Reasonably Available Control Technology (RACT) for Oxides of Nitrogen (NOx) Determination for the 2008 8-Hour Ozone National Ambient Air Quality Standards (NAAQS)

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DEPARTMENT OF ENERGY & ENVIRONMENT
GOVERNMENT OF THE DISTRICT OF COLUMBIA

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1.0 Background

Pursuant to the 2008 8-Hour Ozone National Ambient Air Quality Standards (NAAQS) Implementation Rule (80 Fed. Reg. 12264; March 6, 2015), nonattainment areas are required to submit to the U.S. Environmental Protection Agency (EPA) a State Implementation Plan (SIP) revision demonstrating that a state has implemented all necessary Reasonably Available Control Technology (RACT) controls on all major stationary sources of volatile organic compounds (VOCs) and oxides of nitrogen (NOx). RACT is defined as the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available, considering technological and economic feasibility.

This NOx RACT Plan supports the District of Columbia's (District) RACT determination for the 2008 8-hour ozone NAAQS. It concludes with a certification that previously adopted RACT controls continue to represent RACT for the 2008 ozone NAAQS, except with respect to certain combustion turbines and related equipment and with respect to certain equipment fired on digester gas. These exceptions are addressed herein, and in the case of the combustion turbines, in a separate rulemaking action. A separate RACT evaluation will address RACT with respect to VOC.

1.1 RACT Requirements

To help determine RACT, EPA developed control techniques guidelines (CTGs) and alternative control techniques (ACT) documents. CTGs from the 1970s through the 1990s are still used to presumptively define VOC RACT. There are no CTG-like presumptive RACT limits for NOx sources. ACTs, developed in the late 1980s and 1990s, describe available control technologies and their respective cost-effectiveness for VOCs and NOx. They provide historical background information on controls but do not identify RACT. Since RACT can change over time, states must consider newly available information to supplement CTG and ACT documents and determine RACT.

States implementing the 8-hour ozone standard must assure that RACT is met either through a RACT regulation, a certification (with supporting information) that previously required RACT controls represent RACT for 8-hour implementation purposes, or a negative declaration that there are no sources in the nonattainment area covered by a specific CTG category.

In the 2008 Ozone NAAQS Implementation Rule, EPA states that, "in some cases, a new RACT determination under the 2008 standard would result in the same or similar control technology as the initial RACT determination under the 1-hour or 1997 standard because the fundamental control techniques, as described in the CTGs and ACTs, are still applicable. In cases where controls were applied due to the 1-hour or 1997 NAAQS ozone RACT requirement, we expect that any incremental emissions reductions from application of a second round of controls would be small and, therefore, the cost for advancing that small additional increment of reduction would not be reasonable" (80 Fed. Reg. 12279).

1.2 Major Source Thresholds

The District was designated as a marginal nonattainment area for the 2008 ozone NAAQS. According to Clean Air Act (CAA) Section 182(a)(2)(A), states in marginal nonattainment of a NAAQS need to submit a "RACT fix-up," which is "a revision that includes such provisions to correct requirements in (or add requirements to) the plan concerning [RACT] as were required [prior to November 15, 1990]." However, since the District is a member of the Ozone Transport Region (OTR)[1], CAA Section 184 is applicable, which requires states in the OTR to implement more stringent moderate area RACT at a minimum for:

- All volatile organic compounds (VOCs) covered by a CTG (CAA § 184(b)(1)(B)); and
- Any stationary source that has the potential to emit (PTE) at least fifty tons per year (tpy) of VOC, which shall be subject to major source "moderate" area requirements (CAA § 184(b)(2)); where
- The requirements for major stationary sources of VOCs also apply to major sources of NOx (CAA § 182(f)), where a "major stationary source" directly emits or has the potential to emit one hundred tons per year or more of any pollutant.

For the District's 2008 NAAQS RACT analysis, despite classification as a marginal nonattainment area for the 2008 ozone NAAQS, the OTR major source thresholds of 50 tpy for VOCs and 100 tpy for NOx apply.[2]

[1] States in the OTR include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the Consolidated Metropolitan Statistical Area that includes the District of Columbia.

[2] **Per Appendix I guidance:** "For purposes of meeting the 8-hour RACT requirement, the State's RACT analysis only needs to include an evaluation of RACT for CTG sources and for non-CTG major sources based on the area's 8-hour classification. We note, however, that under the anti-backsliding requirements, the State may not remove RACT requirements for sources that were subject to RACT for the 1-hour standard (but that would not be subject to RACT based on the area's 8-hour classification). Similarly, if the State has never met the RACT requirement for one or more sources for the 1-hour standard, the anti-backsliding requirements require the State to meet that obligation. The anti-backsliding provisions can be found at 40 C.F.R. § 51.905 and apply to all former 1-hour non-attainment areas."

2.0 Existing NOx RACT in the District

In January 1994, the District submitted its first "Reasonably Available Control Technology for Major Stationary Sources of the Oxides of Nitrogen" (NOx RACT) rulemaking (20 DCMR § 805) to EPA as a SIP revision. Since the District was a serious nonattainment area at the time, RACT was applicable for sources that emitted or had a PTE of 50 tpy or more of NOx. Section 805 contained presumptive emission limits for certain source categories: stationary combustion turbines (§ 805.4), fossil fuel-fired steam generating units (§ 805.5), and asphalt concrete plants (§ 805.6). Through "generic RACT" provisions, major sources not otherwise covered by presumptive limits were required to identify source-specific RACT-level controls by a specified date that would later go through the SIP process. The District received no source-specific RACT determinations. In December 1998, the District submitted a "negative declaration" to EPA, stating that all major sources of NOx were covered by presumptive limits in §§ 805.4, 805.5, and 805.6. Minor revisions to the NOx RACT rule were submitted to EPA in 2000, and the regulation was first approved as a SIP revision on December 26, 2000 (65 Fed. Reg. 81369).

The region failed to meet the attainment date of November 15, 1999, so the District was reclassified from serious to severe nonattainment for the 1-hour standard. The major source thresholds dropped to a PTE of 25 tpy for both VOC and NOx. In 2004, the District submitted SIP revisions to meet the more stringent major source definitions and new source offset ratio requirements for severe areas. EPA approved the revised thresholds on December 28, 2004 (69 Fed. Reg. 77647).

Table 1. Existing NOx RACT Regulations in the District

Source Category		20 DCMR Section	EPA Approval
Fuel-burning equipment with an input capacity…	100 MMBtu/hr or greater	805.1, 805.5	12/28/2004 (69 FR 77645 & 69 FR 77647)
	Equal to or greater than 20 MMBtu/hr, but less than 50 MMBtu/hr	805.5, 805.8	
	Equal to or greater than 50 MMBtu/hr, but less than 100 MMBtu/hr	805.1, 805.5	
Combustion turbine with an input capacity of greater than 100 MMBtu/hr[3]		805.4	
Asphalt concrete plant with a PTE of 25 tpy or greater		805.6,	
All other fuel burning equipment with a PTE of 25 tpy or greater		805.1	

[3] In parallel with this NOx RACT submittal, an emergency regulation and an identical proposed regulation are being issued to revise 20 DCMR § 805.4 to cover all combustion turbines and associated duct burners located at major stationary sources with the potential to emit greater than 25 tpy of NOx.

2.1 Major Non-CTG Sources of NOx

There are no CTGs for NOx. Thus, the District concludes that major sources of NOx are, by definition, non-CTG sources.

There are limited categories of major sources of NOx in the District. The District's remaining electric generating units (EGUs) at the Pepco-Benning Road and Pepco-Buzzard Point facilities were shut down by the end of 2012. Large combustion turbines at Pepco-Buzzard Point are no longer in operation. There are combustion turbines (CTs) that are part of newer combined heat and power (CHP) units at four facilities.

