEMS was primarily to show there were no, to very low, concentrations of metals emissions from Eli Lilly's incinerator. This technically is different than measuring an actual, and varying, concentration of metals.***

See Fuchs at 3-4.

EPA Response: Although OTMs 16 and 20 were developed in support of the Lilly AMP, there is nothing in these procedures that is specific to Lilly's stack. Instead, these procedures provide a general procedure that can be applied in many locations and operating conditions. In fact, according to Cooper, these procedures have been successfully demonstrated on other facilities, including coal combustion sources, under a wide range of concentrations and operating conditions. *See* Emails from Krag Petterson, Cooper, to David Ogulei, EPA, July 17 and 18, 2013 (Document IDs. EPA-R05-OAR-2014-0280-0082 and EPA-R05-OAR-2014-0280-0085).

57. **Comment:** ***OTM 16 fails to comply with the HWC MACT at 40 C.F.R. § 63.1208(b)(2), (3), and (4) which states that Method 29 must be used to demonstrate compliance with the emission standards for mercury, SVM and LVM. Method 29 includes a number of requirements to address potentially critical aspects of the measurement of metals emissions from stationary sources that are not included in the operation of the Xact™ multi-metals CEMS. This could potentially lead to the Xact™ multi-metals CEMS providing inaccurate and/or inconsistent results.***

See Fuchs at 4-7.

EPA Response: While OTM 16 will ensure that the multi-metals monitoring devices will generate *comparable* data to a Method 29 test, EPA has not proposed to use OTM 16 in lieu of Method 29 during required CPTs. EPA is not changing the compliance method to be used by Veolia to demonstrate compliance with the metal emissions standards. Veolia will continue to use Method 29 to conduct the CPTs required by the HWC NESHAP. EPA believes that OTMs 16 and 20 are adequate for the purpose for which EPA is requiring the multi-metals monitoring devices – that is, to establish a correlation between the metal feedrates and actual emissions.

58. **Comment:** ***Due to the design and operation of the air pollution control systems at Veolia, the moisture content of stack gases from Veolia's incinerators is variable and considerably higher than most incinerators, typically from 30 to 45%. Concentration of moisture in the stack gas from Veolia's incinerators could have a negative impact upon the operation of multi-metals CEMS (i.e., its reliability), and the CEMS' ability to produce valid metals data in the stack gas from those incinerators.***

See Fuchs at 7-8.

EPA Response: This comment relies on unsupported claims regarding the moisture content in Veolia's stacks and the ability of the Xact to perform under the conditions at the facility. EPA is unaware of any data that shows that the moisture content in Veolia's stacks can be as high as 45%. Even if this were the case, the commenter does not provide any factual support for its conclusion that the multi-metals monitoring devices would not successfully operate under such conditions. Based on discussions with Cooper, EPA believes that the Xact multi-metals monitoring devices will reliably operate at the conditions in Veolia's stacks as long as the probe and filter remain above the water vapor dew point. One of the strengths of the Xact multi-metals monitoring device is that the sample collection is separated from the x-ray analysis. This means that the more sensitive components of the analysis system are never exposed to stack effluent. *See* email from Krag Petterson, Cooper, to David Ogulei, EPA, July 17, 2013.[47] The Xact multi-metals monitoring device has operated at a wide range of temperature and moisture conditions, including saturated stacks such as those that exist at coal-fired power plants equipped with wet scrubbers. EPA has not found any data that support the commenter's assertions.

59. **Comment:** ***While relative accuracy testing of the Xact™ multi-metals CEMS was performed as reported in the Statement of Basis, the relative accuracy testing was not demonstrated for samples collected directly from the source (i.e., stack) as would be required for other performance specifications, including the proposed Performance***

[47] Document ID. EPA-R05-OAR-2014-0280-0082.

Specification 10. In addition, relative accuracy testing results between the Xact™ multi-metals CEMS and Method 29 are not reported for beryllium, cadmium, chromium and lead.

See Fuchs at 8-9.

EPA Response: EPA disagrees with the premise of this comment. It is not unprecedented for the relative accuracy of a monitoring instrument to be determined with reference materials as was done with the Xact multi-metals monitoring device while it operated at Eli Lilly (e.g., Performance Specification 8A and the Calibration Gas Audit procedures of Appendix B, Performance Specification 1). The annual RATAs at Eli Lilly consisted of challenging the Xact multi-metals monitoring device with a reference aerosol containing each of the five metals regulated at the facility: chromium, arsenic, cadmium, mercury, and lead. Beryllium, which is also regulated by the HWC NESHAP, was not measured during these RATAs because the Xact multi-metals monitoring device, by design, is incapable of accurately measuring beryllium.

60. **Comment***: Ever since Evonik Degussa Corporation (Evonik) acquired Eli Lilly's Tippecanoe Laboratories facility on January 1, 2010, it has not relied on the multi-metals CEMS for official monitoring purposes under the site's Title V permit. Evonik operated the CEMS in a very limited capacity, namely during RATA and performance testing. The CEMS operated intermittently for approximately six months following original installation in 2004. Evonik's experience with the multi-metals CEMS is that the CEMS is costly in terms of time and maintenance. Evonik permanently removed the CEMS from service in August 2011 due to software and firmware problems.*

See Affidavit of Emma York, March 29, 2013, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0111 (attachment) (York) at 1-2.

EPA Response: Upon examination of this affidavit, EPA discovered that the affiant had "become familiar with the operating history" of the multi-metals CEMs at Lilly through a "recent discussion with a colleague" who allegedly had "been responsible for CEMS operation and maintenance" at the Lilly facility. *See* York at 1. Because the affiant does not have firsthand knowledge of the operation of the multi-metals CEMs at Lilly to which she swears, and the affidavit does not identify the person who is providing the alleged facts, EPA cannot give significant weight to this affidavit or this comment.

EPA notes, however, that Eli Lilly operated the Xact multi-metals CEMs for more than six years – not six months. In discussions with Mr. Rick Lambert of Lilly, during the start-up and operation of the multi-metals monitoring device from 2004 to 2010 (the

years Lilly had ownership), Lilly experienced no more maintenance issues than it did with its PM CEMS or HCl CEMS. When Lilly did have a maintenance issue, it was normally a power supply, detector tube, or pump. It was important to do routine maintenance along with each quarterly audit (as with the any other CEMS). When Lilly did this, the unit performed well, with only minor problems.

The only major issue identified by Mr. Lambert was a CPU issue in 2010 after Evonik purchased the facility and the unit and incinerator had been shut down for several months. When starting up, the CPU on the control computer of the multi-metals CEMs was replaced, but Evonik uploaded the wrong version of software. This started a spiral of software-related issues that Evonik never completely resolved. Mr. Lambert also pointed out that when the unit was sent back to Cooper and it installed a previous CPU and matching software, the unit ran fine. He observed that Evonik did not maintain appropriate versions of software and have them backed up, which caused the issue. Mechanically, the unit was functional.

61. **Comment:** ***The regulations recognize OPLs and a FAP as the primary means to verify compliance with the HWC MACT. Under the HWC MACT rule, hazardous waste incinerators such as Veolia must conduct comprehensive performance tests (40 C.F.R. § 63.1207(b)) to establish OPLs, must characterize the feedstream prior to feeding the material into the incinerator and document the amount of mercury, semi-volatile metals (lead and cadmium) and low-volatile metals (arsenic, beryllium, chromium) in each feedstream (40 C.F.R. § 63.1209(c)). Pursuant to the HWC MACT, Veolia is given the choice either to document compliance with the OPLs or petition EPA to install and operate a CEMS to directly measure emissions. Veolia has chosen to document compliance with the OPLs. The HWC MACT rule does not mandate the use of CEMS to document compliance with the HWC MACT limits for mercury, low volatile metals, semi volatile metals or chlorine. All commercial hazardous waste incinerators in Region 5, including Veolia, demonstrate compliance with the HWC MACT through FAPs, OPLs, and stack testing. None of the commercial hazardous waste incinerators in Region 5 have multi-metals CEMS.***

See Veolia at 34-35; Affidavit of Ralph Roberson, March 29, 2013, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0111 (attachment) (Roberson) at 2-3.

EPA Response: EPA agrees with the commenters' summary of the requirement to conduct a CPT. EPA also notes that Veolia must analyze its feedstreams prior to feeding waste into the incinerators, and must document the concentrations of mercury, SVM and LVM in each feedstream. The HWC NESHAP requires Veolia to establish and comply

with maximum mercury, SVM and LVM feedrate OPLs (*see* 40 C.F.R. § 63.1209(l)(1) and (n)(2)), but offers the option of petitioning the Administrator to use a CEMS for direct compliance monitoring of, among other air pollutants, mercury, SVM and LVM.

As discussed elsewhere in this response to comments document, even though Veolia's prior FAP contains the elements that 40 C.F.R. § 63.1209(c)(2)(i) through (vii) require, EPA has concluded that, because of the heterogeneity of Veolia's feedstreams, and other site-specific factors, the prior FAP is not sufficient to ensure that the ash, chlorine and metal concentrations in the feedstreams are no greater than the concentrations stated in the waste profiles that Veolia has used to calculate metal feedrates, and, therefore, cannot assure compliance with the OPLs for mercury, SVM and LVM. Further, Veolia's prior feedstream analysis procedures included an overly broad list of exemptions from sampling and analysis, and Veolia's prior procedures for reporting undetected feed concentrations as zero may have underreported metals concentrations from some feedstreams. Compliance with the OPLs is a fundamental step in assuring compliance with the HWC NESHAP emissions limits. Thus, EPA is requiring in Veolia's final Title V permit renewal enhanced feedstream analysis requirements to ensure that Veolia's feedstream analysis procedures are adequate to assure compliance with the permit's OPLs.

See RTC 2 for discussion of the monitoring that occurs at other commercial hazardous waste incinerators in Region 5.

62. **Comment:** ***In the past, EPA has alleged that the reason CEMS were not required in past permits was, in part, due to EPA's determination that performance specifications for mercury or multi-metals CEMS were not yet available when EPA finalized the HWC MACT rule. To date, nothing has changed - EPA still has not promulgated performance specifications or ongoing quality assurance or quality control procedures for multi-metals CEMS. In place of promulgated, tested, and valid performance specifications, EPA is now attempting to substantiate the multi-metals CEMS with OTM 16 and OTM 20. This approach and these methods are flawed in several respects.***

See Veolia at 35-36.

EPA Response: The commenter correctly notes that EPA has promulgated all of its performance specifications and quality assurance procedures for CEMS through the rulemaking procedures established under the Administrative Procedures Act, as amended. EPA acknowledges that a proposed performance specification and quality assurance procedure would attract comments from a wider range of interested parties, and that a broader spectrum of comments acts to check and balance the process of promulgating a

performance specification or a quality assurance procedure for a CEMS. However, this action does not pertain to the promulgation of a performance specification or a quality assurance procedure for multi-metals CEMS at all hazardous waste combustors. As discussed above, EPA has the authority under the HWC NESHAP, Title V of the Act and its implementing regulations to include in a Title V permit performance specifications and quality assurance procedures that have not been promulgated provided the Agency considers those specifications and procedures to be necessary to ensure that the Title V permit assures compliance with the Act.

63. **Comment:** ***The OTM specifications are dramatically flawed and biased. They were developed by the sole marketer of the multi-metals CEMS technology at a facility - the former Eli Lilly incinerator - and under conditions that do not compare to the conditions encountered at commercial hazardous waste incinerators. Further, even if the OTM specifications were valid or applicable to the Veolia units, EPA has not provided sufficient operational parameters for Veolia to fully implement the multi-metals CEMS. Veolia must still grapple with sample-train issues (i.e., how to connect the multi-metals CEMS to Veolia's units to ensure a representative sample arrives at the monitor) and what quality assurance/quality control and calibration measures to use.***

See Veolia at 36.

EPA Response: As part of the Eli Lilly AMP approval, EPA conducted a detailed independent review of the procedures in OTMs 16 and 20 and approved them for compliance monitoring at Eli Lilly, and for classification as Category C methods in EPA's compendium of emission test methods. In approving these methods for compliance monitoring at Eli Lilly, EPA did not identify any significant flaws in the methods that would prevent their widespread use. As explained elsewhere in this response to comments, even though OTMs 16 and 20 were developed by Cooper in support of the Eli Lilly AMP, there is nothing in OTMs 16 and 20 that is specific to Eli Lilly. Thus, EPA has approved through this permitting action the use of OTMs 16 and 20 at Veolia for the purpose of correlating metal feedrates and emissions.

The operational parameters and the procedures for set up and sample collection as described in these methods would also be applicable to Veolia's facility. Veolia has not identified any specific portions of these methods that must be modified for them to be applicable to Veolia. If Veolia believes that certain changes need to be made to OTMs 16 and 20 to ensure accurate and reliable operation of the multi-metals monitoring devices at Veolia, Veolia may request EPA to approve such changes. This would not be inconsistent with how sources currently implement other EPA-approved performance specifications.

64. **Comment:** ***EPA is requiring a method (multi-metals CEMS technology) not approved in the regulations (absent a petition and additional proof provided by Veolia) to verify a method (OPLs and the FAP) approved by the regulations to demonstrate compliance. EPA's analysis makes OPLs and the FAP irrelevant and unnecessary. The only reasonable explanation for EPA's demand that Veolia use both a multi-metals CEMS and OPLs/FAP is that EPA lacks sufficient knowledge about, or confidence in, the multi-metals CEMS to allow its use for compliance purposes (notwithstanding the representations made in the Statement of Basis). EPA's lack of confidence would explain, at least in part, why EPA has never required any commercial hazardous waste incinerator to install a multi-metals CEMS to address an issue that EPA alleges exists at all incinerators - whether the FAP and OPLs are sufficient to assure continuous compliance with the HWC MACT.***

See Veolia at 37.

EPA Response: EPA has explained in the SB and reiterates in this response to comments that the reason for the requirement to install and temporarily operate the multi-metals monitoring devices is not for direct compliance monitoring or to verify the FAP and OPL method. As discussed, based on the site-specific factors related to the Sauget facility, EPA determined that additional monitoring is necessary to assure that Veolia thoroughly characterizes the waste it feeds into its incinerators and to ensure that the OPLs Veolia established through its 2013 CPTs can assure continuous compliance with the HWC NESHAP emissions limits regardless of the composition of the waste stream or the combustion conditions. Thus, EPA is requiring the installation and operation of the multi-metals monitoring devices, for a temporary period, to establish a correlation between the metal emissions and OPLs. If that correlation can be established, Veolia can continue to use the enhanced feedstream analysis in the final permit and CPTs to demonstrate compliance. Despite the commenter's assertions to the contrary, there is nothing in the record for this permit action to suggest that the OPL and the FAP process is irrelevant and unnecessary or that EPA has shown a lack of knowledge about or confidence in the multi-metals monitoring devices.

65. **Comment:** ***EPA's lack of faith in the CEMS and the Agency's unfairness when dealing with Veolia is exposed by EPA's actions with regard to a recent Consent Decree entered into between EPA and Ross Incineration Services, Inc. (Ross). The Consent Decree arose out of EPA's allegations that Ross violated several provisions of the HWC MACT, including exceeding their OPLs for mercury. In its complaint, the United States alleges that on multiple occasions since August 4, 2006, Ross violated its Maximum Total Mercury Feedrate OPL. The Consent Decree catalogs a significant***

amount of operational and capital improvements that Ross must make, including certain monitoring upgrades, but does not require Ross to implement a CEMS for MACT metals compliance. If EPA truly believes that a multi-metals CEMS can produce accurate results in a commercial incineration environment, then they either overlooked the opportunity to employ the technology at Ross or they are not being honest about their motives with regard to Veolia.

See Veolia at 37-38.

EPA Response: This permitting action is not the appropriate forum for EPA to comment on the details of a specific settlement entered into with another company at a different facility. The terms of the consent decree with Ross are the product of negotiations between those parties and based on the site- and case-specific facts at issue. The consent decree with Ross does not resolve any concerns similar to those we have with Veolia's ability to comply with HWC NESHAP emission standards, nor does it address the site-specific factors that EPA considered in reviewing the sufficiency of the monitoring in Veolia's Title V permit.

Consistent with our discretionary authority under the HWC NESHAP and our obligations under Title V of the Act and 40 C.F.R. Part 71, EPA reviewed site-specific factors at the Veolia facility and determined that additional feedstream analysis is necessary to assure Veolia's compliance with the OPLs in the permit. Further, as previously discussed, EPA has determined that it is necessary for Veolia to install and temporarily operate multi-metal monitoring devices to enable Veolia and EPA to ascertain whether the OPLs are sufficiently stringent to assure compliance with the HWC NESHAP emissions limits for metals. Accordingly, this permitting action does not pertain to site-specific facts observed at Ross or any other facility.

66. **Comment:** ***Under 40 C.F.R. § 63.7(f), if a facility petitions to use a CEMS as an alternative test method, the petitioner must prove that the CEMS technology will work in the application. However, in this case, EPA is arbitrarily and capriciously mandating that Veolia utilize a multi-metals CEMS with no proof that it will work. If Veolia had petitioned the Agency to use the technology and offered no proof that it would work, the Agency would have summarily and correctly rejected the request. EPA does not have the authority to impose this alternative test method on Veolia. EPA is not an "owner or operator" that can request an alternative method under the regulation. Section 63.7(f) does not allow EPA to unilaterally require Veolia to use an alternative test method such as the multi-metals CEMS, but even if it did, that requirement would be impermissible because the multi-metals CEMS has not been validated as an acceptable source of data.***

See Veolia at 38.

EPA Response: As discussed elsewhere in this document, EPA has the authority under 40 C.F.R. § 63.1209(g)(2) or Title V of the Act and its implementing regulations at 40 C.F.R. Part 71 to include in this Title V operating permit monitoring requirements necessary to assure compliance with all permit terms and conditions. *See* 42 U.S.C. § 7661c(c) and 40 C.F.R. §§ 63.1209(g)(2) and 71.6(c). This authority exists outside of the alternative monitoring petition provisions in 40 C.F.R. § 63.7(f). EPA is proposing to incorporate into Veolia's Title V renewal permit enhanced feedstream analysis procedures designed to require Veolia to more fully analyze and characterize the waste it feeds into its incinerators. EPA has determined that this is necessary because of the variability of Veolia's feedstreams and other feedstream analysis issues identified by NEIC and discussed in the SB and this response to comments. EPA further is incorporating into Veolia's renewal permit a requirement to install and temporarily operate a multi-metals monitoring device on each of its three incinerators. EPA has determined that this is necessary in part because, as illustrated by the results of Veolia's past CPTs, it is not possible to predict emissions from any stack based on test results from another stack. The past CPTs demonstrated that emissions results are unpredictable. EPA believes that the variety of mixes of waste combusted and Veolia's lack of knowledge about the impact of the different mixes of wastes and combustion conditions in any of the incinerators make necessary the use of the monitoring devices to correlate compliance with the OPLs with actual emissions.

Finally, as discussed elsewhere in this document and in the SB, EPA believes that the multi-metals monitoring device has been demonstrated to be reliable and accurate for measuring emissions from hazardous waste incinerators. Because it is possible through the use of the multi-metals monitoring devices to correlate actual emissions with compliance with the OPLs in the permit, EPA believes that it is appropriate to require its installation and operation for this purpose.

67. **Comment:** ***EPA failed to analyze or consider the efficacy of multi-metals CEMS and demonstrated bias as evidenced by its collusion with Cooper. Despite being made aware of the potential for bias by Veolia, the administrative record shows that EPA has abandoned its role of independently evaluating the multi-metals CEMS technology in the 2014 Draft Permit.***

See Veolia at 38-44.

EPA Response: The commenter has not offered any evidence to support its allegation of EPA collusion with Cooper. EPA has spent considerable time discussing the multi-metals monitoring devices with Cooper and Lilly to determine whether the multi-metals monitoring devices could reliably provide the data necessary for EPA to verify the correlation between compliance with the OPLs and actual metals emissions at Veolia's Sauget facility. Veolia has also taken issue with what it characterizes as EPA's failure to verify the reliability of multi-metals monitoring devices. Veolia cannot have it both ways – EPA must communicate with the manufacturers, vendors, and users of the multi-metals monitoring devices to be able to evaluate the reliability of the equipment.

We disagree with the commenter's assertion that EPA has abandoned its role as an independent reviewer of alternative methodologies. The commenter suggests that EPA's analysis of Cooper's multi-metals monitoring devices results in abandonment of EPA's role as an independent reviewer because it appears that the Cooper product is the only multi-metals monitoring device that is commercially available at this time. EPA spent several years ensuring that the multi-metals monitoring device technology was tested and met Method 301 requirements prior to its use in a compliance role at Eli Lilly. It does not follow that EPA's focus on and proposal for Veolia to install and temporarily operate multi-metals monitoring devices means that EPA is no longer a neutral decision-maker.

EPA has verified the accuracy of the Xact multi-metals monitoring devices using EPA Method 301 validation tests. Although EPA did not independently perform Method 301 testing, EPA met with the vendor and Eli Lilly many times and witnessed the testing. Representatives from RMB Consulting & Research, Inc. also visited the test site and provided comments during the testing. The performance specifications and QA/QC procedures exist to establish and maintain the accuracy of the monitoring devices at a site. Since we verified that Lilly followed the QA/QC procedures during the testing, we feel assured that the testing demonstrates the reliability of the Xact monitoring devices.

68. **Comment:** ***EPA makes it clear that the only multi-metals CEMS technology it considers to be commercially available is the technology that the Xact multi-metals CEMS utilizes. By requiring Veolia to exclusively use the Xact CEMS, EPA relinquished its independent status by advocating on behalf of the Xact multi-metals CEMS and reduced the incentive for technical advancement while also prejudicing Veolia's rights as a consumer.***

See Veolia at 46.

EPA Response: The final permit does not specify that Veolia must install the Xact multi-metals monitoring device. In fact, Veolia may install any other multi-metals monitoring

device that meets the specifications in the permit as long as EPA has verified the reliability and accuracy of that monitoring device. Although the performance specifications included in the final permit were developed for the Xact multi-metals monitoring devices, EPA would approve modifications to these performance specifications, or modify the permit to allow for alternate specifications, if Veolia proposed to use a multi-metals monitoring device that is incompatible with the performance specifications required by the final permit.

As previously discussed, EPA's decision to require monitoring equipment that is currently distributed or manufactured by one vendor is not unprecedented. For example, the software for a DCOT camera system that meets the performance standards of ASTM D7520-13 is currently being distributed by only one vendor. The DCOT camera system is required by the recently promulgated Ferroalloys NESHAP (40 C.F.R. Part 63, Subpart XXX) for monitoring compliance with opacity standards.

69. **Comment:** ***The administrative record reflects that, while Cooper really has no idea what the precise cost to install and operate the Xact multi-metals CEMS will be to Veolia, the cost will be substantial. In communications with EPA, Cooper kept its monetary options flexible by including variable cost factors that could be used to increase the price. The Coalition for Responsible Waste Incineration (CRWI) provides a more realistic cost figure for the deployment and implementation of the Xact CEMS, which is based upon its members' experience. CRWI estimates the total costs to comply with the multi-metals CEMS requirement in the 2014 Draft Permit will be more than $2.2 million. Further, substantial additional costs will be incurred for procurement of the sampling probes and transport systems, for site construction costs for the enclosures to house three multi-metals CEMS, for power and other utilities to be supplied to the CEMS, and for incinerator control system enhancements (to be performed by a third-party contractor) to integrate required data transfer between the CEMS and Veolia's control system. As a private party, Veolia should not have to bear these extreme costs for what amounts to a joint research project between Cooper and EPA.***

See Veolia at 47-48.

EPA Response: EPA acknowledges that an accurate estimate on the actual installation costs is not possible without a site-specific evaluation. This type of uncertainty on final costs is not unique to multi-metals monitoring devices. Following the close of the public comment period, Cooper (on its own accord) confirmed to EPA that Cooper's pricing would be the same for Veolia as for any other customer. *See* Cooper Supplemental Submittal at 11. Cooper stated that pricing for the variable items, such as transport length

to accommodate the location of the monitoring device in relation to the sample port or the amount of filter tape needed for varying sampling intervals, depend greatly on an individual facility's needs. *Id.* EPA understands from Cooper's submittal that Cooper has offered on at least two occasions to travel to Veolia's facility to provide a firm quote but Veolia reportedly did not accept those offers.

EPA acknowledges that a multi-metals monitoring device, like most measurement technologies, requires some custom-built components and trained personnel to operate and maintain. Based on data provided by Cooper, EPA estimates that it would cost approximately $1.2 million to install and operate three multi-metals monitoring devices for one year. *See* Multi-metals CEMS cost analysis, Document ID. EPA-R05-OAR-2014-0280-0138. Although this estimated price tag may appear high, the alternatives are the performance of many stack tests under a variety of combustion conditions and with a variety of mixes of wastes, or continuous manual emission testing or sampling and analysis of every waste stream that Veolia incinerates. These options are considerably more expensive, sometimes unsafe, and more resource-intensive than the temporary use of multi-metals monitoring devices, and would not provide real-time information on emissions. In fact, Veolia has previously stated to EPA that each CPT costs Veolia "several hundred thousand dollars." *See* Letter from Veolia to EPA dated June 17, 2008 (Document ID. EPA-R05-OAR-2014-0280-0123). Additionally, the alternative options would also not provide the breadth of information that operation of the multi-metals monitoring devices can offer.

70. **Comment:** ***EPA's requirement that Veolia install the Xact CEMS places Veolia at an unfair competitive disadvantage. Through the draft permit, EPA seeks to impose onerous and unfair permit conditions on Veolia – conditions that are being imposed on no other commercial hazardous waste incinerator in the nation – that threaten to shut down Veolia's three incineration units and increase Veolia's operating costs to such an extent that the economic viability of Veolia's facility is in jeopardy. Veolia has done nothing wrong to deserve EPA acting in such a prejudicial manner against it. Veolia is in compliance with the HWC MACT standard. No other commercial hazardous waste incinerator in the United States has the requirement of a multi-metals CEMS as a parametric monitor or otherwise. Veolia simply requests that EPA treat it identically to its competitors and stop acting in a prejudicial fashion towards it. EPA should be able to satisfy any question it has concerning the adequacy of Veolia's feedrates by working within the framework of the HWC MACT and, if necessary, creating a more robust FAP. EPA has not subjected Veolia's competitors, each of who operate pursuant to OPLs and a FAP in order to meet the HWC MACT requirements, to a multi-metals CEMS requirement.***

See Veolia at 48-49.

EPA Response: As discussed elsewhere in this document, EPA's action is authorized under the HWC NESHAP and required to comply with the Act's mandate that each Title V permit include monitoring sufficient to assure compliance with the permit terms and conditions. While there is value in maintaining consistency in monitoring requirements across a given industry category, the Act's mandate does not stipulate that monitoring requirements included in Title V permits must be identical across all Title V permits issued for the same industry category. This is consistent with the principle that different facilities may require different monitoring and air quality control requirements to achieve similar levels of compliance due to differences in combustion unit design and operational control systems, existing emissions controls, and feedstreams, among other things. For example, other commercial hazardous waste combustion units utilize different emissions control systems, have differently designed combustion units, and may burn different, more homogeneous, feedstreams than Veolia.

We note that Veolia does not explain in its comment how its facility compares to other commercial hazardous waste incinerators in terms of equipment design and operational controls, operating practices including feedstream analysis procedures and emissions monitoring requirements, variability in feedstreams, and emissions. However, even if Veolia provided such information, EPA has discretion under the HWC NESHAP and, is obligated under Title V of the Act, to consider site-specific facts as previously discussed, in determining whether or not the existing monitoring is sufficient for Veolia to assure compliance with applicable emission standards.

This permit action addresses site-specific concerns at Veolia. EPA would consider the monitoring at other facilities if their permits were properly before us.

71. **Comment:** ***EPA's draft permit condition requiring the installation of multi-metals CEMS within 365 days is impractical. EPA's belief that three multi-metals CEMS can be installed, be calibrated, be operational and receive regulatory approval within a year is not supported by the administrative record. Cooper's estimated timeframe for installing the CEMS only accounts for the Xact CEMS and not for other variables. Variables unique to each installation such as the construction of the sampling train, electrical needs, the construction of shelters and the programming are not accounted for by Cooper because these unique items are constructed by others. Based on Veolia's experience, these variables will take at least 24 to 36 months to construct and become permitted after the CEMS are delivered and receive regulatory approval. Also, no EPA method to calibrate the multi-metals CEMS exists. Further, EPA ignores timeframes set forth in its own regulations for the installation and performance tests of newly***

acquired CEMS. See 40 C.F.R. Part 51, Appendix P (provides affected sources 18 months or more to install and perform tests on newly required CEMS). Additionally, documents in the administrative record reflect that it took Eli Lilly three years to resolve installation problems and to obtain the necessary regulatory approval to operate one Xact CEMS as an alternative method. Given EPA's history of inaction and delay in meeting regulatory deadlines with regard to Veolia's facility, Veolia has no confidence that EPA could act in a timely fashion to approve the CEMS or grant an extension of time in the absence of approval.

See Veolia at 49-51; Warchol at 1-2.

EPA Response: EPA disagrees with the claim that three multi-metals monitoring devices cannot be installed and operated at Veolia within 12 months after the permit becomes effective. *See* Document ID. EPA-R05-OAR-2014-0280-0082. We believe, based on discussions with the vendor and our experience with Lilly, that the three monitors can be installed and operated within this timeframe. Even if this were not the case, the permit provides that EPA can grant an extension to this timeframe upon a showing by Veolia that an extension is justified.

