United States Environmental Protection Agency, Region 5
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

Statement of Basis

for:

DRAFT Air Pollution Control Title V Permit to Operate
No. V-IL-1716300103-2014-10

issued to:

Veolia ES Technical Solutions, L.L.C.
7 Mobile Avenue
Sauget, Illinois 62201

[Date]

SUMMARY

Pursuant to Title V of the Clean Air Act (CAA or Act), as amended, 42 U.S.C. § 7401, et seq., and its implementing regulations at 40 C.F.R. Part 71, the U. S. Environmental Protection Agency is issuing for public comment a draft renewal operating permit (draft permit) for Veolia ES Technical Solutions, L.L.C. (Veolia), a hazardous waste storage and disposal facility located at 7 Mobile Avenue, Sauget, Illinois. This document sets forth the legal and factual bases for the draft permit conditions, including references to applicable provisions of the CAA and its implementing regulations. This document also describes the derivation of conditions as required by 40 C.F.R. § 71.11(b).

The draft permit (Permit No. V-IL-1716300103-2014-10) contains emissions limitations and standards to assure compliance with all CAA requirements that apply to the source, as well as other necessary terms and conditions. This proceeding is subject to the administrative requirements of 40 C.F.R. § 71.11. The draft permit is subject to a minimum 30-day public comment period as required by 40 C.F.R. § 71.11(d).

TABLE OF CONTENTS

SUMMARY **2**

1.0. GENERAL INFORMATION **6**

1.1. Introduction 6

1.2. Applicant and Stationary Source Information 6

1.3. General Facility Description 6

1.4. Area Classification 7

1.5. Basis for Title V Applicability 12

1.6. Application Review History and Application Shield 12

2.0. EMISSION UNITS AND EMISSIONS **14**

2.1. Emission Units and Process Information 14

2.1.1. Process Description 15

2.1.2. Incineration Units 15

2.2. Insignificant Emission Units and Activities 15

2.3. Emissions 15

3.0. AIR PERMITTING AND ENFORCEMENT HISTORY **15**

3.1. Permitting History 15

3.1.1. Construction Permits 15

3.1.2. Title V Permitting History 15

3.2. Enforcement History and Permit Shield 15

3.2.1. Allegations of Violation 15

3.2.2. Permit Shield 15

3.2.3. Compliance Schedule 15

4.0. PERMIT TERMS AND CONDITIONS **15**

4.1. Overview of Permit Terms 15

4.2. Applicable Requirements 15

4.2.1. GHG Requirements 15

4.2.2. Prevention of Significant Deterioration of Air Quality (PSD) 15

4.2.3. OPLs Required by the HWC MACT 15
4.2.4. Extrapolation of CPT Feedrates 15
4.2.5. Feedrate OPLs Included in Veolia's Permit 15
4.3. Non-applicable Requirements 15

5.0. MONITORING REQUIREMENTS 15
5.1. Statutory Requirements 15
5.2. Feedstream Analysis Procedures for Mercury, LVM and SVM 15
5.2.1. Overview of Requirements 15
5.2.2. Deficiencies in Veolia's Current Feedstream Analysis Procedures 15
5.3. Multi-Metals CEMS Requirements 15
5.3.1. Overview of Requirements 15
5.3.2. Multi-Metals CEMS and Feedstream Analysis 15
5.3.3. Deficiencies in Veolia's Current Emissions Monitoring Procedures 15
5.3.4. Availability of Multi-Metals CEMS 15
5.3.5. Performance Specifications for the Multi-Metals CEMS 15
5.3.6. Measurement of Beryllium Emissions 15
5.4. Other Supplemental Monitoring Provisions Included in the Permit 15
5.4.1. Emissions Calculation Methodology 15
5.4.2. Testing Requirements for NOx, VOM and SO_2 Emissions from the Incineration Units 15
5.4.3. Visible Emissions Observations for Material Processing Areas 15
5.4.4. Calculation of VOM Emissions from Material Processing Areas 15
5.4.5. Visible Emissions Observations for the Drum Crusher 15
5.4.6. Calculation of VOM Emissions from the Drum Crusher 15
5.4.7. Periodic Replacement of Carbon in the Carbon Adsorption System 15
5.4.8. Inspection Requirements for the Submerged Loading Pipes 15
5.4.9. Visible Emissions Observations for the Bulk Feed Building 15
5.4.10. Requirements that Ensure Total Enclosure for the Bulk Feed Building 15
5.4.11. Supplemental Recordkeeping Requirements for the Bulk Feed Building 15
5.4.12. Monitoring and Recordkeeping Requirements for the Gasoline Storage Tank 15

5.4.13. Compliance with the Opacity and Other Numerical Limits for the Boiler..... 15

5.4.14. Periodic Monitoring Requirements for Insignificant Emission Units.....15

5.5. Streamlining..... 15

6.0. ENVIRONMENTAL JUSTICE CONSIDERATIONS..... 15

7.0. MAJOR CHANGES FROM THE 2008 PERMIT.....15

7.1. Revision of OPLs and Addition of Enhanced Monitoring Requirements for Metals and Other Pollutants..... 15

7.2. Removal of Case-By-Case MACT Determination for the Boiler..... 15

7.3. Incorporation of Applicable Requirements for the Emergency Generators..... 15

1.0. GENERAL INFORMATION

1.1. Introduction

The 1990 amendments to the CAA established a comprehensive air quality permit program under the authority of Title V of the Act. Title V requires certain facilities that emit large amounts of air pollution (also called major sources) to obtain an operating permit, also known as a Title V permit, after the source has begun to operate. This permit is an enforceable compilation of all enforceable terms, conditions and limitations that are applicable to the source and is designed to improve compliance by clarifying what facilities must do to control air pollution. EPA regulations implementing Title V are codified at 40 C.F.R. Part 71 for permits issued by EPA or its delegatees and at 40 C.F.R. Part 70 for permits issued by states and local agencies pursuant to approved programs. A Title V permit is valid for no more than five years and may be renewed in five year term increments.

EPA is the CAA Title V permitting authority for Veolia's Sauget facility. EPA issued the initial Title V permit to Veolia on September 12, 2008 pursuant to 40 C.F.R. Part 71. As allowed by Title V, EPA is now proposing to renew the permit for a five year term.

1.2. Applicant and Stationary Source Information

Owner:	Veolia ES Technical Solutions, L.L.C.
Facility Name & Address:	Veolia ES Technical Solutions 7 Mobile Avenue Sauget, Illinois 62201
SIC Code:	4953
Responsible Official & Mailing Address:	Doug Harris 7 Mobile Avenue Sauget, Illinois 62201 Telephone: (618) 271-2804
Facility Contact:	Dennis Warchol, (618) 271-2804

1.3. General Facility Description

Veolia owns and operates a commercial hazardous waste incinerator in Sauget, St. Clair

County, Illinois. Veolia's Sauget facility is a waste treatment, storage and disposal facility that accepts offsite waste for further disposal through incineration. The facility includes two fixed-hearth, dual chamber, multi-type feed incinerators (Incineration Units 2 and 3), each rated at 16 million British thermal units per hour (mmBtu/hr), and one rotary kiln incinerator (Incineration Unit 4), rated at 50 mmBtu/hr. Incineration Units 2 and 3 each use spray dry absorbers with lime slurry injection to control hydrogen chloride (HCl) emissions and baghouses for particulate matter (PM). Incineration Unit 4 uses a spray dry absorber for HCl control, an activated carbon injection system for mercury (Hg) control, and a baghouse for PM control. Containers and bulk shipments of hazardous and solid wastes are received, analyzed and transferred to temporary storage facilities, processed, and incinerated in one of three incineration units. Figures 1 through 4 show the layout of the facility.

1.4. Area Classification

St. Clair County, Illinois, is designated as a moderate nonattainment area for the 8-hour ozone National Ambient Air Quality Standard (NAAQS). It is also designated as a nonattainment area for the 1997 annual NAAQS for particulate matter with aerodynamic diameter less than 2.5 micrometers ($PM_{2.5}$).[1] St. Clair County is classified as attainment or unclassifiable with respect to all other NAAQS.

The area surrounding Veolia has a significant minority population (about 65 percent), and a substantial proportion of all persons living within three miles of Veolia (over 30 percent) live below the federal poverty level. EPA considers the area surrounding Veolia as an area with environmental justice (EJ) concerns. *See* section 6.0 for a detailed discussion of the EJ considerations specific to this permit action.

[1] On May 23, 2011, EPA took final action determining that the Saint Louis $PM_{2.5}$ nonattainment area in Illinois and Missouri has attained the 1997 annual $PM_{2.5}$ NAAQS, based upon quality-assured, quality-controlled, and certified ambient air monitoring data for the 2007–2009 monitoring period. This final determination suspends the States' obligation to submit a number of plans for this area **but is not** equivalent to redesignating the area to attainment. The designation of the area will remain nonattainment for the 1997 annual $PM_{2.5}$ NAAQS until such time as EPA determines that this area meets the Act requirements for redesignation to attainment. *See* 76 Fed. Reg. 29652.

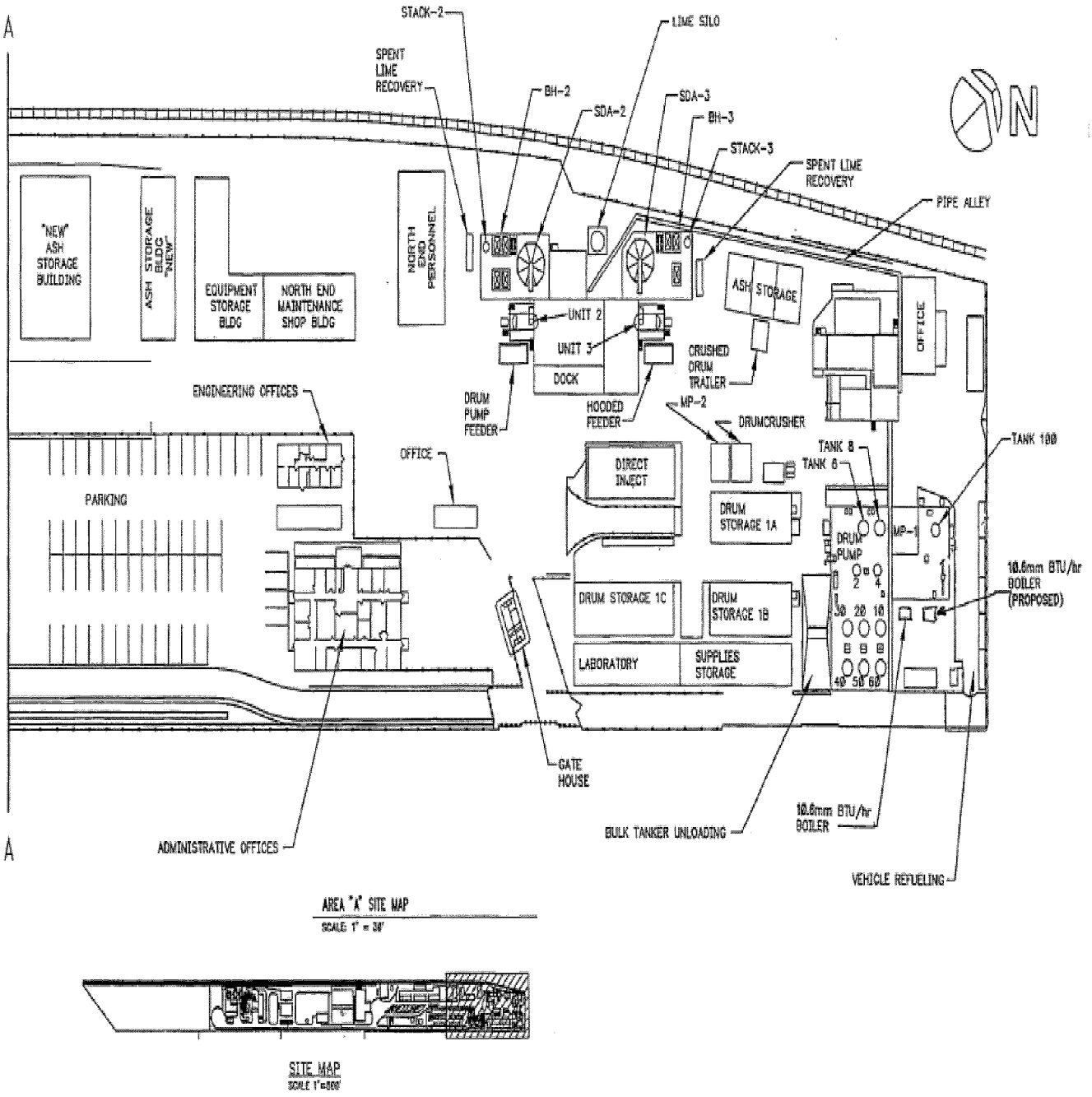

Figure 1. Layout of Veolia's Facility Showing Units 2 and 3.

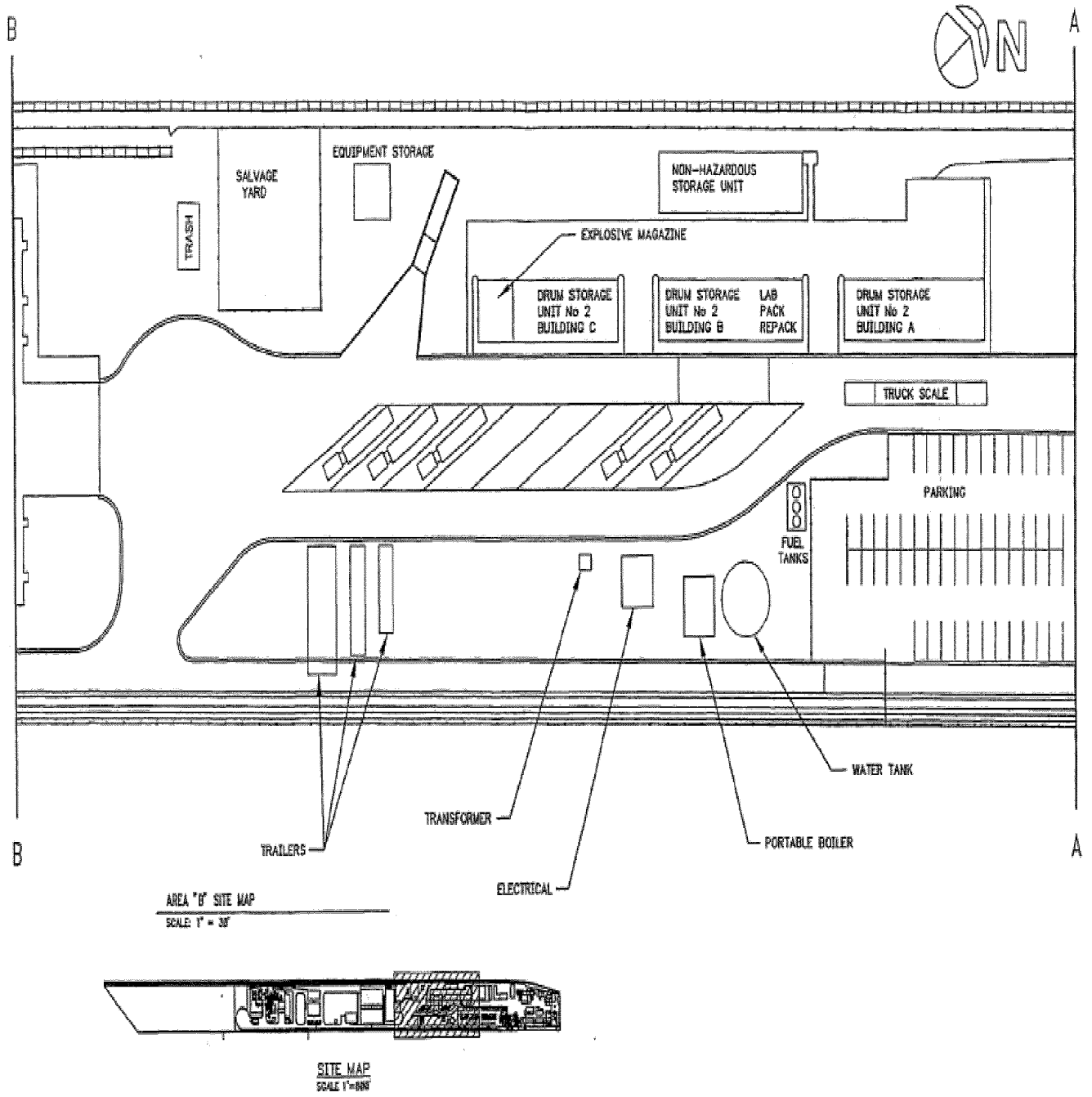

Figure 2. Layout of Veolia's Facility Showing Drum Storage and Lab Pack Repack Areas.

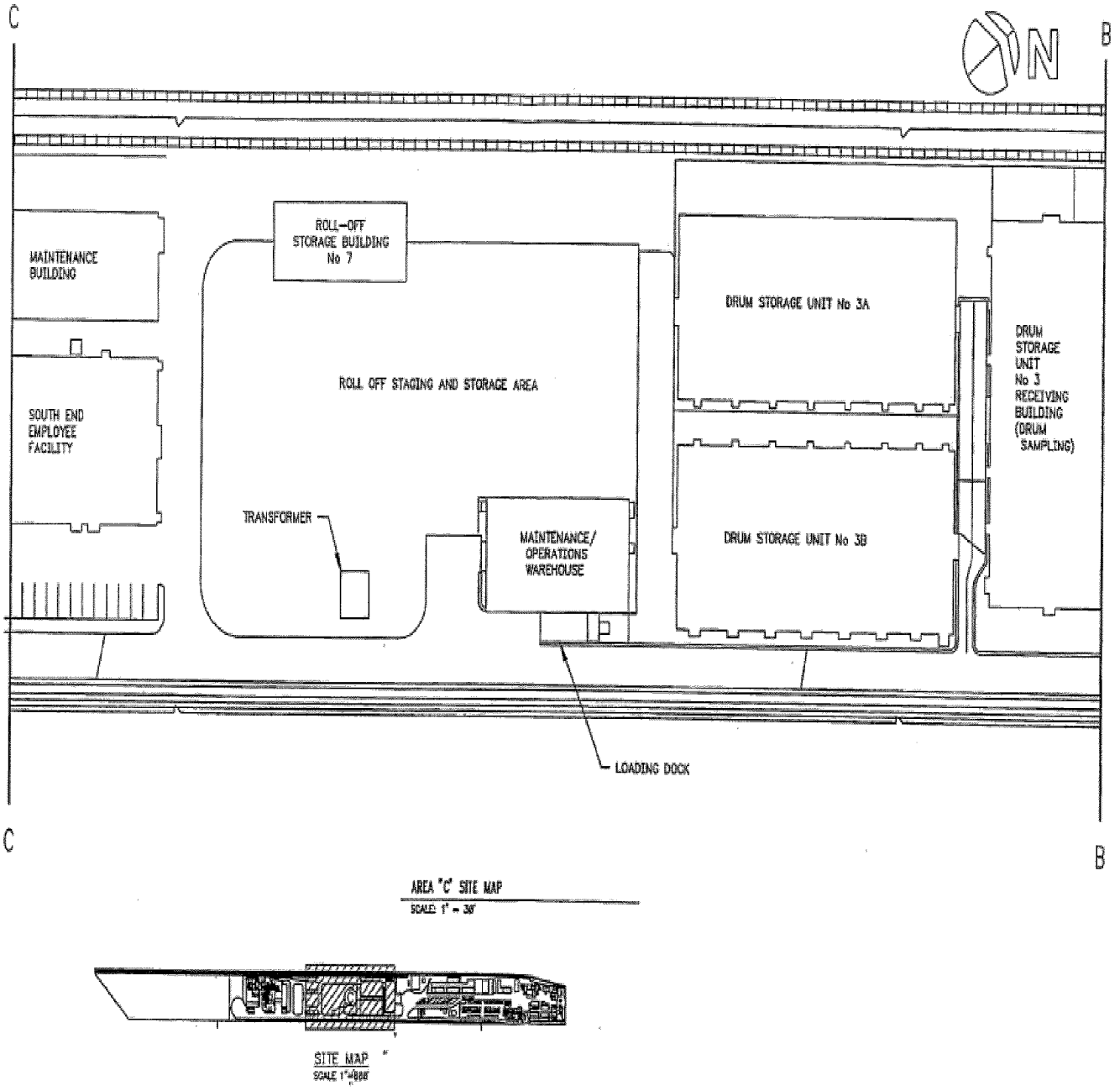

Figure 3. Layout of Veolia's Facility Showing Additional Storage and Staging Areas.