The District is aware of 14 major source facilities in the District that have a PTE of 100 tons per year (TPY) or more of NOx. Most of the large units at major sources for NOx are ICI boilers with substantial contributions to PTE at some facilities from significant numbers of emergency engines:

Table 2. NOx Emissions Controls at 100+ TPY Major NOx Facilities in the District

Facility	NOx-Emitting Units (sizes) & Controls*	Fuel Type
American University	Four boilers (one 26.1, two 63.6, and one 5.86 MMBtu/hr) w/low NOx burners	Natural gas (NG) & #2 oil
	20 emergency generator sets	Diesel
Catholic University	Four boilers (20.92 MMBtu/hr)	NG & #2 oil backup for gas interruptions
	26 emergency generator sets	Ultra-Low Sulfur Diesel (ULSD)
District of Columbia Water and Sewer Authority (DC Water) – Blue Plains Wastewater Treatment Plant	Three Boilers (one 8.31, two 5.979 MMBtu/hr)	NG
	Auxiliary Boiler (62.52 digester gas (DG)/61.79 NG MMBtu/hr)	NG & DG
	Three Gas Turbines (each 46.3 MMBtu/hr)	DG & NG
	Three Duct Burners (each 21 MMBtu/hr)	DG
	Two Emergency Flares (each 126 MMBtu/hr)	DG (NG pilot light)
	Siloxane Flare (6.14 MMBtu/hr)	DG (NG pilot light)
Fort Myer Plant #1	Asphalt plant (200 ton per hour asphalt derated production rate) with 75 MMBtu/hr rotary kiln with baghouse (PM)	NG with #2 oil backup for gas interruptions
	Screener with 99.9 hp engine	ULSD
	Crusher with 275 hp engine	ULSD
Gallaudet University	Three boilers (two 42 and 12.6 MMBtu/hr)	NG & #2 oil (was #4 until recent years); oil only to be used for gas interruptions.
	17 emergency generator sets powered by compression ignition engines	ULSD
	2 emergency generator sets powered by spark ignition engines	NG

Facility	NOx-Emitting Units (sizes) & Controls*	Fuel Type
Georgetown University	Three Boilers (two 127 MMBTU/hr with flue gas recirculation and one 120.6 MMBtu/hr)	NG & ULSD
	Approximately 28 compression ignition emergency engines	Diesel
	Four spark ignition emergency engines	NG
George Washington University**	21 boilers with heat inputs greater than 5 MMBtu/hr (two 48.7, two 20.9, two 10.2, two 9.7, thirteen between 5.0 and 7.0 inclusive, MMBtu/hr)	NG & #2 oil (many of these are NG only)
	Combustion Turbine (52.9 MMBtu/hr) with heat recovery steam generator (HRSG) equipped with duct burner (16.8 MMBtu/hr)	NG
	52 emergency engines (51 for generators, one for a fire pump)	NG, Diesel (most are diesel; a few are NG or dual diesel/NG)
Howard University	Three boilers (~148 MMBtu/hr each), two w/low NOx burners	NG & #2 oil
	29 emergency generator sets powered by compression ignition engines	Diesel
	2 emergency generator sets powered by spark ignition engines	NG
Joint Base Anacostia-Bolling	Five Boilers (three 30.25 NG/28.82 oil, two 8.0 MMBtu/hr)	NG & #2 oil
	43 compression ignition emergency engines	Diesel
Naval Research Lab	Three boilers (two 80.5 and one 56.7 MMBtu/hr)	NG & #2 oil
	27 compression ignition emergency engines (26 for generators, one for a fire pump)	Diesel
	2 spark ignition emergency engines for generators	NG
U.S. Capitol Power Plant	Seven boilers: • One 203 MMBtu/hr NG and #2 oil • Two 160 MMBtu/hr coal and 60 MMBtu/hr NG • Four 60 MMBtu/hr NG and #2 oil	NG, #2 oil, & coal
	One 7.5 MW combustion turbine (heat input 78.4 MMBTU/hr on gas or 74.37 MMBTU/hr on #2 oil) with HRSG (71.9 MMBTU/hr on gas or 68.3 MMBTU/hr on #2 oil)	NG, #2 oil
	Two compression ignition emergency engines (one for a generator, one for a fire pump)	Diesel
	One compression ignition non-emergency engine for an air compressor	Diesel
U.S. General Services	Five boilers (three 250 and two 500	NG with #2 oil backup for

Facility	NOx-Emitting Units (sizes) & Controls*	Fuel Type
Administration (GSA), Central Heating and Refrigeration Plant (CHRP)	MMBtu/hr) w/low NOx burners or dry low-NOx burners***	gas interruptions
	One Cogeneration System consisting of two turbine generators, a HRSG, and duct burners (340 MMBtu/hr inclusive, high heating value (HHV) basis; NG-fired low NOx duct burners make up 211 MMBtu/hr of this total number; each of the two turbine generators are 64.58 MMBtu/hr)	NG with #2 oil backup for gas interruptions
	Three compression ignition emergency engines for generators	ULSD
Washington Navy Yard	Three boilers • Two 101 MMBtu/hr with low NOx burners and flue gas recirculation • One 20.92 MMBtu/hr	NG & #2 oil
	Approximately 17 compression ignition emergency engines	Diesel
	One spark ignition emergency engine	NG
Washington Hospital Center	Six boilers (four 56.8 and two 57.3 MMBtu/hr) w/low NOx burners	NG & #2 oil
	Eight compression ignition emergency engines (seven for generators, one for a fire pump)	Diesel or #2 oil

** Does not include miscellaneous/insignificant activities or units that do not emit NOx.*
*** George Washington University has approximately 365 units of equipment that burn fuel with heat input ratings less than 5 MMBtu/hr, nearly all burning natural gas, but a few that can burn either natural gas or #2 fuel oil. These are individually insignificant, but in combination, contribute significantly to the facility's PTE.*
**** U.S. General Services Administration has permits allowing temporary installation of lower-emitting boilers for periods of time when permanent boilers are offline for maintenance, etc. The information in this table reflects the highest-emitting configuration of the facility.*

Only two facilities' NOx PTE is not dominated by boilers and/or emergency engines as follows:

1. Ft. Myer Plant #1, is an asphalt pavement production plant subject to existing RACT requirements in 20 DCMR 805.6.

2. District of Columbia Water and Sewer Authority (DC Water) – Blue Plains Wastewater Treatment Plant has NOx emissions dominated by their cogeneration facility, designed to run primarily on digester gas. The facility also has three flares and one auxiliary boiler that run on digester gas. These units are not covered by current NOx RACT standards as they are not "fossil-fuel-fired", and are therefore being addressed in this submittal. However, they were all subject to lowest achievable emission rate (LAER) controls based on a non-attainment new source review determination in 2011 (as revised in a 2018 permitting action that revised upward the LAER limit for the two emergency flares).

At this time, the District considers emissions from boilers at major stationary sources with heat input ratings less than 10 MMBtu/hr to be *de minimis* for NOx RACT purposes. In the State Implementation Plan (SIP), they are inventoried with area sources instead of major point sources. The District believes that control of these small individual source units of *de minimis* emissions is not cost effective RACT as it relates to the 2008 NAAQS.

Most of the major source facilities have emergency engines associated with generators or fire pumps (some in large numbers). Many of these units (the newer units) are subject to relatively recent new source performance standards (NSPSs) (see 20 CFR 60, Subparts IIII and JJJJ). Additionally, they are seldom used as they are for emergency purposes only. Older units are not used for large amounts of time, are gradually being retired and replaced by units subject to NSPSs, and would not be cost-effective to retrofit with additional controls.

Four cogeneration systems, located at major stationary source facilities are discussed further in the section 2.2.4 of this document.

2.2 NOx RACT Analysis

Based on the evaluation of sources above, the District has determined that NOx RACT must be established for combustion turbines and related duct burners as well as the equipment located in the District fired on digester gas.