EPA also disagrees that there is currently no EPA-approved method for calibrating the multi-metals monitoring devices. As specified in the final permit, EPA has approved through this permitting action the use of OTMs 16 and 20 for use at Veolia. If Veolia believes that certain changes need to be made to those methods to ensure accurate and reliable operation of the multi-metals monitoring devices, Veolia may request EPA to approve such changes. This would not be inconsistent with how sources currently implement other EPA-approved performance specifications.

The approval process for the multi-metals monitoring device at Eli Lilly took 3 years because it was the first time an instrument of its kind was being installed at a facility and used to demonstrate compliance. The approval process for this situation was very thorough and during this process EPA learned a great deal about the capabilities of the multi-metals monitoring device. As a result of this thorough process, EPA considers multi-metals monitoring devices to be a viable technology for the purpose of establishing a correlation between Veolia's OPLs and actual emissions.

72. **Comment:** ***EPA should promulgate a national standard that attempts to impose multi-metals CEMS on all hazardous waste combustors. EPA posits that the multi-metals CEMS are necessary to "verify that the feedrate limits and the feedstream analysis procedures proposed in this Title V permit renewal are sufficient to assure continuous compliance with the HWC MACT emissions limits." The challenges enumerated by***

EPA are not unique to Veolia; rather, if they exist at all, they are common to each and every emissions source regulated under the HWC MACT. As currently devised, the HWC MACT requires sources to employ a system of OPLs and feedstream analysis to ensure that they meet the emissions limits set forth for mercury, SVMs, and LVMs. For Veolia alone, EPA is now stating that the explicit directives of the HWC MACT are insufficiently certain and that multi-metals CEMS are necessary to assure the feedstream analysis complies with the standard. Because all hazardous waste combustors in the United States rely on OPLs and feedstream analysis to comply with the HWC MACT emission limits, EPA's apparent change in policy regarding the adequacy of OPLs and feedstream analysis should be applied to all hazardous waste combustors – not just Veolia.

See Veolia at 51-52.

EPA Response: EPA has explained in the SB and this response to comments document that the imposition of the enhanced feedstream analysis and multi-metals monitoring device requirements in the final permit is the product of a site-specific analysis. The combination of site-specific factors demonstrates that Veolia's prior FAP did not require adequate analysis to properly characterize its waste streams, and that a single CPT cannot ensure that compliance with the OPLs will assure continuous compliance with the HWC NESHAP emissions limits. Thus, EPA has enhanced the feedstream analysis procedures and required the installation and temporary operation of the multi-metals monitoring devices in the final permit. By doing so, EPA is not finding that the HWC NESHAP procedures are insufficient. Once Veolia establishes a correlation between compliance with the OPLs and continuous compliance with the HWC NESHAP emission limits, it may continue to use the OPL and CPT procedures in the NESHAP to demonstrate compliance with the emission limits.

73. **Comment:** ***The proposed methodology for measuring beryllium shows that EPA's requirement for the installation of multi-metals CEMS is arbitrary and capricious. The methodology for beryllium that EPA proposes is the same HWC MACT methodology that EPA dismisses as too uncertain. If this accepted HWC MACT methodology is accurate and acceptable for beryllium, EPA must show why the same methodology is inaccurate for the other metal emissions in order to justify its decision-making regarding CEMS. Rather than treating the emissions monitoring of metals in such an arbitrary fashion, Veolia proposes that all metal emissions be subject to measurement using the same methodology – specifically, the methodology set forth and approved in the HWC MACT standard. The HWC MACT standard was established in part to avoid inconsistent and varying sampling results which would occur without this standard methodology.***

See Veolia at 65-66.

EPA Response: The final permit requires that beryllium emissions be quantified using the results of feedstream analysis and the system removal efficiency used by Veolia to estimate emissions during the 12-hour period used to calculate the 12-hour average rolling average. Because the Xact cannot measure beryllium, we believe this is a reasonable beryllium calculation methodology since Veolia will already be required to quantify beryllium feedrates pursuant to the feedstream analysis provisions in the permit. EPA believes that even with the potential uncertainty in the feedrate calculations for beryllium, the real-time data provided by the multi-metals monitoring devices for arsenic, cadmium, chromium and lead will be sufficient to establish a correlation between metal feedrates and emissions. However, if Veolia obtains multi-metals monitoring devices that can measure beryllium, EPA will revise the permit if necessary.

74. **Comment:** ***The Xact 640 multi-metals CEMS has never been tested or installed on incinerators with dry pollution control systems such as those at Veolia. Eli Lilly's incinerator and Veolia's incinerators are not comparable. The Eli Lilly incinerator, along with most other incinerators in the United States, employs wet scrubbers as its pollution control equipment or a combination of wet scrubbers and baghouses. The off gases from incinerators using wet scrubbers all have similar moisture and temperature ranges. In comparison, Veolia operates an exclusively dry pollution control system on Units 2, 3 and 4. The only other exclusively dry system in the United States known to Veolia is the Clean Harbors incinerator in Kimball, Nebraska. Veolia's dry pollution control systems produce off gases at much higher variable moisture and temperature ranges than wet scrubber systems. The Xact multi-metals CEMS has never been tested, installed or demonstrated to successfully operate in incinerators using exclusively dry pollution control systems and producing off gases with the high variable moisture and high temperature produced by Veolia's incinerators.***

See Veolia at 66.

EPA Response: The commenter does not provide any factual support for its conclusion that the multi-metals monitoring devices would not successfully operate under such conditions. EPA has discussed the commenter's concerns with Cooper and, based on those discussions, believes that the Xact will reliably operate at the conditions in Veolia's stacks as long as the probe and filter remain above the water vapor dew point. One of the strengths of the Xact is that the sample collection is separated from the x-ray analysis. This means that the more sensitive components of the analysis system are never exposed to stack effluent. *See* Email from Krag Petterson, Cooper, to David Ogulei, EPA, July 17,

2013.[48] According to Cooper, the Xact has operated at a wide range of temperature and moisture conditions, including moisture conditions of at least 20% and, based on our discussions with Cooper, we believe that the Xact multi-metals monitoring devices can operate in even higher moisture contents, including moisture contents as high as 45%. It has operated successfully on saturated stacks such as those that exist at coal-fired power plants equipped with wet scrubbers. EPA has not found any data that support the commenter's assertions.

75. **Comment:** ***The Xact 640 has not been demonstrated to be reliable for measuring the content of stack emissions from a commercial hazardous waste incinerator such as Veolia.***

See Veolia at 68-71.

EPA Response: As discussed in the SB and elsewhere in this document, the Xact multi-metals monitoring device has been extensively tested under a variety of conditions that encompass the expected conditions at Veolia's stacks. Due to the body of evidence gathered by EPA through tests conducted at Eli Lilly and other facilities, EPA believes that the multi-metals monitoring devices would have no problem producing reliable data needed to establish a correlation between OPLs and actual emissions.

76. **Comment:** ***The Xact 640 technology fails to obtain a representative sample. The majority of the metals from the dry process that Veolia uses are in the form of particulate matter (PM). As a result of variations during normal operation, the PM emitted is not size selective. In order to provide accurate analysis, the Xact CEMS must obtain a representative sample of the PM in the emission stream and transport that sample to the detector. The result from the Xact CEMS is a discrete, quantifiable reading for each of the metals it tests from a single sampling point. A single point sampling location cannot obtain a sample as representative as a traversing sampling collection system under changing process conditions. When the Xact CEMS fails to obtain a representative sample from the stack to be examined by the detector, the resulting discrete output for each of the metals from the Xact CEMS will be incorrect. Based on the actual sampling location of the Xact CEMS, there is a very high possibility that the Xact CEMS output will not match the actual emissions since, unlike PM CEMS which use Performance Specification (PS) 11, the Xact CEMS does not have any way of compensating for PM stratification under changing process conditions. Depending on the single point stack gas sampling location of the Xact***

[48] *See* Document ID EPA-R05-OAR-2014-0280-0082.

CEMS, the sample collected could be higher or lower in metals/PM than the overall average concentration.

See Veolia at 71-73; Ross at 4-5; Comments by Robert W. Baxter, December 11, 2014, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0110 (Baxter (2014)) at 2-4; and Robert W. Baxter's Reply to Comments from Cooper Environmental Services, LLC, document ID. EPA-R05-OAR-2014-0280-0116 (Baxter (2015)).

EPA Response: While we agree that PM stratification can often be an issue in stationary source stacks, we disagree with the commenters' conclusion that PM stratification would be a problem with the proposed multi-metals monitoring devices, or that PM stratification would cause bias in the measured concentrations. Section 1.3 of OTM 16 specifically allows the use of either single point or traverse sampling provided the tester collects a representative sample. To ensure that a representative sample is collected, OTM 16 recommends that the sampling probe for the multi-metals monitoring device be located at a point without stratification. OTM 16 recommends that the tester test for stratification at the proposed monitoring device sampling location and we expect that a procedure similar to the method detailed in section 8.1.3.2 of Performance Specification 2 would be used.

Moreover, previous studies have shown that PM stratification may not always be present at all stationary sources. In one study, which was designed to demonstrate and validate the capabilities of the Tapered Element Oscillating Microbalance (TEOM) monitor, the authors installed two identically configured TEOM monitors in adjacent sampling ports at a coal-fired power plant, and collected both single-point and traverse measurements. The results demonstrated excellent agreement between the co-located TEOM monitors and showed the sampling locations to be essentially non-stratified with respect to PM.[49] While the previous stratification studies have not specifically used a multi-metals monitoring device as the sample collection device, the observations of those studies are applicable in this case.

77. **Comment:** ***The Xact 640 technology has not been calibrated against a Quantitative Aerosol Generator (QAG) that represents the process conditions at Veolia. The QAG is an excellent tool to verify the detector, similar to a calibration gas for other CEMS since it generates a known concentration of metal. However, a QAG used to verify a detector is only as good as the QAG's replication of the conditions in which the detector will exist. The QAG used to validate the Xact CEMS was non-representative in***

[49] *See* Cooper Environmental Services Supplemental Submittal, February 10, 2015; available at regulations.gov, document ID. EPA-R05-OAR-2014-0280-0113, Attachment 1. *See also* document ID. EPA-R05-OAR-2014-0280-0115 (correction of references).

that the particle sizes contained within the QAG were 1 micron or less and not representative of the particle sizes that have been documented to exist in Veolia's stack emissions.

See Veolia at 73-74.

EPA Response: Users of the Xact multi-metals monitoring devices and fenceline monitors have used the QAG to generate metals aerosols whose concentrations are traceable to National Institute of Standards and Technology (NIST) standards in the range of nanograms per cubic meter (ng/m^3) for the ambient/fenceline Xact monitors and to milligrams per cubic meter (mg/m^3) for stack monitors. This broad QAG range clearly covers the emissions limits specified in the HWC NESHAP as micrograms per cubic meter ($\mu g/m^3$), as well as the maximum concentrations expected from the Veolia facility. The QAG is broadly applicable to ambient as well as stack monitors and its application is independent of such conditions as the type of probe, probe flow or gas conditions. The QAG operating conditions can readily be adjusted to these variables in the field to deliver the concentration to meet the required permit range.

It is difficult to understand how the commenter came to the conclusion that "the particle sizes contained within the QAG were too small and not representative of the particle sizes that have been documented to exist in Veolia's stack emissions." Each of Veolia's stacks contains a baghouse that is expected to filter out all large particles from the stack. In fact, Veolia's 2013 CPT showed that PM emissions from each of Veolia's stacks were very low, with a maximum 3-run average of 0.002 grains per dry standard cubic foot, corrected to 7% oxygen, measured from Unit 3's stack. This level of PM emissions is generally not associated with particles over 1 micrometer in size as the comment suggests.

78. **Comment:** ***The Xact 640 technology is a historical failure when applied to stack emission monitoring at the locations where it has previously been installed and operated as identified by EPA.***

See Veolia at 74-75.

EPA Response: This comment is incorrect and ignores all of the evidence that EPA has included in the permit record. In fact, the Xact 640 multi-metals monitoring device operated reliably for over 6 years at Eli Lilly. Also, test data provided by Cooper indicate that the Xact multi-metals monitoring device has performed reliably in all of the facilities where it has been tested. EPA does not have any data showing that the Xact 640 multi-metals monitoring device "is a historical failure" as alleged in this comment. The fact that

Evonik elected not to proceed with a necessary repair on its Xact multi-metals monitoring device should not be interpreted to erase the 6 plus years over which the instrument operated reliably.

79. **Comment:** ***EPA's actions in requiring the installation of Cooper's Xact 640 CEMS are unprecedented and should be investigated further. It is highly unusual for EPA to endorse the use of a specific vendor of an instrument, monitoring equipment, or other such system in a mandated regulatory or enforcement circumstance or for use in lieu of a performance test. Veolia reserves the right to request additional discovery including written discovery and depositions before an appropriate tribunal due to EPA's failure to explain this unprecedented requirement that Veolia believes demonstrates a strong showing of bad faith and improper behavior.***

See Veolia at 75.

EPA Response: The final permit does not require Veolia to install "Cooper's Xact 640 CEMS" as indicated by this comment; further, as discussed in the SB and this response to comments, the permit does not require the use of CEMSs in lieu of a performance test. Accordingly, the final permit does not endorse a specific vendor for the multi-metals monitoring devices. Although EPA discusses the Xact 640 multi-metals monitoring device in the SB as the only commercially available multi-metals monitoring device of which EPA is aware, the permit does not specify that only the Xact 640 multi-metals monitoring device can be installed by Veolia. Veolia may install any multi-metals monitoring device that can reliably measure the specified metals at the frequency specified in the final permit.

As discussed in RTC 55, above, EPA's decision to require monitoring equipment that is currently distributed or manufactured by one vendor is not unprecedented.

80. **Comment:** ***Condition 2.1(D)(1)(i)(ii), Page 34 of 172, of the Draft Permit should be revised. Veolia cannot calculate a system removal efficiency (SRE) specific for beryllium, a low volatile metal (LVM), from the 2013 CPT data because analytical results for the waste feeds and emissions were predominantly non-detect values, i.e., there was not enough beryllium in either the feed or in the emissions to obtain an accurate measurement. Thus, Veolia would need to use a SRE for LVM, instead of one for beryllium. The lowest SRE for LVM among the three incinerators is 99.99918%.***

See Veolia at 101.

EPA Response: As requested by this comment, EPA has revised Condition 2.1(D)(1)(i)(ii) in the final permit to specify that if the emissions data for the affected metal were non-detect values during the last comprehensive performance test, the Permittee may use the lowest system removal efficiency for the metal group (e.g., LVM in the case of beryllium) instead of one for the specific metal.

81. **Comment:** ***The following requirement contained in Condition 2.1(D)(1)(i)(x), Page 36 of 172, of the Draft Permit is confusing, impractical, and cannot be implemented as written: "Any one-hour block average CEMS reading above any parametric range, as defined in Condition 2.1(D)(1)(i)(iii), is a deviation." As a result of the definition of the parametric range that is defined as the emission limit, then the one-hour block average CEMS reading set at that parametric range can never be exceeded. Using mercury as an example, the parametric range would be set at 0-130 ug/dscm, with 130 being the emission limit. Since the range of the instrument is set at 0-130 then the instrument cannot, by definition, read above 130 µg/dscm because this condition requires the range to be set at the emission limit. An instrument set at that range will never show a reading above the emission limit.***

This condition becomes even more confusing when trying to implement this requirement with LVM and SVM. Since the instrument cannot read beryllium, the parametric range for the LVM compounds, arsenic and chromium, is 92 µg/dscm. The parametric range for SVM compounds, cadmium and lead, is 230 µg/dscm. Because LVM and SVM are each made up of two compounds, it is difficult for Veolia to determine if it should set the parametric range at half the emission limit or should proceed as instructed by this condition and set the range at the emission limit. The permit conditions do not set forth how to deal with the LVM and SVM compounds nor do they provide how the multi-metals CEMS would be able to set the ranges for an emission standard that includes multiple compounds.

See Veolia at 101-102.

EPA Response: The commenter appears to misunderstand how EPA generally uses the term "parametric range" in the Title V permitting context. The parametric range, as defined in the draft permit, did not establish the analytical limitation of the instrument as this comment implies. Generally, the parametric range indicates that the measured parameter must fall within the range specified as the parametric range. However, as discussed in response to other comments above (e.g., RTC 1), EPA acknowledges that confusion may have been caused by referring to the multi-metals monitoring devices as CEMSs and CPMSs. Additionally, because the multi-metals monitoring devices will directly measure metal concentrations, it could cause confusion to refer to the device

output as a "parameter" similar to the output of a typical CPMS. Accordingly, we have revised Condition 2.1(D)(1)(i)(iii) by adopting the term "indicator range" in the final permit to refer to the range within which the metal concentrations measured by the multi-metals monitoring device must fall. We clarified Condition 2.1(D)(1)(i)(iii) to specify that the Permittee is not precluded from establishing the indicator range at a value that is less (i.e., more stringent) than the emission limit.

Because EPA is requiring the multi-metals monitoring devices to determine whether the feedrate OPLs can assure continuous compliance with the applicable emissions limits, EPA agrees that, for purposes of this permit, any 1-hour block measurement outside of the indicator range (e.g., a measurement of 131 µg/dscm in the case of mercury) should not automatically be considered a deviation. Accordingly, EPA has revised Condition 2.1(D)(1)(i)(ix) to specify that any 1-hour block measurement outside of the indicator range would be an "excursion" as defined at 40 C.F.R. § 64.1. An excursion means a departure from an indicator range established for monitoring, consistent with the averaging period specified for averaging the results of the monitoring. A deviation, on the other hand, means a departure from some term or condition of the permit. While EPA has clarified that measurements outside the indicator range shall be considered excursions (and not deviations), the final permit continues to require Veolia to initiate corrective actions upon occurrence of an excursion.

EPA has also revised Condition 2.1(D)(1)(i)(iii) of the final permit to clarify that for LVM and SVM, which are each made up of multiple metals, the indicator range for each metal group applies to the sum of emissions of the individual constituents of that metal group. Thus, the indicator range for SVM would refer to the sum of emissions of lead and cadmium as measured by the multi-metals monitoring device while the indicator range for LVM would refer to the sum of emissions of arsenic, beryllium and chromium.

Recognizing that Veolia typically conducts CPTs over a period of at least 6 hours (i.e., three test runs of approximately 2 hours each), we are also requiring the Permittee to record and report 6-hour rolling averages of monitoring device data for purposes of making comparisons of the multi-metals monitoring device data with the performance test data (if available). We revised Condition 2.1(D)(1)(i)(ix) to clarify that the Permittee is not required to commence the automatic waste feed cut-off (AWFCO) system whenever an excursion occurs. However, we have specified that should the Permittee opt to interlock the multi-metals monitoring devices with the AWFCO system required by Condition 2.1(C)(7), the Permittee shall use the corresponding 12-hour rolling average of multi-metals monitoring device data. This revision ensures that the averaging period used to trigger AWFCOs is consistent with the averaging period used to demonstrate compliance with the feedrate OPLs.

As a consequence of the above changes, we have revised the associated recordkeeping and reporting provisions to specify that the Permittee must maintain and report to EPA, consistent with the reporting provisions of the final permit, 6-hour rolling average concentrations in addition to 1-hour block and 12-hour rolling concentrations and feedrates.

82. **Comment:** ***Veolia is unable to implement Condition 2.1(D)(1)(i)(x)(i), Page 36 of 172, of the Draft Permit as written. The deviation referenced by this condition can never occur due to the requirement for setting the parametric range at the emission limit. However, there are other problems with this permit condition, even if a deviation could occur. The multi-metals CEMS that is being proposed is not a real-time CEMS. A reading is obtained every 15-20 minutes versus other real-time instruments that the facility uses that produce a value within seconds. This delay makes it almost impossible to correlate between what is being incinerated and the CEMS reading. Veolia's waste feeds and feedrates can vary minute by minute, so what occurred 15-20 minutes ago maybe entirely different than what was occurring when the value was actually obtained. Also, the waste that was being fed 15-20 minutes ago may be completely gone when the reading is obtained so that there is no way to go back and do more analysis to prove or disprove the instrument reading. It is therefore impossible to pinpoint with any accuracy what was causing the deviation with an instrument that has a 15-20minute delay.***

See Veolia at 102.

EPA Response: EPA agrees that an instrument that reports stack concentrations of metals every second would generally be better than an instrument that reports concentrations every 15 minutes. However, EPA is not aware of an emissions monitoring instrument that has this level of monitoring resolution for emissions of metals. Even if the available multi-metals monitoring devices could be configured to report concentrations at that resolution, EPA believes it would be unreasonable to require Veolia to perform instantaneous corrective actions based on the instantaneous monitoring device readings.

We disagree that it will be impossible to correlate between the 15-minute monitoring device readings and what is being incinerated. Veolia is required to characterize each feedstream it incinerates and to maintain sufficient records to understand the precise time that each waste is fed to the incinerator. The multi-metals monitoring devices would not replace this obligation. In the case of an excursion, corrective action would involve an analysis of all information related to the wastes that Veolia fed to the incinerator during the excursion period.

83. **Comment:** ***The Xact® CEMS validation process is deficient with regard to representativeness of the chemical species and physical forms present in a hazardous waste incinerator stack gas. Validation using QAG generated aerosols with nitrate salts is not an accurate representation of actual performance in hazardous waste incinerator applications. The specific materials used as standards are inappropriate chemically because they are not comparable to the actual chemistry and physical state of the compounds required to be measured in the stack gas.***

See TestAmerica and Focus Environmental (2014) at 2-3, 16 and TestAmerica and Focus Environmental (2015).

EPA Response: Based on the information provided by Cooper in its supplemental submittal for the permit record, EPA believes that the Xact multi-metals monitoring device validation process using QAG-generated aerosol is adequate. As articulated by Cooper in its supplemental submittal, the total metals analysis used in the XRF analysis of the Xact multi-metals monitoring device is independent of oxidation state, chemical matrix, refractory oxides, or difficult to dissolve metal compounds. *See* Cooper Supplemental Submittal at 8-10. Cooper goes on to explain that "The form of metal compounds would be significant for an analysis method such as inductively coupled plasma – mass spectrometry (ICP-MS), but it does not apply to total metals analysis of particulates and vapor-phase metals captured on the treated filter media of the Xact, because the metals are neither removed nor dissolved and XRF uses inner shell electron transition lines to quantify the amount of metal, which is entirely separate from chemical compound form." *Id.* Cooper has provided testing data in support of its conclusion that the reference aerosol generated by the QAG would be representative of the expected aerosol in Veolia's stacks. The commenter has not provided actual aerosol measurements from Veolia's stack illustrating how the QAG's reference aerosol fails to mimic actual stack conditions.

84. **Comment:** ***During testing performed at the Tooele Army Depot (TEAD) incinerator in 2001 and 2002, the Xact® CEMS' results for non-mercury metals deviated significantly from the results obtained using Method 29. The testing approach to truly validate the Xact® CEMS would be to perform head-to-head concurrent testing of paired Xact® CEMS and paired Method 29 sampling trains. Such testing either has never been performed, or if it has, the data have not been made publicly available.***

See TestAmerica and Focus Environmental (2014) at 5-7, 11 and TestAmerica and Focus Environmental (2015).

EPA Response: Although the commenters are correct that, in 2002, TEAD requested tests on an early model of the Xact relative to EPA Method 29, EPA disagrees with the commenters' conclusions regarding the associated test results. During the 2002 tests, which were conducted under EPA's ETV program, the Xact reported analytical results for 114 samples which were then averaged for the 12 Method 29 runs. The lead concentrations measured by the Xact were in strong agreement with Method 29 with a relative accuracy of 4% and a correlation between Method 29 and the Xact of better than 0.98. *See* Cooper Supplemental Submittal, Attachment 2. The commenter has not explained why it considers these to be significant deviations between the monitoring device and Method 29 test results.

While EPA has not conducted concurrent Method 29 and Xact multi-metals monitoring device measurements at a commercial hazardous waste incinerator, EPA believes the extensive testing already performed on the Xact multi-metals monitoring device at other facilities demonstrates that the Xact multi-metals monitoring device can provide reliable data needed to establish a correlation between feedrates and emissions at the Veolia facility.

85. **Comment:** ***We have significant doubts about the ability of the Xact® CEMS to accurately measure mercury emissions from a well-controlled hazardous waste incinerator. The TEAD testing showed the Xact® CEMS' filter media is wholly inadequate for the capture and retention of mercury as emitted from a hazardous waste incinerator. The Xact® CEMS bias for measuring mercury emissions as impacted by particulate concentration and composition is not resolved. In sampling situations where the total particulate concentrations are very low and the particles much smaller (submicron) and lacking in carbonaceous content such that mercury behaves more as vapor, performance against the reference method is poor. This environment exists in Veolia's stacks and the Xact® CEMS will therefore fail to provide accurate mercury emissions data.***

See TestAmerica and Focus Environmental (2014) at 7-9, 16 and TestAmerica and Focus Environmental (2015).

EPA Response: As previously discussed, information provided by Cooper indicates that tests conducted at a coal-fired power plant have shown excellent correlation between the Xact mercury readings and Method 29 measurements. There are a number of documented studies that have confirmed that the majority of mercury emissions from a typical coal-

fired power plant are primarily in the vapor phase (at least 80% of the total mercury).[50] Thus, the excellent correlation observed in these studies illustrates that the Xact multi-metals monitoring device is fully capable of accurately measuring vapor phase mercury. In its supplemental report, Cooper has demonstrated that it has performed extensive testing on the ability of the Xact to capture vapor-phase mercury. In all tests, elemental mercury trapping efficiency exceeded 99%. EPA expects that the percentage of vapor-phase mercury in Veolia's stacks will be comparable to the amount observed in coal-fired power plants. Therefore, this comment is inconsistent with both published literature and previous tests conducted with the Xact multi-metals monitoring device.

The commenters also suggest that emissions from coal-fired power plants would contain significant amounts of carbon which could behave similarly to activated carbon. However, this assertion is not supported by factual information. While it is logical that the flue gases from a coal-fired power plant or from Veolia's incinerators may have some entrained carbon, it is unclear how the commenters concluded that this carbon would be of significant quantities and that it would behave as activated carbon.

86. **Comment:** ***The Xact® CEMS bias relative to particle transport is a factor that needs to be resolved. The potential for residual carryover effects from previous sampling and potential false positives from the sampling system exist. The Xact® CEMS cannot consistently measure the mostly particulate forms of non-mercury metals that may adhere to the sampling probe, and which could randomly break loose causing false positives. The available data further indicate Xact® CEMS sampling technology cannot consistently and comparably measure mercury emissions in situations like hazardous waste incinerator emissions where the mercury is not likely bound to particulate matter.***

See TestAmerica and Focus Environmental (2014) at 9-10, 16 and TestAmerica and Focus Environmental (2015).

EPA Response: We have already addressed the commenters' concerns regarding the Xact's ability to accurately measure vapor-phase mercury. Regarding the commenters' concern for potential residual PM carryover effects, the commenter does not provide any evidence that this would be an issue for the Xact considering its sample probe design and operation. As we have stated elsewhere, any PM build-up on the transport wall would have to be extremely well distributed across the entire transport line to have the possibility of falsely impacting the Xact's filter and detector and, subsequently, the

[50] See Cooper Supplemental Submittal (Document ID. EPA-R05-OAR-2014-0280-0115) at 13-14 for a listing of some of these studies.

analytical results. This is because as the gas travels through the Xact's transport line, the Xact samples a small subsample from the central flow through the transport line, so the large particles that might break or flake off from the transport line's wall would be unlikely to have an impact on the concentration reading of the Xact. *See* Cooper Supplemental Submittal at 7-8. Moreover, previous tests that have involved comparison of the Xact multi-metals monitoring device's readings with measurements conducted using Method 29 and other candidate methods have demonstrated that PM build-up is not an issue with the Xact monitoring device. Accordingly, EPA is convinced that the Xact multi-metals monitoring device will reliably and accurately produce the data needed to establish a correlation between feedrates and emissions.

In addition, because Cooper's Xact uses a heated transport line, we do not expect that any vapors would condense into PM as they pass through the Xact's transport line. According to Cooper, the temperature of the transport line is maintained at approximately 190°C, which is close to the expected maximum temperature of flue gases as they exit through Veolia's stacks. Thus, the Xact's transport line would ensure that any vapors exiting the stack stay as vapors as they travel through the Xact's transport line.

87. **Comment:** ***The operational design of the Xact® CEMS is to sample the stack gas under "super-isokinetic" conditions. That is, the Xact® CEMS by design extracts a potentially high biased sample from the stack gas and operates continually in a mode that is not representative of isokinetically measured emissions. Under these conditions a metals emissions result evaluated by the Xact® CEMS is not comparable to compliance stack gas metals concentrations measured using Method 29. Operating the Xact® CEMS at super isokinetic conditions to compensate for potential low bias results has the potential to overstate emissions and presents compliance monitoring issues. These falsely high readings along with the problems associated with the transmission lines including the potential false positive results for particulate re-entrainment causes a facility and EPA to have no ability to assess the accuracy of the data being acquired by the Xact® CEMS relative to compliance. The Xact® CEMS data can therefore only be used as a qualitative indicator of compliant operation and not as an accurate indicator of actual emissions, and not to judge the appropriateness of the FAP Analysis Plan procedures.***

See TestAmerica and Focus Environmental (2014) at 10-11, 16; TestAmerica and Focus Environmental (2015); and Ross at 4.

EPA Response: While EPA acknowledges that the design and operation of the Xact multi-metals monitoring device is different from Method 29, this fact does not preclude the use of the multi-metals monitoring device for purposes of establishing a correlation

between OPLs and actual emissions. Moreover, it is standard for EPA to allow in its regulations and permits the use of alternative methods for determining compliance or for other purposes as long as the alternative candidate methods have been demonstrated to produce results that are comparable to the results obtained by the primary method. As we have discussed previously, we are confident, based on previous tests and the installation and operation at Lilly, that the Xact multi-metals monitoring device produces analytical results that are comparable with Method 29 measurements. Moreover, EPA is not making the assertion in this permit action that the multi-metals monitoring device is identical to Method 29 by design or operation, nor is it replacing Method 29 as the compliance demonstration method.