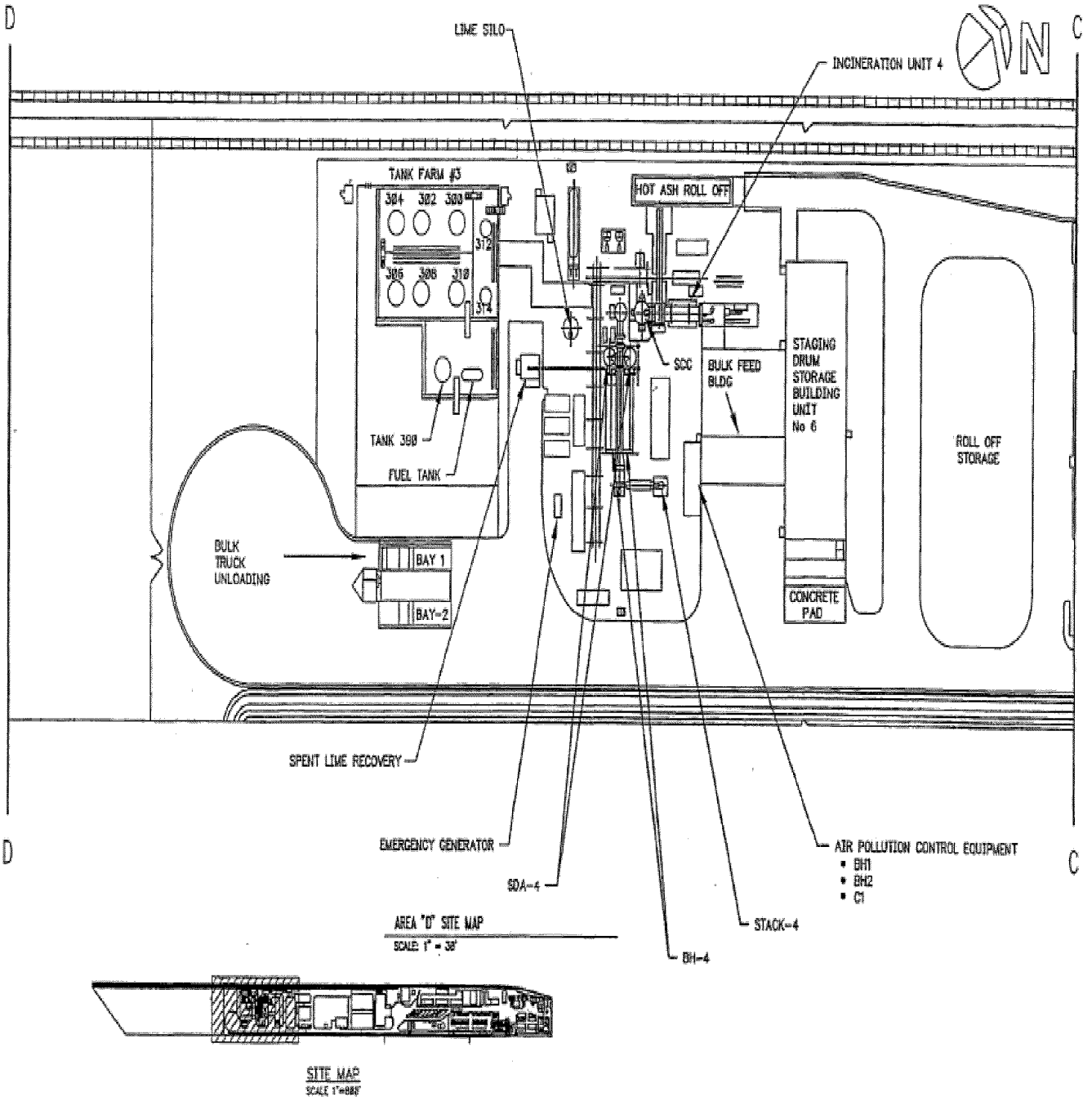
D
C
N
LIME SILO
INCINERATION UNIT 4
TANK FARM #3
304
302
300
312
306
308
310
314
HOT ASH ROLL OFF
SCC
BULK FEED BLDG
STAGING DRUM STORAGE BUILDING UNIT No 6
ROLL OFF STORAGE
TANK 390
FUEL TANK
BULK TRUCK UNLOADING
BAY 1
BAY-2
CONCRETE PAD
SPENT LIME RECOVERY
EMERGENCY GENERATOR
SDA-4
AIR POLLUTION CONTROL EQUIPMENT
• BH1
• BH2
• C1
STACK-4
BH-4
AREA "D" SITE MAP
SCALE: 1" = 30'
SITE MAP

Figure 4. Layout of Veolia's Facility Showing Incineration Unit 4 and Associated Emission Units.

1.5. Basis for Title V Applicability

Veolia is subject to Title V permitting requirements because it is a major source of hazardous air pollutant (HAP) and greenhouse gas (GHG) emissions and because it is subject to the requirements established under 40 C.F.R. Part 63, Subpart EEE, National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors (HWC MACT).

1.6. Application Review History and Application Shield

Pursuant to 40 C.F.R. § 71.5(a)(1)(iii), a timely renewal application is one that is submitted at least 6 months but not more than 18 months prior to expiration of a Title V permit. Since Veolia's existing Title V permit had an expiration of date of October 12, 2013, Veolia was required to submit its renewal application no earlier than April 12, 2012 and no later than April 12, 2013. As shown in Table 1, below, Veolia submitted its application on April 8, 2013; therefore, Veolia's renewal application is timely.

Table 1. Application Review History.

Relevant Date	Activity
April 8, 2013	Veolia submits its Title V Permit renewal application.
May 16, 2013	EPA notifies Veolia that its application is incomplete.
July 17, 2013	Veolia submits (by electronic mail) a preliminary response to EPA's May 16, 2013 Notification of Incompleteness. Veolia and EPA hold a conference call to discuss the Notification of Incompleteness.
August 16, 2013	Veolia submits an addendum to its renewal application.
September 11, 2013	EPA notifies Veolia that its application is complete.
November 20, 2013	Veolia submits additional information on its renewal application as requested by EPA on November 7, 2013.
December 9, 2013	Veolia submits additional information on its renewal application as requested by EPA on December 9, 2013.
December 10, 2013	Veolia submits additional information on its renewal application as requested by EPA on December 9, 2013.

December 20, 2013	Veolia submits additional information on its renewal application as requested by EPA on December 19, 2013.
January 14, 2014	Veolia submits additional information on its renewal application as requested by EPA on December 11, 2013.

EPA reviewed Veolia's April 8, 2013 Title V permit renewal application, as amended on August 16, 2013, for completeness pursuant to the criteria in 40 C.F.R. § 71.5(a)(2). EPA determined on September 11, 2013 that the information submitted by Veolia was administratively complete. As specified by 40 C.F.R. § 71.5(a)(2), the application completeness determination does not preclude EPA from requesting additional relevant information during the course of evaluating or taking final action on the application. In addition, 40 C.F.R. § 71.5(b) obligates Veolia to promptly file corrections to its application should Veolia find that it has omitted any relevant facts or has submitted incorrect information in the application.

Because EPA found that Veolia's permit application was timely and complete, Veolia is covered by an ***application shield***, which allows Veolia to continue operating its facility even though EPA has not yet issued a renewal permit to Veolia. 40 C.F.R. §§ 71.5(a)(2) and 71.7(b). This application shield is in effect from the date of completeness until EPA has acted on Veolia's pending application, provided Veolia submits any requested information by EPA's specified deadlines. The permit application shield does not mean that EPA has already approved the requested permit, nor does it mean that EPA has determined that Veolia has adequately addressed compliance concerns in its application. The permit application shield means only that Veolia may operate its facility until EPA has acted on the pending application.

2.0.

2.0. EMISSION UNITS AND EMISSIONS

2.1. Emission Units and Process Information

Table 2 shows a listing of all of Veolia's emission units that have applicable requirements in the permit.

Table 2. Listing of Veolia's Emission Units with Applicable Requirements in the Permit.

Emission Unit	Description	Date of Construction	Emission Control Equipment
Hazardous Waste Combustors	Incineration Unit #2, Model TWI-2000, Series 2	October 1986	Joy-Niro Spray Dryer Absorber (SDA-2), Pulse Flo Fabric Filter (BH-2)
	Incineration Unit #3, Model TWI-2000, Series 2	November 1987	Joy-Niro Spray Dryer Absorber (SDA-3), Pulse Flo Fabric Filter (BH-3)
	Incineration Unit #4, Model PY*ROX	June 1988	Tempering Chamber, Activated Carbon Injection, Spray Dryer Absorber, Fabric Filter
Material Processing Areas	Waste Processing Units (Area 1 and Area 2)	1988	None
	Lab Pack Repack Unit	1988	
Drum Crusher	Empty drums are crushed	1984	None
Storage Tanks for Liquid Wastes	Tanks #2 (4,391 gals), #4 (4,931 gals), #6 (7,200 gals), #8 (5,820 gals), #10 (12,869 gals), #20 (12,869 gals), #30 (12,869 gals), #40 (12,869 gals), #50 (12,869 gals), #60 (12,869 gals), #300 (19,850 gals), #302 (30,000 gals), #304 (30,000 gals), #306 (30,000 gals), #308 (30,000 gals), #310 (30,000 gals), #312 (10,000 gals) and #314 (10,000 gals)	April 2002 for #2 and #4; June 2004 for #10 and #20; March 2009 for #30; 1988 for the others.[2]	Activated Carbon Absorption Systems for Storage Tank Vents.
Storage Tank for	Tank #390 (30,000 gals)	1988	None

[2] All of the tanks were originally constructed in 1988. Construction dates later than 1988 were in-kind replacements.

#2 Fuel Oil			
Bulk Solid Waste Storage Facility	Temporary storage of bulk solid wastes in pits prior to being fed to incineration unit #4	1988	Cyclone, Airtol Baghouse (BF Bldg-BH-1), Carbon Adsorption Unit (BF Bldg-CA)
Gasoline Storage Tank	550-gallon design capacity, equipped with submerged loading pipe	June 2012[3]	None
Boiler	10.6 mmBtu/hr natural gas-fired boiler (Boiler #1)	November 1995	None
Emergency Generators (2)	Two #2 fuel oil-fired emergency generators (each <112 kilowatts (kW))	1988	None
Fugitive Emissions	Pumps, Valves, Open-End Lines and Compressors	N/A	None

2.1.1. Process Description

Veolia receives a variety of wastes in containers (drums, roll offs, etc.) and in bulk form. These wastes come into the facility predominantly in the form of solids and liquids. Liquid wastes arrive in tank trucks and drums. Gaseous (and some liquid) wastes arrive in various sized cylinders. Bulk solids primarily arrive in 20- to 40-yard roll-off containers or other similar bulk transport vehicles. Solid wastes are also received in containers such as drums, totes, and Gaylord boxes.

Once received, wastes are stored prior to incineration in various buildings on the property (including an explosives magazine), depending on the characteristics of the material, and either fed directly to an incinerator, repackaged into smaller charge containers for incineration, or sent off-site for treatment at other locations. Drummed liquids may be transferred via drum pumps to Tank Farm #1 or Tank Farm #3.

Tank Farm #1, which services Incineration Units 2 and 3, is made up of 10 vertical fixed roof storage tanks. Tank Farm #3, which services Incineration Unit 4, is made up of 8 vertical fixed roof storage tanks. These storage tanks release fugitive emissions during filling and emptying of the tanks, as well as when the tanks are empty. Emissions from these storage tanks are controlled by an individual carbon adsorption unit on each tank.

Bulk solid wastes are stored in four pits in the bulk feed building (bulk solid waste storage facility). The building is enclosed and equipped with a cyclone,

[3] This was an in-kind replacement to the tank originally constructed in 1992.

baghouse, and carbon adsorption unit. Veolia's Title V permit requires Veolia to operate the enclosed building under permanent negative pressure. A clam shell moves bulk solids from the bulk feed building through an enclosed gallery to Combustion Unit 4.

Material processing occurs at units MP-1 and MP-2, and the lab pack repack areas. Material processing involves the repackaging of drummed solids into more manageable containers for subsequent incineration. Some of these solids may have free liquids, which are fixed with an inert absorbent material before repackaging. Lab packs are opened and repackaged into acceptable containers for charging to the incineration units.

The incineration units produce ash, which enters the Ash Handling System. Ash from Units 2 and 3 is temporarily staged in roll-off containers at the Ash Storage Building. From there it is transported to the bulk solid waste storage facility. Ash from Unit 4 is collected in roll-off containers and transported to Storage Building #7. Emissions of PM are minimized through work practices such as wet handling, covering with a tarp, and handling inside enclosed structures.

Veolia also operates a drum crusher, at which drums that are unsuitable for reuse are crushed. Some empty drums may contain residual waste when crushed. These emissions are not controlled.

Fugitive emissions occur facility-wide. The most significant source of fugitive emissions is equipment leaks from pipelines and pumps that handle liquid organic waste. The evaporation of organics from spills, leaks, and drum sampling also contribute to facility-wide fugitive emissions.

Finally, Veolia operates small combustion sources consisting of a natural gas-fired boiler (10.6 mmBtu/hr natural gas boiler) used to generate heat and steam for on-site uses, two emergency generators (each rated at less than 112 kW) and a portable Tioga heater (rated at 2.5 mmBtu/hr). There are no emission control devices associated with these units.

2.1.2. Incineration Units

As shown in Table 2, above, Veolia has three incineration units: Units 2, 3, and 4. Incineration Unit 1 was decommissioned and closed in 1992. Incineration Units 2 and 3 are custom fixed-hearth, dual-chamber units each rated at 16 mmBtu/hr.[4] Incineration Unit 4 is a rotary kiln (transportable system converted to a stationary unit) rated at 50 mmBtu/hr. Each unit includes its own feed, air pollution control,

[4] Units 2 and 3 are similar in design and function. The key differences between these units are the slight differences in feed types and baghouse configurations. As shown in Table 1, Unit 2 also burns gases while Unit 3 does not. Also, Unit 2 has four baghouse modules while Unit 3 has three baghouse modules.

process instrumentation and controls, and continuous emission monitoring systems. Each incineration unit has a primary combustion chamber (PCC) and a secondary combustion chamber (SCC). The PCCs and SCCs have natural gas-fired auxiliary burners, which are used during startup, shutdown, malfunctions and additional heat input. Table 3 shows a summary of the key design specifications for each of the three incineration units.

Table 3. Design Specifications for Veolia's Incineration Units.

Design Parameter	Specification		
	Unit 2	**Unit 3**	**Unit 4**
Incinerator Type	Fixed Hearth, Dual (Primary and Secondary) Chamber	Fixed Hearth, Dual (Primary and Secondary) Chamber	Transportable Rotary Kiln (includes kiln and a secondary chamber)
Model	TWI-2000, Series 2	TWI-2000, Series 2	PY*ROX
Manufacturer	Trade Waste Incineration	Trade Waste Incineration	International Waste Energy Systems
Feed Type	Solids, Organic Liquids, Aqueous Liquids, Sludges, Gases (Unit 2 only)	Solids, Organic Liquids, Aqueous Liquids, Sludges	Solids, Organic Liquids, Aqueous Liquids, Sludges
Maximum Feed Rate For Each Combustion Chamber	Limited by permit (*see* Table 9)	Limited by permit (*see* Table 9)	Limited by permit (*see* Table 9)
Heat Release Rating	16 mmBtu/hr	16 mmBtu/hr	50 mmBtu/hr
Burner Fuel Type	Natural Gas	Natural Gas	Natural Gas
Emission Control Device	Spray dryer absorber and fabric filter (baghouse)	Spray dryer absorber and fabric filter (baghouse)	Tempering chamber, spray dryer absorber, carbon injection and lime recirculation system, and fabric filter (baghouse)

Units 2 and 3 are designed to receive and incinerate containerized wastes, aqueous, organic and specialty liquid wastes, and sludge wastes. The aqueous and organic liquid wastes are fed through air-atomizing nozzles. The specialty liquid feeds and direct-inject liquids are fed through the aqueous or organic liquid feed systems. Each unit can receive any combination of liquid, semi-solid, or solid wastes. Unit 2 can also receive waste gases through separate feed nozzles.

Unit 4 can incinerate container, aqueous, organic and specialty liquid, and sludge wastes. Liquid wastes are fed into either the kiln or SCC. Bulk solid wastes are fed into the kiln through either the ram feeder or the screw auger. Containerized wastes are fed into the kiln through the ram feeder or the auxiliary ram feeder. Unit 4 can also accept liquid wastes injected directly from the delivery vehicle.

The three incineration units are supported by lime handling systems and ash handling systems. The lime handling systems are made up of lime storage silos and slurry mix tanks. There is one system for Units 2 and 3 and one for Unit 4. The silos are controlled by bin vents. Ash handling consists of material collection from the combustion chambers, the spray dryer and baghouse. The combustion chamber ash is collected in roll-off boxes. Veolia tarps the roll-off boxes to minimize PM emissions. Veolia continuously monitors each incineration unit for carbon monoxide (CO) and hydrogen chloride/chlorine (HCl/Cl_2) emissions via a continuous emissions monitoring system.

2.2. Insignificant Emission Units and Activities

Table 4, below, provides a listing of emission units and activities located at Veolia that EPA has determined to be insignificant pursuant to 40 C.F.R. § 71.5(c)(11). Unless otherwise specified in the permit, the Permittee must comply with all applicable requirements including any air quality control requirements that apply to insignificant emission units and activities. Pursuant to 40 C.F.R. § 71.9(c)(5)(iii), emissions from insignificant emission units and activities that are not required to be listed or calculated in a permit application pursuant to 40 C.F.R. § 71.5(c)(11) are excluded from the calculation of fees under 40 C.F.R. § 71.9 (c)(1) through (4).

Table 4. List of Insignificant Emission Units and Activities.

Unit Description	Basis for Classification as an Insignificant Emission Unit or Activity	Regulatory Reference
2.5 mmBtu/hr Tioga portable boiler	Direct combustion unit designed and used for comfort heating purposes, as defined at 35 IAC 201.210(a)(4).	35 IAC 201.210(a)(4); 40 C.F.R. § 71.5(c)(11)(i)(D)
Horizontal 550-gallon kerosene tank	Storage tanks of virgin or rerefined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils.	35 IAC 201.210(a)(11)
Two horizontal 550-gallon No. 2 fuel oil tanks	Storage tanks of virgin or rerefined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or	35 IAC 201.210(a)(11)

	residual fuel oils.	
Ash handling	• The emission unit does not emit more than 1.0 lb/hr of any regulated air pollutant not listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; • The emission unit does not emit more than 0.1 lb/hr of any regulated air pollutant that is listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; and • The emission unit is not a process unit.	35 IAC 201.211(a)
Handling of spent dry scrubber solids	• The emission unit does not emit more than 1.0 lb/hr of any regulated air pollutant not listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; • The emission unit does not emit more than 0.1 lb/hr of any regulated air pollutant that is listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; and • The emission unit is not a process unit.	35 IAC 201.211(a)
Lime unloading (silo) and proportioning	• The emission unit does not emit more than 1.0 lb/hr of any regulated air pollutant not listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; • The emission unit does not emit more than 0.1 lb/hr of any regulated air pollutant that is listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; and • The emission unit is not a process unit.	35 IAC 201.211(a)
Gasoline storage and dispensing	• The emission unit does not emit more than 1.0 lb/hr of any regulated air pollutant not listed as a HAP pursuant to Section 112(b)	35 IAC 201.211(a)

	of the CAA in the absence of air pollution control equipment; • The emission unit does not emit more than 0.1 lb/hr of any regulated air pollutant that is listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; and • The emission unit is not a process unit.	
Use of absorbent material (fugitive PM generation)	• The emission unit does not emit more than 1.0 lb/hr of any regulated air pollutant not listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; • The emission unit does not emit more than 0.1 lb/hr of any regulated air pollutant that is listed as a HAP pursuant to Section 112(b) of the CAA in the absence of air pollution control equipment; and • The emission unit is not a process unit.	35 IAC 201.211(a)
General vehicle maintenance and servicing (assumed to include diesel fuel handling)	General vehicle maintenance and servicing activities at the source, other than gasoline fuel handling, are insignificant pursuant to 35 IAC 201.210(b)(4).	35 IAC 201.210(b)(4)
Laboratory (chemical and physical analysis)	Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated laboratory fume hoods, vacuum producing devices and control devices installed primarily to address potential accidental releases, are insignificant pursuant to 35 IAC 201.210(b)(11).	35 IAC 201.210(b)(11)
Piping and storage system for natural gas	Piping and storage systems for natural gas, propane, and liquefied petroleum gas are insignificant pursuant to 35 IAC 201.210(b)(15).	35 IAC 201.210(b)(15)
Non-halogenated cold cleaning degreasers	Cold cleaning degreasers that are not in-line cleaning machines, where the vapor pressure of the solvents used never exceed 2 kPa (15	35 IAC 201.210(b)(19)

	mmHg or 0.3 psi) measured at 38 °C (100 °F) or 0.7 kPa (5 mmHg or 0.1 psi) at 20 °C (68 °F) are insignificant pursuant to 35 IAC 201.210(b)(19).	
Internal combustion engines of motor vehicles (primarily forklifts)	Internal combustion engines (including the fuel system) of motor vehicles, locomotives, aircraft, watercraft, lift trucks, and other vehicles powered by nonroad engines are insignificant pursuant to 35 IAC 201.210(b)(24).	35 IAC 201.210(b)(24)
Storage and handling of closed drums	Storage and handling of drums or other transportable containers where the containers are sealed during storage and handling is insignificant pursuant to 35 IAC 201.210(b)(26).	35 IAC 201.210(b)(26)

2.3. Emissions

Veolia emits a variety of pollutants including CO, nitrogen oxides (NOx), sulfur dioxide (SO_2), PM, particulate matter with aerodynamic diameter less than 10 micrometers (PM_{10}), $PM_{2.5}$, semivolatile metals (SVM) (i.e., lead and cadmium), low-volatile metals (LVM) (i.e., arsenic, beryllium and chromium), volatile organic compounds (VOC or VOM), greenhouse gases (GHGs)[5] and other HAPs.