With these exceptions, the District has determined that the existing NOx controls and limits are adequate to address the 2008 8-hour ozone NAAQS. The primary reasons for this determination are as follows:

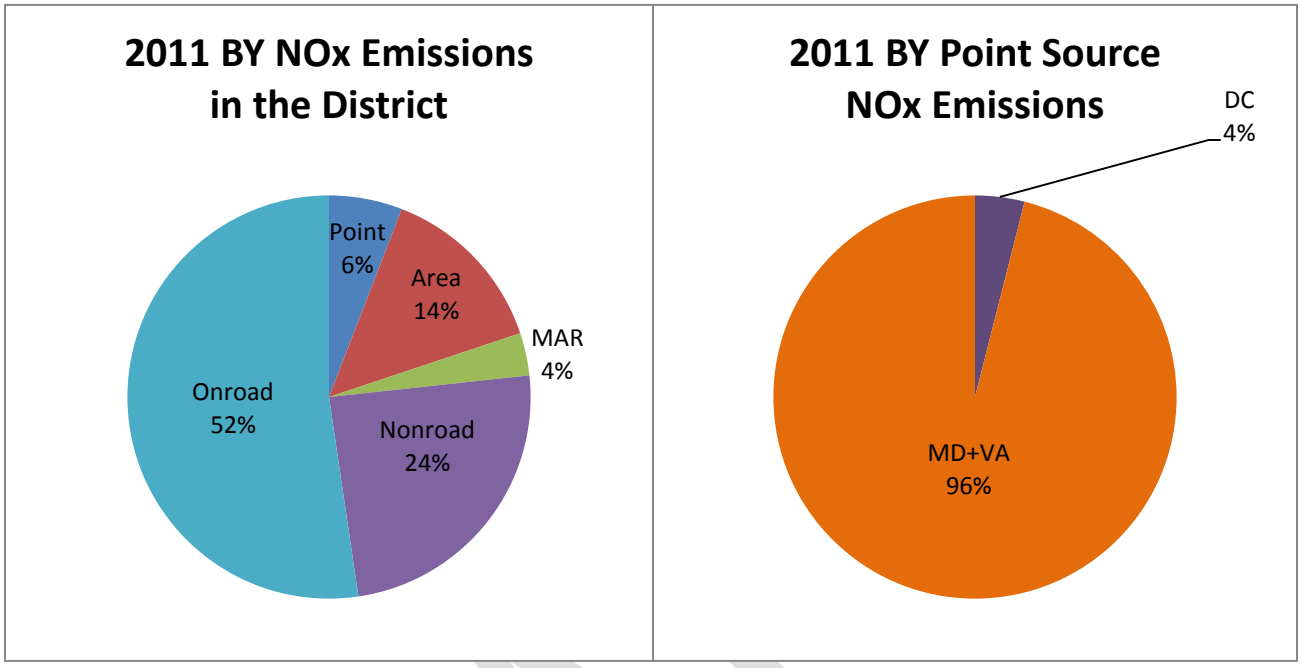
- The point source contribution to the District's NOx inventory is small;
- Units that do contribute large amounts of NOx already have restrictions; and
- The District is currently attaining the 2008 8-hour ozone NAAQS.

A brief assessment of each point is below, as well as a discussion about potential future NOx controls, RACT for existing combustion turbines and associated duct burners, and RACT for digester gas fired equipment.

2.2.1 Point Source Contribution

Point sources in the District have a relatively small influence on the region's nonattainment status. All point sources contributed less than ten percent of the District's NOx emissions in 2011, according to the base year (BY) emissions inventory. Most NOx emissions are from mobile sources. All sources in the District contributed roughly 8% of emissions in the nonattainment region, and point sources in the District contributed 4% of the point source emissions in the nonattainment area.

Table 3. 2011 Base Year NOx Emissions in the District and The District's Contribution to 2011 Base Year Point Source Emissions



Source: 2011 Base Year Inventory, SIP-Approved on May 13, 2015 (80 Fed. Reg. 27255); MAR includes marine, air, and rail emissions

Since 2011, well over half of the point source NOx emissions have been dominated by two major source facilities: GSA and the U.S. Capitol Power Plant (CPP), which supply heating and cooling services to federal facilities and the U.S. Capitol campus, respectively. DC General Hospital did not report emissions for 2015 and 2016. Due to this, DC General was not included in the point source calculations summarized in Table 4 for any of the years to maintain consistency. It should also be noted that AP-42 emission factors were used in the calculations for 2011-2013 point emissions, but where available, Continuous Emission Monitoring Systems (CEMS) emission factors were used in calculations for 2014-2016 point emissions.

Table 4. Proportion of Actual Point Source NOx Emissions from Two Facilities

Facility	2011	2012	2013	2014	2015	2016
Non-EGU Point Sources	469.19	432.85	401.87	427.53	369.04	335.08
GSA	195.49	185.94	182.33	224.72	171.02	143.15
CPP	105.53	94.68	88.21	74.71	70.21	64.33
GSA + CPP	301.02	280.62	270.54	299.43	241.23	207.48
% of All Point Sources	**64.2%**	**64.8%**	**67.3%**	**70.0%**	**65.4%**	**61.9%**

Both facilities are major sources with boilers over 100 MMBtu/hr in size. There are three other facilities with boilers over 100 MMBtu/hr in size, but GSA and CPP are the only facilities that actually emit close to 100 tpy of NOx per year or higher, an amount that equated to roughly 1%

of the District's entire inventory in 2011. Aside from EGUs that shut down, no other major sources have actually emitted over 40 tpy of NOx since at least 2008.

2.2.2 Existing Emissions Controls and Limits

Existing emissions controls and limits on NOx already minimize the impact of several major sources in the District. While these limits are not established as RACT, *per se*, they do impact the cost effectiveness and necessity of establishing further control requirements on the equipment for RACT purposes.

For example, emissions from the two most significant major sources are operationally restricted:

- GSA – Three of GSA's boilers were large enough to participate in the NOx SIP Call, EPA's initial cap and trade programs for NOx. To transition out of the NOx SIP Call, the District was required to adopt sunset provisions for non-EGUs that did not join the Clean Air Interstate Rule (CAIR) trading program, including GSA[4]. In 2015, the District imposed a strict NOx emissions cap of 25 tons per ozone season on GSA's three applicable units (20 DCMR Chapter 10). The cap was SIP-approved on February 22, 2016 (81 Fed. Reg. 8656). There are other large boilers at GSA that emit NOx primarily during the winter season. GSA also has a facility-wide annual cap of 268 TPY NOx contained in their Title V permit.

- CPP – On June 3, 2013, DOEE issued permits at CPP that established facility-wide emission limits (also called Plantwide Applicability Limits, or PAL). The PAL lowered CPP emission limits from the equivalent of 925 tpy for NOx to 197 tpy. The PAL was issued under a SIP-approved program which makes the limit federally enforceable. The permits issued at that time also allowed for the installation of a highly efficient natural gas-fired cogeneration system that will reduce the facility's reliance on coal-burning units even further. This system is in the process of commissioning as of July 2018 and is covered by a NOx RACT regulation discussed further in 2.2.4. Additionally, effective January 24, 2016, a limit in one of the permits, issued pursuant to a SIP-approved permit program, went into effect establishing a facility-wide limit of 16,666 tons per 12-month rolling period of coal usage to avoid being a major source of HAPs. This limit has co-benefits of limiting NOx emissions from coal burning at the facility.

In general, various units at major sources may be required to comply with additional limits due to:

[4] The District's EGUs were part of the NOx SIP Call and then CAIR. In 2012, they stopped operating. With the Cross-State Air Pollution Rule (CSAPR), which replaced CAIR, EPA determined that no sources in the District contribute significantly (at least 1%) to nonattainment in any other state. The District no longer participates in any of EPA's cap and trade programs for NOx.