88. **Comment:** ***Multi-metals CEMS are unnecessary because existing system OPLs established according to the HWC MACT rules, particularly metals feedrate limits, are overtly conservative and by design are forgiving of occasional errors made in documenting metals feedrates.***

See TestAmerica and Focus Environmental (2014) at 12-13, 16.

EPA Response: As we have discussed in the SB, EPA is concerned that deficiencies in Veolia's feedstream analysis procedures as previously observed may have resulted in underreporting of metal feedrates. Further, given the heterogeneity of Veolia's feedstreams, we are concerned that the current feedrate OPLs may not assure continuous compliance with the HWC NESHAP emissions limits. While it is correct from a theoretical perspective that correctly established and conservative OPLs would assure compliance with the emissions standards, given the observed deficiencies in Veolia's feedstream analysis procedures, the nature of the CPT results, and other site-specific factors discussed in the SB and this response to comments document, EPA has determined that current information demonstrates that the OPLs cannot assure continuous compliance with the HWC NESHAP emissions limits in this case. Installation and temporary operation of multi-metals monitoring devices as required in the final permit, along with enhanced feedstream analysis, would increase EPA's confidence in Veolia's ability to comply with the HWC NESHAP emission standards.

89. **Comment:** ***Continuous operation of the Xact® multi-metals CEMS for 12 months as proposed by EPA will not achieve EPA's stated objectives for requiring the CEMS. Due to the design and operational problems when the Xact® CEMS is used in a commercial hazardous waste incinerator environment, the Xact® CEMS is of no significant value from the perspectives of determining any direct correlations with documented metals feedrates. Nor, will operation of the Xact® CEMS ever show any potential excursions***

of any metals emissions limits. Any data generated will be purely of a qualitative nature, not quantitative.

See TestAmerica and Focus Environmental (2014) at 12-13, 16 and TestAmerica and Focus Environmental (2015).

EPA Response: EPA disagrees with the speculative nature of this comment as it disregards all of the evidence EPA has presented on the demonstrated reliability and accuracy of the Xact multi-metals monitoring device. Based on the available data and our experience with Lilly, we believe that the Xact multi-metals monitoring devices will reliably provide the data we need to establish the desired correlation. The commenters do not provide any data demonstrating that establishing such a correlation using the Xact multi-metals monitoring device's data would not be possible.

90. **Comment:** ***Because the Xact CEMS sampling is being required to be done concurrent with the feedstream analysis already performed, the requirement to operate the system for 12 months appears to be a thinly veiled EPA-mandated extended field test of the Xact CEMS funded by Veolia and not associated with any substantive concern or evidence of possible exceedances of metals emissions standards.***

See TestAmerica and Focus Environmental (2014) at 17.

EPA Response: EPA has presented information in the SB and elsewhere documenting EPA's concerns with Veolia's existing feedstream analysis procedures, and explained how the monitoring devices are not a replacement for the enhanced FAP requirements. EPA has also discussed the fact that the CPT results showed significant differences in emissions between two nearly identical units burning nearly identical feedstreams. Our confidence in the ability of the Xact multi-metals monitoring devices to reliably produce accurate data is based on our review of the extensive tests that have already been performed by Cooper as well as our experience with the Lilly operation. Therefore, we do not believe that additional field tests are necessary before we may require a multi-metals monitoring device for the purpose of establishing a correlation between OPLs and actual emissions.

91. **Comment:** ***The complexity and aggregation of waste types, combined with the averaging and agglomerating effects of the treatment unit operations (multiple feed charges of various containerized wastes or continuous feeding of blended liquid wastes), cause any analysis using the Xact CEMS as direct link to any specific waste item fed or FAP generated data to be impossible. EPA's stated basis for the requirement to use the Xact CEMS is not supported.***

See TestAmerica and Focus Environmental (2014) at 17.

EPA Response: This comment partly supports our justification for requiring the installation and temporary operation of multi-metals monitoring devices at Veolia. Due, in part, to the same issues listed in this comment, we agree that it would be challenging for Veolia to know precisely the overall metal concentration being fed to the incinerator at any time. However, the enhanced feedstream analysis procedures included in the final permit will ensure that Veolia has metal composition information for each feedstream, allowing it to estimate the overall feedrate for each feed. The multi-metals monitoring devices will give us the opportunity to then correlate Veolia's feedrate estimates to the actual observed emissions. The commenter has not explained why it believes this correlation would be impossible.

92. **Comment:** ***EPA has not expressly via rules, either in 40 C.F.R. Part 63, Subpart EEE or other similar regulations, provided for immediate and direct relief from OPLs or other monitoring procedures when CEMS are deployed and implemented for continuous compliance demonstration. Only through the arduous and lengthy alternative monitoring petition process has EPA ever granted such exemptions. Yet in the case of Veolia, EPA is allowing the Xact CEMS to take precedence over the FAP by requiring Veolia to take specific operational steps in response to any deviation of the CEMS, even when Veolia is operating in full compliance with the FAP.***

See TestAmerica and Focus Environmental (2014) at 17.

EPA Response: As discussed elsewhere in this document, EPA has authority under the HWC NESHAP and Title V of the Act and its implementing regulations at 40 C.F.R. Part 71 to include in this Title V operating permit monitoring requirements necessary to assure compliance with the permit terms and conditions. Courts have affirmed that EPA has an obligation under section 504(c) of the Act, 42 U.S.C. § 7661c(c), and 40 C.F.R. § 71.6(c)(1), as the Title V permitting authority, to include in a Title V permit any monitoring necessary to assure compliance with all permit terms and conditions. *Sierra Club v. EPA*, 536 F.3d 673, 680-681 (D.C. Cir. 2008) (the most reasonable reading of 40 C.F.R. § 70.6(c)(1), which is identical to 40 C.F.R. § 71.6(c)(1), is that it serves to ensure that "all Title V permits include monitoring 'sufficient to assure compliance with the terms and conditions of the permit.'"). This authority exists outside of the alternative monitoring petition provisions in 40 C.F.R. § 63.7(f). The enhanced monitoring requirements that EPA is imposing, notwithstanding the alternative monitoring petition provisions in 40 C.F.R. § 63.7(f), are consistent with this Clean Air Act mandate. Further, as discussed elsewhere in this document and the SB, the multi-metals monitoring devices

do not "take precedence" over feedstream analysis. The enhanced feedstream analysis required in the final permit, in conjunction with the data from the multi-metals monitoring devices, should allow Veolia and EPA to determine whether Veolia is complying with its OPLs, and whether such compliance will assure continuous compliance with the mercury and heavy metals emissions limits in the HWC NESHAP.

93. **Comment:** ***EPA does not include in the Draft Permit relief from any existing compliance requirements to offset the costs of deploying and implementing the Xact® CEMS on Veolia's incinerators. The commenters estimate the cost of installing and operating Xact® CEMS on three incinerator units for one year is at least triple the cost of two CPTs spread over 10 years, not counting Veolia's annual operating costs of the Feedstream Analysis Plan implementation.***

See TestAmerica and Focus Environmental (2014) at 15.

EPA Response: The final permit allows Veolia to petition the Administrator to use the multi-metals monitoring devices on a permanent basis in lieu of feedstream analysis.

For purposes of this permit, EPA is not requiring the multi-metals monitoring devices in lieu of the CPTs required by the HWC NESHAP; rather, EPA is requiring the multi-metals monitoring devices to establish a correlation between OPLs and actual emissions. Veolia will continue to monitor direct compliance through the combination of feedstream analysis and compliance with the OPLs. To fully understand the correlation between OPLs and actual emissions, Veolia would have to conduct multiple CPTs under varying operating conditions and feedstream combinations. Due to the variability of Veolia's feedstreams, EPA believes that requiring Veolia to conduct the number of CPTs under multiple operating conditions and feedstreams necessary to obtain a statistically sound feedrate-emissions correlation and assure continuous compliance would be considerably more expensive than installing and operating three multi-metals monitoring devices for one year.

94. **Comment:** ***EPA states the multi-metals CEMS are being installed as continuous parametric monitoring systems (CPMSs). However, a CPMS limit on an operational combustor is always established during CPT testing in order to establish a known relationship, if any, between the CPMS and the parameter that is sought to be monitored. A temporary CPMS that has not been established through CPT testing should not have any impact on a feedstream analysis plan that is permanent and was established through CPT testing.***

See Baxter (2014) at 1-2.

EPA Response: This comment suggests a misunderstanding of the type of "parameter" that would be monitored by the multi-metals monitoring devices proposed in the draft permit. In the draft permit, EPA proposed that the monitored "parameter" would be the concentration of metals in the flue gas exiting the stack. This "parameter" would then be related to a feedrate, which would be established through feedstream analysis, under a variety of combustion conditions and mixes of wastes. However, in light of this and similar comments as previously discussed, EPA acknowledges that confusion may have been caused by referring to the monitoring devices as "multi-metals CEMS" or "CPMS." A "continuous monitoring system," which includes "CEMS" and "CPMS," is defined in EPA's regulations as "monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation." 40 C.F.R. § 63.2. Therefore, in the final permit, EPA has changed this permit condition to require multi-metals monitoring devices (not CEMSs or CPMSs). The measurements made by the multi-metals monitoring devices would serve as "indicators" for purposes of establishing a correlation between the OPLs and actual emissions.

95. **Comment:** ***EPA states the Xact CEMS is being established as a CPMS on a temporary basis. However, this temporary CPMS is being used as an absolute emission rate for providing evidence of deviations that indicate that Veolia may not be in compliance with a HWC MACT metals emissions limit. Based on my experience, the HWC MACT recognized feedstream analysis plan is used as evidence of compliance – a temporary CPMS is never used as evidence of compliance.***

See Baxter (2014) at 2.

EPA Response: We have clarified in the final permit that, for purposes of this permit, measurements above the indicator range of the multi-metals monitoring device would be considered excursions. We have also clarified that the purpose of the enhanced FAP and the installation and temporary use of multi-metals monitoring devices is to establish a correlation between OPLs and emissions to ensure that compliance with the OPLs demonstrates continuous compliance with the HWC NESHAP emission limits. The use of the monitoring devices does not replace the OPLs as the method by which Veolia demonstrates compliance with the HWC NESHAP.

96. **Comment:** ***The Xact CEMS has been validated, using Method 301, against an early version of the quantitative aerosol generator (QAG) that generated particles approximately 1 micron in size or less which are particles that transport well. Unfortunately, the QAG is not representative of Veolia's process conditions which may consist of larger particles. Based on a review of stack velocities at Veolia from the 2013***

CPT results, the gas velocities are high enough to easily carry particle sizes up to 100-150 microns. Therefore, the QAG is not representative of actual process conditions at Veolia and will not provide representative results when auditing the Xact CEMS transport system and/or validating the overall system at Veolia. Fabric filter bags fail from time to time, for various reasons, and when they fail, the particles that pass through the failure point are not limited by size or any other characteristic. These particles will include anything the gas stream can carry (metals, lime, etc). Veolia utilizes pulse-jet baghouses for the collection and removal of PM; cleaning of pulse-jet baghouses creates increased PM during the cleaning process.

See Baxter (2014) at 2-4 and Baxter (2015).

EPA Response: This comment does not provide any supporting data showing that Veolia's stack gases contain particles with sizes up to 100-150 microns. While, theoretically, the stack velocities mentioned in this comment could carry particles of that size up the stack, it is nearly impossible that such particles would not be captured by any of the air pollution control equipment operated at Veolia's units, including the spray dryer absorber (SDA) and baghouse, if they are operating properly. Any large particles produced by Veolia's operations would be removed as the gas travels through the emissions control equipment. Thus, although the average size of the aerosol generated by an earlier model of the QAG was approximately 1 micron, we believe, based on our review of the available literature,[51] that this size distribution is representative of the expected particle sizes in Veolia's stacks during normal operation. This belief is also consistent with statements by other commenters. *See*, *e.g.*, TestAmerica and Focus Environmental (2014) at 8 ("The particulate emissions from a typical hazardous waste incinerator equipped with emissions controls are >99 percent less than one micrometer (submicron) in dynamic particle size"). Consequently, because sub-micron particles tend to behave as a gas, we do not expect that the Xact multi-metals monitoring devices would have any problem with drawing a representative sample.

EPA disagrees with the commenter's assertion that considerable emissions of large particles result from cleaning of Veolia's pulse-jet baghouses and when the bags fail. Because the cleaning pulse is very brief (typically about one-tenth of a second long), the other bags continue to filter during the cleaning cycle, taking on extra duty because of the bags being cleaned. *See* EPA Air Pollution Control Technology Fact Sheet, EPA-452/F-03-025, at 4. Thus, in general, there is no considerable change in fabric filter performance as a result of pulse-jet cleaning. Also, pulse-jet fabric filters do not rely on a dust cake to

[51] *See* Veolia Support Documents Pages VES 019300 to VES 019488, Document ID. EPA-R05-OAR-2014-0280-0112, Table 3-1.

provide filtration and, due to the aggressive cleaning cycles used, the amount of dust buildup in pulse-jet fabric filters is minimal. Felted (non-woven) fabrics are typically used in pulse-jet fabric filters because they do not require a dust cake to achieve high collection efficiencies. Therefore, the potential for substantial emissions from dust cake breakup during cleaning, as would be expected from typical mechanical shaker baghouses that rely on a dust cake to provide filtration, is significantly minimized.

Finally, Veolia's baghouses are equipped with bag leak detection systems that enable early detection and prevention of broken bags. Bag leak detection systems monitor the relative particulate matter (dust) loadings in the exhaust of a baghouse in order to detect bag failures. EPA expects that Veolia would promptly detect and repair any failing bags thereby preventing emission of large particles due to failed or broken bags.

97. **Comment:** ***The Xact system has multiple opportunities for sample transport related issues including potential issues when 1) obtaining a representative sample from the stack; 2) transporting the stack sample through the large diameter stack probe and umbilical to the stilling chamber; 3) taking a representative isokinetic subsample from the stilling well; and 4) getting the subsample to the filter tape for analysis. Based on my knowledge and experience with PM CEMS and solids transport, I do not think the Xact can obtain an absolute representative sample at the detector versus Method 29. The dynamic conditions in the stack gases combined with the sample transport issues discussed above are impossible to overcome for a single point sampling system where a large majority of the metals are in the form of PM.***

See Baxter (2014) at 4-5 and Baxter (2015).

EPA Response: As we have discussed elsewhere in this document, we believe that the Xact multi-metals monitoring devices, if operated as required by OTMs 16 and 20, will obtain representative samples from Veolia's stacks. While it is correct that PM stratification can often be an issue in stationary source stacks, we disagree with the commenter's conclusion that PM stratification would necessarily be a problem at Veolia, or that PM stratification would cause bias in the concentrations measured by the multi-metals monitoring devices. Even though we do not believe that PM stratification would be an issue in this case, the performance specifications that would be used by Veolia provide that Veolia may use either single point or traverse sampling. *See* section 1.3 of OTM 16. OTM 16 recommends that the tester test for stratification at the proposed monitoring device sampling location and we expect that a procedure similar to the method detailed in section 8.1.3.2 of Performance Specification 2 would be used.

98. **Comment:** ***The performance specifications written for the Xact CEMS are similar to those written for gaseous CEMS applications. However, an Xact CEMS functions more like a PM CEMS and gas CEMS (e.g., CO, O_2, THC, etc.) in the fact that it must sample particulate matter. Therefore, basic performance specification requirements developed for the Xact CEMS are not valid for transporting multi-metal PM for quantification.***

See Baxter (2014) at 3.

EPA Response: Just because the performance specifications for the Xact multi-metals monitoring devices "are similar to those written for gaseous CEMS applications" does not demonstrate that those performance specifications are somehow deficient. As previously discussed, EPA successfully used these performance specifications for compliance purposes at Eli Lilly for more than 6 years. Also, previous measurements conducted using these specifications have demonstrated their appropriateness for measuring both gas- and particle-phase metals emissions from various combustion sources.

We note that it is appropriate for the performance specifications to be similar (but not identical) to performance specifications for gaseous pollutants because, as we have previously discussed, the majority of particles in Veolia's stack gases (i.e., more than 99%) are expected to be less than 1 micron in size. Research shows that particles of this size have similar transport characteristics as a gas.

99. **Comment:** ***Whether the Xact CEMS worked and produced accurate results at Eli Lilly is not predictive as to whether the Xact CEMS will work and produce accurate results at Veolia. The Eli Lilly facility used a wet scrubber, not the dry baghouse system utilized by Veolia. The systems at the two facilities are completely different and therefore produce PM including multi-metal PM that are of a completely different type, size and characteristic.***

See Baxter (2014) at 5.

EPA Response: While we are convinced that the success of the Eli Lilly operation can be replicated at Veolia, we are not basing our confidence solely on that success. Instead, we have considered the totality of the evidence, as discussed in this document, regarding the ability of the Xact multi-metals monitoring devices to reliably and accurately measure metals concentrations under a wide range of stack conditions. Although the commenter is correct that Eli Lilly operated a different air pollution control system than Veolia, our review of the available data indicates that the wide range over which the Xact multi-

metals monitoring device has demonstrated reliability and accuracy encompasses the expected conditions at Veolia's stacks.

100. **Comment:** ***Veolia is the only commercial HWC in Region 5 that has not failed a CPT or had final Agency action taken against it. Our concern is that despite this fact, EPA is attempting to require Veolia to install unverifiable (as compared to Reference Method 29) monitoring equipment at a great expense. EPA's actions place Veolia at a competitive disadvantage to its two primary competitors, both of which are located in Ohio (also in Region 5) and, unlike Veolia, have failed CPTs and had final Agency action taken against them.***

See Letter from Veolia ES Technical Solutions, L.L.C. to Mr. Robert Kaplan Deputy Regional Administrator, EPA Region 5, April 14, 2015, available at www.regulations.gov, document ID. EPA-R05-OAR-2014-0280-0118 (Veolia (2015)).

EPA Response: The presence or absence of enforcement allegations do not affect EPA's authority under the HWC NESHAP or its obligations under Title V to ensure that the monitoring in Veolia's Title V permit is sufficient to assure continuous compliance with all applicable requirements. This permitting action is not the appropriate forum for EPA to comment on the status of any enforcement actions against other commercial hazardous waste incinerators in Region 5, or on the details of settlement negotiations and any concluded enforcement actions against those facilities.

EPA believes that CPTs conducted once every 5 years provide only a snapshot of Veolia's emissions and, because of the variability of the waste streams, among other things, the CPT does not necessarily represent actual emissions performance with respect to all feedstreams burned by Veolia throughout the year. Further, EPA believes that, in addition to the amounts of any metals in the waste stream, the constant variation in the combination of metals and other components of the waste stream can affect Veolia's ability to adjust combustion conditions timely and, thus, levels of emissions. Requiring Veolia to conduct more frequent CPTs under multiple operating conditions would be more expensive than temporary operation of multi-metals monitoring devices to help "calibrate" the feedstream analysis.

C. FEEDSTREAM ANALYSIS PROCEDURES AND FEEDRATE LIMITS

101. **Comment:** ***We are pleased with the incorporation of the feedrate limits for mercury, LVM and SVM in the Draft Permit.***

See Siegel/Hearing at 18-19.

EPA Response: EPA notes this comment.

102. **Comment:** ***We are happy that EPA will require Veolia to perform enhanced feedstream analysis for mercury and LVM and SVM. We believe that the enhanced FAP is justified because of the high variability in Veolia's emissions, the complex, heterogeneous nature of Veolia's feedstream, and historical problems with Veolia's analysis of its feedstream.***

See Siegel/Hearing at 19; ABC at 9-10.

EPA Response: EPA notes this comment.

103. **Comment:** ***In Condition 2.1(D)(4)(d)(ii)(B) of the draft permit the term "representative sampling" should be clarified.***

See ABC at 12.

EPA Response: We have revised Condition 2.1(D)(4)(d)(ii)(B) in the final permit to clarify that the Permittee shall conduct representative sampling using the methods specified in 40 C.F.R. Part 261, Appendix I.

104. **Comment:** ***Throughout Veolia's permitting history, EPA has alleged, without ever producing evidence (to Veolia or to a neutral third party, such as in an enforcement proceeding), that Veolia has been out of compliance with the mercury emission limitations of the HWC MACT. Yet, Veolia has maintained compliance with the HWC MACT, has kept its emissions below the limits by a margin of safety, and has provided, over the years, voluminous data and information to EPA documenting Veolia's HWC MACT compliance. Veolia's emissions are consistently well below the applicable standards, particularly for mercury. For example, Veolia's actual mercury feedrate (i.e., how much material is actually fed into the incinerator) is, on average, less than ½ of Veolia's permitted feedrate limit for mercury. Thus, by emitting below an already-protective standard, Veolia is providing another margin of safety to the public and the environment. Further, Veolia does not use extrapolation to establish any of its***

feedrates for mercury, LVM, and SVM, even though it is allowed to do so under the HWC MACT. Extrapolation allows incinerators to achieve higher feedrates for these metals based on calculations made from the facility's CPTs. Veolia does not extrapolate metal feedrates from its CPTs-meaning that Veolia's feedrate limits are based on the actual test results achieved during the CPT. This practice builds in another layer of safety regarding Veolia's compliance with the emissions limits.

See Veolia at 46.

EPA Response: EPA is not making a determination through this permitting action that Veolia is in compliance or noncompliance with any emission limit. Instead, acting in the capacity of the Title V permitting authority for Veolia's Sauget facility, EPA has determined that additional monitoring requirements are necessary for this facility to ensure continuous compliance with the Act. As explained previously in this response to comments document (e.g., RTC 1), EPA is exercising its discretionary authority under the HWC NESHAP to develop an alternative approach to establishing limits on the operating parameters for the facility. In the event that that authority is insufficient, EPA has an obligation to fulfill the mandate of 504(c) of the Act and 40 C.F.R. § 76.1(c) to ensure that the monitoring in this Title V permit is sufficient to ensure continuous compliance.

The enhanced feedstream analysis requirements and the multi-metals monitoring device provisions will enable EPA to determine whether the OPLs are sufficiently stringent to assure Veolia's continuous compliance with all applicable requirements. These permit requirements will also enable EPA to determine whether or not Veolia is continuously complying with the metal feedrate OPLs and, by implication, the emission limits.

With regard to the comment on extrapolation of feedrates, extrapolation is not automatically allowed under the HWC NESHAP because extrapolation is not always appropriate in all circumstances. For example, extrapolation may not be appropriate when some types of air pollution control devices are used. The Administrator must determine whether extrapolation to higher feedrates than the feedrates demonstrated during the CPT is appropriate on a case-by-case basis.

105. **Comment:** ***The following statement contained on Page 47 of 79, section 5.2.1, First Partial Paragraph, of the SB is incorrect, misleading, and potentially prejudicial to Veolia and should be removed from the Statement of Basis: "Therefore, under the HWC MACT, Veolia must analyze each feedstream prior to feeding the material into any of its incinerators and document the amount of metals, ash and chlorine present in the feedstream." The HWC MACT does not require each feedstream to be analyzed. In***

fact, the two other commercial incinerators in Region 5 do not analyze each feedstream prior to feeding the material into their incinerators. Furthermore, the HWC MACT does not require that Veolia analyze every feedstream prior to incineration; rather, it allows Veolia and other incinerators to use "other methods" such as "using analytical information obtained from others or using other published or documented data." 40 C.F.R. § 63.1209(c)(2)(ii). The use of "other methods" is even referenced in the 2014 Draft Permit: "[Veolia shall] [d]etermine and record the value of the parameter for each feedstream by sampling and analysis or other method." See 2014 Draft Permit at Condition 2.1(D)(4)(d)(i)(A). Thus, the statement in this paragraph should be deleted because it is contradictory to the HWC MACT, inconsistent with what has been imposed on other facilities in Region 5, and conflicts with other provisions of the 2014 Draft Permit.

See Veolia at 93-94.

EPA Response: This comment suggests a misunderstanding of the term "analysis" as used in the referenced statement from the SB. EPA's use of the term "analysis" is consistent with the use of this term in 40 C.F.R. § 63.1209(c). In this regard, "analysis" does not mean that the Permittee must always *sample and analyze* the feedstream but that the Permittee must either perform sampling and analysis or analyze the feedstream by other methods, such as using analytical information obtained from other credible sources.

The statement in the SB is consistent with 40 C.F.R. § 63.1209(c)(1), which specifies that "Prior to feeding the material, you must obtain an *analysis of each feedstream* that is sufficient to document compliance with the applicable feedrate limits ..." [emphasis added]. As indicated by 40 C.F.R. § 63.1209(c)(2)(ii), the "analysis" required by 40 C.F.R. § 63.1209(c)(1) can be obtained "by performing sampling and analysis or by other methods, such as using analytical information obtained from others or using other published or documented data or information." The draft permit included sampling exemptions based on safety and sampling concerns for certain feedstreams. The final permit retains these exemptions for those feedstreams, with some minor revisions based on comments by Veolia. The majority of the listed exemptions are based on safety challenges posed by sampling and analyzing those feedstreams.

For a company to rely on information other than laboratory analysis for wastes that are not exempt from sampling, it is necessary to know that the *other information* determining metals concentrations is accurate, that the metals concentrations in the waste are non-variable, and that the information has quality assurance. For example, as little as 0.34 mg/kg mercury in a waste stream could impact HWC NESHAP compliance at Veolia. Even smaller concentrations may be of concern if Veolia blends this waste with other

metal-containing wastes. Veolia's prior FAP did not provide assurance that the *other information* with which it seeks to supplant laboratory analysis will be sufficiently accurate to confirm mercury content at this magnitude. Furthermore, there were no provisions in the prior FAP to identify wastes that may have highly variable metal concentrations or to quantify such variability. Wastes with significant variability in metals concentration would require more frequent laboratory analysis to document compliance.

106. **Comment:** ***The following statements contained on Page 47 of 79, section 5.2.1, Full Paragraphs 1 & 2, of the SB are incorrect and should be deleted from the Statement of Basis: "Veolia currently depends on information in a corporate database for "similar" waste streams without real knowledge of what metals are in the wastes it incinerates. Further, the database frequently contains information that is inconsistent with data provided by waste generators. Therefore, the existing FAP cannot assure compliance with the metals feedrate limits. Additionally, because Veolia's FAP does not ensure that each feedstream is appropriately characterized, the current FAP does not assure compliance with the feedrate limits in the permit." Veolia does not depend on information from a corporate database. Veolia characterizes each shipment of waste. Except for those waste streams that have exemptions defined in Veolia's FAP, Veolia analyzes wastes that are suspect for metals, i.e., if the process generating the waste, the waste type, the waste characteristics, or the history of facility indicate that metals maybe present. Thus, Veolia identifies the characteristic of each waste stream independent of a corporate database through analysis, generator knowledge, MSDSs, technical information, and reference documents to ensure compliance with existing regulations and permit requirements. These methods are consistent with the practices of other commercial hazardous waste incinerators in Region 5.***

See Veolia at 94-95.

EPA Response: The referenced statements are based on the observations documented by NEIC during its 2011 multimedia inspection.[52] Although Veolia claims it characterizes each shipment of waste, the NEIC report shows that many of Veolia's waste profiles appear to have the exact same concentrations of all six HWC NESHAP metals, consistent with Veolia's intent in its RCRA WAP[53] to apply analytical results from a database to

[52] A report documenting NEIC's observations during NEIC's 2011 inspection of Veolia (NEIC Report) is available at www.regulations.gov, document ID. EPA-R05-OAR-2012-0649-0035.

[53] Section 4.1.5 of Veolia's WAP, *Standard Profiles,* states that "Standard Profiles may be used for waste streams which are similar in physical and chemical characteristics, generated by similar industries, or processes, consistent with the U.S. EPA approach of assigning a listed waste code to similar process wastes. An analytical database will be developed for a specific Standard Profile based on analytical data from waste streams that are representative of wastes from similar industries, processes, or historical data."

different wastes. Thus, Veolia does not, in fact, characterize each shipment of waste or each waste stream. Also, Veolia's FAP and WAP allow Veolia to substitute characterizations of historical waste streams or characterizations made for waste streams from different generators based on industry or process similarity in lieu of characterizing each shipment or each waste stream. We do not have, and Veolia has not provided, any substantiated factual information disputing these observations.

107. **Comment:** ***The statement "Because Veolia would generally base metal feedrate calculations on actual feedstream analysis data and not on theoretical profile estimates ... ", contained on Page 48 of 79, section 5.2.1, Last Paragraph, of the SB is not correct and should be deleted from the Statement of Basis. This statement infers that Veolia only uses theoretical estimates to calculate metal feedrates. Veolia characterizes each shipment of waste. Except for those waste streams that have exemptions defined in Veolia's FAP, Veolia analyzes wastes that are suspect for metals, i.e., if the process generating the waste, the waste type, the waste characteristics, or the history of facility indicate that metals maybe present.***

See Veolia at 95.

EPA Response: We do not believe the referenced statement implies that Veolia only uses theoretical estimates to calculate metal feedrates. The statement means that if Veolia sampled and analyzed the feedstream, it should base its metal feedrate calculations on the actual analytical results instead of theoretical estimates.

Veolia's description of its procedure for identifying "suspect" wastes is flawed, as EPA is aware of instances where waste streams that Veolia has deemed "non-suspect" waste streams turned out to likely contain metals at detectable levels.[54] While potentially useful in identifying feedstreams needing more frequent analysis, "suspect waste" approaches are subjective and Veolia's prior FAP does not contain any provision to identify non-suspect wastes that actually do contain metals. "Not suspecting" a feedstream for metals content is not equivalent to documenting that metals are at or below the low concentrations required for HWC NESHAP and OPL compliance. A feedstream *not suspected* by Veolia to contain metals might never be analyzed for metals concentrations under the prior FAP.