Veolia is a major source of HAPs and GHGs with potential and actual emissions as shown in Table 5, below. The facility's potential to emit (PTE) is less than major source thresholds for the other pollutants.[6]

Table 5. Potential to Emit and Actual Emissions Reported by Veolia (Tons Per Year).

[5] GHGs refers to the aggregate group of six greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. 40 C.F.R. § 71.2.

[6] As it pertains to HAP emissions, "major source" means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tpy or more of any HAP or 25 tpy or more of any combination of HAPs. 40 C.F.R. § 63.2. The major source threshold for regulated criteria pollutants in the Sauget area is 100 tpy. 40 C.F.R. § 71.2. This threshold applies to VOM and NOx because this area is designated as a "moderate" nonattainment area for the 8-hour ozone, and its PM nonattainment designation is not classified as "serious." The major source threshold for GHGs is 100,000 tpy of carbon dioxide equivalent (CO_2e) emissions. *Id.* However, a June 23, 2014 U.S. Supreme Court decision in *Utility Air Regulatory Group v. EPA* (No. 12-1146) may affect this threshold. The Court said that EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a Prevention of Significant Deterioration (PSD) or Title V permit. EPA is currently evaluating the implications of the Court's decision and awaiting further action by the U.S. Courts.. The major source threshold is 250 tpy for all other regulated pollutants.

Pollutant	PTE	Actual Emissions				
		2012	2011	2010	2009	2008
PM	12.62	1.07	1.12	1.10	1.07	1.04
PM_{10}	12.62	1.07	1.12	1.10	1.07	1.04
$PM_{2.5}$	12.62	1.07	1.12	1.10	1.07	1.04
SO_2	66.25	0.53	0.49	0.49	0.52	0.50
NOx	74.99	56.56	58.16	57.1	55.23	54.76
VOM (VOC)	15.70	1.93	1.51	1.62	1.74	1.70
CO	31.04	1.16	1.21	1.41	1.67	1.95
GHGs (as carbon dioxide equivalents (CO_2e))*	147,053	112,378				
HAPs (Total)	21.41					
Arsenic (As)	0.0388	2.51×10^5				
Beryllium (Be)	0.0388	1.76×10^7				
Cadmium (Cd)	0.0968	3.11×10^5				
Chromium (Cr)	0.0388	5.46×10^5				
Dioxins and Furans	9.97E-08	6.35×10^8				
Hydrogen Chloride (HCl)	19.75	1.98	1.89	2.03	2.09	3.56
Lead	0.0968	0.00018				
Mercury (Hg)	0.0342	0.0017				

*GHG emissions were calculated using global warming potentials for CO_2, methane and nitrous oxide as published in 78 Fed. Reg. 71948 (November 29, 2013).

3.0. AIR PERMITTING AND ENFORCEMENT HISTORY

3.1. Permitting History

Veolia operates under a number of construction permits issued by the Illinois Environmental Protection Agency (IEPA). Veolia also operates under a CAA Title V permit No. V-IL-1716300103-08-01 that EPA issued on September 12, 2008 pursuant to 40 C.F.R. Part 71, and that became effective on October 12, 2008. As discussed in more detail below, EPA took over as the CAA Title V permitting authority for Veolia's Sauget facility, as provided by 40 C.F.R. § 70.8, when IEPA did not timely issue a permit to address EPA's February 1, 2006 Order objecting to IEPA's proposed Title V permit for this facility. Although EPA is the CAA Title V permitting authority for Veolia's facility, IEPA retains the authority to issue construction permits for projects proposed by Veolia.

3.1.1. Construction Permits

Table 6 lists all of the construction permits issued by IEPA to Veolia. EPA has incorporated applicable requirements from all of Veolia's active construction permits into the Title V permit.

Table 6. Summary of State Construction Permits Issued by IEPA to Veolia.

Date Issued	Permit #	Project Description	Permit Active?
-	83080072	Construction of Unit 1. Unit 1 was decommissioned and removed from service in 1992.	No
8/8/1984	84060063	Shredder System	No
9/2/1986	83120053	Units 2 and 3 and Tank Farm #1 Construction	Yes
2/11/1988	87110052	Pneumatic Conveyor	No
4/13/1988	87120069	Residue Feed System for Unit 1	No
6/27/1988	88030101	Tank Farm #3 Construction	Yes
8/3/1988	88010001	Unit 4 Construction	Yes
8/19/1988	87100024	Unit 3 Construction	Yes
6/7/1993	93030107	Specialty Feeder for Unit 3	No
11/7/1995	95080025	Cleaver Brooks Boiler #1	Yes
2/6/2001	00110030	Activated Carbon Injection System and Baghouse Solids Recirculation	Yes

[7] Construction Permit #00110030 did not establish additional air quality control requirements beyond those already established by 40 C.F.R. Part 63, Subpart EEE.

		System for Unit 4.[7]	

3.1.2. Title V Permitting History

A. Regulatory and Factual Background

All major stationary sources of air pollution and certain other sources are required to apply for Title V operating permits that include emission limitations and other conditions necessary to assure compliance with applicable requirements of the Act, including the requirements of the applicable State Implementation Plan (SIP). *See* CAA sections 502(a) and 504(a), 42 U.S.C. §§ 7661a(a) and 7661c(a).

On September 7, 1995, Veolia submitted to IEPA its first application for a Title V permit for Veolia's Sauget, Illinois facility. Following a public comment period that ended on November 6, 2003, IEPA provided a 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 February 18, 2004, EPA received a petition submitted by the Sierra Club and American Bottom Conservation (ABC) pursuant to Section 505(b)(2) of the CAA and 40 C.F.R. § 70.8(d), requesting that EPA object to issuance of Veolia's Title V permit. On February 1, 2005, EPA issued an Order granting the petition in part and denying it in part. Pursuant to 40 C.F.R. § 70.8(c), EPA's action on the petition initiated a 90-day period during which IEPA was required to issue a revised Title V permit that addressed the issues raised in the EPA Order. IEPA did not issue the permit within the 90-day period. The Sierra Club and ABC filed a complaint with the U.S. District Court for the Northern District of Illinois, alleging that 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. On June 4, 2008, EPA signed a settlement agreement with the plaintiffs requiring the Agency to take action on Veolia's application by September 12, 2008.

B. The Initial Permit

Following a public comment period that closed on July 18, 2008, EPA issued a final Title V permit to Veolia on September 12, 2008.[8]

[7] Construction Permit #00110030 did not establish additional air quality control requirements beyond those already established by 40 C.F.R. Part 63, Subpart EEE.
[8] The final permit and support documents are available at www.regulations.gov; Docket ID: EPA-R05-OAR-2008-0235. Also, *see* Document ID. EPA-HQ-OGC-2008-0310.

Prior to issuing the 2008 permit, EPA reviewed historical metal feedrate data supplied by Veolia to support Veolia's proposed operating parameter limits (OPLs or feedrate limits) for HAPs required by the HWC MACT. EPA concluded that reliance on the OPLs submitted by Veolia would not assure Veolia's compliance with the applicable requirements in the HWC MACT.[9] Specifically, EPA determined that the past data were not reliable for determining feedrate OPLs for mercury, SVM and LVM. On February 22, 2008, EPA issued a Request for Information under Section 114 of the Act, 42 U.S.C. § 7414, requiring Veolia to complete comprehensive performance tests (CPTs) on all of its three incineration units. The required testing was limited to mercury, SVM and LVM.[10] Veolia conducted the CPTs in August and September 2008.

Since reliable test results for mercury, SVM and LVM were not available at the time that EPA made the initial permit available for public comment, EPA provided the opportunity for the public to comment on the compliance schedule, Veolia's comprehensive performance test (CPT) plan, and the OPL calculation methodologies. In the September 12, 2008 final permit, EPA required Veolia to submit, by October 10, 2008, the results of its testing and a request for a significant modification to its Title V permit to incorporate OPLs.

C. The 2013 Proposed Significant Modification/Reopening

As required by the 2008 permit, on October 10, 2008, Veolia submitted to EPA the results of the August and September 2008 tests, and requested a significant modification to its Title V permit to incorporate OPLs for mercury, SVM and LVM, as specified in the compliance schedule in the 2008 Title V permit. EPA reviewed Veolia's application and submitted multiple requests for additional information from Veolia. In response to EPA's requests for information, Veolia amended its significant modification application multiple times, including application updates submitted to EPA on January 7, 2009,[11] March 27, 2009,[12] March 2, 2010,[13] and March 12, 2012.[14]

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[9] *See* Statement of Basis for Permit No. V-IL-1716300103-08-01 at 8, September 12, 2008 (citing April 16, 2008 memorandum from Charles Hall to the permit file, "Operating Parameter Limits for Veolia ES Technical Solutions, LLC, Sauget, IL."). Available at www.regulations.gov; Docket ID: EPA-R05-OAR-2008-0235.

[10] Veolia explained that it could not meet the deadlines in the February 22, 2008 Request for Information because stack testing crews and materials were not available. Therefore, EPA extended the testing schedule and limited the testing to mercury, SVM and LVM. For all other required OPLs, EPA incorporated into the draft Title V permit parameters that EPA calculated based upon data submitted by Veolia. *See* Statement of Basis for Permit No. V-IL-1716300103-08-01, September 12, 2008.

[11] *See* Document ID. EPA-R05-OAR-2012-0649-0007.

[12] *See* Document ID. EPA-R05-OAR-2012-0649-0104.

[13] *See* Document ID. EPA-R05-OAR-2012-0649-0005

[14] *See* Document ID. EPA-R05-OAR-2012-0649-0069

On November 29, 2012, EPA notified Veolia that it intended to deny its significant modification application and to reopen the permit to add feedrate OPLs that EPA considered to be supported by the available CPT data. However, Veolia withdrew the significant modification application on December 13, 2012.

On January 8, 2013, EPA proposed to reopen Veolia's Title V Permit No. V-IL-1716300103-08-01 for cause, pursuant to 40 C.F.R. § 71.7(f)(1)(iv), to incorporate OPLs and enhanced monitoring requirements into the permit. EPA's primary purpose for proposing to reopen the permit was to ensure that the permit complied with the CAA's mandate that the permit include "all operational requirements and limitations that assure compliance with all applicable requirements" and monitoring sufficient to assure compliance with the requirements of the Act. *See* 40 C.F.R. § 71.6(a) and (c). EPA's action was based on EPA's analysis of the 2008 CPT data and recognition that, given the variability of Veolia's feedstream, minimal monitoring is not sufficient to assure compliance with the HWC MACT emissions limits.

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 informed EPA that it was planning to conduct another round of CPTs in October 2013. 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 enhanced monitoring requirements in the renewal permit that is the subject of this permitting action. Inclusion of the enhanced and parametric monitoring discussed below will satisfy the CAA mandate that the permit contain sufficient monitoring to assure compliance with all requirements of the Act.

3.2. Enforcement History and Permit Shield

3.2.1. Allegations of Violation

On September 27, 2006, EPA issued a Finding of Violation and Notice of Violation (FOV/NOV) to Veolia notifying the company that EPA found it to be in violation of the Act and the following regulations: 40 C.F.R. Part 61, Subpart V, the National Emission Standard for Emission Leaks; 40 C.F.R. Part 63, Subpart DD, the National Emission Standard for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations; and 40 C.F.R. Part 61, Subpart FF, the National Emission Standard for Benzene Waste Operations.

Subsequent to the issuance of the FOV/NOV and based on further investigation, on June 12, 2008, EPA issued an FOV to Veolia alleging that Veolia was also in noncompliance with 40 C.F.R. Part 63, Subpart EEE, the HWC MACT, for failure to timely perform compliance testing as required by 40 C.F.R. § 63.1207(c); failure to appropriately request the use of an extrapolation methodology as required by 40 C.F.R. § 63.1207(f)(1)(x); exceeding the applicable HWC MACT mercury limit on Units 2, 3, and 4, as set forth in 40 C.F.R. § 63.1206(b)(1); and exceeding the HWC MACT arsenic emission standard as set forth in 40 C.F.R. § 63.1203(a)(4).

On August 24, 2012, after further investigation into Veolia's compliance with the HWC MACT, EPA issued another FOV to Veolia notifying Veolia that EPA found it to be in violation of Section 112 of the Act, 42 U.S.C. § 7412, and its implementing regulations for the HWC MACT, and Section 114 of the Act, 42 U.S.C. § 7414.[15]

3.2.2. Permit Shield

EPA's regulations at 40 C.F.R. Part 71 allow permitting authorities the discretion to include a provision in the permit stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that certain specific conditions set out in 40 C.F.R. § 71.6(f) are met. This provision is commonly referred to as a "permit shield." *See* 40 C.F.R. § 71.6(f). EPA has determined that it is appropriate at this time to grant a permit shield for the requirements applicable to the Sauget facility as a result of applicability of the following regulations: 40 C.F.R. Part 61, Subpart V, the National Emission Standard for Emission Leaks; 40 C.F.R. Part 63, Subpart DD, the National Emission Standard for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations; and 40 C.F.R. Part 61, Subpart FF, the National Emission Standard for Benzene Waste Operations. EPA has made this determination because EPA is no longer pursuing the violations of these provisions alleged in the September 27, 2006 FOV/NOV.

However, because the allegations in the June 12, 2008 and August 24, 2012 FOVs have not yet been resolved, and may result in incorporation into the permit of a compliance schedule, if necessary to bring this facility into compliance, EPA has determined that it is not appropriate at this time to grant a permit shield for the applicable requirements of the HWC MACT standard, including those portions of the general provisions of 40 C.F.R. Part 63 applicable to the source as a result of

[15] On February 26, 2007, IEPA referred Veolia to the Illinois Attorney General for alleged violations of the Illinois Environmental Protection Act, Illinois Pollution Control Board Regulations, and the HWC MACT. On March 5, 2010, after receiving additional information, IEPA referred to the Illinois Attorney General additional alleged violations of the Illinois Environmental Protection Act, Illinois Pollution Control Board Regulations, and the HWC MACT.

the applicability of 40 C.F.R. Part 63, Subpart EEE. EPA will reconsider whether a permit shield for these provisions is appropriate following resolution of the allegations in the FOVs.

In addition, EPA notes that 40 C.F.R. § 71.6(f)(3) expressly provides that nothing in any Part 71 permit shall alter or affect the following:

(i) The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;

(ii) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

(iii) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act; or

(iv) The ability of EPA to obtain information from a source pursuant to Section 114 of the Act.

EPA may reopen the permit to add or modify permit terms and conditions if EPA determines that additional measures are necessary to assure compliance. *See* Conditions 4.10 through 4.14 of the permit.

3.2.3. Compliance Schedule

EPA has determined that a compliance schedule is not required at this time to address the pending FOVs. An FOV is simply one early step in EPA's enforcement process. This step is commonly followed by additional investigation or discovery, information gathering, and an exchange of views, all of which occur in the context of an enforcement proceeding, and are important means of fact-finding under our system of civil litigation. An FOV is not a final agency action and is not subject to judicial review. No binding legal consequences flow from an FOV, and an FOV does not have the force or effect of law. *See PacifiCorp v. Thomas*, 883 F.2d 661 (9th Cir. 1988); *Absetec Constr. Servs. v. EPA*, 849 F.2d 765,768-69 (2nd Cir. 1988); *Union Elec. Co. v. EPA*, 593 F.2d 299, 304-06 (8th Cir. 1979); and *West Penn Power Co. v. Train*, 522 F.2d 302, 310-11 (3rd Cir. 1975). *See also*, *Sierra Club v. Johnson*, 541 F.3d 1257, 1267 (11th Cir. 2008); *Sierra Club v. EPA*, 557 F.3d 401, 406-409 (6th Cir. 2009). However, EPA will reopen the permit following resolution of EPA's allegations, if necessary, to incorporate a compliance schedule or any applicable requirements.

4.0. PERMIT TERMS AND CONDITIONS

4.1. Overview of Permit Terms

Title V permits generally do not impose new substantive air quality control requirements, referred to as "applicable requirements."[16] *See* 57 Fed. Reg. 32250, 32251. A Title V permit must include all emissions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. 40 C.F.R § 71.6(a)(1). Additionally, the permit must contain periodic monitoring that is sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, and that is sufficient to assure compliance with the terms and conditions of the permit. 40 C.F.R. § 71.6(a)(3)(B), (c)(1).

One purpose of the Title V permit is to enable the source, states, EPA, and the public to better understand the requirements to which the source is subject, and whether the source is meeting those requirements. 57 Fed. Reg. 32251. Thus, the Title V permit is a vehicle for ensuring that air quality control requirements are appropriately applied to facility emission units and for assuring compliance with such requirements. The Title V permit is an enforceable compilation of enforceable terms, conditions and limitations.

Veolia's permit includes enforceable terms and conditions from the following sources:

- National Emission Standards for HAPs (NESHAPs) – Standards promulgated under the authority of Section 112 of the CAA and promulgated under 40 C.F.R. Parts 61 and 63. The specific applicable subparts are listed in Table 7;

- New Source Performance Standards (NSPS) – Standards promulgated under the authority of Section 111 of the CAA and promulgated under 40 C.F.R. Part 60. The specific applicable subparts are listed in Table 7;

- The Illinois SIP – EPA-approved regulations codified in Title 35 of the Illinois Administrative Code (35 IAC) and 40 C.F.R. § 52.720; and

- Construction and operating permits issued by IEPA.

4.2. Applicable Requirements

[16] The term "applicable requirement" is defined in 40 C.F.R § 71.2.

Table 7 provides a summary of the applicable requirements included in Veolia's permit. Note that this summary is provided as an overview of the requirements that apply to Veolia's emission units and it does not include specifics on all of the applicable requirements nor does it include all of the monitoring, reporting and recordkeeping requirements to which Veolia is subject. The permit itself includes such information.

Table 7. Summary of Applicable Requirements.

Emission Unit	Summary of Applicable Requirement and Permit Condition	Regulatory Citation	Summary of Monitoring, Reporting and Recordkeeping Requirements
Incineration Units 2, 3 and 4	**Visible emission limitations**: maximum 30 percent opacity and no visible emissions beyond the property boundary. [Condition 2.1(A)(1)]	35 IAC 212.123(a), 212.301 and 212.314	Continuous opacity monitors (COMs) and recording devices. Best management practices.
	SO_2 emission limit: 7.7 tpy for Units 2 and 3; 50.76 tpy for Unit 4. [Condition 2.1(A)(2)]	Construction Permits 87100024 and 88010001	Calculate emissions from test results, monitoring data, engineering calculations and standard emission factors.
	CO emission limitations: 100 parts per million by volume (ppmv) corrected to 7 percent oxygen; 500 ppm corrected to 50 percent excess air; 6.6 tpy for Units 2 and 3; and 13.86 tpy for Unit 4. [Condition 2.1(A)(3)]	40 C.F.R. § 63.1219(a)(5); 35 IAC 216.141; Construction Permits 83120053, 87100024 and 88010001.	CO continuous emissions monitoring systems (CEMS) and recording devices.
	PM limits: 0.08 grain per standard cubic foot (gr/scf)) of effluent gases corrected to 12 percent CO_2; 0.013 gr/dscf, corrected to 7 percent oxygen; 15.0	35 IAC 212.181(b), Construction Permit 83120053; 40 C.F.R. § 63.1219(a)(7); Construction Permits 87100024 and 88010001	Bag leak detection systems for baghouses. CPTs at the frequency required by the HWC MACT. Establish and comply with the applicable OPLs.

tpy for Units 2 and 3 and 16.92 tpy for Unit 4. [Condition 2.1(A)(4)]		Comply with the reporting and recordkeeping requirements of the HWC MACT. Calculate emissions from test results, monitoring data, engineering calculations and standard emission factors.
VOC emission limits: 8 lb/hr; 0.9 tpy for Units 2 and 3 and 3.1 tpy for Unit 4. [Condition 2.1(A)(5)]	35 IAC 219.301, 219.302; Construction Permits 87100024 and 88010001	Compliance with the HWC MACT's DRE standard of 99.99% destruction provides for compliance with these requirements. Calculate emissions from test results, monitoring data, engineering calculations and standard emission factors.
NOx emission limits: 4.0 tpy for Units 2 and 3 and 61.6 tons per year for Unit 4. [Condition 2.1(A)(6)]	Construction Permits 87100024 and 88010001	Calculate emissions from test results, monitoring data, engineering calculations and standard emission factors.
HAP emission limits (corrected to 7 percent oxygen): dioxins and furans: 0.20 ng TEQ/dscm; mercury: 130 µg/dscm; cadmium and lead (combined): 230 µg/dscm; arsenic, beryllium and chromium (combined) 92 µg/dscm; HCl: 32 ppmv, 4.0 lb/hr from Units 2 and 3 or a minimum HCl removal efficiency of 99 percent. [Conditions 2.1(A)(7)(a)-(d) and (A)(8)]	40 C.F.R. § 63.1219(a); Construction Permits 83120053 and 87100024	CPTs at the frequency required by the HWC MACT. Establish and comply with applicable OPLs established in the permit through the use of continuous monitoring systems (CMSs), feedstream analysis as prescribed in a feedstream analysis plan and the permit, and operation of a multi-metals CEMS as a parametric monitor at each unit for at least one year. Comply with the reporting and recordkeeping requirements of the HWC MACT.