- The NESHAP for industrial, commercial, and institutional boilers and process heaters at area source facilities, adopted by reference at 20 DCMR 1410 (not included in the SIP, but as a result of the adoption, enforceable both by the District and EPA);
- For facilities in the District that burn fuel oil, the sulfur content limits for fuel oil at 20 DCMR 801. Beginning on July 1, 2016, residual oil is banned. By 2018, the rule is anticipated to reduce NOx emissions due to the combustion of fuel oil by 22%. The typical emission rates for number 6 fuel oil are 26 to 47 pounds of NOx per 1,000 gallons of fuel burned versus 10 to 24 pounds of NOx per 1,000 gallons of fuel burned for distillate oils.[5]
- For emergency generators, the Reciprocating Internal Combustion Engine (RICE) NESHAP, adopted by reference (with slight revisions increasing stringency) at 20 DCMR 1406 (not included in the SIP, but enforceable by the District and, in slightly less stringent form, by EPA).
- 20 DCMR § 107 requires that, "the devices or practices provided for the control of air pollutants discharged from stationary sources…shall remain operative or effective, and shall not be removed."

The one major source of NOx that does not have large boilers (with the exception of DC Water, discussed in 2.2.4 below), Ft. Myer Plant #1, is required to meet limits found in 20 DCMR §805.6 which is in the District's SIP.

Finally, prior to the construction of any new major stationary source or any major modification at an existing major stationary source, each facility goes through New Source Review (NSR, at 20 DCMR 204) during the permitting process.

2.2.3 Attainment Status

The Washington DC-MD-VA nonattainment area is designated as a marginal nonattainment area for the 2008 8-hour ozone NAAQS, but is currently monitoring attainment. Based on EPA data for the period 2014 through 2016for the Washington DC-MD-VA nonattainment area, the 2016 ozone design value (DV) is 0.072 ppm. The DV for the District alone is 0.070 ppm. The region submitted a redesignation request and maintenance plan for the 2008 NAAQS.

Because the area is already monitoring attainment with the 2008 8-hour ozone NAAQS and existing NOx controls and limits are adequate to maintain attainment, it is not cost effective to establish RACT levels that require heavy investment in new emission control equipment with respect to this standard.

[5] Section 1.3 of EPA's AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s03.pdf.

2.2.4 Potential for Additional NOx Controls

ICI boilers contribute more NOx to the District's point source inventory than any other category. More than half of the fuel used to operate ICI boilers is natural gas, and most of the rest is #2 or #4 oil.

According to the Connecticut Department of Energy and Environmental Protection (CT DEEP) SIP, "EPA generally considers controls that have been achieved in practice by other existing sources in the same source category to be technologically and economically feasible."[6] The following table shows a comparison of the requirements of NOx regulations in various states and the District of Columbia.

Table 5. Comparison of NOx Limits for ICI Boilers (lb/MMBtu)

State	NG-Fired		Distillate Oil-Fired	
	50-100 MMBtu/hr	>100-250* MMBtu/hr	50-100 MMBtu/hr	>100-250 MMBtu/hr*
CT	0.2 to 0.43 0.2 to 0.3 (2018) 0.05 to 0.10 (2022)	0.15 to 0.43 0.10 to 0.30 (2018) 0.1 (2022)	0.2 to 0.43 0.2 to 0.43 (2018) 0.10 (2022)	0.15 to 0.43 0.10 to 0.43 (2018) 0.10 to 0.15 (2022)
DC	*Adjust combustion process*	*0.2***	*0.30*	*0.25***
DE	LEA, low NOx, FGR	0.2	LEA, low NOx, FGR	0.38 to 0.43
FL (portions)	0.2 to 0.5	0.2 to 0.5	0.36 to 0.62	0.36 to 0.62
LA (portions)	0.1 to 0.2	0.1	0.2	0.1
MA	0.1	0.2	Tune-up	0.3
MD (portions)	Tune-up	0.2	No limits	0.25
NC (portions)	0.3	0.3	0.2	0.2
NJ	0.05	0.1	0.08	0.1
NY	0.05	0.06	0.08 to 0.2	0.15
OH (portions)	0.1	0.1	0.12	0.12
PA	0.10	0.10	0.12	0.12
VA (NOVA)	0.2	0.2	0.25 to 0.43	0.25 to 0.43

Source: OTC Draft Summary Tables from file "MWC_Survey_Comparison_state_nonEGU_NOx_regs_Master_05202016_1-am.xlsx" (March 31, 2014)
** In many cases these or more stringent limits apply to units over 250 MMBtu/hr*
*** These limits apply to any unit over 100 MMBtu/hr*

As the preceding chart demonstrates, the District's existing limits for larger natural gas-fired and oil-fired boilers are comparable to what other states have adopted as RACT. A few states have adopted somewhat more stringent limits, notably New Jersey, New York, and Connecticut. However, these limits do not necessarily reflect RACT, but likely reflect beyond-RACT requirements. EPA acknowledged in the March 6, 2015 final rule to implement the 2008 ozone

[6] http://www.ct.gov/deep/lib/deep/air/ozone/ozoneplanningefforts/RACT_2008_NAAQS/2014-07-17_-_CT_Final_RACT_SIP_Revision.pdf

NAAQS that the obligation to demonstrate attainment of the ozone NAAQS as expeditiously as practicable may require the imposition of limits beyond just what RACT would require, stating that states have the "discretion to require beyond-RACT reductions from any source… in order to provide for timely attainment of the ozone NAAQS." 80 FR 12264 at 12279 (March 6, 2015).

However, because the District has already monitored attainment of the 2008 ozone NAAQS (see section 2.2.3), the District has determined that it is not necessary to establish limits beyond-RACT to attain that standard.

There are, however, some areas where the District has determined that RACT standards must be established. As noted above, CHP systems have been installed at four major NOx sources in the District as presented in the following table:

Table 6: Combined Heat and Power Systems at Major NOx Sources

Facility	Equipment Description	Fuel(s)
DC Water Blue Plains Wastewater Treatment Plant	Three Gas Turbines (each 46.3 MMBtu/hr) Three Duct Burners (each 21 MMBtu/hr)	DG & NG (duct burners burn only DG)
The George Washington University	Combustion Turbine (52.9 MMBtu/hr) with HRSG equipped with duct burner (16.8 MMBtu/hr)	NG
U.S. Capitol Power Plant	One 7.5 MW combustion turbine (heat input 78.4 MMBTU/hr on gas or 74.37 MMBTH/hr on #2 oil) with HRSG (71.9 MMBTU/hr on gas or 68.3 MMBTU/hr on #2 oil)	NG, #2 oil
U.S. General Services Administration, CHRP	One Cogeneration System consisting of two turbine generators, a HRSG, and duct burners (340 MMBtu/hr inclusive (HHV basis); NG-fired low NOx duct burners make up 211 MMBtu/hr of this total number; each of the two turbine generators are 64.58 MMBtu/hr)	NG with #2 oil backup for gas interruptions

The District has reviewed the above combined heat and power systems for NOx RACT applicability. None of them are fully covered by previously existing RACT standards. Additionally, at the DC Water Blue Plains Wastewater Treatment Plant, there are several units fired on digester gas that are not covered by previously existing RACT standards. The following provides further information on each of these facilities and evaluates whether additional controls are appropriate.

<u>DC Water Blue Plains Wastewater Treatment Plant</u>

The CHP system at DC Water Blue Plains Wastewater Treatment Plant has been issued a permit (No. 6372-C2/O) to operate the cogeneration equipment pursuant to 20 DCMR § 200.2. In this same permit are several other units that burn digester gas and are therefore not subject to previously established NOx RACT levels. The NOx emission limits for the equipment went through a non-attainment new source review process in 2011/2012 and installed emission

controls determined to be LAER at that time. A more recent review shows that the combustion turbines, heat recovery steam generators with duct burners, and an auxiliary boiler are still among the best performing units in the RACT/BACT/LAER Clearinghouse[7] for broadly similar applications and are therefore at least as stringent as RACT.