108. **Comment:** ***Section 5.2.2.A, Page 49 of 79, of the SB is incorrect and flawed and should be deleted from the Statement of Basis. Under Veolia's, Ross's and Heritage-WTI's WAPs, there are waste streams that are specifically exempt from sampling***

[54] *See*, for example, NEIC Report at 19-20.

because of (a) safety concerns, (b) the impracticality of sampling the waste, or (c) the waste characteristics are of such a nature that the waste information provides all the required information to incinerate the waste. In these instances, the facilities rely on generator knowledge, MSDS information, or other waste profile information to properly characterize the waste. Although a waste may not be sampled, it does not mean that metals are being underreported. The metal concentrations are determined on generator knowledge, MSDS information, and other waste profile information to properly characterize the waste. In addition, waste streams that are not exempt from sampling that are suspect for metals are sampled and analyzed every time prior to incineration to calculate metal concentrations.

See Veolia at 95.

EPA Response: EPA agrees that it is impractical to sample and analyze each feedstream accepted for incineration due to safety and other reasons. For this reason, both the draft and final permit include exemptions from sampling and analysis. The discussion in Section 5.2.2.A of the SB centers on the waste streams that have not been specifically exempted from sampling and analysis by the prior FAP. It also refers to the waste streams that have been improperly exempted from sampling and analysis by the prior FAP. Since Veolia does not sample and analyze each non-exempt feedstream as acknowledged by this comment, the discussion in the SB is one of fact. Because they are outside of the scope of this permitting action, the SB does not address sampling practices at Ross or Heritage-WTI.

109. **Comment:** ***The variability of Veolia's waste streams as discussed on Page 50 of 79, section 5.2.2.B, Paragraph 1, of the SB does not justify EPA's enhanced monitoring proposal. Veolia does accept a wide range of waste streams, but this is also true for all of the commercial incinerators in the country, including the Ross and Heritage (WTI) incinerators in Region 5. The varied waste streams do not support or justify a need to sample all waste streams. Veolia does sample and analyze those waste streams that are highly variable and uses the most current data to demonstrate compliance with the HWC MACT rule and Title V permit requirements. However, some waste streams such as cylinders (which cannot be sampled but the contents are known), explosives, and reactive wastes pose significant safety concerns that make analysis imprudent and dangerous for Veolia staff. Other wastes, such as certain off-specification commercial products, controlled substances, and certain chemical wastes are made up of known constituents and do not vary in their compositions. Under the 2014 Draft Permit, Veolia would be required to sample and analyze these waste streams – a dangerous and wasteful proposition. Neither of the other two incinerators in Region 5 (Ross and Heritage-WTI) currently have to sample and analyze these types of waste.***

See Veolia at 96.

EPA Response: Exemptions from sampling based on safety and other concerns apply to most hazardous waste incinerators, including those in Region 5, and the final permit includes exemptions based on feedstreams that pose safety concerns. Veolia's prior FAP relied on and referred to a broad list of exemptions in Veolia's RCRA WAP, many of which have nothing to do with safety concerns. The feedstreams that do not pose intractable safety concerns from sampling can and should be analyzed given the OPLs' sensitivity to low concentrations of metals.

While Veolia agrees to sample and analyze those waste streams that are highly variable, there was no procedure in the prior FAP to identify feedstreams with high variability or to quantify such variability. It is unclear how Veolia will identify highly variable feedstreams for sampling and analysis. EPA agrees that variability is a major factor in determining sampling frequencies and, if Veolia wishes to use assessments of variability to limit or expand sampling frequencies, the FAP should provide for this assessment.

110. **Comment:** ***Paragraph 2, section 5.2.2.B, on Page 50 of 79 of the SB is incorrect and should be deleted from the Statement of Basis. The wastes discussed in the NEIC report are not "similar" waste streams. The waste containing the 6470 mg/kg of cyanide is a bulk liquid waste that is shipped to Veolia in 5000 gallon tankers. The 1 mg/kg of cyanide waste stream is a container filled with individually-packaged and labeled unused products. The bulk waste stream was sampled and analyzed with a cyanide concentration of 6470 mg/kg. The individual packages are unused products, so the cyanide concentration is known by technical information. The bulk liquid waste is a perfect demonstration of waste streams that vary and are therefore sampled and analyzed by the facility. Similarly, the unused product is a demonstration of a waste stream that does not vary and technical information is provided to support the chemical concentration and are therefore not sampled and analyzed by the facility. EPA's use of this example to justify the need for enhanced analysis demonstrates EPA's profound misunderstanding of the industry that it purports to regulate. EPA's enhanced monitoring requirements would require Veolia to sample all waste streams containing metals regardless of the safety and environmental concerns, practicality, or the technical information received regarding the waste stream that clearly identifies the waste's constituents. These requirements are dangerous for Veolia staff, are unnecessary and wasteful, and are not required of the other incinerators in Region 5.***

See Veolia at 96-97.

EPA Response: The commenter appears to be confused about the waste profiles discussed in the SB since the comment references analytical results that are not found anywhere in the NEIC documentation. Although the NEIC referred to the waste streams discussed in this comment as "cyanide containing" wastes, the concentrations of concern as identified by the NEIC and discussed by EPA in the SB were for cadmium and not for cyanide, as suggested by the comment. The 6,470 mg/kg and 1 mg/kg values referenced in this comment refer to the concentrations of cadmium, not cyanide. The referenced discussion in the SB is consistent with the observations documented in the 2011 NEIC report, and Veolia has not provided substantiated factual data to refute those observations. The final permit does not require Veolia to sample and analyze each feedstream; however, if Veolia's permit does not specifically exempt a feedstream from sampling and analysis for safety or other reasons, Veolia must sample and analyze that feedstream.

111. **Comment:** ***The following statement contained on Page 50 of 79, section 5.2.2.B., Paragraph 3, of the SB is not correct and should be deleted: "Also, as noted in the NEIC report, '[s]amples of bulk liquids are not analyzed [by Veolia] for metals; instead, metals concentrations are calculated based on profile information stored in Veolia's waste tracking system (WTS). The WTS pulls information from the corporate tracking system, called the "I-Series."'" Regardless of the waste being liquids or solids, Veolia characterizes each shipment of waste. Except for those waste streams that have exemptions defined in Veolia's FAP, Veolia analyzes wastes that are suspect for metals, i.e., if the process generating the waste, the waste type, the waste characteristics, or the history of facility indicate that metal maybe present.***

See Veolia at 97-98.

EPA Response: The referenced discussion in the SB is consistent with the observations documented in the 2011 NEIC report. As noted elsewhere, the final permit does not require Veolia to sample and analyze each feedstream; however, if Veolia's permit does not specifically exempt a feedstream from sampling and analysis for safety or other reasons, Veolia must sample and analyze that feedstream.

112. **Comment:** ***Section 5.2.2.C, Page 51 of 79, of the SB is incorrect and should be deleted from the Statement of Basis. The waste profile that the NEIC report referred to consisted of spent filter media. The MSDS values were for unused carbon with copper and chromium that was provided as additional information. As a result, Veolia did not use the total chromium value defined on the MSDS to determine the metals concentration. Veolia currently samples and analyzes this waste stream every time it is received to determine the metals concentration.***

See Veolia at 98.

EPA Response: The referenced discussion in the SB is consistent with the observations in the 2011 NEIC report. The value used by Veolia to track this waste stream was inappropriately based on a leachate analysis instead of an analysis of the total concentration of chromium. Most importantly, NEIC's findings illustrate that the leachate test is fundamentally inappropriate for total metal determinations and almost certainly underestimates the total concentration of metals.

113. **Comment:** ***Paragraph 1 of section 5.2.2.D, Page 51-52 of 79, of the SB is incorrect and should be deleted from the Statement of Basis. The 1.8 mg/L value for chromium was not included in Veolia's waste profile and the TCLP values in the profile were all below detection limits. Thus, this allegation is incorrect and is of no support for EPA's position. In addition, the mercury value of 25 mg/kg determined by Veolia was validated by the generator of the waste and Veolia is entitled to rely on the generator's representations under applicable regulations. Thus, the mercury value of 4140 mg/kg that EPA alleges Veolia fed on August 28 and 29, 2011 is incorrect and likewise does not support EPA's draft permit proposal.***

See Veolia at 98-99.

EPA Response: The referenced discussion in the SB is consistent with the observations in the 2011 NEIC report. With such widely varying results in Veolia's record, the feedstream may have changed significantly or normally varies over a wide range. In either case, EPA has determined that Veolia's single result does not adequately characterize the feedstream.

114. **Comment:** ***The enhanced monitoring that EPA is requiring in Condition 2.1(D)(4), Analysis of Feedstreams, Page 41 of 172, of the Draft Permit causes serious safety concerns by requiring sampling and analysis of wastes that are currently exempted from analysis (e.g., explosives, certain reactives, controlled substances), or are impossible to sample (e.g., gas cylinders, sealed filters). The enhanced monitoring would also require Veolia to sample other exempted wastes such as lab packs and off-specification commercial products despite the fact that the metals concentrations of these wastes are already known. The requirements contained within the Draft Permit are extraordinarily more burdensome than Veolia's current WAP and more extreme than the requirements for the two commercial incinerators in Region 5 that are also regulated by EPA. Currently, the two other commercial incinerators in Region 5 are allowed to rely upon generator knowledge, MSDS information, or other waste profile***

information to exempt certain waste from sampling either because of safety concerns, impracticality of sampling, or the waste characteristics are of such a nature that the waste information provides all the required information to incinerate the waste.

See Veolia at 102-104.

EPA Response: Veolia will not have to sample and analyze wastes exempted from sampling by Condition 2.1(D)(4)(d)(ii)(F) and determined through sufficient documentation to contain a specific concentration of metals in accordance with Conditions 2.1(D)(4)(d)(ii)(F)(II-III). However, if there is not sufficient information to allow the Permittee to make a reasonable determination of the amount of mercury, LVM and SVM present in the waste, the waste will not be exempt from the analysis procedures. EPA has clarified the permit language accordingly. For example, off-specification commercial products exempted from sampling under Condition 2.1(D)(4)(d)(ii)(F)(I)(cc), could be off-specification due to metals contamination and Conditions 2.1(D)(4)(d)(ii)(F)(II) and (III) would require that this information be considered in determining the metals concentration.

Addressing the remainder of the comment, this permit action addresses site-specific concerns at Veolia. Because it is outside of the scope of this action, EPA is not considering the adequacy of other facilities' FAPs in the context of this permitting action. We would address any concerns at those facilities on a case-by-case basis when permits for those facilities are properly before EPA. Following the close of the public comment period, Veolia submitted to EPA additional information on the types of changes it was requesting EPA to make to the enhanced FAP to be consistent with the FAPs of other Region 5 facilities. *See* document IDs. EPA-R05-OAR-2014-0280-0242 through -0246. As discussed later in this document, EPA has revised the FAP to address Veolia's concerns.

115. **Comment:** ***Veolia has taken many steps to enhance its waste characteristic procedures since the promulgation of the HWC MACT. Further, Veolia has implemented certain suggestions resulting from the NEIC inspection in 2011 and the final report dated August 2012. Veolia samples and analyzes all suspect waste for metals and has developed a list of suspect industries whose waste may contain metals. Metals analyses are conducted on wastes received from these industries even though the waste may not contain metals. All wastes are characterized for metals concentration prior to incineration. This characterization may be performed through generator knowledge, MSDS's, technical documents, or through sampling and analysis. Thus, if certain waste is able to be completely characterized through information provided by the generator, then the waste is not sampled or analyzed. These wastes are called "exempt"***

wastes, a common term in the incineration industry that denotes wastes that require no sampling and analysis of the waste because their chemical properties are sufficiently documented to enable them to be processed and managed properly in accordance with the HWC MACT.

See Veolia at 102-104.

EPA Response: Generator-knowledge of metals concentrations often is not based on quality sampling, thus, analysis based on generator knowledge has higher uncertainty than if quality sampling and analysis were conducted. MSDSs are rarely prepared for wastes, and generally do not require reporting the presence of metals at concentrations that may be of concern for HWC NESHAP compliance.

EPA appreciates and agrees with Veolia's commitment to sample and analyze all wastes identified on the "suspect list." However, Veolia has not shown that its approach to collecting generator knowledge, MSDSs, and technical documents is sufficient to characterize feedstreams for metals content. Veolia has never attempted to show how its infrequent characterization, even when using sampling and analysis, is an adequate surrogate for determining actual metals concentrations of feedstreams fed on a day-to-day or minute-by-minute basis. Without this information, Veolia cannot document compliance with its OPLs for mercury and other heavy metals. Given the precision needed to document compliance with specific metal feedrates, EPA believes that Veolia's analyses of metal concentrations must be more robust. Veolia has not demonstrated to EPA that generator knowledge is always reliable for characterizing its feedstreams. In fact, Veolia's own WAP recognizes that generator knowledge is often inadequate to provide the information required to operate the facility. Veolia requires every incoming shipment to be sampled and analyzed for chlorine content and BTU, a clear indication that generator knowledge alone is not good enough for these two parameters. NEIC observed discrepancies between analytical results for the "exempt" wastes and information in the generators' profiles.

Regardless of what *industry convention* implies for the meaning of *exempt*, EPA here wishes to remain clear in that, for purposes of this permit, *exempt* wastes (from sampling) are only those explicitly listed in Condition 2.1(D)(4)(d)(ii)(F).

116. **Comment:** ***The enhanced monitoring provided in Condition 2.1(D)(4)(d)(ii)(F) of the Draft Permit expressly allows the "exempt" waste process, but removes the exemption if the waste contains mercury, LVM and SVM. This change would require Veolia to sample wastes that pose safety and environmental risks such as explosives, controlled substances or reactives. It would also require the facility to sample waste filters, aerosol***

cans and cylinders, again causing safety concerns. It would require sampling of off-specification products of which the exact chemical composition is known causing unnecessary releases of chemicals to the environment, not to mention the waste of resources and generation of waste products through the sampling and analysis procedures. If using generator knowledge, MSDSs, technical, or reference documents are acceptable to characterize wastes that are not sampled and analyzed when the waste contains no metals, then it should be acceptable to characterize wastes when the wastes contain metals. If this is sufficient for the other two incinerators in Region 5, then it should be sufficient for Veolia.

See Veolia at 102-104.

EPA Response: EPA has modified the permit to allow those wastes posing unique safety concerns or profound sampling difficulties that are specifically exempted from sampling under Condition 2.1(D)(4)(d)(ii)(F) to remain exempt even if generator knowledge, MSDS, and container labels, indicate that metals are present. The metal concentration must be determined from this information for the purposes of tracking metal feedrates and documented as described in Conditions 2.1(D)(4)(d)(ii)(F)(II) and (III).

117. **Comment:** ***For wastes not exempted from sampling by the current FAP/WAP, Veolia analyzes those wastes every time and the values obtained are used to document compliance. These enhancements are far more stringent than those requirements found in the Ross and Heritage WAPs. In fact, Veolia is willing to accept the conditions contained in the approved WAP of Heritage-WTI, Inc. There are no current Agency actions to modify their WAP, so the Agency must feel that their WAP is adequate to show compliance with the existing regulations.***

See Veolia at 102-104.

EPA Response: EPA agrees that Veolia should analyze all wastes not exempted under Condition 2.1(D)(4)(d)(ii)(F) in order to document compliance. This permit is for the Veolia facility and the permit may address different permit requirements with more or less specific requirements than other facilities regulated by EPA depending on the particular facility's circumstances and operations.

As discussed elsewhere in this document and the SB, EPA's determination that additional feedstream analysis is necessary to assure Veolia's continuous compliance with the HWC NESHAP emissions limits is based on consideration of site-specific factors. The adequacy of other facilities' FAPs is outside the scope of this permitting action. EPA

would review the adequacy of the other facilities' feedstream analysis plans when they are properly before EPA.

118. **Comment:** ***Condition 2.1(D)(4)(d)(ii), Page 42 of 172, of the Draft Permit requires Veolia to submit a revised FAP for approval within 60 days of the permit becoming effective. Due to the complexity of these types of plans and to ensure that all required elements are incorporated, Veolia would expect to meet with the Agency several times to ensure the plan is adequate. As a result, Veolia is requesting that this requirement be changed from 60 days to 180 days to allow the necessary time to ensure all required elements are included.***

See Veolia at 104.

EPA Response: EPA disagrees with the suggestion that 60 days is not an adequate timeframe for the Permittee to prepare and submit a revised FAP for review and approval by EPA. However, to address the Permittee's concern, EPA has revised the permit to specify that the Permittee has 60 days to submit a draft revised FAP for review by EPA. The final revised FAP must be submitted according to the timelines provided by EPA after EPA reviews the draft FAP.

119. **Comment:** ***The following statement in Condition 2.1(D)(4)(d)(ii)(C), Batch Sampling Procedure, Page 43 of 172, of the Draft Permit is vague and confusing: "Feedstreams which are exempt from sampling in accordance with Condition 2.l(D)(4)(d)(ii)(F) must not be batched, treated, blended, mixed, or otherwise altered, unless the Permittee samples and analyzes the otherwise exempt feedstream." The reason for the exemptions from sampling and analysis defined in the Draft Permit is to avoid safety and environmental concerns of sampling explosives, controlled substances or reactive material when there is sufficient information available to calculate metal feedrates. These exemptions also prevent Veolia from having to sample wastes which have already been sampled and are impractical to sample again, particularly when there is already sufficient information to calculate feedrates. These exemptions also avoid the sampling of off-specification products where there are MSDSs that completely define the waste. By requiring that exempted wastes that are batched, treated, blended, mixed, or otherwise altered be sampled, EPA is unnecessarily placing employees and the public at risk and causing Veolia to incur additional costs that its direct competitors in Region 5, Ross and Heritage-WTI, do not have to bear. In addition, if the Agency is allowing sampled waste to be batched, treated, blended, mixed, or otherwise altered, exempted waste should be permitted to be batched, treated, blended, mixed, or otherwise altered as long as information is available to determine metals concentration***

and feedrates to ensure compliance with the HWC MACT Rule and the Title V Permit requirements.

See Veolia at 104-105.

EPA Response: The permit condition referenced in this comment was meant to reflect the position that, if a feedstream is unsafe to sample, it generally also is unsafe to batch, treat, blend, mix, or alter. We believe that if the Permittee opens or alters the container/waste stream to batch or mix the waste, then the Permittee can sample it. Additionally, MSDSs generally do not contain a complete characterization of waste. Generally, an MSDS will list only components that are present at one percent or greater. Some constituents need to be analyzed for metals at lower concentrations.

To address the concerns raised in this comment, EPA has revised the permit to clarify that Veolia can batch, treat, blend, mix, or otherwise alter any feedstreams exempted by Condition 2.1(D)(4)(d)(ii)(F)(I) of the final permit provided it complies with the recordkeeping provisions for exempt feedstreams as specified in Conditions 2.1(D)(4)(d)(ii)(F)(II) and (III) of the final permit.

120. **Comment:** ***Veolia objects to Condition 2.1(D)(4)(d)(ii)(E)(II), Page 44 of 172, of the Draft Permit. EPA used "non-detects" as zeros in formulating the HWC MACT rule and EPA cannot now reject this approach by requiring that "non-detects" be reported at the reporting limit. Veolia agrees with EPA that the reporting limit is the only defensible number that should be used, but the HWC MACT must be applied consistently. The method that was used to set the standards has to be the one that is used to show compliance. Thus, EPA cannot now require non-detects to be reported at the reporting limit. This would artificially inflate Veolia's emissions and potentially create compliance issues where none actually exist. This also will cause problems with Veolia's compliance with the Emergency Planning and Community Right-to-Know Act. The requirements of this condition place Veolia in a "catch-22"- if Veolia does not comply with this permit condition it will be in violation of its Title V permit; however, if Veolia does comply with this condition it will be forced to not certify that its Emergency Planning and Community Right-To-Know Act (EPCRA) emissions reports are accurate (because the emissions are inflated) and thus will be in violation of EPCRA.***

See Veolia at 105; CRWI at 14.

EPA Response: Condition 2.1(D)(4)(d)(ii)(E)(II) addresses *feedrate* calculations and not stack *emissions* calculations. EPA maintains that tracking concentrations of metals not

detected in non-exempt feedstreams at the reporting limit is appropriate for HWC NESHAP compliance purposes because the actual concentration of metals in any given case may very well be just below that limit. In order to minimize underestimating NESHAP metals during operations, Veolia may report zero concentrations of metals only for exempt feedstreams where the generator has reported that the exempt feedstream does not contain the subject metals.

EPA is not changing the way by which Veolia will report its emissions calculations. The methodology in the permit for reporting actual metal feedrates does not modify the compliance determination methodology in the HWC NESHAP, as this comment suggests, since Veolia is not required to change the way it calculates its stack emissions. In requiring Veolia to report concentrations of metals not detected in non-exempt feedstreams at the reporting limit, EPA is ensuring that Veolia does not under-report metal concentrations in its feedstreams, which helps assure that Veolia is complying with the HWC NESHAP emissions limits.

EPA disagrees with the commenter's position that this rulemaking "will cause problems with Veolia's compliance with the Emergency Planning and Community Right-to-Know Act," because "[t]he requirements of this condition place Veolia in a 'catch-22' …." EPCRA section 313 requires certain facilities to report release and other waste management quantities of certain toxic chemicals included on the EPCRA section 313 chemical list, but it does not require that these quantities be measured or otherwise determined experimentally— although if by coincidence measurement is required under other regulations, these "readily available" measured values can also be used for EPCRA section 313 (Toxics Release Inventory, TRI) reporting purposes. When measured data are not "readily available", EPCRA only requires that facilities determine their release and other waste management quantities of TRI-listed chemicals by making "reasonable estimates". This permit, therefore, does not force Veolia into the position of certifying inaccurate reports under EPCRA. EPA provides written guidance on how to report non-detectable quantities that Veolia should consult for TRI reporting purposes. For example, section 3.2.1 of the TRI Electricity Generating Facilities guidance document (*See* Document ID. EPA-R05-OAR-2014-0280-0272)[55] states the following:

> If your waste profiles (or other information) indicate that there are chemicals that are below the detection limit, you may need to include those chemicals in your threshold determinations and release and other waste management calculations. If you have no information to indicate that the chemical exists in the waste stream,

[55] Available at https://ofmpub.epa.gov/apex/guideme_ext/f?p=104:81:::no::p81_id:egf (accessed January 17, 2017).

you may assume that the concentration is zero. If the facility has reason to believe that the EPCRA Section 313 chemical is present in the waste, you may use half of the detection limit.

121. **Comment:** ***Veolia objects to the entirety of Condition 2.1(D)(4)(d)(ii)(F), Exemptions to the Analysis Procedures, Page 45-46 of 172, of the Draft Permit. This condition arbitrarily and capriciously omits provisions of Veolia's current FAP/WAP and imposes requirements that are onerous, unsafe, and place Veolia at an unfair disadvantage as compared to other incinerators in Region 5. This condition causes serious safety concerns by requiring sampling and analysis of waste that are currently exempted (e.g. explosives, certain reactives, controlled substances) or impossible to sample (e.g. gas cylinders, sealed filters). The enhanced monitoring also requires the sampling of other defined "exempt" waste such as lab packs and off-specification commercial products although the metals concentration are known. These requirements are not required by Veolia's current FAP/WAP and are more stringent than the two commercial incinerators that are also regulated by Region 5. EPA fails to explain why the exemptions defined in Condition 2.1.4(d)(ii)(F) have eliminated some of the defined exemptions in Veolia's current FAP/WAP.***

See Veolia at 106-107.

EPA Response: EPA does not agree that limiting exemptions and requiring sampling and analysis of non-exempt wastes results in onerous or unsafe permit conditions. EPA has clarified that some metal-containing feedstreams can be exempted from sampling and analysis provided that the feedstream meets specific criteria contained in the permit. In those cases, the Permittee must rely on generator information to determine the amount of metals present in the feedstream.

122. **Comment:** ***One of the exemptions that EPA has removed from Condition 2.1(D)(4)(d)(ii)(F) of the Draft Permit is for visually identifiable material such as glass, batteries, metal parts, etc. These types of wastes in many cases cannot be sampled due to their design and construction; however, the chemical constituents are known from MSDSs, generator knowledge, technical data or reference documents. EPA must reinstate this exemption. Veolia also requests that EPA include in the exemption list "other waste that pose safety, health, environmental and sampling difficulties as determined and justified by the Technical Manager." The Ross and Heritage-WTI WAPs give this latitude to the Technical Manager so that he/she can determine whether sampling would present safety and environmental concerns.***

See Veolia at 106-107.

EPA Response: EPA believes Veolia can safely sample many of the visually identifiable feedstreams mentioned in this comment. The Permittee may request EPA approval to add specific feedstreams to the exempt list in Condition 2.1(D)(4)(d)(ii)(F). The technical manager can always reject other wastes that pose significant safety, health, environmental, or sampling difficulty without notifying EPA. In the case of specific wastes that pose safety, health, environmental and sampling difficulties, the final permit at Condition 2.1(D)(d)(ii)(F) allows the Permittee to use data obtained through generator knowledge to document the concentrations of metals in those wastes.

123. **Comment:** ***The requirement in Condition 2.1(D)(4)(d)(ii)(F)(VII) of the draft permit requiring a "written determination of exemption from these analysis procedures [that] shall describe the information reviewed and the basis for the determination that no mercury, LVM or SVM is present" is unnecessary and overly burdensome. Veolia maintains technical records on the waste streams approved at the facility and the Waste Profile Sheets and supporting documentation supports the Technical Manager's decision on sampling and analysis. To require additional documentation, such as describing the basis for the decision is not required in the RCRA regulations for WAPs at 40 C.F.R. § 264.13, nor is it required in either the Ross or Heritage-WTI WAPs or Title V permits. This requirement needlessly duplicates information that is already available at the facility and should be removed from the Draft Permit.***

See Veolia at 106-107.

EPA Response: EPA does not believe that memorialization of decision making creates an additional burden to the facility if information is already available and the Permittee is already analyzing it. We note that it is very important to understand how Veolia makes determinations that certain wastes do not contain mercury or other heavy metals to be able to verify that the determinations are accurate. We further note that we are not addressing the adequacy of other facilities' FAPs in the context of this permitting action. We would evaluate site-specific factors at other facilities and address any concerns at those facilities on a case-by-case basis when permits for those facilities are properly before EPA.

124. **Comment:** ***Veolia objects to Condition 2.1(D)(4)(d)(ii)(F)(IX), Page 46 of 172, of the Draft Permit. The exemption should be expanded to include wastes that contain metals. Wastestreams that contain metals can be properly characterized without sampling to determine the metals concentration. Veolia also respectfully requests that the section provide the amount of time EPA has to approve these requests. If these requests are not reviewed and responded to in a timely manner, Veolia will be unable to respond to the***

needs of its customers and will lose business as a result. Veolia will only incinerate waste that is properly characterized either by sampling and analysis, generator knowledge, MSDSs, technical documents, or other reference material.

See Veolia at 107.

EPA Response: EPA has revised the permit to clarify that certain metal-containing feedstreams that are specifically listed in Condition 2.1(D)(4)(d)(ii)(F) are exempted from sampling and analysis even if they contain metals. In addition, EPA has specified in the final permit that if EPA does not object to the Permittee's request to add waste streams to the exemption list in Condition 2.1(D)(4)(d)(ii)(F) within 60 days of receiving the Permittee's fully documented and explained request to exempt a waste stream from sampling and analysis requirements, the Permittee need not sample and analyze that waste stream.

125. **Comment:** ***EPA's assertion that Veolia's customer base is in some fashion fundamentally different than either of Veolia's Ohio competitors is inaccurate. Based on publicly available data, all three Region 5 commercial HWCs service the same type of industries and, in many cases, the identical customers based on competitive bidding results. The publicly available information demonstrates Veolia receives and incinerates approximately 50% of the volume of waste that each of the Ohio incinerators incinerate. Further, all three commercial HWCs in Region 5 receive approximately 50% of their waste from large quantity generators. The remaining 50% for each of the incinerators is from non-hazardous/small quantity "one off" generators. Similarly, the number of large quantity generators shipping to each of the three commercial HWCs relative to each of the incinerator's volumes processed again supports the similar nature of each of these businesses.***

See Veolia (2015).

EPA Response: EPA reviewed data that Veolia, Ross Incineration Services (Ross) and Heritage Thermal Services (Heritage) submitted to EPA's RCRAInfo System[56] for the 2009, 2011 and 2013 National Biennial RCRA Hazardous Waste Report,[57] as well as data collected by NEIC for Veolia and Heritage for the periods 2009-2013 and 2012-2013, respectively. *See* document IDs. EPA-R05-OAR-2014-0280-0201 through -0206; EPA-R05-OAR-2014-0280-0151 through -0162; EPA-R05-OAR-2014-0280-0166; and EPA-

[56] *See* http://www3.epa.gov/enviro/facts/rcrainfo/search.html.
[57] *See* https://www.epa.gov/hwgenerators/biennial-hazardous-waste-report.

R05-OAR-2014-0280-0223. Our review of the RCRAInfo data refutes the waste variability data provided by Veolia in this comment.

While it is accurate that Ross and Heritage generally receive more waste (measured in tons) than Veolia, our analysis of Veolia's waste receipts for purposes of this permitting action focused on the variability of the individual waste profiles received by Veolia and not on the number of large versus small quantity generators that supply waste to Veolia. We have not identified any publicly available information that provides detailed data on the individual profiles received by any of the Region 5 facilities as the facilities generally treat such information as CBI.