	Destruction and Removal Efficiency (DRE) standard. [Condition 2.1(A)(9)]	40 C.F.R. §§ 63.1219(c)(1) and 63.1219(d); 40 C.F.R. § 63.1219(c)(2); 40 C.F.R. § 63.1219(c)(3)]	CPTs at the frequency required by the HWC MACT. Establish and comply with applicable OPLs. Comply with the reporting and recordkeeping requirements of the HWC MACT.
	Work practice, design and operating requirements. [Conditions 2.1(A)(7)(e) and (f); 2.1(C)]	40 C.F.R. §§ 61.348(a)(1)(iii); 63.689(c)(2); 63.1209; 63.1206; 63.6(e)(3)	Establish and comply with applicable OPLs. Comply with the reporting and recordkeeping requirements of the HWC MACT.
Material Processing Areas (MP-1, MP-2 and Lab Pack Repack Unit)	NESHAPs for off-site waste and recovery operations and containers. [Conditions 2.2(A)(1) and (A)(2))]	40 C.F.R. Part 63, Subparts DD and PP	Comply with the work practice requirements of 40 C.F.R. Part 63, Subparts DD and PP. Control air emissions from containers in accordance with Container Level 1 requirements.
	VOC limit: 8 lb/hr except as allowed for in 35 IAC 219.301. [Condition 2.2(A)(3)]	35 IAC 219.301	Calculate VOC emissions based on the most recent version of the TANKS program.
	Visible emissions: 30 percent limit except as allowed by 35 IAC 212.123(b). [Condition 2.2(A)(4)]	35 IAC 212.123	Daily visible emissions observations.
Drum Crusher	**PM limits:** Variable SIP limits for process emission units. [Condition 2.3(A)(1)]	35 IAC 212.321(a)	Calculate PM emissions from test results, monitoring data, engineering calculations and standard emission factors.
	VOC limit: 8 lb/hr except as allowed for in 35 IAC 219.301. [Condition 2.3(A)(2)]	35 IAC 219.301	Calculate VOM emissions using an emission factor equal to 0.0221 lb VOM per drum crushed.
	Visible emissions: 30 percent opacity limit except as allowed by	35 IAC 212.123(a)	Daily visible emissions observations.

	35 IAC 212.123(b) and 212.124. [Condition 2.3(A)(3)]		
Storage Tanks for Liquid Wastes (Tanks #2, #4, #6, #8, #10, #20, #30, #40, #50, #60, #300, #302, #304, #306, #308, #310, #312, #314), and No. 2 Fuel Oil (Tank #390)	NESHAPs for benzene waste operations and off-site waste and recovery operations. [Conditions 2.4(A)(1) and (A)(2)]	40 C.F.R. Part 61, Subpart FF; 40 C.F.R. Part 63, Subpart DD	Monitoring, recordkeeping and reporting requirements of 40 C.F.R. Part 61, Subpart FF and 40 C.F.R. Part 63, Subpart DD. Regular inspection of submerged loading pipes.
	NSPS for Volatile Organic Liquid Storage Vessels. [Condition 2.4(A)(3)]	40 C.F.R. Part 60, Subpart Kb	Monitoring, recordkeeping and reporting requirements of 40 C.F.R. Part 60, Subpart Kb.
	VOC emissions from Tank Farm #3 limited to 2.5 tpy. [Condition 2.4(A)(3)]	Construction Permit 88030101	Comply with the work practice and operating requirements of 40 C.F.R. Part 60, Subpart Kb, 35 IAC 219.129(f) and 219.122(b).
Bulk Solid Waste Storage Facility (Bulk Feed Building)	NESHAPs for benzene waste operations and off-site waste and recovery operations. [Conditions 2.5(A)(1) and (A)(2)]	40 C.F.R. Part 61, Subpart FF; 40 C.F.R. Part 63, Subpart DD	Monitoring, recordkeeping and reporting requirements of 40 C.F.R. Part 61, Subpart FF and 40 C.F.R. Part 63, Subpart DD.
	PM limits: Variable SIP limits for process emission units. [Condition 2.5(A)(3)]	35 IAC 212.321(a)	Calculate PM emissions from test results, monitoring data, engineering calculations and standard emission factors.
	Visible emissions: 30 percent opacity limit except as allowed by 35 IAC 212.123(b) and 212.124. [Condition 2.5(A)(4)]	35 IAC 212.123(a)	Daily visible emissions observations.
	VOC limit: 8 lb/hr except as allowed for in 35 IAC 219.301. [Condition 2.5(A)(5)]	35 IAC 219.301	Building enclosure during operations. Calculate VOC emissions from test results, monitoring data, engineering calculations and standard emission factors.
Gasoline Storage	Requirements of the	35 IAC 219.122(b)	Recordkeeping of tank

Tank (564 gallon design capacity equipped with submerged loading pipe)	Illinois SIP. [Conditions 2.6(A)(1) and (A)(2)]	and 35 IAC 219.583(a)(1).	design information and gasoline throughput.
Boiler #1	**CO emission limits**: 200 ppm, corrected to 50 percent excess air; 2.1 lb/hr; 9.2 tpy. [Conditions 2.7(A)(1) and (A)(2)]	35 IAC 216.121; Construction Permit 95080025	Performance tests for CO and NOx at a frequency of no less than once every 5 years. Comply with the work practice requirements of 40 C.F.R. Part 63, Subpart DDDDD, including conducting annual tune-ups. Use of natural gas only. Recordkeeping of fuel usage.
	NOx emission limits: 1.46 lb/hr and 6.41 tpy. [Condition 2.7(A)(2)]	Construction Permit 95080025	Performance tests for CO and NOx at a frequency of no less than once every 5 years. Measure NOx concentrations during annual tune-ups. Use of natural gas only. Recordkeeping of fuel usage.
	Visible emissions: 30 percent opacity limit except as allowed by 35 IAC 212.123(b) and 212.124. [Condition 2.7(A)(3)]	35 IAC 212.123(a)	Annual Method 9 testing.
	NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters. [Condition 2.7(A)(5)]	40 C.F.R. Part 63, Subpart DDDDD	Comply with the work practice requirements of 40 C.F.R. Part 63, Subpart DDDDD, including conducting annual tune-ups.
Emergency Generators (2)	NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE). [Condition 2.8(A)]	40 C.F.R. Part 63, Subpart ZZZZ	Comply with the work practice requirements of 40 C.F.R. Part 63, Subpart ZZZZ.

Facility-wide Fugitive Emissions Requirements	Requirements of 35 IAC Part 219, Subpart C, and 40 C.F.R. Part 61, Subparts J and V (equipment leaks). [Conditions 2.9(A)(1) and (A)(2)]	40 C.F.R. Part 61, Subparts J and V, and 35 IAC Part 219, Subpart C	Comply with the work practice, leak detection and repair requirements of 35 IAC Part 219, Subpart C, and 40 C.F.R. Part 61, Subparts J and V.
Other General Facility-wide Requirements	Permit conditions 2.10, 3.0 and 4.0 detail all applicable general requirements, including emissions control requirements that apply to insignificant emissions units and activities. Veolia must maintain records sufficient to demonstrate compliance with the applicable requirements.		

4.2.1. GHG Requirements

Veolia is not currently subject to any applicable requirements for emissions of GHGs. This is because there are no GHG air quality control requirements contained in the CAA, the Illinois SIP, construction permits issued pursuant to the Illinois SIP, or operating permits that currently apply to this facility. While Veolia is subject to the Mandatory Reporting Rule for GHG emissions, 40 C.F.R. Part 98, that rule does not constitute an "applicable requirement," as defined at 40 C.F.R § 71.2, because it was adopted under the authority of CAA sections 114(a)(1) and 208. *See* 74 Fed. Reg. 56260, 56288 (October 30, 2009). The Permittee must continue to comply with the applicable provisions of the GHG Mandatory Reporting Rule.

4.2.2. Prevention of Significant Deterioration of Air Quality (PSD)

Congress developed the PSD program, set forth in Part C of the CAA (Sections 160 through 169B), to prevent significant adverse environmental impacts on "attainment areas" from large industrial sources of air pollution. Attainment areas are regions of the United States where air quality meets standards established by EPA (also called National Ambient Air Quality Standards, or NAAQS).

The PSD permitting requirements of 40 C.F.R. § 52.21 apply to major stationary sources located in Illinois. This is because EPA has delegated to IEPA the responsibility for all PSD permitting in the state of Illinois with the exception of any sources in Indian Country.[17] A major stationary source under the PSD regulations is a stationary source that emits or has the potential to emit 100 tpy or more of a regulated new source review (NSR) pollutant as defined in 40 C.F.R.

[17] Illinois currently does not have any federally-recognized Indian Country areas.

§ 52.21(b)(50), and the stationary source belongs to the list of source categories provided in 40 C.F.R. § 52.21(b)(1)(i)(a). 40 C.F.R. § 52.21(b)(1). Additionally, any stationary source is considered a major source if it emits or has the potential to emit 250 tpy or more of a regulated NSR pollutant. *Id.*

As of the date of EPA's proposal of this Title V renewal permit, there are no PSD permits issued by IEPA for construction projects undertaken by Veolia that would trigger GHG PSD requirements. Future construction projects at Veolia will continue to be reviewed for applicability of PSD permitting requirements.

4.2.3. OPLs Required by the HWC MACT

To demonstrate compliance during periods between compliance tests, the HWC MACT (40 C.F.R. Part 63, Subpart EEE) requires sources to establish and comply with OPLs that are representative of operating levels achieved during compliance testing required by the HWC MACT. 40 C.F.R. § 63.1207. Veolia must develop the OPLs contained in Table 8 for Units 2, 3 and 4.

Table 8. OPLs Required by the HWC MACT.

OPL	Reference
Minimum primary combustion chamber temperature	40 C.F.R. § 63.1209(j)(1), (k)(2)
Minimum secondary combustion chamber temperature	40 C.F.R. § 63.1209(j)(1), (k)(2)
Maximum flue gas flowrate or production rate	40 C.F.R. § 63.1209(j)(2)), (k)(3), (m)(2), (n)(5), (o)(2)
Maximum hazardous waste pumpable feedrate rate for each combustion chamber	40 C.F.R. § 63.1209(j)(3), (k)(4)
Maximum hazardous waste total feedrate rate for each combustion chamber	40 C.F.R. § 63.1209(j)(3), (k)(4)
Operation of waste firing system for each location where waste is fed to the incinerator	40 C.F.R. § 63.1209(j)(4)
Maximum temperature of the gas at the inlet to a dry particulate matter control device	40 C.F.R. § 63.1209(k)(1)), (n)(1)
Minimum carbon injection rate (Unit 4 Only)*	40 C.F.R. § 63.1209(k)(6)(i)
Minimum carrier fluid (gas or liquid) flowrate or pressure drop for activated carbon injection system (Unit 4 Only)*	40 C.F.R. § 63.1209(k)(6)(ii)
The brand (i.e., manufacturer) and type of carbon used during the comprehensive performance test (Unit 4 Only)*	40 C.F.R. § 63.1209(k)(6)(iii)
Maximum total feedrate of mercury	40 C.F.R. § 63.1209(l)(1)(i)
Maximum ash feedrate	40 C.F.R. § 63.1209(m)(3)
Maximum total feedrate of semivolatile metals	40 C.F.R. § 63.1209(n)(2)(ii)
Maximum total feedrate of low volatile metals	40 C.F.R. § 63.1209(n)(2)(ii)
Feedrate limits for low volatile metals in pumpable feedstreams	40 C.F.R. § 63.1209(n)(2)(vii)
Feedrate of total chlorine and chloride in all feedstreams	40 C.F.R. § 63.1209(n)(4), (o)(1)
Minimum sorbent feedrate	40 C.F.R. § 63.1209(o)(4)(i)
Minimum carrier fluid flowrate or nozzle pressure drop for the spray dry adsorber	40 C.F.R. § 63.1209(o)(4)(ii)
The brand (*i.e.,* manufacturer) and type of sorbent used during the comprehensive performance test	40 C.F.R. § 63.1209(o)(4)(iii)(A)
Maximum combustion chamber pressure	40 C.F.R. § 63.1209(p)

*These OPLs only apply to combustion units that are equipped with an activated carbon injection system. Units 2 and 3 are not equipped with activated carbon injection systems.

To ensure that these OPLs do not impede normal day-to-day operations, sources generally take measures to operate during compliance testing under conditions that are at the extreme high end of the range of normal operations. For example, sources often feed ash, metals, and chlorine during compliance testing at substantially higher than normal levels (e.g., by spiking the feedstream) to maximize the feed concentration, and they often detune the air pollution control equipment to establish operating limits on the control equipment that provide operating flexibility.[18] Thus, the emission levels achieved during compliance tests are typically the highest emission levels a source emits under reasonably anticipatable circumstances.[19]

By designing its CPT to generate emissions at the extreme high end of the normal range of emissions, a source can establish OPLs that account for variability in operations (e.g., composition and feedrate of feedstreams, as well as variability of pollution control equipment efficiency) and that do not impede normal operations. Thus, the feedrate OPL would be based on waste levels fed during the CPT unless the regulatory authority approves a request for the source to extrapolate to a higher allowable feedrate (and emission rate) limit.[20]

4.2.4. Extrapolation of CPT Feedrates

40 C.F.R. § 63.1209(l)(1)(v) and (n)(2)(vii) allows each facility to include as part of the CPT plan required under 40 C.F.R. §§ 63.7(b) and (c) and 63.1207(e) and (f) a request to use the mercury, SVM and LVM feedrates and associated emission rates during the CPT to extrapolate to higher allowable feedrate limits and emission rates, subject to a number of statutory and policy provisions.[21] Extrapolation can be advantageous because it avoids much of the spiking that sources normally undertake during compliance testing and the associated costs, risks to operating and testing personnel, and environmental loading from emissions. 64 Fed. Reg. 52827, 52946-52947. Under an approved extrapolation approach, the facility would be required to feed metals at no less than normal rates to narrow the amount of extrapolation requested. *Id.* Further, EPA expects that some spiking would be desired to increase confidence in the measured performance test feedrate levels that will be used to project feedrate limits (i.e., the errors associated with sampling and analyzing heterogeneous feedstreams can be minimized by spiking known quantities). *Id.* EPA will generally disapprove any extrapolation approaches that request feedrate limits that are significantly higher than the historical range of feedrates. *Id.* Extrapolated feedrate limits should be limited to levels within the range of the highest historical feedrates for

[18] 69 Fed. Reg. 21198, 21218 (April 20, 2004).
[19] 69 Fed. Reg. 21197, 21218, April 20, 2004, HWC MACT Proposed Rule. *See also* 40 C.F.R. §§ 63.1206(b)(2), 63.1207(f)(1) and (g)(1).
[20] 69 Fed. Reg. 21197, 21309-10, fn. 202 & 204.
[21] *See also* 64 Fed. Reg. 52827, 52946-47 (September 30, 1999); 40 C.F.R. § 63.1209(l)(1)(v) and (n)(2)(vii).

the source. *Id.*

4.2.5. Feedrate OPLs Included in Veolia's Permit

EPA has reviewed Veolia's CPT test report dated January 28, 2014 (the 2014 CPT report)[22] and Veolia's Notification of Compliance (NOC) dated January 28, 2014 (the 2014 NOC) and determined that there is sufficient information to enable EPA to establish OPLs for mercury, SVM and LVM that satisfy the requirements of the Act and the HWC MACT. Specifically, EPA has determined that the OPLs shown in Table 9, below, are supported by the available CPT data. Therefore, consistent with 40 C.F.R § 71.6(a)(1), EPA is proposing to incorporated these OPLs into the permit. *See* Condition 2.1(C)(2).

Table 9. Proposed Feedrate OPLs for Selected Parameters.

Unit #	Measured Parameter	Average Feedrate During CPT (lb/hr)	Proposed OPL (lb/hr) [a]	Measured Average Stack Concentration (µg/dscm @ 7% O_2, except as noted) [d]	MACT Limit (Corrected to 7% O_2)
2	Mercury	0.00212	0.0021	100	130 µg/dscm
	LVM	46.3	46	2.6	92 µg/dscm
	LVM (Pumpable)	46.3	46	2.6	92 µg/dscm
	SVM	61.9	62	0.95	230 µg/dscm
	Total Chlorine	206.1	204	20	32 ppmv dry, as Cl^-
	Ash	503.0	503	0.00071 gr/dscf (PM)	0.013 gr/dscf
	Total Waste	4,182.4	4,017 [b]	N/A	N/A
	Total Pumpable Waste	3,324.5	3,107 [b]	N/A	N/A
3	Mercury	0.00221	0.0021	48	130 µg/dscm
	LVM	46.0	46	9.4	92 µg/dscm
	LVM (Pumpable)	46.0	46	9.4	92 µg/dscm
	SVM	62.3	62	15	230 µg/dscm
	Total Chlorine	204.2	204	3.6	32 ppmv dry, as Cl^-
	Ash	525.8	503	0.00200 gr/dscf (PM)	0.013 gr/dscf
	Total Waste	4,180.2	4,017 [b]	N/A	N/A
	Total Pumpable Waste	3,337.5	3,107 [b]	N/A	N/A
4	Mercury	0.0402	0.040	10	130 µg/dscm
	LVM	46.2	46	9.7	92 µg/dscm
	LVM (Pumpable)	45.9	46	9.7	92 µg/dscm
	SVM	62.0	62	7.8	230 µg/dscm

[22] The 2014 CPT report contains the results of the CPT performed in October 2013 and analysis of the data.

Total Chlorine	203.2	203	14	32 ppmv dry, as Cl^-
Ash	4,777.2	4,777	0.0021 gr/dscf (PM)	0.013 gr/dscf
Total Waste to PCC	9,490.5	10,632	N/A	N/A
Total Pumpable Waste to PCC	3,432.0	3,312 [c]	N/A	N/A
Total Pumpable Waste to SCC	1,191.5	1,203	N/A	N/A

a. Hazardous waste feedrate OPLs are 1-hour rolling averages; other OPLs are 12-hour rolling averages. Maximum hazardous waste feedrate is established as the average of the maximum hourly rolling averages for each run.
b. 1993 Resource Conservation and Recovery Act (RCRA) Trial Burn value for Unit 2.
c. 1995 RCRA Trial Burn value for Unit 4.
d. Data taken from the 2014 CPT Report. For purposes of this table, measurements that were reported below the detection limit have been rounded up to the detection limit.

Veolia did not include in the 2014 CPT report or application for renewal of its Title V permit a request to extrapolate mercury, SVM or LVM feedrates pursuant to 40 C.F.R. § 63.1209(l)(1)(v) and (n)(2)(vii). Because Veolia did not request such extrapolation, we are proposing to incorporate as mercury, SVM and LVM feedrate OPLs the feedrates at which Veolia conducted its October 2013 testing, as documented in the 2014 NOC.

To establish the mercury, LVM, SVM and chlorine feedrates reported in Table 9, Veolia spiked:[23]

- mercury (as a mercuric nitrate solution) during all three metal test runs of the CPT and used the mercury system removal efficiency (SRE) demonstrated during the CPT to establish the feedrate limits for total mercury;

- chromium (as chromic acid) during all three metal test runs of the CPT and used the chromium SRE demonstrated during the CPT to establish the feedrate limits for total and pumpable LVM;

- lead (as lead nitrate) during all three metal test runs of the CPT and used the lead SRE demonstrated during the CPT to establish the feedrate limits for SVM; and

- chlorine (hexachloroethane) during all three metal test runs of the CPT and used the chlorine SRE demonstrated during the CPT to establish the feedrate limits for HCl/Cl_2.

[23] Spiking during CPTs involves adding a known amount of a high purity compound into the feedstream for the purpose of establishing the maximum amount of that compound that can be fed to the incinerator without violating any applicable emission standards. The average CPT feedrates for mercury, SVM, LVM and chlorine reported in Table 9 represent the analysis results of feedstream samples collected at least 30 minutes after spiking with chromium, lead, mercury and chlorine had been initiated.

4.3. Non-applicable Requirements

As previously discussed, EPA's regulations at 40 C.F.R. Part 71 allow permitting authorities the discretion to include a "permit shield" in the permit (i.e., a provision in the permit stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance). *See* 40 C.F.R. § 71.6(f). However, to extend the permit shield to conditions to which the source is not subject, the permitting authority must, in acting on the permit application, determine in writing that requirements specifically identified in the permit are not applicable to the source, and must include in the permit that determination or a concise summary thereof. *See* 40 C.F.R. § 71.6(f)(1)(ii).

Table 10 provides a summary of requirements that EPA has determined do not apply to Veolia's emission units. The non-applicability determinations are found in conditions 2.1(B), 2.2(B), 2.3(B), 2.4(B), 2.5(B), 2.6(B), 2.7(B), 2.8(B) and 2.9(B) of the proposed renewal permit. Each non-applicability determination is based on the particular rule's applicability criteria.

Table 10. Summary of Non-applicable Requirements.