A recent permitting action increased the level determined to represent LAER for the emergency flares as the facility had determined that they could not meet the previously established LAER level. This is due to higher levels of ammonia in the digester gas than in other digester gas flares. This difference, related to the digestion process (thermally hydrolyzed sludge digestion) was not considered in the original LAER evaluation. It should be noted that the thermally hydrolyzed sludge digestion process being used at the facility is the first of its kind in the U.S. As such, even though a similar flare technology to those used in other digester gas applications was installed, the NOx levels exiting the flare are higher due to the increased fuel-bound nitrogen.

The NOx emission limits and associated control technologies in the permit related to the digester gas-fired auxiliary boiler and the three flares at the facility have been determined to meet or exceed RACT standards and, as such, are being included with this submittal for inclusion in the SIP as Attachment 1 to this submittal[8]. It should be noted that, because the maximum design treatment plant dry weather influent flow of 384 million gallons per day (MGD) has not been achieved in practice at this site, and given that the sludge digestion process is unique in the U.S. at this time, and the full effect of higher ammonia loading to the flares resulting from increased dry weather influent flows has not been demonstrated, it is possible that it will be determined that a higher NOx emission level than that included in the permit at this time for the emergency flares will represent RACT at higher dry weather influent flows in the future. As such, should a higher emission limit for dry weather influent flows higher than the currently achieved 290 MGD be determined to be RACT at those higher influent flows in the future, this will not be considered SIP backsliding.

The gas turbines at the site, as well as the duct burners are being addressed via a rulemaking action accompanying this submittal for inclusion in the SIP.

<u>The George Washington University</u>

In October 2016, a new exclusively natural gas-fired cogeneration system went online at The George Washington University. The equipment is capable of producing up to 4.6 MW of electric

[7] https://cfpub.epa.gov/rblc/index.cfm?action=Search.BasicSearch&lang=en

[8] Some details of test protocol submittal and approval procedures as well as test report submittal procedures relevant to testing requirements for showing compliance with NOx emissions limitations contained in the permit are not being incorporated into the SIP. This is because the District expects submittal procedures to change over time (such as changing from paper to electronic submittals) and as such needs to keep open flexibility to revise these requirements over time. However, the District does have sufficient authority and requirements established in 20 DCMR §502 (already in the SIP) to ensure that testing and reporting requirements sufficient to ensure that the emission limits are enforceable as a practical matter are consistently maintained as requirements on the facility in the future.

power. This equipment was installed pursuant to Chapter 2 Permit 6618-C, issued January 2, 2013, as revised by Chapter 2 Permit 6618-C-R1, issued April 8, 2016. The equipment has the potential to emit 21.3 ton/yr of NOx. Actual emissions reported for calendar year 2017 (the first full year of typical operation) were 6.69 tons of NOx. Emission limits in the permit are comparable to other similar equipment found in the RACT/BACT/LAER clearinghouse, except those having selective catalytic reduction (SCR) installed. In the RACT/BACT/LAER Clearinghouse, SCR was found to be required for much larger units going through non-attainment new source review (NSR), requiring LAER controls, or attainment new source review/prevention of significant deterioration (PSD), requiring BACT controls. At this time, the District does not believe it would be cost-effective to require installation of SCR on this equipment, given the small size of the equipment, the fact that the installation of the equipment did not trigger the District's stringent 25 ton per year "significant" threshold for non-attainment NSR, and the relatively low actual emissions observed from the equipment.

Based on this evaluation, the NOx emission limits and associated control technologies in the permit have been determined to meet and exceed RACT standards. The combustion turbine and duct burner are subject to the requirements contained in the NOx RACT rulemaking action accompanying this submittal, for inclusion in the SIP, covering all of the combustion turbines and associated duct burners in the District.

U.S. Capitol Power Plant

In mid-2018, a cogeneration system fired primarily on natural gas, but with the capability to also burn a limited amount of ultra-low sulfur No. 2 fuel oil, went online at the U.S. Capitol Power Plant. The equipment is capable of producing up to 7.5 MW of electric power. The equipment consists of one combustion turbine (heat input 78.4 MMBTU/hr on gas or 74.37 MMBTH/hr on #2 oil) with HRSG with associated duct burner (71.9 MMBTU/hr on gas or 68.3 MMBTU/hr on #2 oil). This equipment was installed pursuant to Chapter 2 Permit 6663-C, issued June 6, 2013. The potential to emit of the equipment is estimated at 59.2 ton/yr NOx. No actual emissions data is available at this time. The equipment is also part of a facility with a plantwide applicability limit (PAL) for NOx of 196.7 ton/yr per Chapter 2 Permit No. 6577, issued June 5, 2013.

At the time of permit issuance, AQD determined that the HRSG (and associated duct burner) was considered a "Fossil-Fuel-Fired Steam-Generating Unit"[9], and because its heat input exceeded 20 MMBTU/hr it was subject to 20 DCMR 805 in accordance with 20 DCMR 805.1(a)(1). AQD then determined that the relevant RACT requirement was found in 20 DCMR 805.5(a), requiring annual combustion process adjustments. This is reflected in Condition III(c) of permit 6663-C.

[9] Per 20 DCMR 199, a "Fossil-Fuel-Fired [Steam]-Generating Unit" is "a furnace or boiler, or combination of furnaces or boilers connected to a common stack, used in the process of burning fossil fuel for the primary purpose of producing steam by heat transfer."

AQD is revising the NOx RACT requirements to explicitly address combustion turbines and associated duct burners in the rulemaking action accompanying this submittal for inclusion in the SIP. The CPP CHP equipment is subject to this action.

U.S. General Services Administration, CHRP

On May 20, 2002, a permit to modify a previously existing boiler to convert it to a cogeneration system was issued. The system consists of two turbine generators, a HRSG, and duct burners (340.16 MMBtu/hr (HHV basis) inclusive). Natural gas-fired low NOx duct burners make up 211 MMBtu/hr of this total number; each of the two turbine generators have heat input ratings of 64.58 MMBtu/hr (HHV basis). The combustion turbines are inherently low NOx (dry low NOx burners) with manufacturer's guaranteed maximum emissions of 25 parts per million by volume (ppmv) when running on natural gas and 96 ppmv when running on liquid fuel. The only liquid fuel allowed is low sulfur No. 2 fuel oil which must only be used during natural gas service interruptions and can only be used in the combustion turbines. The duct burners are fired exclusively on natural gas. Total facility-wide fuel oil use is limited to 4,435,035 gallons per 12-month rolling period. Additionally, in accordance with 20 DCMR 1001, NOx Emissions Budget and NOx Limit per Source, the cogeneration system is one of three units (also including Boiler #3 and Boiler #4, each with a heat input rating of 500 MMBTU/hr) whose NOx emissions are limited to a total for the three units of 25 tons per control period (May 1 through September 30 of each year), which further limits the use of the unit.

Actual NOx emissions from the cogeneration system were 47.4 tons in 2015, 64.0 tons in 2016, and 46.0 tons in 2017.

AQD is revising the NOx RACT requirements to explicitly address combustion turbines and associated duct burners in the rulemaking action accompanying this submittal for inclusion in the SIP. The GSA CHP equipment is subject to this action.

2.3 NOx RACT Certification

The District certifies that the combination of existing NOx controls already established in the SIP and approved by EPA under the 1-hour ozone NAAQS, the attached case-by-case RACT determination found in Attachment 1 of this submittal, and the revisions to the District's NOx RACT regulations for combustion turbines and associated duct burners submitted herewith, represent NOx RACT controls for the 2008 8-hour ozone NAAQS.