Based on our analysis of the NEIC data as shown in Table 4, below, of the waste profiles that Veolia received between 2009 and 2013, nearly 70% of those profiles were distinct wastes and only 30% of the waste that Veolia accepted for incineration during that period was the same as waste it previously had accepted during the same period. In comparison, only 10% of the waste profiles that Heritage received in 2012-2013 (12 months of data) were distinct wastes. *See* Document ID. EPA-R05-OAR-2014-0280-0175.

Table 2. Summary of Waste Acceptance Data Received by NEIC During its Inspections of Veolia and Heritage.

Parameter	Veolia Waste Receipts (2009-2011)	Heritage Waste Receipts (May 2012-May 2013)
Total Profiles	14,328	134,680
No. of Unique Suppliers	3,054	ND
No. of Unique Profiles	9,908	13,449
Percent of Unique Profiles	69%	10%

*ND = No data

D. ENFORCEMENT HISTORY

126. **Comment:** ***EPA is arbitrarily and capriciously using unsubstantiated enforcement allegations contained in Findings of Violation (FOVs) to deny Veolia a permit shield and to support unnecessary multi-metals CEMS and feedstream analysis requirements. EPA has never taken any final agency action pertaining to the allegations contained within the September 27, 2006 Notice of Violation (NOV), the June 12, 2008 NOV, and the August 2012 FOV, and September 2012 NOV discussed on Page 27 of 79, sections 3.2 and 3.2.2, of the SB. So much time has passed with regard to the allegations contained in the 2006 and 2008 FOVs that the statute of limitations has expired with regard to some or all of those claims, and all of these FOVs consist of one-sided allegations. Because of EPA's failure to develop these FOVs, the claims contained in them are no longer subject to enforcement, have no relevance, and should be deleted from the Statement of Basis. Rather than resolving the allegations in the FOVs and including a compliance schedule in the permit, EPA would rather keep the FOVs as a useful tool to leverage Veolia into accepting unnecessary requirements. Moreover, it is improper for EPA to deny Veolia a comprehensive permit shield on the basis of the unsubstantiated and unproven FOVs. The Statement of Basis and the 2014 Draft Permit should be revised to give Veolia a permit shield for the applicable provisions of the HWC NESHAP.***

See Veolia at 76-78, 93.

EPA Response: In the draft permit, we proposed permit shield provisions that would not cover any requirement of 40 C.F.R. Part 63, Subpart EEE, (including the appendix and any requirement of the General Provisions (40 C.F.R. Part 63, Subpart A) identified in Table 1 as applicable to 40 C.F.R. Part 63, Subpart EEE). EPA explained in the SB that our proposed decision was due to the fact that the pending NOV/FOVs raised a question regarding applicability of, and compliance with, certain HWC NESHAP requirements. Because it is no longer pursuing the violations alleged in referenced NOV/FOVs, EPA decided to include in the final permit a permit shield, consistent with 40 C.F.R. § 71.6(f), to cover the HWC NESHAP requirements. EPA's decision to allow application of the permit shield to the HWC NESHAP requirements does not affect in any way EPA's determination that enhanced monitoring requirements are necessary to ensure that the permit assures compliance with all applicable requirements. Furthermore, we believe that Veolia's implementation of and compliance with these enhanced monitoring requirements will lead to compliance with the HWC NESHAP.

As explained above in RTC 2, the existence of these NOV/FOVs raises questions regarding Veolia's past compliance with the provisions of the HWC NESHAP referenced

in those NOV/FOVs, and thus, they are relevant to the site-specific factor addressing whether Veolia is likely to violate the provisions of the HWC NESHAP. The observations that led to the NOV/FOVs, particularly the observations of NEIC related to Veolia's feedstream analysis procedures, are one of many pieces of information that led to EPA's determination that an enhanced FAP and the temporary use of multi-metals monitoring devices are needed at this facility to ensure that compliance with all the permit terms and conditions, namely the HWC NESHAP emission limits.

127. **Comment:** ***In light of the fact that the allegations made against Veolia in the FOVs have not been subject to independent third-party review, Veolia presents its responses to the allegations.***

See Veolia at 78-90.

EPA Response: As explained above in RTC 2, the NOV/FOVs referenced by Veolia raise questions regarding Veolia's past compliance with the provisions of the HWC NESHAP referenced in those NOV/FOVs, and thus, they are relevant to the site-specific factor addressing whether Veolia is likely to violate the provisions of the HWC NESHAP. The observations that led to the NOV/FOVs, particularly the observations of NEIC related to Veolia's feedstream analysis procedures, are one of many pieces of information that led to EPA's determination that an enhanced FAP and the temporary use of multi-metals monitoring devices are needed at this facility to ensure compliance with all the permit terms and conditions, namely the HWC NESHAP emission limits.

To the extent that Veolia's comments responding to the allegations in the NOV/FOVs call into question the observations made in the NEIC report, EPA stands behind the observations made by NEIC. EPA disagrees with Veolia's contention that NEIC's observations were the product of misunderstandings of Veolia's waste profiles and waste profile system or were somehow erroneous. Specifically:

- Regarding NEIC's observations that the metals concentration data in the package for profile 236152 and the information in Veolia's waste tracking system (WTS) and the incinerator control systems (ICS) are in conflict, this observation was based upon Veolia's statement that it multiplied toxicity characteristic leaching procedure (TCLP) values by 20 to determine the incinerator feedrate. NEIC Report at 19. Irrespective of any conflicts between the profile package and in WTS and ICS for this waste and the basis for these conflicting values, the value used by Veolia to track this waste stream was inappropriately based on a leachate analysis instead of an analysis of the total concentration of chromium. Most importantly, NEIC's findings illustrate that Veolia incorrectly used the "20 times

rule" to derive total concentrations from TCLP because the 1:20 dilution assumes that the material being analyzed by TCLP is completely soluble. The result of misapplication of the "20 times rule" may have resulted in an underestimation of actual metals concentration in the waste stream.

- Regarding NEIC's observation that Veolia used a TCLP value for chromium of 1.8 mg/L, when the WTS and ICS used a value of 0 mg/L, for profile package 691163 and Veolia's contention that it did not multiply the TCLP value by 20 to determine the chromium concentration of 1.8 mg/L, Veolia does not address why this feedstream has such widely varying mercury concentrations in its records for this profile, irrespective of how the 1.8 mg/L concentration of chromium was determined. With such widely varying results in Veolia's record for this profile, the feedstream may have changed significantly or normally vary over a wide range. In either case, EPA has determined that Veolia's single result does not adequately characterize the feedstream.

- Regarding NEIC's observation that Veolia used a value of 6,470 mg/kg cadmium for profile CI5789 and 1 mg/kg cadmium for profile 660210, even though these profiles were both described as "cyanide containing wastes," Veolia fails to explain why it described these waste streams as "cyanide containing wastes" when, according to the information in its comment, these waste streams are dissimilar. Describing these wastes as "cyanide containing wastes," despite very different reported cadmium concentrations, could lead to the use of incorrect cadmium concentrations for the feedrate calculations for these profiles.

- Regarding NEIC's observation that Veolia's profile package for AF3753 included a total mercury value of 4140 mg/kg (TCLP value of 37.8 mg/L), but the WTS and ICS used a value of 25 mg/kg for at least five years, and Veolia's explanation that the 25 mg/kg value was based upon information it received in 2004, EPA believes that the widely varying mercury concentration values in Veolia's record for this profile could lead to the use of incorrect mercury concentrations for the feedrate calculations.

- Regarding NEIC's observation that waste profile 374339 ("Organic Debris") is variable, Veolia's comment states that it has the right to rely upon generators' representations relating to this waste stream, but that it is now analyzing this waste stream for metals every time it is received and adjusting its database values accordingly. EPA believes that, given the variability in metals concentrations in this waste stream, it is appropriate to analyze concentrations each time this waste stream is received. EPA appreciates Veolia's commitment to sample and analyze

this waste stream for metals every time it is received and change its database values to reflect actual metals concentrations.

For several waste profiles, NEIC observed conflicting metals values in Veolia's waste profile packages and its databases. These conflicting values create the potential for misreporting metal feedrates. NEIC's observations, and Veolia's responses to the same, underscore the need for the enhanced feedstream analysis requirements and the multi-metals monitoring device provisions. These permit requirements will enable EPA to determine whether Veolia is continuously complying with the metal feedrate OPLs and, by implication, the emission limits. They will also enable EPA to determine whether the OPLs are sufficiently stringent to assure Veolia's continuous compliance with all applicable requirements.

128. **Comment:** ***Page 28 of 79, Footnote 15, of the SB should be deleted. EPA's inclusion of this footnote regarding alleged referrals by the Illinois Environmental Protection Agency (IEPA) to the Illinois Attorney General is improper and negligent, and it would be arbitrary and capricious for EPA to rely on unsupported, unsubstantiated, and unidentified enforcement allegations to support the Agency's denial of Veolia's permit shield and the enhanced monitoring requirements. There is no evidence of any enforcement referrals in the administrative record and this footnote is potentially misleading and prejudicial to Veolia and should be deleted from the Statement of Basis it its entirety.***

See Veolia at 90-91; 93.

EPA Response: The referenced footnote is consistent with factual information that the IEPA provided to EPA for the permit record. *See* document ID. EPA-R05-OAR-2012-0649-0039. The inclusion of this footnote in the SB was to document the fact that there were other allegations that have been placed by the IEPA into the public record. EPA did not rely on any allegations made by IEPA as a basis for the terms of the draft or final Title V renewal permit.

129. **Comment:** ***The administrative procedures EPA is following for the permit renewal are constitutionally inadequate as applied to Veolia because they do not give Veolia an adequate opportunity to contest the alleged violations of the Act that EPA is using to justify portions of the 2014 draft permit renewal.***

See Veolia at 91-92.

EPA Response: Veolia has had all of the opportunities afforded permit applicants under the Act and 40 C.F.R. Part 71 to comment on the draft permit, and has all of available opportunities to challenge the final permit. The procedures for fact-finding and cross examination in an enforcement context are not related to this or any Title V permitting action.

In this permitting action, EPA is not using the alleged violations in any NOV/FOVs issued to Veolia as proof of a violation. *See* RTC 126 and 127. The allegations in the NOV/FOVs and the documented observations in the 2011 NEIC report concern applicability of, and Veolia's compliance with, certain HWC NESHAP requirements. However, the presence or absence of enforcement allegations does not affect EPA's obligation under the Act and implementing regulations to ensure that the monitoring in Veolia's Title V permit is sufficient to assure continuous compliance with all applicable requirements and the permit terms and conditions.

130. **Comment:** ***As evidenced by Veolia's permitting and enforcement history, EPA's primary concern since this process began has been Veolia's mercury emissions. However, Veolia's yearly mercury emissions are magnitudes lower than other major sources of mercury emissions in the St. Louis area. Veolia's estimated Toxic Release Inventory (TRI) emissions for reporting year 2013 were a mere 3.1 pounds of mercury. This pales in comparison to the hundreds of pounds of mercury emitted by sources within a 45 mile radius of the Veolia facility. Specifically, Veolia is literally surrounded by coal-fired utilities that emit hundreds of pounds of mercury on a yearly basis. To the west, the Labadie power station emits 823 pounds of mercury a year. To the south, Rush Island power station emits over 400 pounds. To the southeast, Baldwin power station and Prairie State Energy (which are only 11 miles apart) combine to emit over 100 pounds of mercury per year, and, just 7.5 miles to the north of the Veolia facility, U.S. Steel in Granite City releases over 220 pounds of mercury into the atmosphere per year. In relative terms, Veolia's mercury emissions are only a tiny portion of the total mercury emissions of the greater St. Louis area. Thus, in relative terms, the Agency's continued haranguing of Veolia is misplaced.***

See Veolia at 45-46.

EPA Response: First, while it is correct that some of the allegations EPA has made in its past enforcement actions against Veolia have primarily been related to Veolia's compliance with the mercury emissions standards, it is incorrect to suggest that, in the permitting context, EPA is interested only in Veolia's mercury emissions. Our concerns regarding the adequacy of Veolia's feedstream analysis procedures relate to the procedures that Veolia has in place for analyzing all of the regulated metals including

mercury, LVM and SVM. EPA has determined that the FAP proposed by Veolia is not sufficient to ensure that the ash, chlorine and metal concentrations in the feedstreams are no greater than the concentrations stated in the waste profiles that Veolia has used to calculate metal feedrates, and, therefore, cannot assure compliance with the OPLs for mercury, SVM and LVM. Compliance with the OPLs is a fundamental step in assuring compliance with the HWC NESHAP emissions limits.

Secondly, while enforcement actions are brought as a consequence of alleged violations, a violation is not a prerequisite for EPA's determination that an alternative approach to establish limits on operating parameters under the HWC NESHAP or to require enhanced monitoring requirements in a Title V permit. Accordingly, EPA does not need to allege a violation of an emission standard to include those monitoring requirements that are necessary to ensure continuous compliance with the HWC NESHAP. On the contrary, as the Title V permitting authority for Veolia's Sauget facility, EPA has an obligation to ensure that Veolia's Title V permit can assure continuous compliance with the HWC NESHAP emissions limits at the time of issuance of the permit and thereafter, regardless of whether there is any evidence or allegation of past violations, and regardless of the magnitude of emissions from surrounding sources. The benefit of the final permit's enhanced monitoring requirements is that EPA and Veolia have the ability to determine whether Veolia is properly characterizing the waste it incinerates and continuous compliance with the HWC NESHAPs is ensured based upon an accurate correlation between OPLs and actual emissions.

E. EMISSIONS CONTROL REQUIREMENTS

131. **Comment:** ***Veolia continues to believe the most effective way to reduce air emissions is not through the changes contained in the Draft Permit, but rather through the installation of additional pollution control equipment. Veolia is committed to spending significant resources on enhanced pollution control equipment going well beyond that which is required under current regulations, provided the correct approvals are in place and we are able to resolve the various open issues concerning our Draft Permit.***

See Veolia at 1-2 (cover letter).

EPA Response: EPA agrees that installation of additional pollution controls would be beneficial to the environment and would, at least in the short term, lead to a reduction in emissions of certain pollutants. However, EPA disagrees that installation of additional pollution controls would ultimately address all of EPA's concerns as documented in the SB and this document. Nevertheless, EPA supports Veolia's proposal to voluntarily install additional pollution controls on its incineration units as such proposal would help protect the environment. EPA believes that the monitoring requirements included in the final permit along with any additional pollution controls would further ensure that Veolia demonstrates continuous compliance with all applicable requirements.

132. **Comment:** ***The not-well-understood unpredictability of mercury emissions shown by the CPT results support the installation of activated carbon injection systems for mercury control on Units 2 and 3. While under the MACT limit, the CPT result for unit 2 was relatively close to the limit. Installing activated carbon injection would most likely lower mercury emissions to a level significantly below the MACT limit, providing an enhanced margin of safety which is necessary because of the wide swings and unpredictability of the Unit 2 and Unit 3 processes.***

See ABC at 7-9; Siegel/Hearing at 19-20.

EPA Response: EPA concurs that an activated carbon injection system – properly operated and maintained – would reduce mercury emissions from Units 2 and 3, and supports Veolia's proposal to install such controls at Units 2 and 3.

F. ENVIRONMENTAL JUSTICE CONSIDERATIONS

133. **Comment:** ***The new monitoring and feedstream analysis provisions proposed by EPA are necessary to protect the residents of the Metro East's overburdened communities—communities that experience disproportionate environmental harms and risks as a result of cumulative impacts or greater vulnerability to environmental hazards --- from Veolia's HAP emissions. There are numerous negative health effects caused by exposure to HAP metals and the permit should be considered in an environmental justice context and in the context of the legacy of pollution in the surrounding area.***

See ABC at 1-5.

EPA Response: EPA notes this comment.

134. **Comment:** ***EPA inaccurately states that "Veolia is located in East St. Louis, Illinois, an area with overburdened communities, and the source of significant public interest". Statement of Basis at 75. Veolia is located in Sauget, Illinois. The lack of attendance and commenters at the public hearing suggests that Veolia is not of public interest. EPA should revise the SB to accurately reflect Veolia's location and to determine whether there are environmental justice concerns.***

See Veolia at 113.

EPA Response: EPA agrees that Veolia is located in Sauget, Illinois and not in East St. Louis, Illinois. However, we disagree with the conclusion that the "lack of attendance and commenters at the public hearing suggests that Veolia is not of public interest." Such conclusion ignores the fact that EPA has provided the public with multiple opportunities to review and comment on EPA's proposal outside of the public hearing and therefore, attendance at the public hearing was not necessary for some interested members of the public.

In addition, there is a long history of community interest in this facility including a Title V petition and lawsuit.[58] Previous public comment opportunities on Veolia's permitting actions have generated significant public interest.

[58] Veolia's permitting history dates back to September 7, 1995, when Veolia first submitted to IEPA an application for a Title V permit for its Sauget, Illinois facility. *See* SB for the 2008 draft permit (2008 SB), Document ID. EPA-R05-OAR-2014-0280-0263, at 3. IEPA issued a draft Title V permit on June 6, 2003, and the public comment period for the draft permit ended on September 12, 2003. Following the close of the public comment period, on November 6, 2003, IEPA revised the permit and submitted the proposed permit to EPA for review. EPA did not object to the proposed permit within its statutory 45-day review period, which ended on December 21, 2003. On

135. **Comment:** ***EPA reaches the inaccurate conclusion that, "[t]o ensure compliance with the feedrate limits in the permit, EPA has included in the Title V permit additional and specific monitoring requirements for heavy metals… [t]he proposed monitoring requirements are based on site-specific conditions at the Veolia facility and will help protect human health and the environment from the consequences of emissions of mercury and other metals by providing further assurance that Veolia will not exceed its permitted limits." [sic] Veolia ensures compliance with the feedrate limits by emissions testing as defined in 40 C.F.R. § 63.1209. CEMS do not change past compliance or assure future compliance, and have not been demonstrated to protect human health and the environment. Region 5's statements are false and prejudicial to Veolia.***

See Veolia at 114-115.

EPA Response: EPA disagrees with this comment. Although Veolia *demonstrates* compliance with the emission standards by performing testing as defined in 40 C.F.R. § 63.1209, continuous compliance is *ensured* through continuous compliance with feedrate and other OPLs. The enhanced FAP and multi-metals monitoring devices will verify that compliance with the established OPLs ensuring compliance with the emissions limits. Undoubtedly, establishing that the monitoring requirements in Veolia's Title V permit can ensure continuous compliance with the HWC NESHAP emission limits for mercury and other heavy metals helps to protect human health and the environment.

136. **Comment:** ***Veolia's location has not moved and the demographics of the surrounding area have not changed. To the extent that EPA attempts to justify the additions contained within the draft permit, in part, to the location of the facility, EPA must explain why in 2008 EPA issued Veolia a permit without such conditions, particularly***

February 18, 2004, EPA received a petition from the Sierra Club and American Bottom Conservancy (ABC) requesting that EPA object to issuance of Veolia's Title V permit, pursuant to Section 505(b)(2) of the CAA and 40 C.F.R. § 70.8(d). On February 1, 2006, EPA issued an order granting the petition in part and denying it in part. *See* EPA-R05-OAR-2014-0280-0185. This Order was amended on August 9, 2006. *See* EPA-R05-OAR-2014-0280-0185 0185. The IEPA did not revise and submit a new permit. The Sierra Club and ABC filed a complaint with the U.S. District Court for the Northern District of Illinois, alleging EPA failed to perform a nondiscretionary duty under CAA section 505(c), 42 U.S.C. § 7661d(c), to issue by May 2, 2006, a Title V operating permit for Veolia under 40 C.F.R. Part 71. *Sierra Club v. Johnson*, Case No. 06-CV-4000 (N.D. Ill.). On September 29, 2006, EPA announced its intent to issue or deny a federal Title V permit for Veolia. Subsequently, Veolia submitted a Title V permit application to EPA on May 2, 2007. EPA deemed the application administratively complete on June 13, 2007. On June 4, 2008, EPA signed a settlement agreement with the plaintiffs in *Sierra Club v. Johnson* requiring EPA to issue a final Title V permit to Veolia by September 12, 2008. *See* EPA-R05-OAR-2014-0280-0174. On June 6, 2008, EPA made a draft Title V permit for Veolia available for public comment pursuant to 40 C.F.R. Part 71. The comment period on the draft permit ended on July 18, 2008, and included a public hearing on July 8, 2008. Following the close of the public comment period, EPA issued the final Title V permit to Veolia on September 12, 2008. *See* 2008 SB, Document ID. EPA-R05-OAR-2014-0280-0263 at 3.

when with this action EPA relies upon 2000 U.S. Census data to support its environmental justice discussion.

See Veolia at 115.

EPA Response: EPA was aware of the community's concerns before issuing Veolia's 2008 Title V permit. Those facts and the unreliability of the then-existing feedrate and emissions data formed the bases for EPA's decision at that time to seek additional test data before incorporating feedrate OPLs for mercury, SVM and LVM into the permit. Due to community concerns about potential impacts of this facility on the neighboring community, factors related to the heterogeneity of Veolia's feedstreams, and other site-specific facts, EPA considered it very important to take the time necessary to fully review the data and ensure that the OPLs and monitoring provisions would assure compliance with the HWC NESHAP emissions limits. EPA's decision to incorporate an enhanced FAP and to require temporary installation and operation of multi-metals monitoring devices in Veolia's renewed Title V permit was based on EPA's analysis of the site-specific factors discussed elsewhere in the SB and this document, and the resulting recognition that the minimal monitoring proposed by Veolia is not sufficient to assure compliance with the HWC NESHAP emissions limits. The action EPA is finalizing today reflects that the underlying facts regarding EJ concerns have not changed.

G. OTHER COMMENTS

137. **Comment:** ***Due to the nature of fugitive emissions and considering the population density surrounding Veolia, an additional alternative monitoring plan should be considered to minimize exposure and any potential detrimental effects to human and ecological health. Cooper Environmental Services recommends that, in addition to stack monitors, fenceline ambient metals monitors should be placed at the perimeter of the Veolia facility, at upwind and downwind locations, to capture fugitive emissions of HAP metals.***

See Cooper at 39-42.

EPA Response: EPA concurs that fenceline ambient metals monitoring would help monitor and minimize exposure any potential detrimental effects to human and ecological health as a result of Veolia's emissions. However, EPA has determined that the temporary operation of multi-metals monitoring devices to measure emissions from the incinerators can provide the best assurance that the OPLs and enhanced FAP can assure continuous compliance with the HWC NESHAP emissions limits. The Title V permitting program codified at 40 C.F.R. Part 71 obligates EPA, as the Title V permitting authority for Veolia's Sauget facility, to incorporate into this permit monitoring "to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c). The inclusion in Veolia's renewal Title V permit of enhanced feedstream analysis requirements and the requirement to install and temporarily operate the multi-metals monitoring devices to monitor emissions is consistent with that obligation.

138. **Comment:** ***EPA's Notice of Proposed Renewal of Veolia's Title V permit failed to comply with 40 C.F.R. § 71.11(d)(4) because it did not "designate an individual who may be contacted 'for instructions on how to obtain additional information'" and because EPA did not identify Veolia's principle office located in Lombard, Illinois in the notice.***

See Veolia at 115.

EPA Response: EPA disagrees with this comment. The public notice for the proposed renewal permit designated David Ogulei, EPA Region 5, 77 West Jackson Boulevard, 18th floor, Chicago, Illinois 60604; phone: (312) 353-0987; email: ogulei.david@epa.gov as the contact for obtaining additional information, including copies of the permit record. *See* Document ID. EPA-R05-OAR-2014-0280-0001. The public notice also included a contact for questions regarding the public hearing as well as the contact to whom the public would submit written comments and requests to receive notices of any future

actions. In addition, EPA's press release of October 17, 2014, designated Phillippa Cannon, phone: 312-353-6218, email: cannon.phillippa@epa.gov, as the media contact. *See* Document ID. EPA-R05-OAR-2014-0280-0217. Therefore, EPA's public notice complied with 40 C.F.R. § 71.11(d)(4)(E), which requires that the public notice include "[t]he name, address, and telephone number of a person whom interested persons may contact for instructions on how to obtain additional information, such as a copy of the draft permit, the statement of basis, the application, relevant supporting materials, and other materials available to the permitting authority that are relevant to the permitting decision."

Secondly, Veolia alleges that EPA's public notice did not identify Veolia's principal office located in Lombard, Illinois in the notice. 40 C.F.R. § 71.11(d)(4)(B) requires that a public notice include "[t]he name and address of the permittee or permit applicant and, if different, of the facility regulated by the permit." Veolia stated in its application that "Veolia ES Technical Solutions (Veolia) owns and operates a Resource Conservation and Recovery Act (RCRA) treatment, storage and disposal facility in Sauget, Illinois." Veolia provided "Veolia ES Technical Solutions (Veolia), #7 Mobile Avenue, Sauget, IL 62201-1069" as its address, and identified Douglas Harris, General Manager of the Sauget facility, as the permit contact. *See* April 2013 Application for Renewal of a Major Source Operating Permit, Veolia ES Technical Solutions, #7 Mobile Avenue, Sauget, Illinois 62201 at 3, 18 (Document ID. EPA-R05-OAR-2014-0280-0008). Thus, by identifying Veolia ES Technical Solutions in Sauget, Illinois, as the Permittee and permit applicant, in the public notice, EPA has complied with the requirements of 40 C.F.R. § 71.11(d)(4)(B).

139. **Comment:** ***The compliance methodology for the opacity limit is unclear. The monitoring requirement of Condition 2.1(D)(1)(c) refers to a continuous opacity monitoring system (COMS) but does not impose any monitoring requirements whereas Condition 2.1(D)(14) requires the use of Method 9 to determine compliance with MACT emission standards. Given the height of Veolia's stacks and the shape of the facility, the commenter believes it would be difficult to use Method 9 and believes a COMS would be a superior method for determining compliance.***

See ABC at 10-12.

EPA Response: EPA agrees that Condition 2.1(D)(1)(c) as written leaves the impression that COMSs are required elsewhere in the permit to monitor opacity. However, 40 C.F.R. Part 63, Subpart EEE, does not require the installation and operation of COMSs for purposes of monitoring opacity from hazardous waste combustors. Instead, pursuant to 40 C.F.R. § 63.1209(a)(1)(ii), COMSs must be used to demonstrate and monitor

compliance with the cement kilns opacity standard under §§ 63.1204(a)(7) and (b)(7) subject to certain exceptions. Because the HWC NESHAP does not require hazardous waste combustors to use a COMS to monitor compliance with the opacity standard, reference to COMS in the HWC NESHAP requirements included in the permit is not appropriate. Accordingly, EPA has revised Conditions 2.1(C)(6)(b)(iii)(A)(I) and (II); 2.1(D)(1); 2.1(D)(1)(c); and 2.1(D) (4)(i)(ii) to remove all references to COMS.

EPA disagrees with the commenter's suggestion that EPA Method 9 would not be accurate or reliable for monitoring the opacity of emissions from Veolia's stacks. EPA does not agree that the necessity of leaving the Veolia property to conduct Method 9 readings makes the use of Method 9 less accurate or reliable, and the commenter has not identified any other impediment to using Method 9. EPA believes that Method 9 is appropriate for monitoring the opacity of emissions from Veolia's stacks.

We also note that EPA recently approved Alternative Method ALT-082 as an alternative test method to Method 9. This alternative method, also known as the DCOT uses a digital camera and specialized software to determine the opacity of visible emissions. Veolia may request to use the DCOT method in lieu of EPA Method 9 to measure the opacity of emissions from its stacks.

140. **Comment:** ***Page 20 of 79, section 2.2, Table 4, of the SB contains an error. The facility has only one horizontal 550 gallon #2 fuel oil tank, not two as set forth in the table.***

See Veolia at 92.

EPA Response: EPA agrees with this comment and has updated Condition 2.10(A)(3) of the final permit to reflect that there is only one horizontal #2 fuel oil tank that qualifies as an insignificant emission unit pursuant to 35 IAC 201.210(a)(11).

141. **Comment:** ***Page 27 of 79, section 3.1.2.C., Paragraph 3, of the SB suggests that EPA became aware of Veolia's intention to conduct CPTs in April of 2013 and, based on that information, it decided to abandon the reopening. However, EPA has misstated the facts with regard to when Veolia made EPA aware that Veolia was going to conduct another round of CPTs. Veolia's Title V permit expired on October 12, 2013, however, EPA notified Veolia in June of 2012 that the CPT was required to be initiated by September 5, 2013. Although Veolia disagreed with this date because the 5 year requirement for CPT testing would not have required Veolia to conduct testing until September 5, 2014, Veolia submitted CPT plans to EPA on September 5, 2012. This is well before the permit expired on October 12, 2013, and months before the April 2013***

date that EPA suggests. EPA should revise this paragraph and state the real reasons that it abandoned the permit reopening, to the extent it has actual reasons.

See Veolia at 93.

EPA Response: EPA's discussion in the SB of the rationale for EPA's decision to not finalize the reopening is accurate. As stated in the SB, EPA received a significant number of substantive written and oral comments during the public comment period for the reopening, which closed on April 1, 2013. Due to the complexity of the comments received, EPA did not finalize the proposed modifications prior to expiration of the 2008 permit. At the same time, Veolia submitted to EPA its revised plans for conducting another round of CPTs in October 2013. Although EPA and Veolia had been in communication about Veolia's plans for the 2013 CPT, including exchanging letters and emails and participating in numerous calls, EPA did not deem Veolia's CPT plan sufficient to document compliance with applicable HWC NESHAP emissions standards, and to establish appropriate operating feedrate limits. *See* Letter from Eric Cohen, Branch Chief, Office of Regional Counsel, to Joseph Kellmeyer, Thompson Coburn LLP, September 4, 2013.[59] Because of that fact and because Veolia's 2008 permit was due for renewal, EPA decided that, rather than finalizing the proposed reopening, it would be most effective to include the OPLs and additional monitoring requirements in the renewal permit that is the subject of this permitting action.