Emission Unit	The affected emission unit is not subject to…	Explanation and Regulatory Reference
Incineration Units 2, 3 and 4	40 C.F.R. Part 64, Compliance Assurance Monitoring for Major Stationary Sources (CAM).	These units are required to comply with a MACT standard proposed after November 15, 1990. Emissions units subject to MACT standards proposed by the Administrator after November 15, 1990 are exempt from CAM. [40 C.F.R. § 64.2(b)(1)(i)]
	35 IAC Part 229, Hospital Medical Infectious Waste Incinerators.	Condition 2.1(C)(1) prohibits the Permittee from accepting or processing hospital medical infectious waste at the facility. [35 IAC 229.110]
Waste Processing Areas (MP-1, MP-2 and the Lab Pack Repack)	40 C.F.R. Part 64, CAM.	These units do not use an add-on control device to achieve compliance with an emission limitation or standard. [40 C.F.R. § 64.2(a)]
	40 C.F.R. Part 61, Subpart BB.	This source is not part of a benzene production facility. [40 C.F.R. § 61.300]

Waste Processing Areas (MP-1, MP-2) Conveyor Systems	40 C.F.R. Part 63, Subpart DD.	The conveyor systems associated with MP-1 and MP-2 are used in the conveyance of material using a container. [40 C.F.R. § 63.681]
Drum Crusher	40 C.F.R. Part 64, CAM.	The affected drum crusher does not use an add-on control device to achieve compliance with an emission limitation or standard. [40 C.F.R. § 64.2(a)]
Liquid Waste Storage Tanks	35 IAC 219.120, 219.121 and 219.123	The affected liquid waste storage tanks are not subject to the control requirements of 35 IAC 219.120, 219.121 and 219.123 because these storage tanks are less than 151 m^3 (40,000 gallon) capacity. [35 IAC 219.119, 219.121, 219.123(a)(2)]
	40 C.F.R. Part 64, CAM.	• The affected liquid waste storage tanks are subject to a NESHAP proposed after November 15, 1990. Emissions units subject to NESHAPs proposed by the Administrator after November 15, 1990 are exempt from CAM. [40 C.F.R. § 64.2(b)(1)(i)] • The potential pre-control device emissions are less than major source levels for any of the CAM pollutants. [40 C.F.R. § 64.2(a)(3)]
Bulk Solid Waste Storage Facility	40 C.F.R. Part 64, CAM.	The potential pre-control device emissions are less than major source levels for any of the CAM pollutants. [40 C.F.R. § 64.2]
Gasoline Storage Tank	35 IAC 219.583(a)(2),(3),(4)	The affected gasoline storage tank has a capacity of less than 575 gallons. [35 IAC 219.583(b)(3)]
	40 C.F.R. Part 60, Subpart Kb	The design capacity of the storage tank is less than 40 m^3 (10,576 gallons). [40 C.F.R. § 60.110b(a)]
	35 IAC 219.121	The gasoline storage tank has a capacity of less than 40,000 gallons. [35 IAC 219.121]

	35 IAC 219.120	The gasoline storage tank stores petroleum liquids. [35 IAC 219.119(e)]
	40 C.F.R. Part 64, CAM.	The gasoline storage tank does not use an add-on control device to achieve compliance with an emission limitation or standard. [40 C.F.R. § 64.2]
Boiler #1	35 IAC 217.121	The actual heat input of the affected boiler is less than 73.2 MW (250 mmBtu/hr). [35 IAC 217.121]
	35 IAC 219.301	Boiler #1 is a fuel combustion emission unit and fuel combustion emission units are not subject to 35 IAC 219.301. [35 IAC 219.303]
	35 IAC 214.122	Solid or liquid fuels are not burned in the affected boiler. [35 IAC 214.122]
	40 C.F.R. Part 63, Subpart JJJJJJ	Boiler #1 is a gas-fired boiler as defined at 40 C.F.R. § 63.11237. [40 C.F.R. § 63.11195(e).]
	40 C.F.R. Part 60, Subpart Da	Boiler #1 is not capable of combusting more than 73 MW (250 mmBtu/hr) heat input of fossil fuel (either alone or in combination with any other fuel). [40 C.F.R. § 60.40Da(a)(1)]
	40 C.F.R. Part 60, Subpart Db	Boiler #1 has a heat input capacity from fuels combusted in the unit of less than 29 MW (100 mmBtu/hr). [40 C.F.R. § 60.40b(a)]
	40 C.F.R. Part 64, CAM	The affected boiler does not use an add-on control device to achieve compliance with an emission limitation or standard. [40 C.F.R. § 64.2(a)]
Emergency Generators	40 C.F.R. Part 60, Subpart IIII	Construction of the emergency generator engines did not commence, as defined at 40 C.F.R. § 60.4200(a), after July 11, 2005 and the engines have not been modified or reconstructed after July 11, 2005. [40 C.F.R. § 60.4200]
	40 C.F.R. Part 60, Subpart JJJJ	The emergency generator engines are not spark ignition engines as defined

		at 40 C.F.R. § 60.4248. [40 C.F.R. § 60.4230]
	40 C.F.R. Part 64, CAM.	The affected emergency generators do not use an add-on control device to achieve compliance with an emission limitation or standard. [40 C.F.R. § 64.2(a)]
Fugitive Emissions from Equipment Leaks	40 C.F.R. Part 60, Subparts VV, III, NNN, and RRR (NSPS for the Synthetic Organic Chemicals Manufacturing Industry) and 40 C.F.R. Part 63, Subparts F, G, H, and I (NESHAP for the Synthetic Organic Chemicals Manufacturing Industry).	The leaking equipment is not associated with the manufacture or production of the affected organic chemicals. [40 C.F.R. §§ 60.480; 60.610; 60.660; 60.700; 63.100; 63.110; 63.160]
	40 C.F.R. Part 64, CAM.	The affected leaking equipment does not use add-on control devices to achieve compliance with an emission limitation or standard. [40 C.F.R. § 64.2(a)]

5.0. MONITORING REQUIREMENTS

5.1. Statutory Requirements

Section 504(c) of the Act requires that all Title V permits contain, among other things, monitoring requirements to assure compliance with permit terms and conditions. 42 U.S.C. § 7661c(c). EPA codified monitoring rules at 40 C.F.R. §§ 71.6(a)(3)(i)(A) and (B) and 71.6(c)(1) to carry out that directive.

EPA must take the following three steps to satisfy the monitoring requirements in its regulations:

- First, EPA must ensure that monitoring requirements contained in applicable requirements are properly incorporated into the Title V permit. 40 C.F.R. § 71.6(a)(3)(i)(A).

- Second, if the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as 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). Such monitoring requirements, which may consist of recordkeeping provisions, shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. *Id.*

- Third, if the applicable requirement contains some periodic monitoring, but that monitoring is not sufficient to assure compliance with permit terms and conditions, EPA must supplement monitoring to assure such compliance. 40 C.F.R. § 71.6(c)(1). *See 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) is that it ensures that "all Title V permits include monitoring 'sufficient to assure compliance with the terms and conditions of the permit.'"). *See also In the Matter of CITGO Refining & Chemicals Co.,* Petition No. VI-2007-01 (Order on Petition) (May 28, 2009) at 6-7.

5.2. Feedstream Analysis Procedures for Mercury, LVM and SVM [Condition 2.1(D)(4)(d)(ii)]

5.2.1. Overview of Requirements

Under the HWC MACT, to demonstrate compliance with the emissions limits for mercury, LVM, SVM, PM and chlorine, Veolia must either comply with feedrate limits established through comprehensive performance testing for those metals, ash and chlorine, or it may petition EPA to approve the installation and continuous operation of emission monitoring systems to directly measure and document compliance with PM, metals and chlorine emissions limits. Veolia has not petitioned EPA to install and operate a CEMS for PM, metals, or chlorine. 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. Veolia must follow procedures documented in a feedstream analysis plan (FAP). The FAP must be "sufficient to document compliance with the applicable feedrate limits." 40 C.F.R. § 63.1209(c).

EPA has reviewed Veolia's FAP, which is available as part of the permit record for this proposed permit renewal action,[24] and other monitoring requirements in the existing 2008 permit, and determined that they are not sufficient to determine that waste streams comply with the feedrate limits or assure compliance with applicable emissions limits for metals. Although Veolia's FAP contains the minimum elements required by 40 C.F.R. § 63.1209(c)(2)(i) through (vi), for the reasons outlined below, EPA has found that the existing FAP is not sufficient to ensure that the mercury, lead, arsenic, beryllium, cadmium and chromium concentrations in the waste streams are no greater than the concentrations stated in the waste profiles that Veolia has used to calculate metal feedrates. As discussed below, 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 completely characterized, it is impossible to conclude whether compliance with the feedrate limits in the permit assures compliance with all applicable emissions limits.

For the reasons further discussed below, Veolia's current FAP is not sufficient to ensure that the mercury, SVM and LVM concentrations in the waste streams are no greater than the concentrations stated in the waste profiles that Veolia uses to calculate metal feedrates. Therefore, the FAP cannot assure compliance with the feedrate limits for mercury, SVM and LVM. Compliance with the feedrate limits is a fundamental step in assuring compliance with the HWC MACT emissions limits. To address the deficiencies in Veolia's FAP described above, and to

[24] Veolia's FAP and RCRA Waste Analysis Plan (WAP) are available at http://www.epa.gov/region5/air/veoliasauget/index.html.

assure compliance with the feedrate limits, EPA has proposed minimum mercury, LVM and SVM analysis procedures in the permit.

The proposed enhanced analysis procedures would require Veolia to:

- sample and analyze each feedstream accepted for incineration unless that feedstream is specifically exempted by the permit;[25]

- sample and analyze all batched, treated, blended, mixed, or otherwise altered waste for mercury, LVM and SVM in its final form as feed for incineration prior to incineration;[26]

- not batch, treat, blend, mix, or otherwise alter feedstreams which are exempt from sampling unless Veolia samples and analyzes the otherwise exempt feedstream;

- document the concentration of mercury, LVM and SVM in any fuel other than natural gas, including used oil, diesel, and alternative fuels fed into the incinerators by either (1) obtaining analytical results from each fuel supplier or (2) conducting representative sampling of each fuel supply and analyzing such samples using appropriate quality assurance/quality control procedures and test methods. Veolia would follow this procedure at least once per year for each fuel supply;[27]

- document concentrations that fall below the detection limit in non-exempt feedstreams as equal to the detection limit;[28] and

- maintain records of all required feedstream analyses for a period of five calendar years.

The above feedstream analysis provisions supplement any analysis procedures specified in Veolia's FAP for mercury, LVM and SVM, and supersede any less stringent provisions in the FAP. Incorporation of these requirements into the Title V permit would not eliminate Veolia's obligation to maintain an adequate FAP, consistent with 40 C.F.R. § 63.1209(c); rather, the permit would specify minimum

[25] The proposed permit lists exemptions in condition 2.1(D)(4)(d)(ii)(F).
[26] In lieu of sampling and analysis, Veolia would be given the option to perform a mass balance calculation to determine concentrations in the final batched, treated, blended, mixed, or otherwise altered waste. The calculation must be based on all batched, treated, blended, mixed, or otherwise altered ingredients having been analyzed and the contribution of each ingredient determined as specified in the permit.
[27] This provision refers to fuels that are burned in the incinerators along with hazardous waste.
[28] For purposes of this provision, "detection limit" loosely refers to the proposed permit's "reporting limit" that would be calculated for each measurement using procedures contained in EPA's solid waste analysis methods manual, SW-846.

feedstream analysis procedures to assure compliance with the proposed feedrate limits, and, through them, with applicable HWC MACT emissions limits. Because Veolia would generally base metal feedrate calculations on actual feedstream analysis data and not on theoretical profile estimates, the above supplemental feedstream analysis provisions will increase our confidence in the feedrates reported by Veolia. These provisions also will ensure that Veolia does not report metal concentrations of zero in situations where actual metal concentrations in the feedstream are only slightly below the detection limit.

5.2.2. Deficiencies in Veolia's Current Feedstream Analysis Procedures

A. Veolia currently does not sample and analyze all feedstreams and thus might be underreporting metal concentrations in its feedstreams.

Under Veolia's current feedstream analysis procedures, Veolia does not analyze all feedstreams and instead primarily relies on the generator for information regarding the composition of a feedstream. Prior to scheduling wastes for shipment to the facility, the generator characterizes the waste streams. Veolia staff review the generator information before accepting the waste for incineration.[29] Veolia maintains a "dynamic suspect list" of industries and process wastes that could contain mercury, cadmium, chromium, arsenic, lead, and beryllium which it, therefore, must analyze for metals before the waste stream can be approved for incineration.[30] However, if Veolia considers a waste stream submitted by a generator for approval to be "similar" to waste streams that it already has accepted for treatment at Veolia facilities, rather than sampling the waste, Veolia currently may use a standard profile designation to calculate the amount of metals in the waste.[31] The standard profile designation is based on an analytical database developed using analytical data from wastes from similar industries or processes and is highly uncertain. Once waste is accepted for incineration, Veolia randomly samples and analyzes 10 percent of containers from each receipt number (profile) within a shipment for pH, radiation, flash point, polychlorinated biphenyls (PCBs) and apparent viscosity, pursuant to its waste analysis plan.[32] However, metals analysis may nor may not be conducted on these

[29] Comprehensive Performance Test (CPT) Plan for Unit 2 (June 27, 2013) at 3-1.
[30] 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. The goal of the investigation was to determine Veolia's compliance with CAA and RCRA waste analysis requirements. In general, Veolia does not analyze wastes that are exempted by the FAP from sampling and analysis.
[31] *Id.* Veolia utilizes standard profile designations, many of which are based on historical data obtained by the Veolia facility located in Port Arthur, Texas, for waste streams that have similar physical and chemical characteristics, that are generated by similar industries or processes, or that have the same EPA hazardous waste codes as similar process waste. *Id.*
[32] *Id.* at 10.

samples. As discussed below, there are numerous problems with Veolia's reliance on its analytical database in lieu of independently sampling and analyzing each feedstream.

B. Veolia's feedstreams are highly variable and metal compositions can vary significantly within the feedstream (i.e., heterogeneous feedstreams) and among feedstreams (variable feedstreams).

Veolia treats and disposes a variety of solid, liquid and gaseous wastes which typically arrive in drums, roll-off containers or other similar bulk transport vehicles, totes, Gaylord boxes, tank trucks and cylinders.[33] According to Veolia's website, in addition to other hazardous and non-hazardous waste, Veolia's Sauget facility accepts for incineration Drug Enforcement Administration controlled substances, drugs, goods with expired dates, seized goods, returned goods and lab chemicals.[34] Because Veolia's Sauget facility accepts and incinerates a broad range of wastes, Veolia has explained that "the individual streams that may make up the incinerator overall feed at any given time can vary greatly, depending on generator production and shipping schedules."[35]

In its 2012 investigation, EPA's National Environmental Investigations Center (NEIC) found that some nominally similar waste streams generated by different generators had significantly different metal concentrations, yet, as described above, Veolia did not analyze these wastes when they arrived onsite. Instead, Veolia relied upon an "overly broad" characterization of the wastes and assigned a single metal concentration value for the individual wastes. In one instance, for example, Veolia has assigned two waste streams, both classified as "cyanide containing wastes" and identified by Veolia as "very similar," two very different cadmium concentrations: 6,470 mg/kg and 1 mg/kg, respectively.[36] NEIC suggested that, due to the potential variability in metal concentrations of some "very similar" wastes from different generators, Veolia should analyze waste streams generated by different generators each time they arrive on-site instead of relying on "overly broad profiles" to characterize these wastes.[37]

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".... Onsite analyses may be used to update the profile information in the WTS."[38] Because

[33] Veolia's 8-16-13 application addendum at 3.
[34] http://www.veoliaes.com/en/services/enterprise/waste/incineration.html (last accessed 3/14/14)
[35] CPT Plan for Unit 2 (June 27, 2013) at 3-1.
[36] NEIC Report at 23.
[37] *Id.*
[38] NEIC Report (August 2012) at 6. The goal of the NEIC investigation was to determine Veolia's compliance with

liquids stored in drums, tank trucks or other containers separate or settle and, thus, do not generally stay homogenous (i.e., well mixed) over an extended period of time in storage, the metal concentrations in these drums can vary substantially within the drum, tank truck or container such that the stored metal concentration profile may no longer represent the actual metal concentrations in each portion of the waste as fed to the incinerator. In addition, solids stored in containers may not stay well-mixed (i.e., homogeneous) during transport from the waste generator to the facility. Therefore, in order to better determine actual metal concentrations in solid and liquid wastes as fed to the incinerator, it is critical that these wastes be analyzed after they are accepted for incineration at the facility.

C. Veolia's current feedstream analysis and recordkeeping procedures could cause Veolia to significantly underreport concentrations of some metals in its feedstreams.

NEIC's investigation revealed that Veolia may have significantly underreported concentrations of chromium and cadmium in some feedstreams.[39] In one example, Veolia reported a chromium value of 228 milligrams per kilogram (mg/kg) for a certain waste in its databases while a material safety data sheet for that waste listed a total chromium value of 30,000 to 60,000 mg/kg.[40] Because Veolia generally uses information contained in its databases to calculate metal feedrates rather than independently analyzing each feedstream before it is fed to the incinerator, Veolia may have used an incorrect concentration to calculate chromium feedrates in this case. Therefore, in the examples observed by NEIC, Veolia's possible use of incorrect metal concentrations to calculate feedrates may have resulted in significant underreporting of the actual metal feedrates.[41] Without enhanced monitoring procedures, there is no way to evaluate the accuracy of the metal concentrations used by Veolia.

D. Analytical and data reporting errors may have resulted in inaccurate feedrate calculations for some metals.

In its investigation, NEIC identified conflicting metals data between the profile package and the information entered in Veolia's databases.[42] In one example, a

CAA and RCRA waste analysis requirements. *Id.* at 8.

[39] NEIC Report at 23.

[40] *Id.*

[41] Another example of this possibility is illustrated within the preparations leading up to the October 2013 comprehensive performance test. Waste Profile #739592, BILT PLATES – a product containing kaolin clay – was not identified by Veolia staff as "suspect" for mercury. As such, Veolia continued to receive several shipments and would likely have incinerated the material assuming a mercury concentration of zero had it not decided to reserve this material for the test burn. As it turns out, analysis of this wastestream during the test burn revealed that the actual mercury concentration in the wastestream was 0.19 ppm – not zero. Thus, the wastestream contained enough mercury to have supplied about 36% of the total mercury feedrate for Units 2 or 3 (based on the updated Notification of Compliance (NOC)), but Veolia would not have accounted for it in its wastestream analysis.

[42] NEIC Report at 23.

profile reported a chromium concentration of 1.8 milligrams per liter (mg/L), yet Veolia used a value of 0 mg/L in its databases.[43] In another example, a profile reported a total mercury concentration of 4140 mg/kg but Veolia used a value of 25 mg/kg in its databases for at least 5 years.[44] NEIC estimated that if a mercury concentration of 4140 mg/kg had been present in waste that was incinerated on August 28 and 29, 2011, Veolia would have exceeded the emissions and feedrate limits for mercury on those days.[45] Because of this type of problem with conflicting entries, without any clear indication of which concentration is correct, it is possible that Veolia used incorrect metals concentrations for feedrate calculations on August 28 and 29, 2011, and very likely that Veolia uses incorrect metals concentrations on a regular basis.

Thus, in the proposed Title V renewal permit, EPA requires Veolia to prepare and follow a FAP to demonstrate compliance with the metal feedrate limits, conduct periodic comprehensive performance tests as required by the HWC MACT, and comply with a number of additional monitoring, recordkeeping and reporting requirements. The enhanced feedstream analysis procedures, which are found in conditions 2.1(D)(1)(i) and 2.1(D)(4)(d)(ii), supplement any other mercury, LVM and SVM analysis procedures specified in Veolia's FAP and supersede any less stringent provisions in the FAP. As already stated above, incorporation of these requirements into the Title V permit does not eliminate Veolia's obligation to maintain an adequate FAP, consistent with 40 C.F.R. § 63.1209(c); rather, we are specifying minimum feedstream analysis procedures to assure compliance with the proposed feedstream limits, and, through them, compliance with the applicable HWC MACT limits.

We are also specifying that Veolia maintain records of its feedstream analyses and other data required to be kept by the permit for a period of five calendar years, and make them available at all times for inspection by EPA, Illinois EPA, local agencies, or their duly authorized representatives, pursuant to Condition 2.1(E)(21) of the permit.

5.3. Multi-Metals CEMS Requirements [Condition 2.1(D)(1)(i)]

5.3.1. Overview of Requirements

Veolia conducted comprehensive performance tests (CPTs) at each of the incinerators in October 2013. The results of those CPTs demonstrated, among other things, that the emissions from the three units were significantly different,

[43] *Id.*
[44] *Id.*
[45] *Id.* at 27.

despite the fact that Veolia had incinerated similar wastes during the tests. This illustrates that a simple linear calculation may not be appropriate for estimating metal stack concentrations from the emission units. As discussed at section 5.3.3, below, EPA has identified several possible reasons for the differing emissions at the three units. Further, EPA does not know with which metals chlorine or other anions preferentially react in the gas stream and which metal chlorides are more easily captured in Veolia's air pollution control equipment.