Attachment 1

Case-by-Case NOx RACT – Blue Plains Wastewater Treatment Plant

Permit No. 6372-C2/O to Construct and Operate New Biosolids Handling Facilities at District of Columbia Water and Sewer Authority (DC Water) – Blue Plains Wastewater Treatment Plant

Case-By-Case NOx RACT Consists of Those Portions of the Permit Not Struck Out

April 20, 2018

Mr. Henderson Brown
CEO & General Manager, Acting
District of Columbia Water and Sewer Authority (DC Water)
5000 Overlook Ave., SW
Washington, DC 20032

RE: Permit (No. 6372-C2/O) to Construct and Operate New Biosolids Handling Facilities

Dear Mr. Brown:

Pursuant to sections 200.1 and 200.2 of Title 20 of the District of Columbia Municipal Regulations (20 DCMR), a permit from the Department of Energy and Environment ("the Department") shall be obtained before any person can construct or operate a stationary source in the District of Columbia. The application of the District of Columbia Water and Sewer Authority ("Permittee") to construct and operate new Biosolids Handling Facilities (BHF), located on the property of the Blue Plains Advanced Wastewater Treatment Plant, 5000 Overlook Avenue SW, Washington, DC, has been reviewed. The project consists of the following significant components:

- ~~**Combined Heat and Power (CHP):**~~
  - ~~Three (3) Solar Mercury 50 Combustion Gas Turbines (CT) rated at 46.3 MMBtu/hr (HHV) heat input firing digester gas (DG) or a combination of digester gas and natural gas;~~
  - ~~Three (3) Heat Recovery Steam Generators (HRSGs) equipped with supplemental firing by Duct Burners rated at 21 MMBtu/hr (HHV) heat input each, firing DG;~~
  - One (1) Auxiliary Boiler (AB) rated at 62.52 MMBtu/hr (HHV) heat input, firing DG and 61.79 MMBtu/hr (HHV) heat input firing natural gas (NG); and
  - One (1) Siloxane Destruction Flare (SF) rated at 6.14 MMBtu/hr heat input, firing DG

- **Main Process Train:**
  - Two (2) Emergency Flares rated at126 MMBtu/hr heat input each, firing DG.
  - ~~One (1) Raw Sludge Blending, Screening and pre-dewatering process;~~
  - ~~Four (4) CAMBI Thermal Hydrolysis Process (THP) trains;~~
  - ~~Four (4) 3.8 million gallon Anaerobic Digesters; and~~
  - ~~One (1) 44,800 scfm Bioscrubber Odor Scrubber (MPTOS).~~

- ~~**Final Dewatering Facility:**~~
  - ~~Sixteen (16) Belt Filter Presses (BFP);~~
  - ~~One (1) 54,000 scfm Dual Stage Chemical Scrubber - Final Dewatering Facility Odor~~

Scrubber (FDFOS); and
- One (1) new Spent Wash Water Concrete Collection Tank.

- **Lime Storage Silos**
  - Installation of two (2) new lime storage silos;
  - Installation of Silo Particulate Control Devices; and

- **Building Make-Up Air Handling Units (Space Heaters) Less than 5 MMBtu/hr Heat Input with Equivalent Combined Full Load of 33.11 MMBtu/hr limited to 94.8 MMCF/yr, firing NG**
  - Final Dewatering Facility (FDF): 12 units, 0.750 MMBtu/hr each, and 1 unit, 1.00 MMBtu/hr (10.00 MMBtu/hr total);
  - CHP Gas Condition Facility: 2 units, 0.70 MMBtu/hr each (1.40 MMBtu/hr total) ;
  - CHP Gas Blower Building: 1 unit,0.25 MMBtu/hr total heat requirement;
  - CP Turbine Plant: 3 units, 0.70 MMBtu/hr each (2.10 MMBtu/hr total);
  - MPT Pre-Dewatering Building: 2 units, 3.52 MMBtu/hr each, and 1 unit, 3.17 MMBtu/hr (10.21 MMBtu/hr total);
  - Digestion Building: 1 unit, 2.20 MMBtu/hr total heat requirement;
  - Sludge Screening Building: 1 unit, 2.38 MMBtu/hr total heat requirement; and
  - Solids Blending Building: 4 units, 1.145 MMBtu/hr each (4.58 MMBtu/hr total)

The primary control devices consist of the following:

Emissions Control Devices

Unit ID	Number	Unit Name	Description
MPTOS	1	Biological Odor Scrubber	One (1) 44,800 scfm Enduro Biological Odor Scrubber used to control foul air from the Sludge Screening Building, Pre-Dewatering Building and Sludge Blend Tanks.
FDFOS	1	Chemical Odor Scrubber	One (1) 54,000 cfm dual stage chemical odor chemical scrubber used to control emissions from FDF
Lime Silo Baghouse (LS-BH1 and LS-B2)	2	Pulse-Jet Baghouse	Two (2) (one per silo) Donaldson Torit Model TBV 6 (or equivalent) vent filtration systems with six (6) filter bags per baghouse (1,356 total square feet per baghouse) to control particulate matter from the lime silos.

Based on the submitted plans and specifications as detailed in the application dated August 12, 2010 and enclosed with the letter of the same date, supplemental information dated March 3, 2011, and further supplements dated March 9, 2012, amendment application of June 6, 2014, consolidated modification request dated July 26, 2017, and memorandum dated August 23, 2017, your application to construct and operate is hereby approved subject to the following conditions:

~~I.~~ ~~General Regulatory Requirements:~~

~~a. The equipment shall be constructed and operatedin accordance with the air pollution control requirements of 20 DCMR.~~

~~b. This permit expires on April 19, 2023 [20 DCMR 200.4]. If continued construction after this date is desired, the Permittee shall submit an application for renewal by December 19, 2022.~~

~~c. Construction and operation of equipment under the authority of this permit shall be considered acceptance of its terms and conditions.~~

~~d. The Permittee shall allow authorized officials of the District, upon presentation of identification, to:~~

~~1. Enter upon the Permittee's premises where a source or emission unit is located, an emissions related activity is conducted, or where records required by this permit are kept;~~

~~2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;~~

~~3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and~~

~~4. Sample or monitor, at reasonable times, any substance or parameter for the purpose of assuring compliance with this permit or any applicable requirement.~~

~~e. This permit shall be kept on the premises and produced upon request.~~

~~f. Failure to comply with the provisions of this permit may be grounds for suspension or revocation. [20 DCMR 202.2]~~

~~g. If modifications to the equipment design as submitted in the permit application, or any revision thereof are required, an amendment to this construction and operation permit shall be obtained before making these design changes, unless the Department determines that no such amendment is required.~~

~~h. Any renovation or demolition activity that may occur as a part of this project must be performed in conformance with the requirements of 20 DCMR 800. If a permit is required under this section, a separate asbestos permit must be obtained. This construction and operation permit does not replace any asbestos abatement permit that may be required.~~

i. ~~Within 12 months of the issuance of this permit to construct and operate the equipment covered by this permit, the Permittee shall apply for an amendment to an existing Chapter 3 operating permit or shall amend any pending Chapter 3 operating permit application to include the requirements of this permit. [20 DCMR 301.1(a)(2)]~~

j. This permit is subject to the requirements of the Lowest Achievable Emission Rate (LAER). LAER will be achieved through the following:

Emission Source	Control Technology	NOx Emission Limit
Auxiliary Boiler	Low-NOx Burner	0.034 lb/MMBtu HHV (DG) 0.032 lb/MMBtu HHV (NG)
~~Duct Burners~~	~~Low-NOx Burner~~	~~0.079 lb/MMBtu (DG)~~
Siloxane Flare	Low-NOx Burner	0.06 lb/MMBtu (DG)
Emergency Flares	Low-NOx Burner	0.101 lb/MMBtu (DG)
~~Combustion Turbines~~	~~Solar Mercury 50 Recuperative Combustion Design~~	~~20 ppmvd@15% O_2 (DG or DG/NG blend.~~

k. ~~This permit is conditional upon the acquisition of NOx offsets of 110 tons of NOx based on a ratio of 1:1.3. These offsets must meet the following criteria:~~

1. ~~The offsetting Emission Reduction Credits (ERCs) must be quantifiable, surplus, and permanent and must be legally binding and enforceable directly against the offsetting source. [20 DCMR 204.10]; and~~