142. **Comment:** ***Page 15 of 79, section 2.1, Table 2, of the SB contains an error. The capacity of Storage Tanks for Liquid Wastes, Tank #2 is 4,931 gallons, not 4,391 gallons as set forth in the table.***

See Veolia at 92

EPA Response: EPA agrees that this was a typographical error and has verified that the final permit reflects the correct capacity of Tank #2.

143. **Comment:** ***Condition 1.3, Page 9 of 172, of the Draft Permit contains an error. The capacity of Storage Tanks for Liquid Wastes, Tank #2 is 4931 gallons, not 4391 gallons as defined in the table.***

See Veolia at 99.

[59] Available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0067.

EPA Response: EPA has corrected this error in the final permit to reflect the correct capacity of Tank #2 in the final permit.

144. **Comment:** ***Condition 2.1(A)(7)(a), Page 13 of 172, of the Draft Permit should be amended as follows to account for the different limits established at incineration Unit 4: 'The Permittee shall not allow emissions of dioxins and furans from the facility in excess of 0.20 nanograms (or 0.40 nanograms if the combustion gas temperature at the inlet to the initial particulate matter control device is 400 °F or lower based on the average of the test run average temperatures) toxicity equivalents per dry standard cubic meter (ng TEQ/dscm), corrected to 7 percent oxygen. [40 C.F.R. § 63.1219(a)(1)]." (Inserted language is underlined.)***

See Veolia at 99.

EPA Response: EPA has made the requested revision to Condition 2.1(A)(7)(a).

145. **Comment:** ***Condition 2.1(C)(1), Page 15 of 172, of the Draft Permit, which prohibits the Permittee from burning hospital medical infectious waste should be removed because, although the facility does not currently receive and incinerate hospital medical infectious waste, it does possess a permit from the Illinois EPA to accept and incinerate potentially infectious medical waste. There are no current prohibitions or regulatory reasons why the facility cannot accept and incinerate hospital medical infectious waste as long as it meets all the regulatory requirements.***

See Veolia at 99-100.

EPA Response: The prohibition to burn hospital medical infectious waste as referenced in this comment existed in Veolia's 2008 Title V permit. EPA is not removing the prohibition to burn hospital medical infectious waste from the final renewal permit because Veolia did not include in its application a request to remove this prohibition. In addition, the applicant did not identify nor certify compliance with all state and federal air quality control requirements that would apply if this prohibition were removed. If Veolia wishes to incinerate hospital medical infectious waste, it should submit an application for a permit amendment.

146. **Comment:** ***Condition 2.1(C)(2), Page 15 of 172, of the Draft Permit must be revised to address a potential conflict. The facility is required to conduct Comprehensive Performance Testing every 5 years and then in accordance with 40 C.F.R. § 63.12070)(1), submit a Notification of Compliance (NOC) to EPA within 90 days of the completion of testing. Upon postmark of the NOC, the facility must comply with all***

operating requirements specified in the NOC. Complying with this requirement would inevitably put the NOC and the Operating Conditions defined in this permit in conflict. Veolia is scheduled to test all of the incinerators again in 2018, which will result in OPLs based on performance tests that are different than those included in this permit. If there is no mechanism in this permit to address that the new OPLs should be followed in lieu of the outdated requirements included in this permit, then the facility will have to operate under both sets of conditions. This puts the facility in a compromising position and will create compliance issues. A significant modification can be submitted at the same time as the NOC is submitted but the Agency has 18 months to review and approve the submittal. This again creates a period where the new NOC OPLs can and will be different than what is included in the permit. It is common in many permits where these situations can occur that wording is placed in this section that states that the current NOC OPLs are always the point of compliance until a significant modification is approved by the Agency. This section must be amended to address this conflict and to clearly identify what set of OPLs are applicable and enforceable.

See Veolia at 100.

EPA Response: EPA believes that Condition 2.1(C)(2), as currently written, is clear regarding the OPLs that apply at any given time. As stated in Condition 2.1(C)(2), "If any OPL contained in this Condition 2.1(C)(2) differs from the corresponding OPL contained in the Permittee's most recent NOC, the Permittee may submit an application requesting a revision to the OPLs in this permit, pursuant to 40 C.F.R. § 71.7(e)(1)." The Permittee must comply with the OPLs in the permit until EPA approves the revised OPLs, as well as with the OPLs in the NOC, as required by the HWC NESHAP. However, this does not create a conflict, as the commenter suggests, because compliance with the more stringent of the OPLs in the NOC and the Title V permit will also assure compliance with the less stringent OPL. By requiring that EPA approve any proposed revisions to the OPLs, EPA and the public can have confidence that the OPLs have been appropriately established and that the permit continues to include sufficient monitoring to ensure continuous compliance with the new OPLs. As soon as EPA can determine that the OPLs in the NOC are based upon complete results from a test properly performed, EPA will revise the permit so that the OPLs are identical.

147. **Comment:** ***Condition 2.1(C), Pages 15-16 of 172, OPL Table, of the Draft Permit should be revised. The "minimum secondary combustion chamber temperature" for incineration Unit 3 should be the same as incineration Unit 2's, i.e., 1885 °F. The value for incineration Unit 4 for "minimum carrier fluid (gas or liquid) flowrate or pressure drop for activated carbon injection system" should be N/A. This criteria is met***

by high and low pressure switches supplied by the manufacturer and previously approved by EPA. The 3.10 gal/lb Cl_2 value is for "minimum carrier fluid flowrate or nozzle pressure drop for the spray dryer absorber" in the table on page 17.

See Veolia at 100-101.

EPA Response: EPA has made the requested revisions in the final permit.

148. **Comment:** ***The citation to the HWC MACT in Condition 2.1(D)(4)(o)(ii)(A), Page 56 of 172, of the Draft Permit should be 40 C.F.R. § 63.1209(n)(2)(vii), not 40 C.F.R. § 63.1209(n)(2)(ii).***

See Veolia at 107.

EPA Response: EPA agrees that this was a typographical error and has corrected the citation in the final permit.

149. **Comment:** ***Condition 2.1(D)(4)(q) of the Draft Permit does not adequately track the language of 40 C.F.R. § 63.1209(p) and should be amended accordingly: "The Permittee must monitor the pressure instantaneously and the automatic waste feed cutoff system must be engaged when negative pressure is not <u>adequately</u> maintained." (Inserted language is underlined.)***

See Veolia at 107.

EPA Response: EPA agrees with the requested revision and has revised Condition 2.1(D)(4)(q) in the final permit accordingly.

150. **Comment:** ***Condition 2.1(D)(11)(a)(xvi)(A) & (B), Page 65 of 172, of the Draft Permit does not pertain to Veolia's incineration units and should be removed***.

See Veolia at 107.

EPA Response: The HWC NESHAP at 40 C.F.R. § 63.1207(f)(1)(xxiv) provides that the Permittee must include in the comprehensive performance test plan the information specified in 40 C.F.R. § 63.1207(f)(1)(xxiv)(A) and (B) if the "source is equipped with a particulate matter control device other than a wet scrubber, baghouse, or electrostatic precipitator…" Because Veolia uses fabric filters for particulate matter control in its incineration units, EPA agrees that this provision of the HWC NESHAP does not

currently apply to Veolia and therefore can be removed from the Title V permit. EPA has revised the permit accordingly.

151. **Comment:** ***Condition 2.1(E)(4)(a), Page 77 of 172, of the Draft Permit does not adequately track the language of 40 C.F.R. § 63.1206(c)(3)(vi) and should be amended accordingly: "For <u>each set of</u> 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must submit to the Administrator a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken." (Inserted language is underlined.)***

See Veolia at 108.

EPA Response: EPA agrees with the requested revision and has revised Condition 2.1(E)(4)(a) in the final permit accordingly.

152. **Comment:** ***Condition 2.1(E)(5), Page 77-78 of 172, of the Draft Permit does not adequately track the language of 40 C.F.R. § 63 .1206(c)(8)(iv) and should be amended accordingly: "If you operate the combustor when the detector response exceeds the alarm set-point or the bag leak detection system is malfunctioning more than 5 percent of the time during any 6-month block time period, you must submit a notification to the Administrator within 30 days of the end of the 6-month block time period that describes the causes of the exceedances and bag leak detection system malfunctions and the revisions to the design, operation, or maintenance of the combustor, baghouse, or bag leak detection system you are taking to minimize exceedances and bag leak detection system malfunctions. To document compliance with this requirement: ..."***

See Veolia at 108.

EPA Response: EPA agrees with the requested revision and has revised Condition 2.1(E)(5) in the final permit accordingly.

153. **Comment:** ***The cross reference in Condition 2.1(E)(9), Page 80 of 172, of the Draft Permit should be to Condition 2.1(C)(4), not to Condition 2.1(B)(4).***

See Veolia at 108.

EPA Response: EPA agrees that this was a typographical error and has corrected the reference in the final permit.

154. **Comment:** ***Condition 2.1(E)(10), Page 80 of 172, of the Draft Permit should be amended to include the requirements of 40 C.F.R. § 63.1207(e)(1)(i)(A), which states that "[t]he Administrator will notify you of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within 9 months after receipt of the original plan."***

See Veolia at 108.

EPA Response: EPA agrees with the requested revision and has revised Condition 2.1(E)(10) in the final permit accordingly.

155. **Comment:** ***Condition 2.1(E)(10)(c)(ii), Page 82 of 172, of the Draft Permit should be amended to include a new subsection C. The new subsection should state: "The Administrator will approve or deny the petition within 30 days of receipt and notify you promptly of the decision pursuant to the requirements of 40 C.F.R. § 63.1207(e)(3)(ii)(B)."***

See Veolia at 108.

EPA Response: EPA has revised Condition 2.1(E)(10)(c)(ii) in the final permit to include the previously omitted provisions from 40 C.F.R. § 63.1207(e)(3)(ii).

156. **Comment:** ***Condition 2.2(E)(3), Page 99 of 172, of the Draft Permit should be revised. There are no enclosed storage tanks located in MP-1, MP-2 or in the Lab Pack Repack areas. The last sentence of this paragraph should therefore be deleted.***

See Veolia at 109.

EPA Response: In its application for the renewal permit, Veolia stated that waste containers that are received and stored in MP-1, MP-2 and the Lab Pack Repack areas are closed with a lid or cover.[60] Although Veolia also claimed that no volatile organic compounds (VOCs) are emitted from these containers except when they are opened for mixing or waste transfer, EPA is not fully confident that VOCs will not be emitted by those containers while they are closed. Thus, it is appropriate for the permit to allow for

[60] *See* email from Kathy Strubberg to David Ogulei dated April 3, 2014, available at www.regulations.gov; document ID. EPA-R05-OAR-2014-0280-0011.

the treatment of the enclosed containers in a similar fashion as "enclosed storage tanks" thereby allowing the use of the TANKS program, as appropriate, to calculate VOC emissions from those units. EPA has revised Condition 2.2(E)(3) by replacing "enclosed storage tanks" with "enclosed waste containers."

157. **Comment:** ***Condition 2.4(D)(1), Page 105 of 172, of the Draft Permit should be revised. Veolia's tanks are not below atmospheric pressure; thus, the sentence "The Permittee must monitor the pressure continuously to ensure that the pressure in the tank remains below atmospheric pressure" should be removed.***

See Veolia at 109.

EPA Response: EPA has revised Condition 2.4(D)(1) to clarify that continuous monitoring of the tank pressure to ensure that the pressure in the tank remains below atmospheric pressure is only required if the cover and closed-vent system operate such that the tank is maintained at a pressure less than atmospheric pressure.

158. **Comment:** ***Condition 2.5(E)(2)(d), Page 117 of 172, of the Draft Permit should be deleted. This condition discusses calculation of volatile organic materials (VOM) from the bulk pits using the most current method, however, because there are no enclosed storage tanks located in the bulk solid waste storage facility, this discussion should be deleted.***

See Veolia at 109.

EPA Response: Because the bulk feed building only processes solid wastes in bulk storage pits, EPA agrees that it is appropriate to delete the last sentence in Condition 2.5(E)(2)(d) of the Draft Permit, which refers to the use of the TANKS program to calculate VOM emissions from the bulk feed building. EPA has revised Condition 2.5(E)(2)(d) accordingly.

159. **Comment:** ***Condition 2.7(D)(4), Page 124 of 172, of the Draft Permit should be deleted. There is not a regulatory basis for performance testing this boiler. Further, while Veolia has historically been required to perform performance testing for carbon monoxide (CO), the draft permit now adds nitrogen oxides (NOx) to the requirements. Veolia disagrees primarily with the need for any performance testing but also the additional emissions test. This is a natural gas fired boiler and there are published emission factors which can be used for both CO and NOx.***

See Veolia at 109.

EPA Response: EPA disagrees with this comment and has retained this requirement in the final permit. While EPA often allows the use of AP-42 emission factors, as appropriate, to estimate emissions from a particular source, EPA's general policy is that the Permittee must verify the appropriateness of those emission factors for the emission units at the source. This is because AP-42 emission factors are generic emission factors that may not necessarily reflect actual emissions from the subject facility. In the case of Veolia's boiler, EPA does not have enough data to determine that the CO and NOx emission factors in AP-42 are adequate for characterizing Veolia's future emissions as the boiler gets older.

In addition, because CO and NOx typically have an inverse relationship in boilers (i.e., CO is typically highest when NOx is lowest), EPA believes that measurement of both CO and NOx during the performance tests will help assure that Veolia is in compliance with the CO emission limits without violating the NOx emission limits. EPA believes the 5-year frequency of performance testing is adequate given that testing conducted on the affected boiler over the past 4 years has demonstrated compliance with the CO emission limits with an adequate margin of compliance. At the next renewal of Veolia's permit or after EPA collects additional actual CO and NOx emissions data, EPA may reevaluate the performance testing requirements for the boiler.

160. **Comment:** ***Condition 2.7(E)(2)(h), Page 125 of 172, of the Draft Permit should be deleted. Veolia does not have a startup, shutdown and malfunction plan (SSMP) for the boiler, which is subject only to tune-ups and energy assessments. Therefore, this requirement should be deleted.***

See Veolia at 109.

EPA Response: EPA agrees with this comment and has deleted the referenced provision from the final permit.

161. **Comment:** ***Condition 2.7(E)(2)(e), Page 125 of 172, of the Draft Permit should be revised. The annual compliance report requires a summary of performance test results. Performance testing is required once every 5 years. If performance testing is required, Veolia would like this section to read as follows: "A summary of the results of performance tests conducted during the reporting period if applicable."***

See Veolia at 109.

EPA Response: EPA has revised Condition 2.7(E)(2)(e) in the final permit as requested by this comment.

162. **Comment:** ***Condition 2.8(C)(10), Page 129 of 172, of the Draft Permit should be revised. These fuel requirements are applicable under Subpart ZZZZ, if, and only if, Veolia participates in an emergency demand response program. The draft permit implies the facility is subject to the fuel requirements at all times beginning January 1, 2015.***

See Veolia at 110.

EPA Response: EPA has revised Condition 2.8(C)(10) in the final permit to clarify its applicability as requested by this comment.

163. **Comment:** ***Condition 3.1(C), Page 150 of 172, of the Draft Permit should be revised. Condition 3.1(C)(1) requires emissions calculations to be chosen from a hierarchically ranked list of options. Condition 3.1(C)(2) requires Veolia to document review of the hierarchy prior to selection of an emissions calculation methodology, including a demonstration of the appropriateness of the selected emission factor. The draft permit clearly identifies emission calculation methods for Veolia emission units lacking published emission factors or commercially available emission calculation software. Review, demonstration, and documentation of the choice of methodology is unnecessary and these requirements should be deleted.***

See Veolia at 110.

EPA Response: EPA disagrees with this comment and has retained the referenced provision in the final permit. EPA believes that it is appropriate and necessary to specify an emissions calculation hierarchy in the final permit to address emissions calculations for units for whom an emissions calculation methodology has not been specified in the permit, including insignificant emission units.

H. CHANGES MADE IN THE FINAL PERMIT DUE TO PUBLIC COMMENTS

In addition to formatting and typographical changes made to remain consistent with the plain language of the HWC NESHAP, EPA has made the following corrections and clarifications in the final permit:

1. Multi-metals Monitoring Devices Requirements [Condition 2.1(D)(1)(i)]

In response to public comments, we have clarified a number of multi-metals monitoring device provisions to better align them with our regulatory authority under the Act, 40 C.F.R. § 1209(g)(2) and 40 C.F.R. Part 71, and to clarify the Permittee's obligations. Specifically, as previously discussed in this response to comments document, EPA has made the following changes in the final permit:

(a) Legal Authority and Description [Condition 2.1(D)(1)(i)]

We have clarified in the final permit that EPA has authority under 40 C.F.R. § 1209(g)(2) to require multi-metals monitoring devices for the purposes and duration specified in the permit. In the event that this authority is insufficient, the EPA has an obligation under 40 C.F.R. § 76.1(c) as the permitting authority to require this supplemental monitoring such that this title V permit will ensure continuous compliance with the HWC NESHAP. While the SB for the draft permit discussed the EPA's authority under 40 C.F.R. § 1209(g)(2) and the EPA's general obligations under section 504 of the Act, the SB did not specifically describe the alternative argument regarding the use of section 504(c) of the Act and 40 C.F.R. § 71.6(c)(1) to fulfill these obligations. This revision to Condition 2.1(D)(1)(i) therefore clarifies the sources of our authority to require multi-metals monitoring devices.

As discussed in RTC 4, above, because the requirement to use the multi-metals monitoring devices is provided by the HWC NESHAP itself, 40 C.F.R. § 63.1209(g)(2), or if not provided in the HWC NESHAP, is necessary to assure compliance with the HWC NESHAP and the permit's terms and conditions and thus required under section 504 of the Act and 40 C.F.R. § 71.6(c)(1), we are not relying on Section 114(a)(1) as a justification for the requirement for the temporary use of multi-metals monitoring devices or for the enhanced FAP requirement. Therefore, we have also revised Condition 2.1(D)(1)(i) of the permit to remove Section 114(a)(1) of the Act as a justification for the multi-metals monitoring device requirements.

In addition, several commenters, including Veolia, took issue with EPA's description of the proposed monitoring devices in the draft permit as multi-metals "continuous emissions monitoring systems (CEMS)" that would be operated as "continuous parametric monitoring systems (CPMS)." Based on the issues raised in the public comments, EPA acknowledges that confusion may have caused by referring to the monitoring devices as "multi-metals CEMS" or "CPMS." The mercury, lead, cadmium, arsenic, and chromium emissions that will be measured from the three incinerator units will not be used as a direct measure of compliance with the emission limits for these pollutants in the HWC NESHAP. *See* Response to Comment 1. Rather, these metal HAPs concentrations will be measured for a period of at least 12 months to verify that the procedures established in the enhanced FAP are sufficiently robust to ensure (a) that the feedrate OPLs are being met; and (b) that those OPLs are sufficient to ensure continuous compliance with the mercury, SVM, and LVM emission limits in the HWC NESHAP. A "continuous monitoring system," which includes "CEMS" and "CPMS," is defined in EPA's regulations as "monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation." 40 C.F.R. § 63.2. Because the multi-metals monitors will be used to ensure that there is a strong correlation between the established metal feedrate OPLs and associated emissions, and not as a direct measure of compliance with emission limits, these devices are not being used as CEMS or CPMS. Therefore, in the final permit, EPA has changed this permit condition to require a multi-metals monitoring device on each of the three incinerator units for the temporary period of at least 12 months.

(b) Calculation of System Removal Efficiency (SRE) for Metals Not Detected During Stack Tests [Condition 2.1(D)(1)(i)(ii)]

In its comments, Veolia expressed concern that it cannot calculate a SRE specific for beryllium from the 2013 CPT data because analytical results for the waste feeds and emissions were predominantly non-detect values (i.e., there was not enough beryllium in either the feed or in the emissions to obtain an accurate measurement). EPA agrees that beryllium could indeed exist in very low concentrations in waste streams burned by some hazardous waste incinerators. To address this concern, EPA has revised Condition 2.1(D)(1)(i)(ii) in the final permit to specify that if the emissions data for the affected metal were non-detect values during the last comprehensive performance test, the Permittee may use the lowest SRE for the metal group (e.g., LVM in the case of beryllium) instead of one for the specific metal. EPA believes that this change, which is reflected in Condition 2.1(D)(1)(i)(ii)(B) of the final permit, is a commonsense clarification of the underlying requirement to ensure its practicality.

(c) Indicator Range Clarifications [Conditions 2.1(D)(1)(i)(iii) and (ix)]

Several commenters objected to EPA's definition of "parametric range" in Condition 2.1(D)(1)(i)(iii) of the draft permit. EPA had used the term "parametric range" in recognition of its proposal to use the multi-metals monitoring devices as CPMSs. In this context, the parametric range would represent the range within which the parameter measured by the multi-metals monitoring device (i.e., the metal concentration) must fall. However, as discussed in subsection (H)(1)(a), above, EPA acknowledges that it may have caused confusion by referring to the multi-metals monitoring devices as CPMSs. Additionally, because the multi-metals monitoring devices will directly measure metal concentrations, it may have caused confusion to refer to the device output as a "parameter" similar to the output of a typical CPMS. Accordingly, we have revised Condition 2.1(D)(1)(i)(iii) by adopting the term "indicator range" in the final permit to refer to the range within which the metal concentrations measured by the multi-metals monitoring device must fall. We have clarified Condition 2.1(D)(1)(i)(iii) to specify that the Permittee is not precluded from establishing the indicator range at a value that is less (i.e., more stringent) than the emission limit.

EPA has also revised Condition 2.1(D)(1)(i)(iii) to clarify that for LVM and SVM, which are each made up of multiple metals, the indicator range for each metal group applies to the sum of emissions of the individual constituents of that metal group. Thus, the indicator range for SVM would refer to the sum of emissions of lead and cadmium as measured by the multi-metals monitoring device while the indicator range for LVM would refer to the sum of emissions of arsenic, beryllium and chromium.

Because EPA is requiring the multi-metals monitoring devices to determine whether the feedrate OPLs can assure continuous compliance with the applicable emissions limits, EPA agrees that, for purposes of this permit, any 1-hour block measurement outside of the indicator range should not automatically be considered a deviation. Accordingly, EPA has revised Condition 2.1(D)(1)(i)(ix) to specify that any 1-hour block measurement outside of the indicator range would be an "excursion" as defined at 40 C.F.R. § 64.1. An excursion means a departure from an indicator range established for monitoring, consistent with the averaging period specified for averaging the results of the monitoring. A deviation, on the other hand, means a departure from some term or condition of the permit.

While EPA has clarified that measurements outside the indicator range shall be considered excursions, EPA has not substantively revised the corrective actions, including reporting requirements, which are triggered when an excursion occurs.

(d) Length of the Multi-Metals Monitoring Device Installation Period [Condition 2.1(D)(1)(i)(iv) and related conditions]

In the draft permit, we required the Permittee to operate the multi-metals monitoring devices for no less than 12 consecutive months. Recognizing that there may be situations when a multi-metals monitoring device is temporarily down for scheduled maintenance, calibrations, or other reasons, we have revised Condition 2.1(D)(1)(i)(iv) to clarify that only those calendar months that comply with the data completeness criteria specified in the permit will be counted towards the 12-month period. We have added the data completeness criteria as Conditions 2.1(D)(1)(i)(iv)(B) and (C) of the final permit.

(e) Averaging Period Used to Determine Excursions and for Triggering Corrective Actions [Conditions 2.1(D)(1)(i)(ix), (x) and (xi), and related recordkeeping and reporting provisions in Condition 2.1(D)(1)(i)(xiv)]

As already discussed, the final permit defines an "excursion" as any 1-hour block measurement outside the indicator range. Recognizing that Veolia typically conducts comprehensive performance stack tests over a period of at least 6 hours (i.e., three test runs of approximately 2 hours each), we are also requiring the Permittee to record and report 6-hour rolling averages of monitoring device data for purposes of making comparisons of the multi-metals monitoring device data with the performance test data (if available). Additionally, because the feedrate OPLs required by the HWC NESHAP are 12-hour rolling average data, we are requiring the Permittee to record and report 12-hour rolling average multi-metals monitor data for purposes of facilitating comparisons with the 12-hour rolling average feedrate data. The Permittee will also report 1-hour block and 6-hour rolling feedrate data corresponding to the monitor device data.

We have revised Condition 2.1(D)(1)(i)(ix) to clarify that the Permittee is not required to commence an AWFCO whenever an excursion occurs. However, we have specified that should the Permittee opt to interlock the multi-metals monitoring devices with the AWFCO system required by Condition 2.1(C)(7), the Permittee shall use the corresponding 12-hour rolling average of multi-metals monitoring device data. This revision ensures that the averaging period used to trigger AWFCOs

is consistent with the averaging period used to demonstrate compliance with the feedrate OPLs.

As a consequence of the above changes, we have revised the associated recordkeeping and reporting provisions to specify that the Permittee must maintain and report to EPA, consistent with the reporting provisions of the final permit, 6-hour rolling average concentrations in addition to 1-hour block and 12-hour rolling concentrations and feedrates.

(f) Other Changes

We have revised Condition 2.1(D)(1)(i) to remove the specific reference to XRF measurement technology for the multi-metals monitoring devices. This revision recognizes the fact that the multi-metals monitoring devices need not be based on XRF technology in order for it to be acceptable to EPA, provided that EPA has approved it for use in compliance situations under EPA's measurement technology certification procedures. As a consequence of this change, we have also revised Condition 2.1(D)(1)(i)(i) to provide the Administrator the option to approve the Permittee's request to use performance specifications and QA/QC procedures other than those specified in the permit, that are appropriate for the technology the Permittee selects.

We have clarified in Condition 2.1(D)(1)(i) that the monitoring devices required in the final permit will be used as described in the permit to establish limits on operating parameters to control the emission of metals from the Veolia facility.

Further, we have revised Conditions 2.1(D)(1)(xii) and (xiii) to specify that EPA may reopen the permit pursuant to 40 C.F.R. § 71.7(f) to revise additional OPLs (not just the feedrate limits) based on the data collected by the multi-metals monitoring devices in conjunction with feedstream analysis or other relevant data, in order to assure compliance with the applicable emissions limits.

2. Enhanced Feedstream Analysis Procedures [Condition 2.1(D)(4)(d)(ii)]

(a) Sampling and Analysis Procedures

We have clarified in Condition 2.1(D)(4)(d)(ii) that the Permittee must specify in the feedstream analysis plan the quality assurance/quality control procedures and test methods it will use to conduct the sampling and analyses required by Condition 2.1(D)(4)(d)(ii).

(b) Waste Acceptance Procedure

In response to concerns raised by Veolia and others, we have revised the waste acceptance analysis procedures to provide details on the various analyses to be conducted by Veolia. Although we had not specified these detailed procedures in the draft permit, they are consistent with procedures implemented with other hazardous waste facilities and thus we expected Veolia to include them in its feedstream analysis plan. We have also defined "shipment" in Condition 2.1(D)(4)(d)(ii)(B) to mean the collection of all waste streams identified in the waste manifest form that accompanies the waste.

The waste acceptance procedure includes both initial and subsequent analyses as specified in Condition 2.1(D)(4)(d)(ii)(B) of the final permit. Specifically, we are requiring Veolia to use the following analytical protocol and frequency for all waste streams accepted for incineration:

- Sampling and analysis of at least 10% of containers in each of the first five or more shipments of each waste stream received at the facility per calendar year. Veolia shall use the analytical result for each shipment sampled and analyzed for performing metals feedrate calculations for that shipment. If any metals analysis result is below the reporting limit (i.e., non-detect), the reporting limit as defined in Condition 2.1(D)(4)(d)(ii)(E)(III) will be used for metals feedrate calculations. For the next nine shipments of the same waste stream received, Veolia shall use the 95% upper confidence level (UCL) of the data obtained above (i.e., profile concentration) for metals feedrate calculations for those shipments.

- For every tenth shipment received after the initial five shipments, sample and analyze at least 10% of containers in the shipment, and use the metals analysis results for metals feedrate calculations for that shipment (shipment concentration). Veolia shall re-calculate the profile concentration by including analytical data from each subsequent analysis, and shall use the re-calculated profile concentration for metals feedrate calculations for the non-sampled shipments.

- A shipment is discrepant for metals if the shipment concentration, as defined above, exceeds the UCL. Following a discrepant metals analysis, Veolia shall sample and analyze at least 10% of containers in each of the next five or more shipments of that waste stream, and shall re-calculate the initial and subsequent profile concentrations.

In lieu of conducting sampling and analysis as described above, we have clarified that Veolia may elect to use a combination of laboratory analysis and "acceptable knowledge" for the following wastes whose physical nature may make it technically impracticable to obtain a representative laboratory sample: batteries, cathode ray tubes, piping, wire, tubing, syringes, metal sheeting and parts, explosive components, electronic devices, and personal protection equipment that are impractical to sample and difficult to obtain accurate and representative analysis (gloves, boots and disposable garments). The use of "acceptable knowledge" shall be consistent with EPA guidance as contained in Section 1.2 of Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Wastes - Final, A Guidance Manual, EPA 530-R-12-001 (April 2015), available at http://www2.epa.gov/sites/production/files/2015-04/documents/tsdf-wap-guide-final.pdf (*See* EPA-R05-OAR-2014-0280-0241).