The HWC MACT at 40 C.F.R. § 63.1209(g)(2) provides the Administrator authority to limit additional or alternative operating parameters or require "alternative approaches to establish limits on operating parameters" that are necessary to document compliance with the HWC MACT emissions standards. EPA interprets 40 C.F.R. § 63.1209(g)(2) as providing EPA with authority to require enhanced monitoring related to parametric monitoring. Therefore, 40 C.F.R. § 63.1209(g)(2) provides the authority to require installation and temporary use of a multi-metals continuous parameter monitoring system 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. Under this authority, a parametric monitoring system using CEMS technology can be used as an indicator of performance and not necessarily as a direct measure of emissions themselves. EPA has previously employed this approach in the context of the Portland Cement MACT rulemaking in which EPA required affected sources to install PM CEMS but to operate the CEMS as continuous parametric monitoring systems. *See* 78 Fed. Reg. 10019-10020. Therefore, throughout this document, EPA is using the term multi-metals CEMS to reflect the use of the CEMS as a parametric monitoring system.

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, EPA is proposing to require that Veolia install and operate a multi-metals CEMS at each incineration unit for a period of at least 12 months.[46] Veolia will operate the multi-metals CEMS as a continuous parametric monitoring system (CPMS), using the metal concentrations measured by the multi-metals CEMS as a parametric indicator of compliance with the emissions standards and to verify the adequacy of the feedrate limits. Because multi-metals CEMS measurements have previously been demonstrated[47] to have excellent correlation with measurements made using EPA Reference Method 29

[46] EPA is aware of one commercially available multi-metals CEMS – the Xact Multi-Metals CEMS manufactured and distributed by Cooper Environmental Services, LLC (10180 SW Nimbus Avenue, Suite J6, Portland, Portland, Oregon 97223). The Xact does not directly measure beryllium, which is one of the regulated metals. The proposed permit would require Veolia to estimate beryllium emissions from its feedrate as quantified according to the enhanced feedstream analysis procedures in the permit and the system removal efficiency and exhaust parameters used by Veolia to estimate emissions of that metal.

[47] *See*, for example, http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA433778 for the results of one such evaluation.

of Appendix A to 40 C.F.R. Part 60, Determination of Metals Emissions from Stationary Sources, the EPA sees a distinct advantage in using this technology for establishing the correlation between metal emissions and metal feedrates. In this regard, the parametric range for the multi-metals CEMS would be equivalent to the HWC MACT emissions standards. However, Veolia may choose to perform a site-specific side-by-side evaluation of the multi-metals CEMS and EPA Reference Method 29 to establish an alternate parametric range that demonstrates compliance with the HWC MACT standards, and it may propose to use that alternate parametric range to establish a correlation between the OPLs and the emission limits. Because the metal concentrations measured by the multi-metals CEMS are directly comparable to concentrations by Method 29, EPA does not believe that such a site-specific evaluation is necessary.

During the period in which the multi-metals CEMS is operating, a correlation can be determined between the emissions concentration values reported by the multi-metals CEMS and the feedrate concentrations reported through feedstream analysis. Veolia then will use the data from the multi-metals CEMS as an indicator of whether or not the feedrate limits are sufficiently stringent to assure continuous compliance with the metals emissions limits in the HWC MACT at each of the combustion units.

During the 12-month period, Veolia will continue to monitor feedrates using the procedures in its FAP and the enhanced feedstream analysis procedures proposed in the Title V permit. In addition, during the 12-month period during which it operates the multi-metals CEMS, Veolia will be required to comply with the feedrate limits for mercury, LVM and SVM.

If the data from the multi-metals CEMS show a deviation from the metals emissions limits, indicating that Veolia may be violating a HWC MACT metals emissions limit, Veolia will analyze the feedstream analysis data for the waste burned at the time of the deviation and the combustion conditions that existed at the time of the deviation to determine why the deviation occurred. Veolia will send to EPA within 30 days of the deviation all feedstream analysis data for the period of the deviation and its analysis of the cause of the deviation. Additionally, from the time that a CEMS records a deviation, Veolia must immediately stop feeding the batch of waste burned when the deviation occurred, and is prohibited from burning the remainder of that batch or any component that comprised the batch at that unit until such time that Veolia demonstrates to EPA, and EPA indicates in writing that it accepts the demonstration, that a reduction in the feedrate for that affected class of metals is not necessary to assure compliance with the HWC MACT emissions limits.

At any time during or after the period in which Veolia operates the CEMS as a parametric monitor of the adequacy of the feedrate limits, Veolia may petition

EPA to allow it to use the multi-metals CEMS as the primary means of demonstrating compliance with the HWC MACT emissions limits, in lieu of complying with the feedrate limits. If Veolia does not petition to use the CEMS as the primary means of demonstrating compliance, Veolia may discontinue use of the CEMS once EPA has sufficient information to verify the efficacy of the feedrate limits in assuring compliance with the HWC MACT emissions limits.

Under EPA's proposal, the multi-metals CEMS will provide evidence of deviations that may demonstrate that the feedrate limits in the Title V permit are not stringent enough to assure compliance with the HWC MACT limits at all times. A deviation will not necessarily mean that Veolia has violated a HWC MACT emissions limit. If data collected through operation of the multi-metals CEMS at the time of any deviation, along with analysis of the waste burned and the combustion conditions that existed at the time of the deviation, reveal that any of the feedrate limits included in Veolia's permit must be more stringent to assure compliance with the applicable emissions limits, EPA will reopen the permit, pursuant to 40 C.F.R. § 71.7(f), to either revise the affected feedrate limits or require extended or permanent operation of the multi-metals CEMS. On the other hand, if operation of the multi-metals CEMS reveals that any of the feedrate limits included in the permit are more stringent than necessary to assure compliance with the applicable emissions limits, Veolia may petition EPA to use the results of historical performance tests, feedstream analysis, and CEMS data to establish higher feedrate limits for the affected incineration units, provided that Veolia demonstrates that compliance would be assured at the higher feedrate limits regardless of the waste burned.

Because the multi-metals CEMS will provide near real-time data, Veolia can identify deviations from the HWC MACT emissions limits in near real time and make prompt adjustments to process parameters (temperature, oxygen, feed rate, etc.) to minimize emissions, as well as analyze the waste data and combustion conditions that existed at the time of the deviation.

EPA believes that one year of data at each incinerator should be sufficient to ensure that deviations resulting from any variability in feedstream characteristics can adequately be captured. Additionally, Veolia may be able to develop a correlation between feedrates and deviations based on the CEMS data. The temporary use of the CEMS, in conjunction with the feedstream analysis plan and the supplements to the plan proposed in the permit to ensure compliance with the feedrate limits should, therefore, confirm that the metal feedrate limits established in the permit are adequate to assure compliance with the emissions limits for these metals.

5.3.2. Multi-Metals CEMS and Feedstream Analysis

Aside from the specific deficiencies discussed above, feedstream analysis generally poses several challenges including the uncertainty associated with 1) measurement of extremely low metal concentrations in the feedstream (i.e., concentrations at or near the detection limit of the measurement device); 2) heterogeneity of the hazardous waste, which may lead to a non-representative sample and hence an inaccurate estimate of the metal feed concentration; and 3) inability to demonstrate continuous compliance with MACT limits since there is typically a considerable time lag time between sampling and analysis.

The uncertainties caused by feedstream analysis can be largely resolved when a well-maintained and operated CEMS is used to identify deviations from emissions limitations that may result from inaccurate or insufficient feedstream analysis. First, unlike feedstream analysis, CEMS provide continuous or semi-continuous data.[48] This allows the facility to identify the waste being burned at the time a deviation occurs, enabling it to determine the reason for the deviation.

Second, because multi-metals CEMS continuously measure post-combustion stack emissions, they are able to capture all deviations that occur during combustion of heterogeneous feedstreams. Without a CEMS, many deviations resulting from combustion of such heterogeneous feedstreams would go undetected. A CEMS can alleviate this concern by giving the facility instantaneous data, thus enabling it to make changes that compensate for the increased metals in the feedstream before emissions become excessive.[49] Thus, the facility operator could rely on the instantaneous data to initiate various corrective actions before there is a compliance or safety problem. Instantaneous data typically gives a facility plenty of time to optimize performance before employee or public safety is threatened.

Third, the use of CEMS has the potential to enable the facility to increase waste feedrates by demonstrating that the HWC MACT limits may not be exceeded at higher feedrates. This could be attractive to a facility that wants flexibility in feedrates to account for expected or unplanned variability in waste profiles.

In the context of this Title V permit, EPA is proposing the temporary use of the multi-metals CEMS to provide data that will allow verification that the OPLs in

[48] Depending on the sampling and analytical technique used by the CEMS, a brief time lag typically exists between measurements due to the amount of time needed to collect and analyze each sample and to conduct quality assurance checks. For example, Cooper Environmental Services, LLC, Portland, Oregon, has informed EPA that the Xact™ multi-metals CEMS samples and analyzes simultaneously within the instrument except for the time required to advance the tape (about 20 seconds) and the time required for automated quality assurance checks. *See* Xact™ 640 Multi-Metal Continuous Emissions Monitoring System. Specification Data Sheet. Available at: http://static.pall.com/pdfs/OEM-Media-Membranes-and-Materials/PGXACT640EN.pdf.

[49] French, N.B., and Priebe, S.J. (1999). Implementing Mercury CEMS in DOE Mixed Waste Treatment Systems. Presented at the WM'99 Conference, February 28 - March 4, 1999. Available at http://www.wmsym.org/archives/1999/32/32-6.pdf (accessed October 16, 2012).

the permit will assure compliance with the emissions limits in the HWC MACT. Because the multi-metals CEMS provides real-time data, Veolia can use the data to evaluate whether it is necessary to make adjustments to process parameters (temperature, oxygen, feed rate, etc.) to minimize emissions. EPA is not proposing to replace the feedstream analysis provisions of the HWC MACT as Veolia must continue to demonstrate compliance with the OPLs in the permit through feedstream analysis.

As further discussed below, the record for EPA's proposed action on Veolia's Title V permit renewal application supports the conclusion that the monitoring already performed by Veolia does not provide sufficient data for EPA to determine that the metal feedrate OPLs proposed by Veolia are stringent enough to assure compliance with the HWC MACT metals emissions limits regardless of the mix of wastes being incinerated or the combustion conditions, given the heterogeneity of the waste that Veolia incinerates and EPA's observations on Veolia's operating practices. Multi-metals CEMS would provide the data that EPA needs to verify the stringency of the metal feedrate OPLs proposed by Veolia.

5.3.3. Deficiencies in Veolia's Current Emissions Monitoring Procedures

A. Veolia's October 2013 comprehensive performance tests revealed that Veolia's three incineration units have significantly different emissions.

In October 2013, Veolia conducted performance tests on each of its incinerators as required by the HWC MACT regulations. The test results show that emissions of mercury were at least 50% higher from Incineration Unit 2 than from Incineration Unit 3, despite nearly identical mercury feedrates to Units 2 and 3,[50] and despite the fact that Units 2 and 3 are nearly identical by design and type of emissions control equipment used. Emissions of other metals from Units 2, 3, and 4 were also significantly different. *See* Table 9. Therefore, it is not possible to assume that emissions data from any one emissions unit are representative of emissions from any other unit. To verify actual emission rates from each unit and to assure that compliance with the feedrate limits, verified through feedstream analysis, is adequate to assure compliance with all applicable requirements, it is necessary to separately monitor emissions from each incineration unit.

B. Veolia's October 2013 comprehensive performance tests on Units 2 and 3 demonstrated that the relationship between stack concentrations and metal feedrates may not be linear.

[50] *See* CPT Report (January 28, 2014) at 1-11 through 1-13.

As discussed above, 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 from Units 2 and 3. This illustrates that a simple linear calculation may not be appropriate for estimating metal stack concentrations from the emission units. 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;
(e) differences in incinerator operating parameters (residence time, temperature, etc).

Because of EPA's and Veolia's lack of knowledge about any of these or other relevant factors, the temporary use of multi-metals CEMS on each of the incinerators is necessary to determine whether compliance with the OPLs in the permit will lead to compliance with the HWC MACT emissions limits.

C. The CPT demonstrates compliance only for the particular combination of wastes incinerated and combustion conditions at the time of the test.

Even though Veolia's October 2013 comprehensive performance tests demonstrated compliance with the HWC MACT emissions limits at each of the three incinerators, the tests cannot guarantee that Veolia will be in compliance with the emissions limits under different combustion conditions or when burning a different mix of wastes. As discussed above, there are a variety of possible reasons that the test results for Units 2 and 3 differed despite the similarity of the two units. For similar reasons, any of the three units may be out of compliance when different mixes of waste are incinerated or when combustion conditions differ from that achieved during the October 2013 tests. The temporary use of multi-metals CEMS will allow Veolia to ascertain under what conditions it remains in compliance. Further, the use of the CEMS will allow Veolia to vary its feedstream or incinerator parameters if it discovers that it is violating emissions limits while burning different combinations of waste under varying conditions.

5.3.4. Availability of Multi-Metals CEMS

Multi-metals CEMS are commercially available and have been demonstrated to be reliable for measuring metal emissions from a commercial hazardous waste combustor. In addition, EPA has monitored side-by-side evaluations of multi-metals CEMS with EPA Method 29 of Appendix A–8 to 40 C.F.R. Part 60 at

industrial waste incinerators and found good correlation between the two methods. 75 Fed. Reg. 31962 (June 4, 2010). Moreover, though not specifically required, EPA considers multi-metals CEMS as an accepted option for metals emission compliance in the recently promulgated mercury and air toxics (MATS) rule. 77 Fed. Reg. 9303 (February 16, 2012).

EPA recently evaluated at several facilities a commercial version of a multi-metals CEMS (the Xact™ multi-metals CEMS), which is capable of measuring up to 20 or more HAP metals in real time. The Xact™ multi-metals CEMS was developed and is being marketed by Cooper Environmental Services, LLC (10180 SW Nimbus Avenue, Suite J6, Portland, Portland, Oregon 97223).[51] The system uses reel-to-reel filter tape sampling technology followed by X-ray fluorescence (XRF) analysis of metals in the deposit. The process begins when an isokinetic sub-sample of stack gas is taken from the stilling chamber and drawn through a chemically-reactive filter tape. Vapor phase metals, including mercury, are deposited on the reactive filter tape along with the particulate matter. The resulting deposit is then automatically advanced and analyzed by XRF for selected metals while the next sample is being collected. The XRF sample analysis technique does not destroy the sample, which allows for possible sample archiving and re-analysis at a later time.[52, 53] The Xact™ multi-metals CEMS can measure up to 20 or more metals simultaneously including arsenic, cadmium, chromium, mercury, and lead.[54] The system reports analytical results every 15 minutes in the units of the MACT standards (µg/dscm). [55]

Cooper Environmental Services has also developed and received EPA approval for a Quantitative Aerosol Generator (QAG), which generates a reference aerosol

[51] 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™.

[52] Hay, K.J., Johnsen, B.E., and Cooper, J.A. (2005). X-Ray Fluorescence-Based Multi-Metal Continuous Emission Monitor: Development. Final Report ERDC/CERL TR-05-3, January 2005. Available at: http://www.dtic.mil/dtic/tr/fulltext/u2/a430237.pdf (accessed October 16, 2012).

[53] Yanca, C.A., Barth, D.C., Petterson, K.A., Nakanishi, M.P., Cooper, J.A., Johnsen, B.E., Lambert, R.H., and Bivins, B.G. (2006). Validation of Three New Methods for Determination of Metal Emissions Using a Modified Environmental Protection Agency Method 301. Journal of the Air & Waste Management Association, 56: 1733-1742.

[54] Lambert, R. and Foster, M. (2011). Eli Lilly's Experience Using a Multi-Metals Continuous Emission Monitoring System. Available at: http://events.awma.org/it32011/presentations/SESSION%2014/14-3%20Lilly's%20Experience%20with%20Using%20the%20Xact%20Multi-Metals%20Monitoring%20System.pdf (accessed October 17, 2012)

[55] Cooper Environmental Services reports that the Xact™ multi-metals CEMS can be used at waste incinerators (hazardous, sewage, municipal, medical, industrial), cement kilns, lime kilns, foundries, coal-fired power plants, industrial furnaces and boilers, primary and secondary metal smelters, etc. The unit has been tested at hazardous waste incinerators, coal-fired boilers, wet and dry stacks and 50 ppm acid gases. *See* http://cooperenvironmental.com/wp-content/uploads/2010/11/2010-Xact-640-Presentation-at-the-AWMA-Symposium-on-Air-Quality-Measurement-Methods-and-Technology.pdf (Slide 37). In one test case at a coal-fired power plant, the Xact™ was installed and operating within 2 days.

for calibrating the multi-metals CEMS and for performing relative accuracy test audits (RATAs) of the multi-metals CEMS.[56] Yanca *et al.* evaluated both the Xact™ and the QAG using a modified EPA Method 301 at a hazardous waste combustor by comparing measured and reference aerosol concentrations. The authors found that both the Xact™ and the QAG met the Method 301 validation criteria with precisions and accuracies on the order of 5 percent over a wide range of concentrations.[57]

In 2006, Eli Lilly and Company received approval from EPA to use a multi-metals CEMS as an alternative to operating parameter monitoring at the Eli Lilly Tippecanoe Laboratories manufacturing facility near Lafayette, Indiana. Eli Lilly successfully installed and certified the Xact™ multi-metals CEMS, and operated it for at least six years, on a 50 mmBtu/hr rotary kiln hazardous (solid and liquid) waste incinerator at its facility from 2005 until 2010.[58] Eli Lilly used the Xact™ multi-metals CEMS in conjunction with a PM and HCl CEMS.[59, 60] Evonik Degussa Corporation purchased the Tippecanoe facility in 2010 and continued to operate the PM, HCl and, for a brief period, the multi-metals CEMS for monitoring compliance with the HWC MACT.[61]

Cooper Environmental Services has also recently signed agreements with the South Coast Air Quality Management District (SCAQMD) and a Texas company to supply two multi-metals CEMS units.[62] The SCAQMD will operate one multi-metals CEMS at a secondary lead smelter in southern California for a period of at least 10 months beginning in December 2014. According to Cooper, the Texas company expects to begin operating the

[56] http://cooperenvironmental.com/wp-content/uploads/2010/01/QAG-820-Data-Sheet.pdf
[57] Yanca et al. (2006).
[58] Eli Lilly's stack gases at the Tippecanoe facility averaged approximately 8 percent moisture content and 140 ^{0}F while the multi-metals CEMS was being operated. However, Cooper Environmental Services has assured EPA that trial tests on its CEMS demonstrate that the unit can operate reliably at moisture contents above 40 percent.
[59] Lambert, R. and Foster, M. (2011). As part of Eli Lily's experience with the multi-metals CEMS, Eli Lilly in conjunction with EPA prepared a number of technical documents that are now posted on the OAQPS methods web site as Other Test Methods. *See* http://www.epa.gov/ttn/emc/prelim.html
[60] The U.S. Army has also successfully installed and evaluated a multi-metals CEMS on one of its hazardous waste incinerators. Hay *et al.* (2005). EPA also understands that the U.S. Department of Defense has purchased three Xact™ units for use at army munitions incinerators. Finally, multi-metals CEMS are an accepted option for metals emission compliance in the utility mercury and air toxics (MATS) rule that was recently promulgated by EPA.
[61] EPA's Emissions Measurement Center (EMC), located within the Office of Air Quality Planning and Standards (OAQPS), has also recently evaluated the use of the multi-metals CEMS technology for ambient fenceline multi-metals monitoring for compliance determinations, ambient health exposure studies, and for locating and evaluating unknown sources of metals emissions. In 2010-2011, EMC deployed the Xact™ 625 fenceline multi-metals monitor at two sites in Ohio in coordination with EPA Region 5, EPA Office of Research and Development (ORD) and Ohio EPA. The Xact™ 625 reports hourly ambient air metals concentrations in near real-time, which allows for faster data acquisition and decision making over conventional filter-based monitoring methods. EPA's Ohio studies show excellent comparability between the Xact™ 625 and conventional, filter-based, metals monitoring methods.
[62] Phone conversations between EPA and John Cooper and Krag Petterson, Cooper Environmental Services, dated March 24 and 26, 2014, respectively.

CEMS at its facility in Nigeria in mid-summer 2014.

Several additional multi-metals CEMS are under development, including several efforts focused on laser-based atomic emission spectroscopy (AES), microwave AES and spark-based AES.[63] However, EPA is not aware that any of these other technologies are currently commercially available.

5.3.5. Performance Specifications for the Multi-Metals CEMS

Although performance specifications for multi-metals CEMS have not yet been subjected to a formal rulemaking process, EPA has published specifications and quality assurance procedures for the multi-metals CEMS in its website as OTM 16 (Specifications and Test Procedures for X-ray Fluorescence Based Multi-Metals Continuous Emission Monitoring Systems at Stationary Sources) and OTM 20 (Quality Assurance Requirements for X-Ray-Fluorescence Based Multi-Metals Continuous Emission Monitoring Systems at Stationary Sources).[64] As EPA's historical practice indicates, OTM specifications and procedures can be used for compliance purposes with the approval of the permitting authority. As the permitting authority for this permitting action, EPA believes that the specifications and procedures published as OTM 16 and 20 are appropriate for the multi-metals CEMS. 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 Alternative Monitoring Petition (AMP) approval process.