2. ~~The offsets must come from the same source or other sources within the same nonattainment area, except that the Department may allow the Permittee to obtain such emission reductions in another nonattainment area if:~~

   i. ~~the other area has an equal or higher nonattainment classification than the area in which the source is located; and~~

   ii. ~~Emissions from such other areas contribute to a violation of the national ambient air quality standard in the nonattainment area in which the source is located.~~

~~No permit to operate equipment subject to this permit will be issued until these offsets have been obtained and approval of these offsets has been obtained from the Department in writing.~~

~~The Permittee has notified the Department that it has entered into enforceable contracts to purchase NOx emission reduction credits ("ERCs") certified by the Maryland Department of the Environment ("MDE") in the amount of 43 tons from Constellation Power Source Generation, Inc., Baltimore, MD, and 87 tons from Simkins Industries, Inc., Catonsville, MD, thereby committing the 110 tons of NOx per year of NOx ERCs to this project. The Permittee has notified the Department that these NOx ERCs have been transferred to the Permittee, and notice of the transfer has been provided to MDE.~~

The ERCs from these two sources have been determined to be acceptable for compliance with the nonattainment provisions of 20 DCMR 204.2, based on the legally binding purchase agreements between the Permittee and the sources of NO_x ERCs identified above, that show Agreement of the purchase of NO_x ERCs. These purchase agreements were received by the Department on March 16, 2012, meeting the requirements of this condition.

l. Within 15 days of receipt of a written request, the Permittee shall furnish to the Department any information the Department requests to determine whether cause exists for reopening or revoking the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish the Department with copies of records required to be kept by this permit. [20 DCMR 302.1(g)(5)]

m. This permit supersedes Permit No. 6372-C-A2, dated October 27, 2014.

II. General Permit Conditions:

The Permittee shall comply with the following general permit conditions:

a. General Maintenance and Operations

At all times, including periods of start-up and malfunction, the Permittee shall, to the extent practicable, maintain and operate stationary sources and fuel-burning equipment, and associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating procedures are being used will be based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [20 DCMR 606.3 and 20 DCMR 201]

b. Emission Limitations:

1. Visible emissions shall not be emitted into the outdoor atmosphere from the emission units and control equipment, except that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period during start-up, cleaning, adjustment of combustion controls, if any, or malfunction of the equipment [20 DCMR 606.1].

Note that 20 DCMR 606 is subject to an EPA-issued call for a State Implementation Plan (SIP) revision (known as a "SIP call") requiring the District to revise 20 DCMR 606. See "State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction", 80 Fed. Reg.

33840 (June 12, 2015). It is likely that this federal action will result in changes to the requirements of 20 DCMR 606. Any such changes, once finalized in the DCMR, will supersede the language of Condition II(b)(1) as stated above.

2. Violation of standards set forth in Condition II(b)(1), as a result of unavoidable malfunction, despite the conscientious employment of control practices, shall constitute an affirmative defense on which the discharger shall bear the burden of proof. Periods of malfunction shall cease to be unavoidable malfunctions if reasonable steps are not taken to eliminate the malfunction within a reasonable time. [20 DCMR 606.5]

   Note that 20 DCMR 606 is subject to an EPA-issued call for a State Implementation Plan (SIP) revision (known as a "SIP call") requiring the District to revise 20 DCMR 606. See "State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction", 80 Fed. Reg. 33840 (June 12, 2015). It is likely that this federal action will result in changes to the requirements of 20 DCMR 606. Any such changes, once finalized in the DCMR, will supersede the language of Condition II(b)(2) as stated above.

3. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Condition II(b)(1), Condition II(b)(1) shall not be applicable. [20 DCMR 606.7]

4. An emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life or property is prohibited. [20 DCMR 903.1] *Note: This condition is District enforceable only.*

c. Operational Limitations:

The Permittee shall ensure that fugitive dust from the facility is controlled in accordance with 20 DCMR 605 as follows:

1. Reasonable precautions shall be taken to minimize the emission of any fugitive dust into the outdoor atmosphere. The reasonable precautions shall include, but not be limited to, the following:

   A. In the case of unpaved roads, unpaved roadways, and unpaved parking lots;

      i. Use of binders, chemicals, or water in sufficient quantities and at sufficient frequencies to prevent the visible emission of dust due to the movement of vehicles or of the wind; and

ii. Prompt clean-up of any dirt, earth, or other material from the vicinity of the road, roadway, or lot which has been transported from the road, roadway, or lot due to anthropogenic activity or due to natural forces.

B. In the case of paved roads, paved roadways, and paved parking lots: Maintenance of the road, roadway, lot, or paved shoulder in a reasonably clean condition through reasonably frequent use of water, sweepers, brooms, or other means, through reasonably frequent removal of accumulated dirt from curb-side gutters, through reasonably prompt repair of pavement, or through any other means;

C. In the case of vehicles transporting dusty material or material which is likely to become dusty:

i. Fully covering the material in question, with a tarpaulin or other material; and

ii. Operation, maintenance, and loading of the vehicle, distribution of the loaded material on or in the vehicle, and limiting the quantity of material loaded on or in the vehicle, so that there will be no spillage of the material onto the roads;

D. In the case of vehicles which accumulate dirt on the wheels, undercarriages, and other parts of the vehicle, due to the movement of the vehicle on dusty, dirty or muddy surfaces: Water washing of all of the dirty parts of the vehicle to thoroughly remove the dirt before or immediately after the vehicle leaves the dusty, dirty, or muddy surface;

E. In the case of the demolition of buildings or structures: Use, to the extent possible, of water;

F. In the case of removal of demolition debris which is dusty or likely to become dusty: Use of water to thoroughly wet the material before moving or removing the material and keeping it wet or otherwise in a dust-free condition until eventual disposal;

G. In the case of loading and unloading of dusty material and in the case where dry sand-blasting or dry abrasive cleaning is necessary: Use of enclosed areas or hoods, vents, and fabric filters. If it is shown to the satisfaction of the Department that use of enclosed areas, hoods, vents, and fabric filters is not possible, alternate control techniques acceptable to the Department and designed to minimize the emissions to the extent possible shall be utilized; and

H. In the case of stockpiles of dusty material: Use, where possible, of closed silos, closed bins or other enclosures which are adequately vented to fabric filters. Where the use of closed silos, closed bins, or other enclosures is not possible, thorough wetting of the material before loading onto the stockpile and keeping the stockpile wetted, covered, or otherwise in a non-dusty condition.

2. ~~The emission of fugitive dust from the following is prohibited:~~

   A. ~~Any material handling, screening, crushing, grinding, conveying, mixing, or other industrial-type operation or process;~~

   B. ~~Heater-planers in repairing asphaltic concrete pavements;~~

   C. ~~Portable tar-melters, unless close-fitting lids, in good repair, for the tar-pots are available and are used;~~

   D. ~~The ventilation of any tunneling operation; or~~

   E. ~~The cleaning of exposed surfaces through the use of compressed gases.~~

3. ~~All persons shall comply with the provisions of Condition II(c) and those of the Soil Erosion and Sedimentation Control Act of 1977 (D.C. Law 2-23).~~

4. ~~In those circumstances where it is not possible to comply with specific provisions of both Condition II(c) and the Soil Erosion and Sedimentation Control Act of 1977 (D.C. Law 2-23), the provisions of the Soil Erosion and Sedimentation Control Act of 1977 (D.C. Law 2-23), shall prevail.~~

d. ~~Monitoring and Testing Requirements:~~

1. ~~The Permittee shall monitor the facility for compliance with the fugitive dust emissions limits contained in Condition II(c) of this permit and take appropriate action to address any excess fugitive dust from the facility.~~

2. ~~The Permittee shall conduct and allow the Department access to conduct tests of air pollution emissions from any source as requested. [20 DCMR 502.1]~~

3. ~~The Permittee shall monitor the facility to ensure that visible emissions, odor and other nuisance air pollutants are not emitted in such quantities as to create any violation of Condition II(b) of this permit.~~

4. ~~Process monitors for parameters that are required to demonstrate compliance with a permit requirement or emission limit must be operational at all times when the associated process equipment is operating except during service outages not to exceed 24 hours per event. Service outage is defined as the time the process monitor is not operating while permitted process is operating excluding quality assurance and routine scheduled maintenance activities. The process monitors shall be operational for 99% of the annual potential operating time (measured on a 12 month rolling basis) excluding quality assurance and routine scheduled maintenance activities. The facility shall not use the process monitor downtime as a shield of a known violation of an emission standard or other known compliance problem.~~

e. Record Keeping Requirements: [20 DCMR 200.7]

1. The Permittee shall maintain all records, including records of visual inspections, necessary for determining compliance with this permit in a readily accessible location for five (5) years and shall make these records available to the Department upon written or verbal request.