Finally, we have specified that Veolia must perform sampling and analysis, and must re-calculate the initial and subsequent profile concentrations, under any of the following circumstances:

- A generator notifies Veolia, or Veolia has reason to believe, that the process or operation generating the waste has changed;

- The results of the pre-acceptance inspection indicate that the waste received at the facility does not match the waste designated on the accompanying manifest or shipping paperwork;

- Veolia determines through a review of other information that the concentration of arsenic, beryllium, chromium, lead, cadmium or mercury in the waste stream may have changed.

(c) Batching Procedures

EPA has revised the batching procedures to clarify that Veolia can batch, treat, blend, mix, or otherwise alter any feedstreams exempted by Condition 2.1(D)(4)(d)(ii)(F)(I) of the final permit provided Veolia complies with the recordkeeping provisions for exempt feedstreams as specified in Conditions 2.1(D)(4)(d)(ii)(F)(II) and (III) of the final permit. This revision recognizes the fact that some otherwise exempt feedstreams can indeed be batched before Veolia feeds them to the incinerators.

(d) Exemptions to the Analysis Procedures in Condition 2.1(D)(4)(d)(ii)

EPA has clarified Condition 2.1(D)(4)(d)(ii)(F) to specify that Veolia will not have to sample and analyze wastes exempted from sampling by Condition 2.1(D)(4)(d)(ii)(F) and determined to contain a specific concentration of metals in accordance with Conditions 2.1(D)(4)(d)(ii)(F)(II-III). EPA has modified the permit to allow those wastes posing unique safety concerns or profound sampling difficulties that are specifically exempted from sampling under Condition 2.1(D)(4)(d)(ii)(F) to remain exempt even if generator knowledge, MSDS, and container labels, indicate that metals are present. The metal concentration must be determined from generator knowledge, MSDS, and container labels for the purposes of tracking metal feedrates and must be documented as described in Conditions 2.1(D)(4)(d)(ii)(F)(II) and (III).

Additionally, we have specified that if Veolia requests approval by the Administrator to exempt additional feedstreams from sampling and analysis, the Administrator shall have 60 days from receipt of the request to approve, deny or request additional information. If the Administrator does not respond to the request within 60 days of receiving the request and any additional information requested, the Permittee may consider its request to exempt the specified wastes approved by default.

3. Monitoring and Recordkeeping Requirements for the Gasoline Storage Tank [Conditions 2.6 (D) and (E)]

Conditions 2.6(A)(3) through (5) of the draft permit included the requirements of 35 IAC 219.585, Gasoline Volatility Standards for the Metro East Area. To monitor compliance with these requirements, EPA proposed in the draft permit to include periodic monitoring provisions in Conditions 2.6(D)(1) through (5) and recordkeeping requirements in Conditions 2.6(E)(3) and (4). When EPA public noticed the draft permit, the IEPA had submitted to EPA a request to revise its SIP to remove the requirements of 35 IAC 219.585 from its SIP; however, EPA had not yet issued a final decision on that request. EPA noted that when the provisions were removed from the Illinois SIP, EPA would remove the requirements from Veolia's permit, and if the SIP was revised prior to the issuance of the final permit, EPA would remove the repealed provisions from the permit prior to issuing a final permit. *See* SB at 70, fn 74. On October 6, 2014, EPA approved Illinois' request to remove 35 IAC 219.585 from the Illinois SIP. *See* 79 Fed. Reg. 60065 (October 6, 2014). This approval became effective on December 5, 2014. Because 35 IAC 219.585 is no longer in the Illinois SIP, EPA is granting Veolia's request to remove the requirements of 35 IAC 219.585 from its Title V permit. Accordingly, EPA has removed from the final permit Conditions 2.6(A)(3) through (5), the associated

monitoring requirements in Conditions 2.6(D)(1) through (5), and the recordkeeping requirements in Conditions 2.6(E)(3) and (4) of the draft permit.

4. Emergency Provisions [Condition 4.17]

In this final permit, EPA is not including the "*emergency provisions*" located in Condition 4.17 of the draft permit. These provisions were modeled on the "Emergency provision" regulations contained in 40 C.F.R. Part 71 for federal operating permit programs. Specifically, in the regulations discussing the contents of Title V operating permits issued under the federal operating permits program, 40 C.F.R. § 71.6(g) provides that certain "emergency" events can constitute "an affirmative defense in an action brought for non-compliance" with certain emission limits contained in the permit, when certain conditions are met. However, nothing in the CAA or 40 C.F.R. Part 71 requires that these types of "emergency provisions" be included as conditions in operating permits issued by EPA, and for the reasons discussed below, we are exercising our discretion not to include them in this final permit.

In 2014, the United States Court of Appeals for the District of Columbia Circuit ruled that the Act does not authorize EPA to create affirmative defense provisions applicable to certain enforcement actions. *See NRDC v. EPA,* 749 F.3d 1055 (D.C. Cir. 2014). The Court ruled that Sections 113 and 304 of the Act preclude EPA from creating affirmative defense provisions in the Agency's regulations imposing hazardous air pollutants emission limits on sources. The Court concluded that those affirmative defense provisions purported to alter the jurisdiction of federal courts generally provided in the Act to assess liability and impose penalties for violations of emission limits in private civil enforcement cases, and that the Act did not provide authority for EPA to do so. Consistent with the reasoning in the *NRDC v. EPA* decision, EPA has determined that it is not appropriate under the Act to alter the jurisdiction of the federal courts through affirmative defenses provisions in its Title V regulations, such as those contained in the emergency provisions of 40 C.F.R. § 71.6(g), and that such provisions are inconsistent with our authority under the Act. In light of the above-described D.C. Circuit decision and EPA's obligation to issue Title V permits consistent with the applicable requirements of the Act, it is no longer appropriate to include permit conditions modeled on affirmative defenses such as those contained in the emergency provisions of 40 C.F.R. § 71.6(g) in operating permits issued by EPA.

Although EPA views the Part 71 emergency provisions as discretionary (i.e., neither the statute nor the regulations mandate their inclusion in Part 71 permits), EPA is considering whether to make changes to the operating permit program regulations in order to ensure EPA's regulations are consistent with the recent D.C. Circuit decision; and if so, how

best to make those changes. Until that time, as part of the normal permitting process, it is appropriate for EPA permitting authorities to rely on the discretionary nature of the existing emergency provisions to choose not to continue to include permit terms modeled on those provisions in operating permits that we are issuing in the first instance or renewing. By doing so, we are not only fulfilling EPA's obligation to issue Title V permits consistent with the applicable requirements of the Act, but we will also help ensure that permittees do not continue to rely on permit provisions that have been found legally invalid. Accordingly, in the final Part 71 permit, EPA is exercising its discretion to not include the *"emergency provisions"* located in Condition 4.17 of the draft permit, to ensure that the Part 71 permit is in compliance with the applicable requirements of the Act.

5. Permit Shield [Condition 4.21]

In the draft permit, we proposed that we would not include a permit shield related to any requirement of 40 C.F.R. Part 63, Subpart EEE, (including the appendix and any requirement of the General Provisions (40 C.F.R. Part 63, Subpart A) identified in Table 1 as applicable to 40 C.F.R. Part 63, Subpart EEE). EPA explained in the SB that our proposed decision was due to the fact that the pending NOV/FOVs raised a question regarding applicability of, and compliance with, certain HWC NESHAP requirements. However, EPA has decided to include in the final permit a permit shield to cover the HWC NESHAP requirements. The existence of FOV/NOVs and EPA's decision to allow application of the permit shield to the HWC NESHAP requirements does not affect in any way EPA's determination that enhanced monitoring requirements are necessary to ensure that the permit assures compliance with all applicable requirements.

6. Other Changes and Clarifications

In response to public comments, and after further review, EPA has clarified or corrected the following additional conditions as specified below:

(a) Storage Tanks for Liquid Wastes [Condition 1.3]

EPA has corrected the capacity of storage tank #2, consistent with the capacity reported in Veolia's application. The correct capacity for storage tank #2 is 4,931 gallons.

(b) Hazardous Air Pollutant Limitations [Condition 2.1.7(a)]

We have clarified Condition 2.1.7(a) to address all of the applicable emission limits for dioxins and furans as established at 40 C.F.R. § 63.1219(a)(1). Specifically, we have added the alternate dioxins/furans emission limit in 40 C.F.R.

§ 63.1219(a)(1)(i)(B) (i.e., dioxin/furan emissions shall not exceed 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400 ° Fahrenheit or lower based on the average of the test run average temperatures).

(c) Minimum Secondary Combustion Chamber Temperature [Condition 2.1(C)(2)]

We have corrected an error in the minimum secondary combustion chamber temperature OPL for Unit #3. The correct OPL is 1,885 °F, which is consistent with Veolia's January 2014 Notification of Compliance.

(d) Minimum Carrier Fluid Flowrate or Pressure Drop for Activated Carbon Injection System [Condition 2.1(C)(2)]

We have clarified that the minimum carrier fluid flowrate OPL does not apply to Unit #4. This is because Unit #4 has met the minimum carrier fluid flowrate criteria by using high and low pressure switches supplied by the manufacturer and previously approved by EPA.

(e) Permit References to COMSs for Monitoring Compliance with the Opacity Standard

EPA has revised Conditions 2.1(C)(6)(b)(iii)(A)(I) and (II); 2.1(D)(1); 2.1(D)(1)(c); and 2.1(D) (4)(i)(ii) to remove all references to COMS because the Permittee is not required, pursuant to 40 C.F.R. Part 63, Subpart EEE, to install and operate COMSs for purposes of monitoring the opacity of Veolia's emissions. As previously written, Condition 2.1(D)(1)(c) had left the impression that COMSs were required in the permit to monitor opacity. However, pursuant to 40 C.F.R. § 63.1209(a)(1)(ii), COMSs are only required for certain cement kilns that are complying with §§ 63.1204(a)(7) and (b)(7). Because the HWC NESHAP does not require hazardous waste combustors to use a COMS to monitor compliance with the opacity standard, reference to COMS in the HWC NESHAP requirements included in the permit is not appropriate.

In addition, EPA has not determined, pursuant to 40 C.F.R. § 71.6 or other authority under the Act, that use of COMS to monitor compliance with the opacity standard, or as a surrogate for particulate matter emissions, is necessary at the Veolia facility.

(f) Contents of Comprehensive Performance Test Plan [Condition 2.1(D)(11)(a)(xvi)(A) & (B)]

We had incorrectly included in the draft permit the requirements of 40 C.F.R. § 63.1207(f)(1)(xxiv), which provide that the Permittee must include in the comprehensive performance test plan the information specified in 40 C.F.R. § 63.1207(f)(1)(xxiv)(A) and (B) if the "source is equipped with a particulate matter control device other than a wet scrubber, baghouse, or electrostatic precipitator…" Because Veolia uses fabric filters (baghouses) for particulate matter control in its incineration units, this provision of the HWC NESHAP does not currently apply to Veolia and therefore can be removed from the Title V permit. EPA has revised the permit accordingly.

(g) Emergency Generator Provisions [Condition 2.8]

On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision granting in part and denying in part petitions for review of the NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ, and the NSPS for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subparts IIII and JJJJ.[61] The court decision, as modified on rehearing, vacated paragraphs 40 C.F.R. §§ 60.4211(f)(2)(ii)-(iii), 60.4243(d)(2)(ii)-(iii), and 63.6640(f)(2)(ii)-(iii). The vacated paragraphs specified that emergency engines may operate for a limited number of hours per year in two situations: (1) emergency demand response when the Reliability Coordinator has declared an Energy Emergency Alert Level 2, and (2) when there is a deviation of voltage or frequency of five percent or greater below standard voltage or frequency. Consistent with EPA guidance regarding this vacatur,[62] we have revised Condition 2.8 to remove the vacated provisions.

[61] *See* https://www.epa.gov/sites/production/files/2016-06/documents/rice_vacatur_mandate.pdf
[62] *See* https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf

I. DOCUMENTS INCLUDED IN THE ADMINISTRATIVE RECORD

In addition to specific online references cited in the body of this response to comments document, EPA has included the following documents in the docket for this permit action. These documents are available from www.regulations.gov, docket ID. EPA-R05-OAR-2014-0280. Additionally, EPA maintains electronic and hard copies of all documents, including any confidential business information, used to support today's permit decision at its offices at 77 West Jackson Blvd., Chicago, Illinois.

Document ID as Posted at www.regulations.gov	**Document Date (if specified)**	**Document Title/Description**
EPA-R05-OAR-2014-0280-0001	10-10-14	Public Notice for Draft Permit
EPA-R05-OAR-2014-0280-0002	10-10-14	Fact Sheet for Draft Permit
EPA-R05-OAR-2014-0280-0003	10-10-14	Draft Permit
EPA-R05-OAR-2014-0280-0004	10-10-14	Statement of Basis for Draft Permit
EPA-R05-OAR-2014-0280-0005	1-28-14	Veolia 2013 CPT Report
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix A CEMS RATA Reports
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix B Spiking Report
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix C Process Operating Data
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix D CMS Performance Evaluation Test Report
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix E Chains of Custody and Field Logbook
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix F Sampling Documentation
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix G Analytical Data Reports
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix H Data Quality Assessments
EPA-R05-OAR-2014-0280-0005	1-28-14	2013 CPT Report Appendix I Sampling Equipment and Instrumentation Calibration Documentation
EPA-R05-OAR-2014-0280-0006	1-28-14	Veolia 2014 Notification of Compliance
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix A (Forms)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix B (Nonapplicable Regs)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix C (Figures)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix D (CEMS and CMS Plans)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix E (2010 NOC)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix F (Construction Permits)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix G (Startup, Shutdown and Malfunction (SSM) Plan)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix H (Automatic Waste Feed Cut-off (AWFCO) Plan)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix I (Emergency Safety Vent (ESV) Plan)
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix J (Feedstream Analysis Plan (FAP))
EPA-R05-OAR-2014-0280-0007	8-16-13	Addendum to Renewal Application Appendix K (Items Proposed by Veolia to be Removed from 2008 Permit)
EPA-R05-OAR-2014-0280-0008	4-8-13	Veolia Renewal Application
EPA-R05-OAR-2014-0280-0009	11-20-13	Veolia Application Addendum Email
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application Page 57
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application Page 63
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application Page 65
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application Page 66
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application Page 73
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application Page 78
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application Page 80
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Application PTE Summary Form
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Emergency Generator 1 Application Form EMSS
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Emergency Generator 1 Application Form EUD
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Emergency Generator 2 Application Form EMSS
EPA-R05-OAR-2014-0280-0009	11-20-13	Revised Emergency Generator 2 Application Form EUD
EPA-R05-OAR-2014-0280-0010	4-1-14	Veolia Application Addendum with Certification

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0011	4-3-14	Change in VOM Calculation Methodology for Material Processing Areas
EPA-R05-OAR-2014-0280-0012	12-9-13	EPA Email to Veolia (Emissions Information)
EPA-R05-OAR-2014-0280-0012	12-9-13	Emissions Calculations from Application
EPA-R05-OAR-2014-0280-0012	8-16-13	Addendum to Veolia Renewal Application Appendix A (Forms)
EPA-R05-OAR-2014-0280-0013	12-20-13	Veolia Email 12-20-13 (Waste Analysis Plan)
EPA-R05-OAR-2014-0280-0013	9-29-94	Veolia's Waste Analysis Plan
EPA-R05-OAR-2014-0280-0014	9-11-13	Veolia Title V Renewal Completeness Determination
EPA-R05-OAR-2014-0280-0015	7-18-13	Veolia Response to Incompleteness Letter
EPA-R05-OAR-2014-0280-0016	5-16-13	Veolia Renewal Application Incompleteness Letter
EPA-R05-OAR-2014-0280-0017	1-14-14	Veolia GHG Emissions Email
EPA-R05-OAR-2014-0280-0017	1-14-14	Veolia Greenhouse Gas (GHG) Emissions
EPA-R05-OAR-2014-0280-0018	3-4-14	EIIP Methods for Estimating Air Emissions from Paint, Ink, and Other Coating Manufacturing Facilities (EPA Publication)
EPA-R05-OAR-2014-0280-0018	3-4-14	EIIP Volume II, Chapter 8 (March 1998)
EPA-R05-OAR-2014-0280-0018	3-4-14	EIIP Volume II, Chapter 8 (February 2005)
EPA-R05-OAR-2014-0280-0019	12-9-13	Veolia Email to EPA (PTE Summary)
EPA-R05-OAR-2014-0280-0019	12-9-13	Revised Application Form PTE Summary
EPA-R05-OAR-2014-0280-0020	12-9-13	EPA Email to Veolia (Emissions Information)
EPA-R05-OAR-2014-0280-0021	12-5-13	Veolia Email (Boiler MACT Applicability)
EPA-R05-OAR-2014-0280-0022	11-6-13	Veolia Email (Application Review Questions)
EPA-R05-OAR-2014-0280-0023	11-6-13	Veolia Email (Application Review Questions)
EPA-R05-OAR-2014-0280-0024	8-15-13	Veolia Email (Application Update Email)
EPA-R05-OAR-2014-0280-0025	8-15-13	Veolia Email (Application Addendum)
EPA-R05-OAR-2014-0280-0026	7-17-13	EPA Email to Veolia (Veolia's Response to Incompleteness Letter)
EPA-R05-OAR-2014-0280-0027	7-17-13	Veolia Letter Responding to Notification of Incompleteness, Dated 5/31/2013
EPA-R05-OAR-2014-0280-0027	7-17-13	Veolia Email (Response to Incompleteness Letter)
EPA-R05-OAR-2014-0280-0028	7-16-13	Veolia Email (Application Review Questions)
EPA-R05-OAR-2014-0280-0029	12-9-13	Veolia Email (PTE Update)
EPA-R05-OAR-2014-0280-0030	12-10-13	Veolia Email (Emissions Information)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0030	12-10-13	Revised Application Page 18
EPA-R05-OAR-2014-0280-0030	12-10-13	Revised Unit 4 Emissions
EPA-R05-OAR-2014-0280-0030	12-10-13	Revised Unit 2 Emissions
EPA-R05-OAR-2014-0280-0030	12-10-13	Revised Drum Crusher Emissions
EPA-R05-OAR-2014-0280-0030	12-10-13	Revised Unit 3 Emissions
EPA-R05-OAR-2014-0280-0030	12-10-13	Revised Application Form PTE Summary (1 of 2)
EPA-R05-OAR-2014-0280-0030	12-10-13	Revised Application Form PTE Summary (2 of 2)
EPA-R05-OAR-2014-0280-0030	12-10-13	Emissions Calculations from Application from Veolia 12-9-13
EPA-R05-OAR-2014-0280-0031	12-10-13	Veolia Email (Application Update)
EPA-R05-OAR-2014-0280-0031	12-10-13	Revised Application Form PTE Summary (Clean)
EPA-R05-OAR-2014-0280-0031	12-10-13	Emissions Calculations from Application from Veolia 12-10-13
EPA-R05-OAR-2014-0280-0031	12-10-13	Revised Application Form PTE Summary (Marked)
EPA-R05-OAR-2014-0280-0031	12-10-13	Revised Boiler Emissions
EPA-R05-OAR-2014-0280-0032	12-11-13	EPA Email to Veolia (GHG Requirements)
EPA-R05-OAR-2014-0280-0033	1-15-14	Veolia Email (GHG Emissions Calculations)
EPA-R05-OAR-2014-0280-0034	3-3-14	Veolia Email (VOM Calculation Methodology for Material Processing Areas)
EPA-R05-OAR-2014-0280-0035	3-4-14	Veolia Email (Application Update)
EPA-R05-OAR-2014-0280-0036	3-10-14	Veolia Email (Unit In-service Dates)
EPA-R05-OAR-2014-0280-0037	3-13-14	EPA Email (Public Participation)
EPA-R05-OAR-2014-0280-0038	3-26-14	Cooper Environmental Services Email (Multi-Metals CEMS Price Quote)
EPA-R05-OAR-2014-0280-0038	3-26-14	Cooper Environmental Multi-Metals CEMS Sample Price Quote
EPA-R05-OAR-2014-0280-0039	3-26-14	Record of Phone Call with Cooper Environmental Services
EPA-R05-OAR-2014-0280-0040	3-24-14	Record of Phone Call with Cooper Environmental Services
EPA-R05-OAR-2014-0280-0041	3-20-14	EPA Email to IEPA (Public Participation)
EPA-R05-OAR-2014-0280-0042	3-20-14	EPA Email (Public Participation)
EPA-R05-OAR-2014-0280-0043	3-27-14	Notes from the 3-27-14 Veolia Public Outreach Call
EPA-R05-OAR-2014-0280-0044	4-23-14	Cooper Environmental Services Email (Follow-up)
EPA-R05-OAR-2014-0280-0045	4-24-14	EPA Email to Cooper Environmental Services (Follow-up)
EPA-R05-OAR-2014-0280-0046	4-24-14	Cooper Environmental Services Email (Follow-up)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0047	9-16-14	EPA Email to Veolia (Preliminary Draft Permit)
EPA-R05-OAR-2014-0280-0047	9-10-14	Veolia Preliminary Draft Renewal Title V Permit
EPA-R05-OAR-2014-0280-0047	9-10-14	Veolia Preliminary Draft Renewal Statement of Basis
EPA-R05-OAR-2014-0280-0048	9-17-14	EPA Email to Veolia (Meeting Request)
EPA-R05-OAR-2014-0280-0049	9-17-14	EPA Email to Veolia (Preliminary Draft Fact Sheet)
EPA-R05-OAR-2014-0280-0049	9-10-14	Veolia Renewal Preliminary Fact Sheet
EPA-R05-OAR-2014-0280-0050	9-30-14	Notes from Meeting with Veolia Regarding Pre-draft Permit
EPA-R05-OAR-2014-0280-0051	10-2-14	Illinois EPA Email to EPA (Preliminary Draft Permit)
EPA-R05-OAR-2014-0280-0052	4-30-14	EPA Email (Public Participation)
EPA-R05-OAR-2014-0280-0053	4-3-14	Veolia Email to EPA (VOM Calculations for Material Processing Areas)
EPA-R05-OAR-2014-0280-0054	4-3-14	Veolia Email to EPA (VOM Calculations for Material Processing Areas)
EPA-R05-OAR-2014-0280-0055	4-3-14	EPA Email to Veolia (VOM Calculations for Material Processing Areas)
EPA-R05-OAR-2014-0280-0056	4-3-14	Veolia Email to EPA (VOM Calculations for Material Processing Areas)
EPA-R05-OAR-2014-0280-0057	3-31-14	Veolia Email to EPA (VOM Calculations for Material Processing Areas)
EPA-R05-OAR-2014-0280-0058	3-31-14	EPA Email to Veolia (VOM Calculations for Material Processing Areas)
EPA-R05-OAR-2014-0280-0059	3-31-14	Veolia Email to EPA (VOM/HAP Calculations for Material Processing Areas)
EPA-R05-OAR-2014-0280-0060	3-28-14	EPA Email to Veolia (VOM/HAP Calculations for Material Processing Areas
EPA-R05-OAR-2014-0280-0061	6-13-13	Veolia Email to EPA (CPT Plans)
EPA-R05-OAR-2014-0280-0061	6-11-13	Illinois EPA Letter to Veolia (CPT Plans)
EPA-R05-OAR-2014-0280-0062	6-13-13	Veolia Email to EPA (CPT Plans)
EPA-R05-OAR-2014-0280-0062	6-11-13	Veolia Letter to Illinois EPA (CPT Plans)
EPA-R05-OAR-2014-0280-0063	6-28-13	Veolia Email to EPA (CPT Plans for Units 3 and 4)
EPA-R05-OAR-2014-0280-0063	6-27-13	Veolia Unit 3 CPT Plan
EPA-R05-OAR-2014-0280-0063	6-27-13	Veolia Unit 4 CPT Plan
EPA-R05-OAR-2014-0280-0064	6-27-13	Veolia Email to EPA (CPT Plan for Unit 2)
EPA-R05-OAR-2014-0280-0064	6-27-13	Veolia Unit 2 CPT Plan
EPA-R05-OAR-2014-0280-0065	7-19-13	Veolia Email to EPA (CPT Plans)
EPA-R05-OAR-2014-0280-0066	7-26-13	EPA Letter to Veolia (Veolia's CPT Plans)
EPA-R05-OAR-2014-0280-0067	9-4-13	EPA Letter to Veolia (Veolia's CPT Plans)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0068	5-13-13	EPA Letter to Veolia (CPT Plan Comments)
EPA-R05-OAR-2014-0280-0069	6-10-13	Veolia Email to EPA (Meeting Summary)
EPA-R05-OAR-2014-0280-0069	6-10-13	Veolia Letter to EPA (Meeting Summary)
EPA-R05-OAR-2014-0280-0070	6-7-13	Veolia Letter to EPA (Post-meeting Summary)
EPA-R05-OAR-2014-0280-0070	6-10-13	Veolia Email to EPA (CPT Plans)
EPA-R05-OAR-2014-0280-0071	6-12-08	Veolia 2008 Finding of Violation (FOV)
EPA-R05-OAR-2014-0280-0072	7-10-13	Cooper Environmental Services Email (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0073	7-10-13	EPA Email to Cooper Environmental Services (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0074	6-26-13	Cooper Environmental Services Email (Multi-Metals CEMS)
EPA-R05-OAR-2014-0280-0075	9-27-06	Veolia 2006 FOV
EPA-R05-OAR-2014-0280-0076	6-21-13	Cooper Environmental Services Email (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0077	6-21-13	EPA Email to Cooper Environmental Services (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0078	5-28-13	Cooper Environmental Services Email (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0078	7-28-05	Lilly Method 301 Evaluation Report
EPA-R05-OAR-2014-0280-0078	5-28-13	Cooper Environmental Services Response to Veolia's Comments
EPA-R05-OAR-2014-0280-0079	6-21-13	Cooper Environmental Services Email (Meeting Setup)
EPA-R05-OAR-2014-0280-0080	6-14-13	Cooper Environmental Services Email (Multi-Metals CEMS information)
EPA-R05-OAR-2014-0280-0080	9-30-03	Final Relative Accuracy Testing Report of Xact
EPA-R05-OAR-2014-0280-0080		Xcem QA Applied to Evaluation of Xcem/M29 Mercury Concentration Differences Measured During Relative Accuracy Tests
EPA-R05-OAR-2014-0280-0080	7-31-02	Method 29 Comparison Testing of an X-Ray Based Continuous Emission Monitor (CEM) at Tooele Army Depot
EPA-R05-OAR-2014-0280-0080		Quality Assurance Summary for Montana Test of Cooper Environmental Services' CEM
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition RCA Data Evaluation
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Stratification
EPA-R05-OAR-2014-0280-0081	9-30-99	Eli Lilly AMP Petition PS-4B and Appendix EEE to 40 C.F.R. Part 63
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition PS-4A
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition PS-11 Spreadsheet Instructions

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0081	1-12-04	Eli Lilly AMP Petition PS-11 and P2
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition PS-11 Example Calculations
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Procedure 2 Routine Checks
EPA-R05-OAR-2014-0280-0081	Nov. 2005	Eli Lilly AMP Petition Procedure DD HCl QC and QA Requirements
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition PS-2
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Procedure 2 Audits.pdf
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Expected HWC MACT Operating and Emission Limits
EPA-R05-OAR-2014-0280-0081	Jun. 2005	Eli Lilly AMP Petition Method 301 Appendix E – CEMS Performance Specifications
EPA-R05-OAR-2014-0280-0081	Jun. 2005	Eli Lilly AMP Petition Method 301 Appendix F2 - Procedure Z
EPA-R05-OAR-2014-0280-0081	Jun. 2005	Eli Lilly AMP Petition Method 301 Appendix C- QAG Method
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Figure 6
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Figure 2
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Figure 3
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Figure 4
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Figure 5
EPA-R05-OAR-2014-0280-0081		Eli Lilly AMP Petition Precision and Bias
EPA-R05-OAR-2014-0280-0081	Nov. 2005	Eli Lilly AMP Petition Appendix C
EPA-R05-OAR-2014-0280-0081	Nov. 2005	Eli Lilly AMP Petition Appendix D
EPA-R05-OAR-2014-0280-0081	Jun. 2005	Eli Lilly AMP Petition Appendix B1
EPA-R05-OAR-2014-0280-0081	Nov. 2005	Eli Lilly AMP Petition Appendix A
EPA-R05-OAR-2014-0280-0081	Nov. 2005	Eli Lilly AMP Petition Appendix B
EPA-R05-OAR-2014-0280-0081	Nov. 2005	Eli Lilly AMP Petition HCl CEMS Performance Specifications
EPA-R05-OAR-2014-0280-0081	Jun. 2005	Eli Lilly AMP Petition Method 301 Evaluation Report
EPA-R05-OAR-2014-0280-0081	Oct. 2005	Eli Lilly AMP Petition
EPA-R05-OAR-2014-0280-0081	6-27-06	Eli Lilly Alternative Monitoring Plan (AMP) Approval Letter
EPA-R05-OAR-2014-0280-0082	7-17-13	Cooper Environmental Services Email (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0082		Feasibility of Using the Xact Multi-metals CEMS as a Mercury Monitor on Coal -Fired Power Plants