EPA guidance allows EPA to impose continuous monitoring requirements under Title V without a promulgated performance specification, provided that we include appropriate QA and QC procedures within the permit. *See*, for example, Dianne J. McNally, Air Toxics Coordinator, EPA Region III to Tamera Thompson, Virginia Department of Environmental Quality, May 30, 2001 (McNally Memo) (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 draft performance specifications to develop such performance specifications).[65]

5.3.6. Measurement of Beryllium Emissions

[63] French, N.B., and Priebe, S.J. (1999)
[64] *See* http://www.epa.gov/ttn/emc/prelim/otm16.pdf and http://www.epa.gov/ttn/emc/prelim/otm20.pdf.
[65] Available at www.regulations.gov; document ID. EPA-R05-OAR-2012-0649-0100.

EPA recognizes that the only currently available multi-metals CEMS that would meet EPA's requirements is incapable of measuring beryllium emissions. Because of this, EPA has proposed a methodology in the draft permit for quantifying emissions of metals for which the multi-metals CEMS is incapable of directing measuring. *See* Condition 2.1(D)(1)(i)(ii). The proposed methodology would require that beryllium emissions be quantified using the results of feedstream analysis and the system removal efficiency and exhaust parameters used by Veolia to estimate emissions during the 12-hour period used to calculate the 12-hour average rolling average.

The proposed methodology for measuring beryllium emissions is appropriate since the proposed temporary multi-metals CEMS is not intended to replace the feedstream analysis provisions. As already discussed, the purpose of the multi-metals CEMS is to enable EPA to establish a correlation between the feedrates (and feedrate OPLs) and the emissions; therefore, Veolia will continue to analyze its feedstreams while the multi-metals CEMS is installed and operated. After the 12-month period over which the multi-metals CEMS will be operated (unless that period is extended by EPA), Veolia has the option to petition EPA to permanently operate the multi-metals CEMS in lieu of feedstream analysis. Should Veolia choose that option, EPA and Veolia would determine at that time the best methodology for quantifying beryllium emissions without concurrent feedstream analysis. Until such time, we believe that it is appropriate to require Veolia to calculate beryllium emissions from the beryllium feedstream analysis results and using acceptable conversion factors. We expect that Veolia would use the system removal efficiency from the last CPT or other EPA-approved Method 29 tests in the calculations. Also, because Veolia is required to install and operate continuous monitoring systems (CMSs) for purposes of demonstrating compliance with the maximum temperature and flowrate OPLs, we expect that Veolia will have continuous flow and temperature data that it can use in the calculations.

5.4. Other Supplemental Monitoring Provisions Included in the Permit

5.4.1. Emissions Calculation Methodology [Condition 3.1(C)]

Veolia's Title V permit establishes periodic monitoring in a number of conditions as summarized below. In general, the periodic monitoring requirements include, as appropriate, regular or periodic performance testing, recordkeeping and work practice provisions. In situations where continuous emissions monitoring, performance testing or use of specific emissions estimation software, is not required, EPA expects Veolia to rely on emission factors to calculate emissions. Whether or not the permit specifies the emission factors to be used, Veolia is required to document the emission factors it uses, including a demonstration of their appropriateness to the specific emission units from which emissions are being calculated.

In all situations, EPA expects Veolia to follow the following hierarchy when selecting the appropriate methodology for calculating emissions:

1. Continuous Emissions Monitoring CEM data from the stationary source;
2. Performance test data from the stationary source;
3. Manufacturer's emissions performance guarantee;
4. CEM data from a similar stationary source or sources;
5. Performance test data from a similar stationary source or sources;
6. Industry-derived emission factors;
7. Emission factors published by EPA in the latest version of AP-42;[66]
8. Engineering judgment.

See, generally, Introduction to AP-42, Volume I, Fifth Edition - January 1995 (AP-42 Introduction) at 2-5 and Figure 1. Veolia should document in its records that it followed this hierarchy. Note that Veolia's choice of emission calculation methodology based on the above hierarchy does not preclude any person, such as EPA, the public, or other regulatory agencies, from using other credible evidence to establish compliance or noncompliance with applicable requirements as provided by the Act. *See* 42 U.S.C. § 7413 and 62 Fed. Reg. 8314 (February 24, 1997).

Under the above hierarchy, Veolia should treat AP-42 emission factors (if available) as the last resort before using engineering judgment to estimate emissions. In situations where representative source-specific data cannot be obtained, EPA believes that emissions information from equipment vendors, particularly emission performance guarantees or actual test data from similar equipment, is a better source of information for calculating emissions than an AP-42 emission factor. AP-42 Introduction at 3. If AP-42 emission factors must be used, A-rated AP-42 emission factors should be considered before the lower rated emission factors. While it may not be necessary in some situations to review each individual data source that EPA relied upon in developing the AP-42

[66] http://www.epa.gov/ttn/chief/ap42

emission factors, such review may be appropriate in cases where EPA has reported significant source-to-source variability in the measured emission rates. Because AP-42 emission factors represent an average of emissions from different sources, it is possible that some of the sources evaluated by EPA in developing the AP-42 emission factors being considered have significantly different emissions characteristics than Veolia. Therefore, it is crucial that Veolia's records include a clear justification of the appropriateness of the selected AP-42 emission factor for the specific emission unit being evaluated.[67]

5.4.2. Testing Requirements for NOx, VOM and SO_2 Emissions from the Incineration Units

Condition 2.1(A)(6) limits NOx emissions from Units 2, 3 and 4 to 4.0 tpy, 4.0 tpy and 61.6 tpy, respectively. Condition 2.1(A)(2) limits SO_2 emissions from Units 2, 3 and 4 to 7.7 tpy, 7.7 tpy and 50.76 tpy, respectively. Condition 2.1(A)(5)(b) limits VOM emissions from Units 2, 3 and 4 to 0.9 tpy, 0.9 tpy and 3.1 tpy, respectively. These limits are from Construction Permits 87100024 and 88010001. In addition, Conditions 2.1(A)(1) and 2.1(A)(5)(a) contain emissions limitations for visible emissions (opacity) and VOM from any emission unit, respectively. These limits are from the Illinois SIP.

Although EPA acknowledges that compliance with the HWC MACT requirements assures that NOx, SO_2 and VOM emissions will generally be minimized from the incineration units, EPA believes it is necessary to periodically document the actual emissions of these pollutants so as to document compliance with the numerical emission limits for these pollutants. Therefore, EPA has proposed additional emissions testing requirements for NOx, SO_2, opacity and VOM emissions in Condition 2.1(D)(7)(b) of the draft permit. These requirements state that during the comprehensive performance tests required by Conditions 2.1(D)(8) and (10), Veolia shall also measure emissions of NOx, SO_2, visible emissions (opacity) and VOM to document compliance with the NOx, SO_2, visible emissions and VOM limitations, respectively. EPA has included the appropriate test methods in Conditions 2.1(D)(14)(i) through (l). The tests would be conducted every five years.

Because the NOx, SO_2, opacity and VOM emissions testing would be conducted along with other tests required by the HWC MACT, Veolia can demonstrate

[67] As EPA has previously stated: "Before simply applying AP-42 emission factors to predict emissions from new or proposed sources, or to make other source-specific emission assessments, the user should review the latest literature and technology to be aware of circumstances that might cause such sources to exhibit emission characteristics different from those of other, typical existing sources. Care should be taken to assure that the subject source type and design, controls, and raw material input are those of the source(s) analyzed to produce the emission factor. This fact should be considered, as well as the age of the information and the user's knowledge of technology advances." AP-42 Introduction at 4.

compliance with all of the applicable emissions limits while it burns the same type of waste and under the same operating conditions.

5.4.3. Visible Emissions Observations for Material Processing Areas [Conditions 2.2(D)(4) and 2.2(E)(2)]

Condition 2.2(A)(4) of the permit limits emissions of "smoke or other particulate matter" from any emission unit to no greater than 30% opacity. To demonstrate compliance with this requirement, Condition 2.2(D)(4) requires Veolia to visually survey units MP1, MP2 and the Lab Pack Repack area each day for the presence of visible emissions or fugitive emissions. If emissions are observed, the permit requires appropriate corrective action. If the corrective action does not eliminate the visible emissions, then Veolia is required to conduct opacity observations using EPA Method 9. If any of the visible emissions observations indicate visible emissions greater than 20 percent opacity, Veolia must conduct daily visible emissions observations, for 30 minutes, of the emission point in question until 2 consecutive daily observations indicate visible emissions of 20 percent opacity or less. If the Method 9 visible emissions observations, or if 2 consecutive daily observations, indicate visible emissions of 20 percent opacity or less, the Permittee shall conduct weekly visible emissions observations of the emission point for 3 additional weeks. Condition 2.2(E)(2) requires Veolia to keep records associated with the visual surveys and Method 9 observations.

It is very unlikely that the repackaging of materials will cause opacity greater than 30% because the wastes that are being repackaged are in enclosed containers. The process typically involves opening the containers briefly while the waste is repackaged, and takes place in an enclosure that minimizes the impact from wind. EPA believes this staged approach to assessing compliance with the opacity limit is appropriate, given the infrequency of visible emissions in the materials processing area.

5.4.4. Calculation of VOM Emissions from Material Processing Areas [Condition 2.2(E)(3)]

Condition 2.2(A)(3) provides that no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit. To demonstrate compliance with this requirement, Condition 2.2(E)(3) of the 2008 permit required Veolia to calculate VOM/HAP emissions from units MP-1, MP-2 and the Lab Pack Repack using the most recent version of the TANKS program.[68] EPA had believed that the majority of the waste processing occurring in the waste processing areas took place within the drums

[68] TANKS is a computer software program that estimates VOC and HAP emissions from fixed- and floating-roof storage tanks. It is based on the emission estimation procedures from Chapter 7 of AP-42.

and canisters and therefore, using TANKS to determine the VOC and HAP emissions based on the size of the containers and the liquid content would yield the most reliable information. However, according to Veolia,[69] containers that are received and stored in MP-1, MP-2 and the Lab Pack Repack are closed with a lid or cover which allows no volatile compounds to escape. Once the containers are received into the MP-1, MP-2 and the Lab Pack Repack buildings, they are held there until the waste is transferred for processing either within the building or directly to the incinerator feeds. Containers are only opened to sample and process the contents. The processing consists of placing the waste from a container either into open troughs through which the waste moves through sizing activities and is repacked into feed containers; or directly into feed containers. The waste in the trough is open to the atmosphere of the building. As such constituents in the waste volatilize into the building atmosphere and are emitted through the building exhaust.

In recognition of the nature of the waste processing operations performed in the material processing areas, EPA is proposing in the renewal permit to require Veolia to calculate VOM and HAP emissions from units MP-1, MP-2 and the Lab Pack Repack using the Emission Inventory Improvement Program's[70] surface evaporation model for calculating emissions from surface evaporation of VOM from open or partially covered mixing tanks during coating mixing operations, Methods for Estimating Air Emissions from Paint, Ink, and Other Coating Manufacturing Facilities, Volume II: Chapter 8 (February 2005) at 8.4-22 (Equation 8.4-22).[71] The surface evaporation model estimates the amount of constituents volatized based on the volatility of the different waste constituents and the air flow across the exposed surface of the waste and it is more appropriate than TANKS for calculating emissions from emission units that behave like spills.[72] Thus, although EPA generally considers the TANKS program to be reliable for estimating VOM emissions from enclosed storage tanks, the surface evaporation model is more conservative than TANKS for estimating emissions from Veolia's waste processing areas.

EPA is proposing to continue to require that Veolia use TANKS or the equations and algorithms specified in Chapter 7 of AP-42 for estimating any VOCs emitted from any enclosed storage tanks located in MP-1, MP-2 and the Lab Pack Repack.

5.4.5. Visible Emissions Observations for the Drum Crusher [Conditions

[69] *See* email from Kathy Strubberg to David Ogulei dated April 3, 2014.
[70] The Emission Inventory Improvement Program was a joint effort by the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) and EPA.
[71] http://www.epa.gov/ttn/chief/eiip/techreport/volume02/ii08_feb2005.pdf.
[72] Moreover, EPA has recently determined that the TANKS model is not reliably functional on computers using certain operating systems such as Windows Vista or Windows 7.

2.3(D) and 2.3(E)(3)]

Condition 2.3(A)(3) limits emissions of "smoke or other particulate matter" from any emission unit to no greater than 30% opacity. To demonstrate compliance with this requirement, Condition 2.3(D) requires Veolia to visually survey the drum crusher each day for the presence of visible emissions or fugitive emissions. If emissions are observed, the permit requires appropriate corrective action. If the corrective action does not eliminate the visible emissions, then Veolia is required to conduct opacity observations using EPA Method 9. If any of the visible emissions observations indicate visible emissions greater than 20 percent opacity, Veolia must conduct daily visible emissions observations, for 30 minutes, of the emission point in question until 2 consecutive daily observations indicate visible emissions of 20 percent opacity or less. If the Method 9 visible emissions observations, or if 2 consecutive daily observations, indicate visible emissions of 20 percent opacity or less, the Permittee shall conduct weekly visible emissions observations of the emission point for 3 additional weeks. Condition 2.3(E)(3) requires Veolia to keep records associated with the visual surveys and Method 9 observations.

It is very unlikely that crushing drums will cause opacity greater than 30% because the drums are empty and would not generate enough dust particles to violate the opacity standard when the drums are crushed. EPA believes this staged approach to assessing compliance with the opacity limit is appropriate, given the unlikelihood of visible emissions from the drum crusher.

5.4.6. Calculation of VOM Emissions from the Drum Crusher [Conditions 2.3(E)(1) and (2)]

Condition 2.3(E)(2) requires Veolia to calculate VOM emissions from the drum crusher using an emissions factor of 0.0221 pounds VOM per drum crushed. This VOM emission factor is based on an analysis of actual throughput data collected by Veolia since the initial Title V permit was issued, including the number of containers crushed, the type of volatile constituents likely to be in container residue and the amount of these volatile constituents processed on an annual basis. The VOM emission factor of 0.0221 pounds VOM per drum crushed assumes that the drum residue contains the most prevalent organics at the concentrations present in the waste received during 2007- 2011.[73]

[73] The original permit required Veolia to calculate VOM emissions from the drum crusher using an emission factor of 0.0914 lb VOM per drum crushed. That emission factor was calculated based on the assumption that only methanol residue is in the containers to be crushed and that methanol is the only VOM released as the containers are crushed. This was a rather conservative assumption because methanol has a higher vapor pressure than most of the volatiles found in the container residues. Veolia requested that EPA update the VOM emission factor as discussed here.

To enable calculation of hourly and annual emissions, Veolia must maintain records of the total number of drums crushed (drums/hour and drums/year) for the drum crusher. EPA believes this is a reasonable procedure for estimating actual VOM emissions from the drum crusher. As provided by Condition 4.22 of the permit, any person may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

5.4.7. Periodic Replacement of Carbon in the Carbon Adsorption System [Condition 2.4(D)(4)]

To ensure the integrity of the carbon adsorption bed, Condition 2.4(D)(4) of the permit requires Veolia to replace the carbon bed within 365 days of operation for a high BTU tank and 3 years of operation for a low BTU tank. This provision supplements Condition 2.4(D)(3) which requires Veolia to replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated.

5.4.8. Inspection Requirements for the Submerged Loading Pipes [Condition 2.4(D)(6)]

This provision requires Veolia to inspect the presence and condition of the submerged loading pipes from the top during the quarterly inspections and to conduct a physical inspection of the submerged loading pipes every 5 years. EPA believes this provision is necessary to assure compliance with Condition 2.4(A)(5) which requires that each affected liquid waste storage tank be equipped with a permanent submerged loading pipe.

5.4.9. Visible Emissions Observations for the Bulk Feed Building [Condition 2.5(D)(3) and 2.5(E)(3)]

Condition 2.5(A)(4) limits emissions of "smoke or other particulate matter" from any emission unit to no greater than 30% opacity. To demonstrate compliance with this requirement, Condition 2.5(D)(3) requires Veolia to visually survey the bulk feed building each day for the presence of visible emissions or fugitive emissions. If emissions are observed, the permit requires appropriate corrective action. If the corrective action does not eliminate the visible emissions, then Veolia is required to conduct opacity observations using EPA Method 9. If any of the visible emissions observations indicate visible emissions greater than 20 percent opacity, Veolia must conduct daily visible emissions observations, for 30 minutes, of the emission point in question until 2 consecutive daily observations indicate visible emissions of 20 percent opacity or less. If the Method 9 visible emissions observations, or if 2 consecutive daily observations, indicate visible emissions of 20 percent opacity or less, Veolia is required to conduct weekly visible emissions observations of the emission point for 3 additional weeks.

Condition 2.5(E)(3) requires Veolia to keep records associated with the visual surveys and Method 9 observations.

It is unlikely that operations in the bulk feed building will cause opacity greater than 30% since it is totally enclosed. EPA believes this staged approach to assessing compliance with the opacity limit is appropriate, given the unlikelihood of visible emissions from the bulk feed building.

5.4.10. Requirements that Ensure Total Enclosure for the Bulk Feed Building [Condition 2.5(D)(6)]

Conditions 2.5(A)(1)(b) and 2.5(D)(4) contain requirements to ensure that the bulk feed building is totally enclosed. For the purpose of assuring compliance with these requirements, Condition 2.5(D)(6) requires Veolia to maintain an average facial velocity of at least 200 ft/min flowing into the bulk feed building's enclosure at all natural draft openings in the building. Veolia must annually demonstrate the facial velocity according to Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure, 40 C.F.R. § 52.741, Appendix B. EPA believes this periodic monitoring requirement, in conjunction with the requirements of Condition 2.5(D)(4), assures that Veolia is maintaining a total enclosure of the building.

5.4.11. Supplemental Recordkeeping Requirements for the Bulk Feed Building [Condition 2.5(E)(2)]

To help verify compliance with the applicable requirements, EPA is requiring Veolia to maintain records according to Condition 2.5(E)(2). These records would provide information on VOM/HAP emissions, amount of wastes processed, maintenance and repair activity and level of pressure maintained inside of the building. EPA is proposing to require that Veolia calculate VOM/HAP emissions from waste processing operations located at the bulk solid waste storage facility (bulk feed building) using the Emission Inventory Improvement Program's surface evaporation model. *See* discussion in Section 5.4.4, above. In addition, Veolia will use the most recent version of the TANKS program or the equations and algorithms specified in Chapter 7 of AP-42 to calculate VOM/HAPs emitted from any enclosed storage tanks located in the bulk feed building.

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

Conditions 2.6(A)(1) and (2) prohibit Veolia from causing or allowing the transfer of gasoline from any delivery vessel into any stationary storage tank unless the tank is equipped with a submerged loading pipe. EPA believes it is

necessary for Veolia to maintain records that document the presence of a permanent submerged loading pipe. Also, to ensure that the submerged loading pipe and the storage tank are designed and operated so as to limit VOM/HAP emissions during the transfer of gasoline, EPA believes it is appropriate to require Veolia to maintain records of inspections, maintenance and repair for the storage tank and submerged loading pipe. Condition 2.6(E) requires such recordkeeping.

The draft permit also includes the requirements of 35 IAC 219.585, Gasoline Volatility Standards for the Metro East Area, in Conditions 2.6(A)(3) through (5).[74] To monitor compliance with these requirements, EPA is proposing to include periodic monitoring provisions in Conditions 2.6(D)(1) through (5). In particular, Condition 2.6(D)(1) of the draft permit requires Veolia to demonstrate compliance with the 7.2 pounds per square inch Reid vapor pressure limit in Condition 2.6(A)(4) by annually sampling and analyzing for Reid vapor pressure the gasoline in the affected tank. Pursuant to Condition 2.6(E)(4), Veolia must maintain records of all sampling and analyses it conducts. In addition, Veolia must maintain for three years records of, among other things, the Reid vapor pressure of each shipment of gasoline loaded into the gasoline storage tank pursuant to Condition 2.6(E)(5). Because Veolia is required to record the Reid vapor pressure of each shipment of gasoline loaded into the gasoline storage tank, EPA believes that the additional annual sampling and testing requirements for Reid vapor pressure are sufficient to assure compliance with the vapor pressure limit.

5.4.13. Compliance with the Opacity and Other Numerical Limits for the Boiler [Conditions 2.7(C)(2), 2.7(D)(1), 2.7(D)(2)(e)]

Conditions 2.7(A)(1) through (3) contain numerical limits for the boiler, including SIP limits in Conditions 2.7(A)(1) and (3) and construction permit limits in Condition 2.7(A)(2). Because emissions from a boiler are directly related to the amount and type of fuel burned in the boiler, the permit also includes limits on natural gas consumption (*see* Condition 2.7(C)(2)) along with requirements to track and report natural gas usage (*see* Condition 2.7(E)). To demonstrate compliance with these numerical limits, the Permittee must comply with a number of work practice and operational requirements as well as performance testing requirements for NOx, CO and opacity.

[74] Effective January 28, 2013, the Illinois Pollution Control Board repealed the requirements of 35 IAC 219.585 from state rules. IEPA has submitted to EPA a request to revise its SIP to remove the repealed provisions; however, EPA has not yet acted on that request. EPA is proposing to retain the repealed provisions in Veolia's permit until such a time that those provisions are removed from the Illinois SIP. If prior to issuing the final permit, EPA grants IEPA's request to remove the repealed provisions from its SIP, EPA will remove the repealed provisions from this permit when it issues the final permit. EPA will follow the appropriate permit reopening/revision procedures in 40 C.F.R. § 71.7 if EPA grants IEPA's request to remove the repealed provisions from its SIP after the final permit is issued.

Condition 2.7(D)(1) requires Veolia to demonstrate compliance with the opacity limit by conducting annual opacity observations using EPA Method 9. In addition, Condition 2.7(C)(1) provides that natural gas will be the only fuel fired in the boiler, and Veolia must conduct annual tune-ups pursuant to Condition 2.7(D)(2). Because natural gas-fired boilers generally emit very low levels of particulate matter, it is unlikely that visible emissions from the boiler would ever exceed 30% opacity. Therefore, an annual opacity observation using EPA Method 9 is sufficient to demonstrate compliance with the 30% opacity limit for this unit.

Pursuant to Condition 2.7(D)(2)(e), Veolia must measure the concentrations of both CO and NOx in the effluent stream each time it conducts the annual tune-ups required by the permit. These measurements may be taken using portable CO and NOx analyzers. 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 tune-ups will help assure continuous compliance with the CO and NOx emission limits. In addition, Veolia is required, pursuant to Condition 2.7(D)(4), to conduct performance tests for CO and NOx from the affected boiler at a frequency of no less than once every 5 years to demonstrate compliance with the CO and NOx emission limits in Condition 2.7(A)(2). EPA believes this frequency of testing is adequate given that previous testing conducted on the affected boiler over the past four years has produced CO concentrations that are significantly lower than the applicable CO limits.[75] All CO and NOx measurements would be recorded and reported to EPA according to Conditions 2.7(E)(1)(c), 2.7(E)(1)(d) and 2.7(E)(2).

5.4.14. Periodic Monitoring Requirements for Insignificant Emission Units [Condition 2.10(C)]

Conditions 2.10(B)(1) through (3) contain requirements that apply to insignificant emission units and activities, including numerical emission limits contained in the Illinois SIP for process emission units (Condition 2.10(B)(1)) and organic material emission units (Condition 2.10(B)(2)). Pursuant to 40 C.F.R. § 71.6, the permit must include monitoring requirements sufficient to assure compliance with these requirements.

Because the insignificant emission units specifically identified in the permit are expected to have very low emissions compared to the applicable emission limits, EPA believes the appropriate means of monitoring compliance for these units is

[75] Test data provided by Veolia indicate that average CO concentrations in the boiler exhaust were less than 0.5 part per million (ppm), corrected to 3% oxygen, in measurements conducted on June 25, 2009 (0.06 ppm), June 17, 2010 (<0.01 ppm), June 9, 2011 (<0.01 ppm) and June 8, 2012 (0.13 ppm). *See* Veolia Permit Application (April 8, 2013) at 9-10.

through recordkeeping requirements. Specifically, EPA is requiring that Veolia maintain a record of its emissions calculations, throughput, inspection, maintenance and repair log, and other information necessary to demonstrate compliance with the applicable requirements and classification of the units as insignificant emissions units. Veolia must submit that record to EPA according to the general recordkeeping and reporting schedule in the permit.

5.5. Streamlining

Pursuant to 40 C.F.R. § 71.6(a)(3)(i)(A), if two or more monitoring or testing requirements apply to the same pollutant from the same emission unit, EPA may allow a permittee to comply with a streamlined set of monitoring or testing provisions, provided that the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as the result of the streamlining. EPA is proposing to streamline requirements in Condition 2.1(C)(7)(g) pertaining to requirements for a waste feed cutoff interlock system and sensors as contained in construction permits 83120053, 87100024 and 88010001 and the HWC MACT.

The waste cutoff interlock system required by construction permits 83120053, 87100024 and 88010001 must be constructed and operated so as to prevent introduction of waste into the incineration unit when any of the following events have occurred:

(a) Primary chamber temperature below 1600 °F;
(b) Secondary chamber temperature below 1800 °F;
(c) Primary or secondary chamber above atmospheric pressure;
(d) Spray dryer adsorber inlet greater than 2200 °F;
(e) Spray dryer adsorber outlet greater than 400 °F or below 370 °F;
(f) Low liquid level in lime slurry head tank;
(g) Low makeup water pressure into slurry heat tank;
(h) Baghouse tube sheet pressure drop greater than 10 inches water column (w.c.);
(i) Combustion stack gas flow less than 5,000 actual cubic feet per minute (acfm) or greater than 15,000 acfm;
(j) Oxygen concentration less than 6% by volume;
(k) Carbon monoxide concentration greater than 500 ppm;
(l) Carbon monoxide concentration greater than 50 ppm for 3 minutes;
(m) Total hydrocarbon concentration greater than 100 ppm corrected to 1% oxygen;
(n) HCl concentration greater than 100 ppm for 1 hour;
(o) Opacity greater than 10%;
(p) Primary fuel pressure below 30 psig;
(q) Combustion air pressure below 10 inches w.c.;
(r) Primary burner failure;
(s) Secondary burner failure;

(t) Emergency stack open; and
(u) OPLs as established based upon evaluation of actual operation and measured emissions during a trial burn.

See Construction Permit 87100024 (Unit 3), Condition 4, and Construction Permit 88010001 (Unit 4), Condition 4.[76]

Conversely, the HWC MACT requires each subject facility to have in place a functioning system that immediately and automatically cuts off the hazardous waste feed under certain conditions, also known as the Automatic Waste Feed Cut-Off (AWFCO) system. *See* 40 C.F.R. § 63.1206(c)(3). This system is triggered:

(a) when any of the following are exceeded: OPLs specified under 40 C.F.R. § 63.1209; an emission standard monitored by a CEMS; and the allowable combustion chamber pressure;

(b) when the span value of any CMS detector, except a CEMS, is met or exceeded;

(c) upon malfunction of a CMS monitoring an OPL specified under 40 C.F.R. § 63.1209 or an emission level; or

(d) when any component of the AWFCO fails.

The construction permits and the HWC MACT contain different criteria for when the feed should be cut off, making it difficult to compare each individual criteria for triggering the waste feed cutoff interlock system with the criteria for triggering the AWFCO system. Although the criteria are different, the two applicable requirements are clearly monitoring the incineration units' operation as a means to determine when the units may be out of compliance. Because the AWFCO system required by the HWC MACT can be configured to incorporate all of the triggering events identified in the construction permits, EPA believes that compliance with the AWFCO requirements of 40 C.F.R. Part 63, Subpart EEE, will assure compliance with the list of required monitors in construction permits 83120053, 87100024 and 88010001.

[76] Available at www.regulations.gov; Document ID. EPA-R05-OAR-2014-0280-0033. Construction Permit 83120053 (Units 2 and 3) includes additional trigger events such as induced draft fan failure, quench water flow below 100 gallons per minute (gpm), Venturi scrubber water below 37 gpm, pressure drop across Venturi scrubber less than 21 inches w.c., scrubber pH less than 6, flue gas temperature entering the scrubber greater than 180 °F, and loss of slurry flow to spray dryer adsorber. *See* Condition 5 of Construction Permit 83120053. EPA is not proposing to streamline these trigger events.

6.0. ENVIRONMENTAL JUSTICE CONSIDERATIONS

In 2011, EPA published Plan EJ 2014, EPA's roadmap for integrating EJ into its programs, policies and activities. Plan EJ 2014 has three objectives: 1) Protect health and the environment in overburdened communities; 2) Empower communities to take action to improve their health and environment; and 3) Establish partnerships with local, state, tribal, and federal governments and organizations to achieve healthy and sustainable communities.[77] One focus area of Plan EJ 2014 is "Considering Environmental Justice in Permitting."[78] EPA's goal is to enable overburdened communities to have full and meaningful access to the permitting process and to develop permits that address EJ issues to the greatest extent practicable under existing environmental laws. Overburdened communities are communities that potentially experience disproportionate environmental harms and risk as a result of cumulative impacts or greater vulnerability to environmental hazards.[79]

Veolia is located in East St. Louis, an area with EJ concerns, and is of significant public interest. Approximately two-thirds of all persons living within three miles of Veolia (64 percent) are minorities, and one-third (33 percent) live below the federal poverty level.[80] Table 12 compares the race distribution in the vicinity of Veolia to the state and national distributions. Figure 5 shows the breakdown of household income within three miles of Veolia, based on 2000 U.S. census data. As shown in Figure 5, below, about one-half of all households within three miles of Veolia have annual household income of $25,000 or less.

Table 11. Race Distribution Within 3 Miles of Veolia.

Race	Percent of total population within 3 miles	Illinois	U.S.
White	36%	71.5%	72.4%
African-American	59%	14.5%	12.6%
Asian/ Pacific Islander	2%	4.6%	5.0%
American Indian	0%	0.3%	0.9%
Other race	0%	6.7%	6.2%
Multiracial	3%	2.3%	2.9%

*Statistics represent residential population, by 2000 Census Block Group, from EJView:

[77] *See Plan EJ 2014: Considering Environmental Justice in Permitting – Implementation Plan.* Available at: http://www.epa.gov/compliance/ej/resources/policy/plan-ej-2014/plan-ej-permitting-2011-09.pdf. *See also* "EPA Activities To Promote Environmental Justice in the Permit Application Process," Notice of Availability of Proposed Regional Actions to Promote Public Participation in the Permitting Process and Draft Best Practices for Permit Applicants Seeking EPA-Issued Permits; Request for Comments, 77 Fed. Reg. 38052.
[78] *Id.*
[79] 77 Fed. Reg. 38052.
[80] U.S. Census 2000 and 2010 data, by Block Group. Available through EPA's EJView: http://epamap14.epa.gov/ejmap/entry.html

http://epamap14.epa.gov/ejmap/entry.html

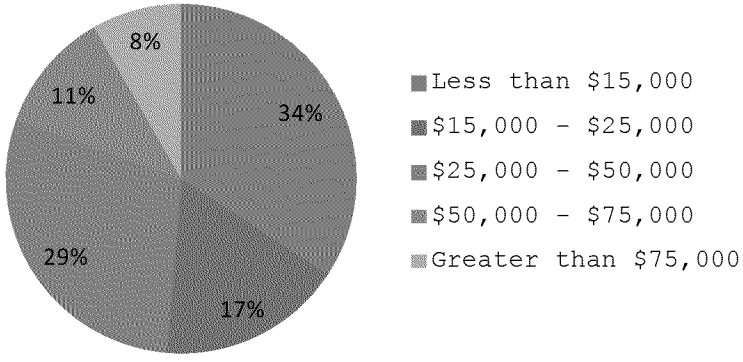

Figure 5. Income of households within 3 miles of Veolia. (*Source*: U.S. Census 2000 data, by Block Group)

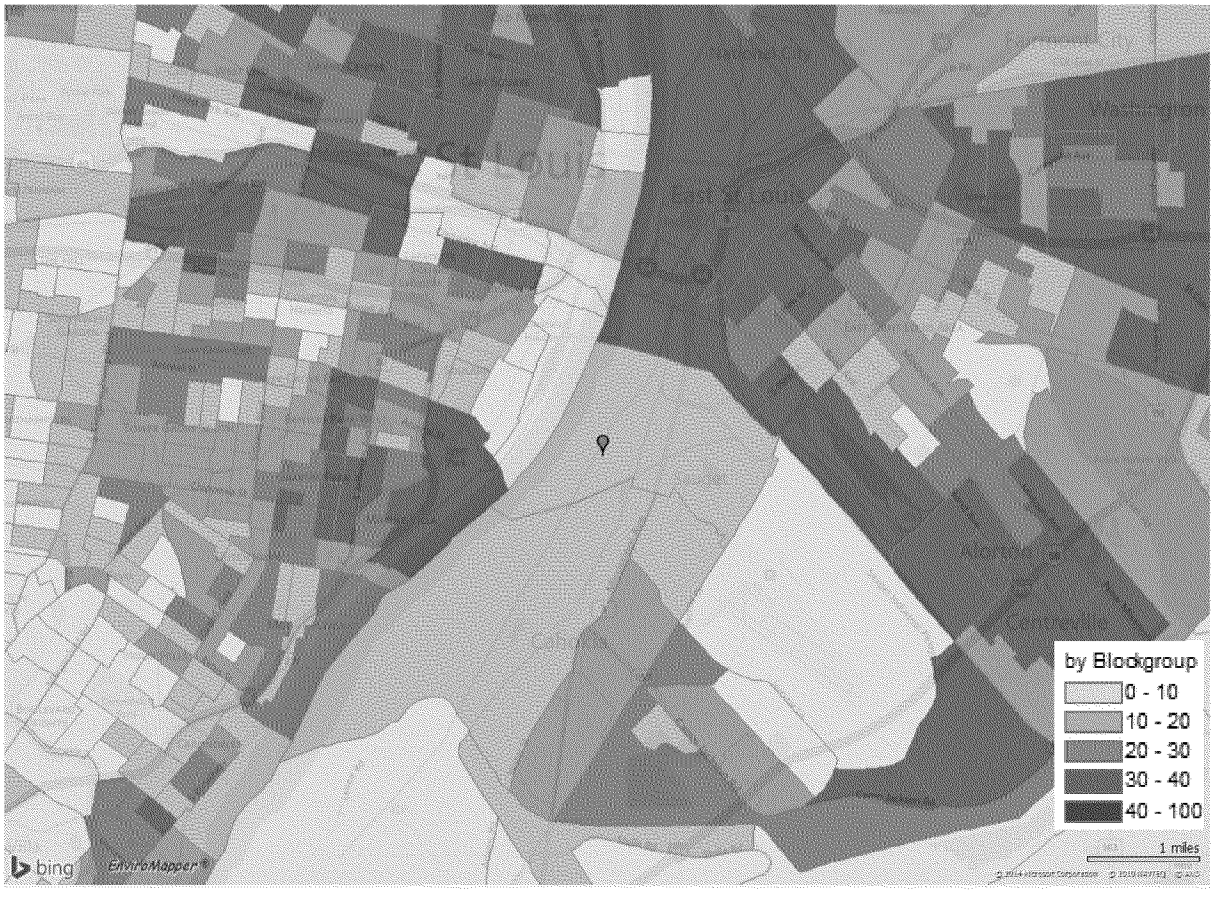

Figure 6. Percentage of population surrounding Veolia living below the federal poverty level. (*Source*: U.S. Census 2000 data, by Block Group)

A significant portion of the population living directly north of Veolia in East Saint Louis, and across the river to the west of the facility in portions of Saint Louis is living below the federal poverty level. *See* Figure 6 (marker shows the location of the facility). Compared to the national average of 12.4% of individuals living below the poverty level, it is clear that the block groups near Veolia have a much higher percentage of individuals living below the federal poverty level than the national average.[81]

Because Veolia is located in an area with EJ concerns, it is important for Veolia to adhere to its emission limits. However, the Title V program does not grant EPA the authority to create new limits or other requirements based on these concerns. As previously discussed, the Title V permitting program codified under 40 C.F.R. Part 71 provides EPA with the authority to incorporate into permits "all operational requirements and limitations that assure compliance with all applicable requirements" and monitoring "sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit" that will assure compliance with all requirements of the Act. Through this proposed permit renewal action, EPA is incorporating monitoring requirements necessary to assure compliance with all applicable requirements. Adding any additional limitations would be outside the authority of the Title V program.

EPA believes that compliance with the HWC MACT requirements will help protect the air quality around Veolia, which will benefit the entire community. To ensure compliance with the feedrate limits in the permit, EPA has included in the Title V permit enhanced monitoring requirements for heavy metals (mercury, arsenic, beryllium, cadmium, chromium and lead). The enhanced 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. *See* sections 5.2 and 5.3 for a discussion of the enhanced monitoring requirements included in the permit.

Compliance with the mercury limits is especially crucial in this case since previous 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.[82]

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[81] U.S. Census 2000 data. Available through: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

[82] A copy of the risk assessment is available at: http://www.epa.state.il.us/public-notices/2008/general-notices.html#veolia. *See also* Document ID. EPA-R05-OAR-2012-0649-0105, available at www.regulations.gov. Note that although limitations on mercury feedrates based on the RCRA risk assessment were incorporated into the RCRA permit issued by Illinois EPA, such additional limitations were not incorporated into Veolia's Title V permit. This is because the requirement for adequate monitoring requirements in Veolia's Title V permit, which comes from the CAA and its implementing regulations at 40 C.F.R. § 71.6, generally does not allow for establishment of new emission limitations under Title V of the Act. The risk assessment referenced here simply demonstrates that the area surrounding the Veolia facility has EJ concerns, emphasizing the importance of ensuring that Veolia complies with the HWC MACT emissions limits for mercury, LVM and SVM.

As discussed earlier, to verify that the feedstream analysis procedures and feedrate limits proposed in the permit are sufficient to assure continuous compliance with the HWC MACT limits, EPA is proposing to require that Veolia install and operate for a period of at least 12 months a multi-metals CEMS on each incineration unit.

Finally, due to the facility's location in an area with EJ concerns, EPA believes it is important to provide enhanced public participation opportunities to overburdened communities near Veolia. The specific public participation opportunities for this permitting action are described in a fact sheet that accompanies this draft permit (*see* Document ID. xx). We believe that more transparency and dialogue can lead to better permit outcomes for the community as well as permit applicants.

7.0. MAJOR CHANGES FROM THE 2008 PERMIT

7.1. Revision of OPLs and Addition of Enhanced Monitoring Requirements for Metals and Other Pollutants

As previously discussed, today's permit includes multi-metals CEMS requirements and supplemental feedstream analysis procedures for mercury, LVM and SVM. The permit also includes new OPLs required by the HWC MACT based on performance tests conducted by Veolia in October 2013. Please see detailed discussions in sections 4.2.3, 4.2.4, 5.2 and 5.3 of this Statement of Basis.

EPA has also proposed in Condition 2.1(D)(7)(b) emissions testing requirements for NOx, SO_2, opacity and VOM emissions from each incineration unit. The new requirements state that during the comprehensive performance tests required by Conditions 2.1(D)(8) and (10), Veolia shall also measure emissions of NOx, SO_2, opacity and VOM to document compliance with the NOx, SO_2, visible emissions and VOM limitations, respectively. EPA has included the appropriate test methods in Conditions (2.1)(D)(14((i) through (l). *See* section 5.4.2 for a more detailed discussion.

7.2. Removal of Case-By-Case MACT Determination for the Boiler

On September 13, 2004, under the authority of Section 112(d) of the Act, 42 U.S.C. § 7412(d), EPA promulgated national emission standards for HAPs for new and existing industrial/commercial/institutional boilers and process heaters, 40 C.F.R. Part 63, Subpart DDDDD (the Boiler MACT). On June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded those standards. *See Natural Resources Defense Council v. EPA*, 489 F.3d 1250 (D.C. Cir. 2007). Veolia was subject to the Boiler MACT prior to its vacatur by the D.C. Circuit. As a consequence of the Boiler MACT's vacatur, pursuant to Section 112(j) of the Act, EPA was required to include in the 2008 Title V permit for Veolia limitations on HAP emissions that EPA determined, on a case-by-case basis, to be equivalent to the limitations that would apply to the affected boiler if an emission standard had been promulgated in a timely manner under Section 112(d) of the Act. Thus, in the 2008 permit, EPA established pursuant to Section 112(j) of the Act, a carbon monoxide emission standard (as a surrogate for organic HAP) for Veolia's natural gas-fired boiler of 100 parts per million by volume on a dry basis corrected to 3 percent oxygen. *See* Condition 2.7(A)(1) of the 2008 permit.[83]

After EPA issued the 2008 permit, on March 21, 2011, EPA promulgated new national

[83] Docket ID: EPA-R05-OAR-2008-0235

emission standards for HAPs for new and existing industrial/commercial/institutional boilers and process heaters, 40 C.F.R. Part 63, Subpart DDDDD. Veolia's boiler is subject to those standards and EPA has proposed to incorporate each applicable provision from 40 C.F.R. Part 63, Subpart DDDDD, into the Title V permit. *See* Conditions 2.7(C) through (E). Pursuant to 42 U.S.C. § 7412(j)(6), if the Administrator promulgates an emission standard that is applicable to the major source prior to the date on which a permit application is approved, the emission limitation in the permit shall reflect the promulgated standard rather than the case-by-case MACT emission limitation.

Because the Administrator has promulgated a standard that applies to Veolia's boiler under Section 112(d) of the Act, EPA is proposing to remove from the permit the case-by-case MACT determination that it made in the 2008 permit and to incorporate into the permit the applicable provisions from 40 C.F.R. Part 63, Subpart DDDDD.

7.3. Incorporation of Applicable Requirements for the Emergency Generators

Veolia's two diesel fuel-fired emergency generators, each with a site rating of less than 112 kW, are subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE), 40 C.F.R. Part 63, Subpart ZZZZ. *See* 40 C.F.R. § 63.6585. This federal rule establishes national emission limitations and operating limitations for HAP emitted from stationary RICE located at major and area sources of HAP emissions. 73 Fed. Reg. 3603 (January 18, 2008). For emergency generators of the size owned and operated by Veolia, 40 C.F.R. Part 63, Subpart ZZZZ, includes work practice and operational requirements that will minimize HAP emissions from the generators while they are being operated.

Consistent with the CAA's mandate to include all applicable requirements in the permit, EPA has incorporated all of the applicable provisions of 40 C.F.R. Part 63, Subpart ZZZZ, into Veolia's renewal permit.