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0082	Mar. 2005	X-Ray Fluorescence-Based Multi-Metal Continuous Emission Monitor (xcem) Technology Demonstration
EPA-R05-OAR-2014-0280-0082	Sept. 2012	Xact 625 Environmental Technology Verification Report (ETV Report)
EPA-R05-OAR-2014-0280-0082	8-30-07	SBIR Phase I (EP-D-07-026) Final Report and Appendix A
EPA-R05-OAR-2014-0280-0082	Dec. 2006	Validation of Three New Methods for Determination of Metal Emissions Using a Modified EPA Method 301 (Yanca *et. al.*)
EPA-R05-OAR-2014-0280-0082	Jun. 2005	Eli Lilly Method 301 Evaluation Report
EPA-R05-OAR-2014-0280-0082		Pall Corporation Comments on the Secondary Lead Smelter MACT Rule
EPA-R05-OAR-2014-0280-0083	5-30-01	EPA Memorandum on Use of Draft Performance Specifications
EPA-R05-OAR-2014-0280-0084	7-18-13	EPA Email to Cooper Environmental Services (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0085	7-18-13	Cooper Environmental Services Email (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0086	9-16-13	Cooper Environmental Services Email (Multi-Metals CEMS Information)
EPA-R05-OAR-2014-0280-0087	3-29-13	Veolia Letter to EPA (2013 Reopening Concerns)
EPA-R05-OAR-2014-0280-0088	8-2-13	Veolia Letter to EPA (2013 Reopening Concerns)
EPA-R05-OAR-2014-0280-0089	9-16-13	Cooper Environmental Services Email (Multi-Metals CEMS Presentations)
EPA-R05-OAR-2014-0280-0089	3-28-13	Sources of Uncertainty in HAP Metal Emission Estimates
EPA-R05-OAR-2014-0280-0089		Quantitative Aerosol Generator (QAG) Poster Presentation
EPA-R05-OAR-2014-0280-0090	9-16-13	Cooper Environmental Services Email (Multi-Metals CEMS Information)
EPA-R05-OAR-2014-0280-0090	1-10-13	Draft Model for Predicting In-Stack Response Functions for Beta Attenuation-Based PM CEMS and Proposed Alternatives to PS-11 and P-2 Using a QAG
EPA-R05-OAR-2014-0280-0090	1-10-13	Preliminary Application of Alternative PS-11B to Examples of Existing BAM-Based PM CEMS Database (Draft Appendix A)
EPA-R05-OAR-2014-0280-0091	5-23-13	EPA Email to Cooper Environmental Services (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0092	5-21-13	EPA Email to Cooper Environmental Services (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0093	5-23-13	Cooper Environmental Services Email (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0094	5-23-13	Cooper Environmental Services Email (Multi-Metals CEMS Questions)
EPA-R05-OAR-2014-0280-0095	5-29-13	Cooper Environmental Services Email (Multi-Metals CEMS Information)
EPA-R05-OAR-2014-0280-0096	6-21-13	Cooper Environmental Services Email (Meeting Setup)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0097	9-9-13	Veolia Letter to EPA (General Concerns)
EPA-R05-OAR-2014-0280-0098	8-27-13	EPA Letter to Veolia (General Concerns)
EPA-R05-OAR-2014-0280-0099	9-26-12	Eli Lilly Email on the Xact Multi-Metals CEMS Performance
EPA-R05-OAR-2014-0280-0099		Beach *et. al.* IT3 Paper on Eli Lilly's T149 Incinerator CPT
EPA-R05-OAR-2014-0280-0099		Lambert and Foster IT3 Power Point Presentation
EPA-R05-OAR-2014-0280-0100	10-2-12	Record of EPA Telephone Conversation with Eli Lilly
EPA-R05-OAR-2014-0280-0101	10-4-12	Record of EPA Telephone Conversation with Evonik DeGussa
EPA-R05-OAR-2014-0280-0102	12-3-14	Public Hearing Transcript
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 16)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 15)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 14)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 12)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 11)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 10)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 02)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental (Reference 01)
EPA-R05-OAR-2014-0280-0103	12-9-14	Comments by TestAmerica and Focus Environmental
EPA-R05-OAR-2014-0280-0104	12-10-14	Comments by Cooper Environmental Services
EPA-R05-OAR-2014-0280-0105	12-19-14	Comments by the Coalition for Responsible Waste Incineration (CRWI)
EPA-R05-OAR-2014-0280-0106	12-19-14	Comments by American Bottom Conservancy (ABC)
EPA-R05-OAR-2014-0280-0107	12-19-14	Comments by Ross Incineration Services
EPA-R05-OAR-2014-0280-0108	12-14-14	Comments and Affidavit of Dennis Warchol
EPA-R05-OAR-2014-0280-0109	12-15-14	Comments by Michael Fuchs
EPA-R05-OAR-2014-0280-0110	12-11-14	Comments by Robert Baxter
EPA-R05-OAR-2014-0280-0111	12-19-14	Veolia's Comments on the Draft Permit
EPA-R05-OAR-2014-0280-0111	4-1-13	CRWI Comments on 2013 Proposed Reopening
EPA-R05-OAR-2014-0280-0111	3-26-13	Doug Harris Comments on 2013 Proposed Reopening
EPA-R05-OAR-2014-0280-0111	3-21-13	Ralph Roberson Comments on 2013 Proposed Reopening
EPA-R05-OAR-2014-0280-0111	3-26-13	Dennis Warchol Comments on 2013 Proposed Reopening

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0111	3-12-13	Emma York Comments on 2013 Proposed Reopening
EPA-R05-OAR-2014-0280-0111	Mar. 2013	Michael Fuchs Comments on 2013 Proposed Reopening
EPA-R05-OAR-2014-0280-0111	3-14-13	Delana Owen Comments on 2013 Proposed Reopening
EPA-R05-OAR-2014-0280-0112	12-19-14	Support Documents for Veolia's Comments on the Draft Permit
EPA-R05-OAR-2014-0280-0113	2-10-15	Cooper Environmental Services Response to Veolia's Comments on Draft Permit
EPA-R05-OAR-2014-0280-0114	3-26-15	Emission Monitoring Incorporated Docket Submission
EPA-R05-OAR-2014-0280-0115	3-27-15	Cooper Environmental Services Email Correcting Previous Comments
EPA-R05-OAR-2014-0280-0115	3-27-15	Cooper Environmental Services Corrected Response to Veolia's Comments
EPA-R05-OAR-2014-0280-0116	4-7-15	Baxter's Response to Cooper Environmental Services Supplemental Submittal
EPA-R05-OAR-2014-0280-0117	4-8-15	TestAmerica's Response to Cooper Environmental Services Supplemental Submittal
EPA-R05-OAR-2014-0280-0118	4-14-15	Veolia Letter to EPA (Bob Kaplan)
EPA-R05-OAR-2014-0280-0119	3-26-15	Veolia 3 Mile EJ Screen Results
EPA-R05-OAR-2014-0280-0120		U.S. Census Data
EPA-R05-OAR-2014-0280-0121	5-10-07	RCRA Risk Report
EPA-R05-OAR-2014-0280-0121	11-8-07	Addendum to Veolia RCRA Risk Report
EPA-R05-OAR-2014-0280-0121	11-6-07	RCRA Risk Report Errata
EPA-R05-OAR-2014-0280-0121	6-15-06	RCRA Risk Report Modeling Description
EPA-R05-OAR-2014-0280-0122	Aug. 2012	NEIC Veolia Observations Report
EPA-R05-OAR-2014-0280-0123	6-17-08	Veolia Letter to EPA (2008 CPT and Permit Concerns)
EPA-R05-OAR-2014-0280-0124	5-23-08	Veolia's 2008 CPT Plan for Unit 2
EPA-R05-OAR-2014-0280-0125	5-23-08	Veolia's 2008 CPT Plan for Unit 3
EPA-R05-OAR-2014-0280-0126	5-23-08	Veolia's 2008 CPT Plan for Unit 4
EPA-R05-OAR-2014-0280-0127	7-17-13	Cooper Environmental Services Email (Multi-Metals CEMS Information, Excluding Attachments) – See EPA-R05-OAR-2014-0280-0082 for attachments.
EPA-R05-OAR-2014-0280-0128	3-7-14	South Coast Air Quality Management District (SCAQMD) Board Meeting Minutes Authorizing Multi-Metals CEMS Contract
EPA-R05-OAR-2014-0280-0129	May 2002	Myers *et. al.* Multi-Metals CEMS ETV Report
EPA-R05-OAR-2014-0280-0130	8-15-02	Myers *et. al.* Multi-Metals CEMS ETV Verification Statement

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0131		EPA Power Point on History of Multi-Metals CEMS
EPA-R05-OAR-2014-0280-0132	6-8-05	Other Test Method (OTM) 16
EPA-R05-OAR-2014-0280-0133	6-23-05	Other Test Method (OTM) 17
EPA-R05-OAR-2014-0280-0134	6-9-05	Other Test Method (OTM) 18
EPA-R05-OAR-2014-0280-0135	6-7-05	Other Test Method (OTM) 19
EPA-R05-OAR-2014-0280-0136	6-9-05	Other Test Method (OTM) 20
EPA-R05-OAR-2014-0280-0137	6-9-05	Other Test Method (OTM) 21
EPA-R05-OAR-2014-0280-0138		Multi-Metals CEMS Estimated Cost Analysis
EPA-R05-OAR-2014-0280-0139	10-6-14	Gasoline Volatility Standards Federal Register Notice
EPA-R05-OAR-2014-0280-0140	Mar. 2005	Hay *et. al.* (2005) - X-Ray Fluorescence-Based Multi-Metals CEMS Technology Demonstration
EPA-R05-OAR-2014-0280-0141	4-7-15	Record of Telephone Conversation with SCAQMD
EPA-R05-OAR-2014-0280-0142	1-20-15	System Removal Efficiency (SRE) Calculations
EPA-R05-OAR-2014-0280-0143	Oct. 2008	Feedstream Analysis Plan (FAP)
EPA-R05-OAR-2014-0280-0144		Xact 640 Multi-Metals CEMS Specification Data Sheet
EPA-R05-OAR-2014-0280-0145		Lambert and Foster IT3 Power Point Presentation
EPA-R05-OAR-2014-0280-0146		Beach *et. al.* IT3 Paper on Eli Lilly's T149 Incinerator CPT (Power Point)
EPA-R05-OAR-2014-0280-0147		Feasibility of Using the Xact Multi-metals CEMS as a Mercury Monitor on Coal -Fired Power Plants
EPA-R05-OAR-2014-0280-0148	8-30-07	Feasibility of Monitoring Heavy Metal Emissions from a Coal- Fired Thermal Hazardous Waste Incinerator Using a Multi-Metal Continuous Emissions Monitor, SBIR Phase I Final Report
EPA-R05-OAR-2014-0280-0149	8-24-12	Veolia 2012 FOV
EPA-R05-OAR-2014-0280-0150	4-7-15	Record of Telephone Conversation with Cooper Environmental Services
EPA-R05-OAR-2014-0280-0151	2009	National RCRA Hazardous Waste Biennial Report State Data 2009
EPA-R05-OAR-2014-0280-0152	2011	National RCRA Hazardous Waste Biennial Report State Data 2011
EPA-R05-OAR-2014-0280-0153	2009	Heritage-WTI Envirofacts Hazardous Waste Report 2009
EPA-R05-OAR-2014-0280-0154	2011	Heritage-WTI Envirofacts Hazardous Waste Report 2011
EPA-R05-OAR-2014-0280-0155	2013	Heritage-WTI Envirofacts Hazardous Waste Report 2013

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0156	2009	Ross Envirofacts Hazardous Waste Report 2009
EPA-R05-OAR-2014-0280-0157	2011	Ross Envirofacts Hazardous Waste Report 2011
EPA-R05-OAR-2014-0280-0158	2013	Ross Envirofacts Hazardous Waste Report 2013
EPA-R05-OAR-2014-0280-0159	2009	Veolia Envirofacts Hazardous Waste Report 2009
EPA-R05-OAR-2014-0280-0160	2011	Veolia Envirofacts Hazardous Waste Report 2011
EPA-R05-OAR-2014-0280-0161	2013	Veolia Envirofacts Hazardous Waste Report 2013
EPA-R05-OAR-2014-0280-0162	2012-2013	Waste Profiles Received by Veolia and Heritage (Confidential Business Information)
EPA-R05-OAR-2014-0280-0163	7-17-13	EPA Email to Veolia (CPT Plan Comments)
EPA-R05-OAR-2014-0280-0164		Xact 625 Ambient Monitor Specification Data Sheet
EPA-R05-OAR-2014-0280-0165	Sept. 2012	ETV Verification Document for the Xact 625 Fenceline Monitor
EPA-R05-OAR-2014-0280-0166	5-6-15	EPA Review of Veolia's Waste Receipts
EPA-R05-OAR-2014-0280-0167	11-11-14	Cooper Environmental Services Email (Metal Measurement)
EPA-R05-OAR-2014-0280-0167	11-11-14	Cooper Environmental Services Power Point (Multi-Metals CEMS Update)
EPA-R05-OAR-2014-0280-0167		Xact 640 Multi-Metals CEMS Specification Data Sheet
EPA-R05-OAR-2014-0280-0168	11-17-14	Cooper Environmental Services Email (Metal Measurement)
EPA-R05-OAR-2014-0280-0168	11-17-14	Cooper Environmental Services Power Point (QAG Version 1)
EPA-R05-OAR-2014-0280-0168	11-17-14	Cooper Environmental Services Power Point (QAG Version 2)
EPA-R05-OAR-2014-0280-0169	5-23-13	EPA Email to Cooper Environmental Services (CEMS Comments)
EPA-R05-OAR-2014-0280-0170	4-10-12	EPA RCRA Division Email Regarding its Comments to Illinois EPA
EPA-R05-OAR-2014-0280-0170	4-8-09	EPA RCRA Division Letter to Illinois EPA (Response to Comments)
EPA-R05-OAR-2014-0280-0170	11-20-07	EPA RCRA Division Mercury Feed Rate Memorandum
EPA-R05-OAR-2014-0280-0170	11-8-07	EPA RCRA Division Review of Veolia WAP
EPA-R05-OAR-2014-0280-0170		Veolia's Proposed Revisions to its WAP in Response to EPA RCRA Division's Critique of the WAP
EPA-R05-OAR-2014-0280-0170	10/30/07	Veolia's Updated WAP
EPA-R05-OAR-2014-0280-0171	2-12-13	National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule (78FedReg10006-10054)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0172	4-18-14	NRDC v. EPA Affirmative Defense Decision
EPA-R05-OAR-2014-0280-0173	4-27-05	Sierra Club, Inc. and the American Bottom Conservancy Notice of Intent to Sue Pursuant to § 304(b)(2) of the Act
EPA-R05-OAR-2014-0280-0174	6-4-08	Sierra Club v. Johnson (2008) Settlement Agreement
EPA-R05-OAR-2014-0280-0175		EPA Summary of CBI Waste Receipts Data for Veolia and Heritage-WTI
EPA-R05-OAR-2014-0280-0176		Combined Envirofacts Waste Reports for Ross Incineration, Veolia and Heritage-WTI (2009-2013)
EPA-R05-OAR-2014-0280-0177	1-29-15	EPA Email to FPI China (Multi-Metals CEMS Availability)
EPA-R05-OAR-2014-0280-0178	1-29-15	EPA Email to Skyray China (Multi-Metals CEMS Availability)
EPA-R05-OAR-2014-0280-0179	1-8-15	EPA Email to Veolia (Meeting Request)
EPA-R05-OAR-2014-0280-0180	4-16-15	EPA Letter to Congressman Shimkus (Response to Concerns)
EPA-R05-OAR-2014-0280-0181	4-6-15	Letter by Congressmen Bost, Davis and Shimkus to Administrator McCarthy
EPA-R05-OAR-2014-0280-0181	4-6-15	Attachment Included in Congressmen Bost, Davis and Shimkus Letter to Administrator McCarthy
EPA-R05-OAR-2014-0280-0182	5-4-15	EPA Letter to Veolia (Post Meeting Follow-up)
EPA-R05-OAR-2014-0280-0183	7-11-07	Manolopoulos *et. al.* (2007) East St Louis Study on Mercury Emissions
EPA-R05-OAR-2014-0280-0184	8-9-06	EPA Administrator Amended Order Responding to Sierra Club and American Bottom Conservancy Onyx Title V Petition
EPA-R05-OAR-2014-0280-0185	2-1-06	EPA Administrator Order Responding to Sierra Club and American Bottom Conservancy Onyx Title V Petition
EPA-R05-OAR-2014-0280-0186	Feb. 1996	HWC MACT Technical Support Document Vol. 1 (Description of Source Categories)
EPA-R05-OAR-2014-0280-0187	Nov. 1995	HWC MACT Technical Support Document Vol. 2 (HWC Emissions Database)
EPA-R05-OAR-2014-0280-0188	Feb. 1996	HWC MACT Technical Support Document Vol. 3 (Selection of Proposed MACT Standards and Technologies)
EPA-R05-OAR-2014-0280-0189	Feb. 1996	HWC MACT Technical Support Document Vol. 4 (Compliance with the Proposed HWC Standards)
EPA-R05-OAR-2014-0280-0190	Feb. 1996	HWC MACT Technical Support Document Vol. 5 (Engineering Costs)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0191	May 1998	HWC MACT Technical Support Document Vol. 6 (Development of Comparable Fuels Specifications)
EPA-R05-OAR-2014-0280-0192	Feb. 1996	HWC MACT Technical Support Document Vol. 7 (Miscellaneous Technical Issues)
EPA-R05-OAR-2014-0280-0193	4-20-15	Category C Test Methods Information
EPA-R05-OAR-2014-0280-0194	5-18-11	EPA Reference Method 301 (76 Fed. Reg. 28673)
EPA-R05-OAR-2014-0280-0195	Dec. 2011	EPA's Responses to Public Comments on MATS Rule Vol. 1
EPA-R05-OAR-2014-0280-0196		Information Collection Request for MATS Rule - Part 8 of Support Document
EPA-R05-OAR-2014-0280-0197		Performance Specification 12A
EPA-R05-OAR-2014-0280-0198	1-8-15	Veolia Email (Meeting Request)
EPA-R05-OAR-2014-0280-0199	1-12-15	Veolia Email (Meeting Request)
EPA-R05-OAR-2014-0280-0200	4-20-15	Web Information on the U.S. Army Umatilla Munitions Disposal Facility
EPA-R05-OAR-2014-0280-0201	2013	Heritage General Management (RCRAInfo Data)
EPA-R05-OAR-2014-0280-0202	2013	Heritage Waste Received (RCRAInfo Data)
EPA-R05-OAR-2014-0280-0203	2013	Ross General Management (RCRAInfo Data)
EPA-R05-OAR-2014-0280-0204	2013	Ross Waste Received (RCRAInfo Data)
EPA-R05-OAR-2014-0280-0205	2013	Veolia General Management (RCRAInfo Data)
EPA-R05-OAR-2014-0280-0206	2013	Veolia Waste Received (RCRAInfo Data)
EPA-R05-OAR-2014-0280-0207	2015	EJScreen Results Ross-Veolia-Heritage Comparison Charts
EPA-R05-OAR-2014-0280-0208	5-12-15	Heritage Thermal Services 3-Mile EJ Screen Results
EPA-R05-OAR-2014-0280-0209	5-12-15	Ross Incineration 3-Mile EJ Screen Results
EPA-R05-OAR-2014-0280-0210	9-18-12	EPA Internal Email on Multi-metals CEMS Availability
EPA-R05-OAR-2014-0280-0211	9-30-14	Veolia's Comments on the Preliminary Draft Fact Sheet
EPA-R05-OAR-2014-0280-0212	10-14-14	Repository Letters for Draft Permit
EPA-R05-OAR-2014-0280-0213	11-3-14	Belleville News-Democrat Public Notice Affidavit of Publication
EPA-R05-OAR-2014-0280-0214	9-30-14	Meeting with Veolia Sign-in
EPA-R05-OAR-2014-0280-0215	10-27-14	East St. Louis Monitor Public Notice Affidavit of Publication
EPA-R05-OAR-2014-0280-0216	12-3-14	Veolia Draft Permit Public Hearing Sign-in Sheet
EPA-R05-OAR-2014-0280-0217	10-17-14	News Release for Draft Permit

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EPA-R05-OAR-2014-0280-0218	6-18-14	Facilities Reporting HAPs Near Veolia (2011 NEI and TRI Data)
EPA-R05-OAR-2014-0280-0219	6-18-14	Veolia Vicinity Facilities Reporting 2011 TRI
EPA-R05-OAR-2014-0280-0220	6-18-14	Veolia Vicinity Facility Reporting HAPs in 2011 NEI
EPA-R05-OAR-2014-0280-0221		Execution of Comprehensive Performance Test Using Particulate, HCl and Metals Continuous Emissions Monitoring Systems – Beach *et. al.* (Evonik Degussa)
EPA-R05-OAR-2014-0280-0222		Eli Lilly AMP Block Flow Diagram of the Solid-Liquid Incinerator (Figure 1 BFD)
EPA-R05-OAR-2014-0280-0223	2013	Combined Heritage-Veolia-Ross RCRAInfo Hazardous Waste Data
EPA-R05-OAR-2014-0280-0224	4-11-08	Veolia's Response to EPA Memorandum on Veolia's Data-in-Lieu Request
EPA-R05-OAR-2014-0280-0225	3-20-07	Eli Lilly (Tippecanoe Laboratories) Title V Permit
EPA-R05-OAR-2014-0280-0226	2006	Alabama Power Company Consent Decree (Civil Action No. 2:01-cv-00152-VEH)
EPA-R05-OAR-2014-0280-0227	2007	East Kentucky Power Cooperative Consent Decree (Civil Action No. 04-34-KSF)
EPA-R05-OAR-2014-0280-0228	2011	Northern Indiana Public Service Company Consent Decree (Civil Action No. 2:11-cv-00016)
EPA-R05-OAR-2014-0280-0229	10-4-12	Pall Corporation Email on the Multi-Metals CEMS Sample Probe
EPA-R05-OAR-2014-0280-0230	10-2-12	EPA Internal Email on Multi-Metals CEMS Availability and Feasibility
EPA-R05-OAR-2014-0280-0231	9-26-12	Pall Corporation Email on Multi-Metals CEMS Feasibility
EPA-R05-OAR-2014-0280-0232	9-25-12	EPA Internal Email on Multi-Metals CEMS Availability
EPA-R05-OAR-2014-0280-0233	6-18-12	EPA (Charlie Hall) Memorandum to File (FAP Review)
EPA-R05-OAR-2014-0280-0234	2-11-15	Veolia Meeting Attendees List
EPA-R05-OAR-2014-0280-0234	2-19-15	EPA Email to Veolia (Summary of Fenceline Monitoring Negotiations)
EPA-R05-OAR-2014-0280-0234	2-19-15	EPA Draft Fenceline Monitoring Proposal 2-19-15
EPA-R05-OAR-2014-0280-0235	1-21-15	Record of Phone Call with Veolia (Fenceline Monitoring)
EPA-R05-OAR-2014-0280-0236	1-27-15	Record of Phone Call with Veolia (Fenceline Monitoring)
EPA-R05-OAR-2014-0280-0237	2-18-15	Record of Phone Call with Veolia (Fenceline Monitoring)
EPA-R05-OAR-2014-0280-0238	2-11-15	Notes from the 2-11-15 Post Public Comment Discussion with Veolia
EPA-R05-OAR-2014-0280-0239	2-11-15	Agenda for the February 11, 2015 Meeting

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0240	2-11-15	Veolia Annual Mercury Feed Rates (submitted 2-11-15)
EPA-R05-OAR-2014-0280-0241	April 2015	EPA 2015 Waste Analysis Plan (WAP) Guidance
EPA-R05-OAR-2014-0280-0242	9-8-15	Veolia's Proposed Changes to the Feedstream Analysis Plan Provisions
EPA-R05-OAR-2014-0280-0243	9-22-15	Veolia Letter Regarding Enhanced Feedstream Analysis and Mercury CEMS
EPA-R05-OAR-2014-0280-0244	11-19-15	Veolia's Proposal of 11-19-15
EPA-R05-OAR-2014-0280-0245	9-17-15	Notes from Phone Call with Veolia Regarding Revised Enhanced Feedstream Analysis Provisions
EPA-R05-OAR-2014-0280-0246	9-3-15	Notes from Phone Call with Veolia Regarding Revised Enhanced Feedstream Analysis Provisions
EPA-R05-OAR-2014-0280-0247	Nov. 2002	August 2002 Performance Test Report
EPA-R05-OAR-2014-0280-0248	Jan. 2003	November 2002 Performance Test Report
EPA-R05-OAR-2014-0280-0249	Jan. 2004	September 2003 Performance Test Report
EPA-R05-OAR-2014-0280-0250	July 2004	May 2004 Performance Test Report
EPA-R05-OAR-2014-0280-0251	7-30-08	2006 CPT Report Arsenic Discussion
EPA-R05-OAR-2014-0280-0252	9-22-06	2006 CPT Report
EPA-R05-OAR-2014-0280-0253	Oct. 2008	2008 CPT Report - Unit 2
EPA-R05-OAR-2014-0280-0254	Oct. 2008	2008 CPT Report - Unit 3
EPA-R05-OAR-2014-0280-0255	Oct. 2008	2008 CPT Report - Unit 4
EPA-R05-OAR-2014-0280-0256	10-14-08	2008 Significant Modification Application
EPA-R05-OAR-2014-0280-0257	Mar. 2010	St. Louis Air Toxic Metals Study Final Technical Report March 2010
EPA-R05-OAR-2014-0280-0258	Dec. 2016	Summary of Veolia's Historical Emissions
EPA-R05-OAR-2014-0280-0259	9-27-13	EPA Letter Approving the 2013 CPT Plans.
EPA-R05-OAR-2014-0280-0260	1-11-17	Telephone Conversation Record with Mike Buckantz of Quemetco
EPA-R05-OAR-2014-0280-0261	3-23-16	Quemetco Site Visit Summary
EPA-R05-OAR-2014-0280-0262	9-12-08	Veolia 2008 Final Title V Permit
EPA-R05-OAR-2014-0280-0263	9-12-08	Veolia 2008 Statement of Basis
EPA-R05-OAR-2014-0280-0264	Aug. 2012	NEIC Full Investigation Report (with appendices)
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix A to NEIC Full Report - RCRA Permit (12-2-2009)
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix B to NEIC Full Report - CAA Title V permit (9.12.2008)

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix C to NEIC Full Report - Current in-use WAP
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix D to NEIC Full Report - Dynamic Suspect List
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix E to NEIC Full Report - Series Profile Summaries
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix F to NEIC Full Report - Profile SOL005
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix G to NEIC Full Report - NEIC Laboratory Report
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix H to NEIC Full Report - Photographs
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix I to NEIC Full Report - Sampling Activities Report
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix J to NEIC Full Report - Profile 23615
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix K to NEIC Full Report - Profile 691163
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix L to NEIC Full Report - Profile 660210
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix M to NEIC Full Report - Profile CI5789
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix N to NEIC Full Report - Profile 374339
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix O to NEIC Full Report - Profile CARBN1
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix P to NEIC Full Report - Veolia Analysis Results for Unit 2 & 3 Ash
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix Q to NEIC Full Report - Profile AF3753
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix R to NEIC Full Report - FAP
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix S to NEIC Full Report - SDP5318
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix T to NEIC Full Report - Stack Gas Calculations
EPA-R05-OAR-2014-0280-0264	Aug. 2012	Appendix U to NEIC Full Report - Chain-of-Custody
EPA-R05-OAR-2014-0280-0265	8-19-08	Sierra Club v. EPA 536 F.3d 673
EPA-R05-OAR-2014-0280-0266	5-28-09	In the Matter of CITGO Refining and Chemicals Company, L.P., Petition Number VI-2007-01
EPA-R05-OAR-2014-0280-0267	12-3-12	In the Matter of U.S. Steel Corporation – Granite City Works, Petition Number V-2011-2
EPA-R05-OAR-2014-0280-0268	4-24-10	In the Matter of Wheelabrator Baltimore, L.P., Petition Number 24-510-01886
N/A	1990	Barton, R. G., Clark, W. D., and Seeker, W. R. (1990), Fate of Metals in Waste Combustion Systems, *Combust. Sci. and Tech.,* Vol. 74, pp. 327-342.
N/A	1988	Barton, R. G. *et. al.* Prediction of the Fate of Toxic Metals in Waste Incinerators, Proceedings of the 1988 Waste Processing Conference, at 385; available at:

Document ID as Posted at www.regulations.gov	Document Date (if specified)	Document Title/Description
		http://www.seas.columbia.edu/earth/wtert/sofos/nawtec/1988-National-Waste-Processing-Conference/1988-National-Waste-Processing-Conference-47.pdf (accessed January 17, 2017).
N/A	2000	National Academy Press: *Waste Incineration & Public Health*; available at http://www.ncbi.nlm.nih.gov/books/NBK233629/pdf/Bookshelf_NBK233629.pdf (accessed January 17, 2017)
N/A	2-29-16	Zhang, L., Wang, S., Wu, Q., Wang, F., Lin, C-J., Zhang, L., Hui, M., Yang, M., Su, H., and Hao, J. (2016), Mercury transformation and speciation in flue gases from anthropogenic emission sources: a critical review, *Atmospheric Chemistry and Physics*, 16, 2417–2433.
EPA-R05-OAR-2014-0280-0269	Dec. 2010	Guide for Developing a Multi-Metals, Fence-Line Monitoring Plan for Fugitive Emissions Using X-Ray Based Monitors (Draft)
EPA-R05-OAR-2014-0280-0270	7-5-11	Heritage-WTI Latest Title V Permit
EPA-R05-OAR-2014-0280-0271	5-30-03	Ross Incineration Services Latest Title V Permit
EPA-R05-OAR-2014-0280-0272	Feb. 2000	Electricity Generating Facilities Guidance Document
EPA-R05-OAR-2014-0280-0272		Errata - Electricity Generating Facilities Guidance Document
N/A	N/A	All documents cited in the RTC if not explicitly listed herein
N/A	N/A	All documents cited in the SB if not explicitly listed herein.
	Jan. 2017	Response to Comments
	Jan. 2017	Final Part 71 Renewal Permit and Cover Letter
	Jan. 2017	Interested Parties Letter