2. At a minimum, the following information shall be recorded and maintained in accordance with Condition II(e)(1) of this permit. All such records must be either initialed or signed by the person recording the information or maintained in a verifiable electronic system whose information can be certified as to its accuracy.

A. The Permittee shall maintain records of all routine and non-routine maintenance performed on all equipment covered by this permit. These records shall include a description of the maintenance activity, any problem being corrected or other reason for the maintenance activity, and a statement indicating whether or not the problem was corrected;

B. The Permittee shall keep records of any odor complaints received as well as any deviations from the requirements of Conditions II(b) of this permit, as well as any actions taken to correct any identified visible emission or odor problem;

C. The Permittee shall maintain records of any equipment shutdowns related to improper operation of a control device and records of any control device malfunctions;

D. The Permittee shall maintain records of the training of the operators and maintenance staff to minimize the production of emissions during operation;

E. The Permittee shall maintain records of any deviations from the fugitive dust standards set forth in Condition II(e) and any corrective actions taken to return to compliance;

F. The Permittee shall maintain records of the results of any testing performed pursuant to Condition II(d)(2);

G. The Permittee shall maintain records of the date, time, and duration (in minutes) of any process monitor service outages and the percent of the annual potential operating time that each process monitor is not operational (excluding quality assurance and routine scheduled maintenance activities). The percent downtime records shall be maintained on a 12-month rolling basis; and

H. The Permittee shall maintain and report a record of the quantities of natural gas consumed, digester gas produced and consumed, and diesel fuel used by all fuel-burning equipment (as defined in 20 DCMR 199) during construction or testing or

~~operation.~~

~~f.~~ ~~Reporting Requirements:~~ ~~[20 DCMR 200.7]~~

~~1.~~ ~~The Permittee shall immediately report to the Department, by telephone, any permit deviation that poses an imminent and substantial danger to public health, safety, or the environment. [20 DCMR 302.1(e)(3)(C)(ii)] This shall be reported to the Department's Emergency Operations number at (202) 645-5665.~~

~~2.~~ ~~In addition to complying with Condition II(f)(1) and any other reporting requirements mandated by the 20 DCMR or this permit, the Permittee shall, within thirty (30) calendar days of becoming aware of any occurrence of excess emissions, supply the Department in writing with the following information:~~

~~A. The name and location of the facility;~~

~~B. The subject source(s) that caused the excess emissions;~~

~~C. The time and date of the first observation of the excess emissions;~~

~~D. The cause and estimated/expected duration of excess emissions;~~

~~E. For sources subject to numerical emission limitations, the estimated rate of emissions (expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions; and~~

~~F. The proposed corrective actions and schedule to correct the conditions causing the excess emission.~~

~~3.~~ ~~Annually, by March 1 of each year, the Permittee shall submit a report of calculated emissions from each piece of equipment covered by this permit for the previous calendar year. This report of emissions shall include back-up information justifying how the emissions were calculated. Any exceedances of emission limits in Table 1 of this permit shall be clearly identified in the report.~~

~~4.~~ ~~All reports required pursuant to this permit shall be submitted to:~~

~~Chief, Compliance and Enforcement Branch~~
~~Air Quality Division~~
~~1200 First Street NE, 5th Floor~~
~~Washington, DC 20002~~

III. Emission Units Specific Conditions:

The Permittee shall not exceed the emission limits in the following tables as applicable:

~~Table 1: Total 12-Month Rolling Emission Limits from Permitted Equipment[1]~~

~~Pollutant~~	~~12-Month Rolling Emissions Limit (tons/yr)~~
~~PM (Total)[2]~~	~~18.45~~
~~SOx~~	~~25.04~~
~~NOx~~	~~80.54~~
~~VOC~~	~~11.84~~
~~CO~~	~~97.51~~
~~PM10~~	~~18.45~~
~~PM2.5~~	~~18.45~~
~~HAPs (Total)~~	~~1.75~~

~~1. The equipment covered consists of three Solar Mercury 50 gas turbines, three duct burners, one auxiliary steam boiler, one siloxane removal system, , two emergency flares, space heating units as referenced in this permit, two odor scrubbers (MPTOS and FDFOS), and two lime silo baghouses.~~
~~2. Total PM is the sum of the filterable PM and condensable PM~~

Table 2: Maximum Hourly Emissions (lbs/hr) when Operating with Any Percentage of Digester Gas

Pollutants	~~Each Solar Mercury 50 Gas Turbine~~	~~Each Duct Burner~~	Auxiliary Boiler	Siloxane Removal System	Each Emergency Flare
~~PM (Total)~~	~~1.06~~	~~0.16~~	~~2.69~~	~~0.21~~	~~2.52~~
~~SOx~~	~~1.21~~	~~0.55~~	~~1.63~~	~~0.16~~	~~3.28~~
NOx	~~3.56~~	~~1.66~~	2.11	0.37	12.72
~~VOC~~	~~0.40~~	~~0.03~~	~~0.31~~	~~0.53~~	~~2.54~~
~~CO~~	~~4.34~~	~~2.31~~	~~2.22~~	~~1.25~~	~~2.52~~
~~PM10~~	~~1.06~~	~~0.16~~	~~2.69~~	~~0.21~~	~~2.52~~
~~PM2.5~~	~~1.06~~	~~0.16~~	~~2.69~~	~~0.21~~	~~2.52~~
~~Total HAPs~~	~~0.07~~	~~0.06~~	~~0.17~~	~~0.01~~	~~0.19~~

~~Table 3: Start-Up Emissions for Two Temporary Boilers and One Emergency Flare~~

~~Pollutant~~	~~Temporary Sources During Construction~~	
	~~Temporary Steam Boilers In Aggregate[(1)] (Natural Gas) (lbs/hr)~~	~~Emergency Flare (Digester Gas) (lbs/hr)~~
~~PM (Total)~~	~~0.20~~	~~2.52~~
~~SOx~~	~~0.04~~	~~3.28~~
~~NOx~~	~~2.00~~	~~12.72~~
~~VOC~~	~~0.10~~	~~2.54~~
~~CO~~	~~0.72~~	~~2.52~~
~~PM10~~	~~0.20~~	~~2.52~~
~~PM2.5~~	~~0.20~~	~~2.52~~

[1] The emission rates listed in this column are informational only and may be change without the amendment of this permit. The boilers are permitted under separate Permit Nos. 6809 and 6810, issued to Pepco Energy Services, Inc.

a. Combustion Gas Turbines CT-1, CT-2 & CT-3: Three (3) Solar Mercury 50 combustion gas turbines (CT) each rated at a heat input capacity of 46.3 MMBtu/hr HHV basis (DG) or a combination of digester gas and natural gas.

1. Emission Limitations:

A. The gas combustion turbines shall not emit pollutants in excess of those specified in Tables 1 and 2. [20 DCMR 201]

B. Particulate emissions (total filterable only) from each of the gas combustion turbines shall not exceed 0.071 pounds per million Btu. [20 DCMR 600.1]

C. Sulfur dioxide (SO_2) emissions from each gas turbine shall not exceed 0.15 lb SO_2/MMBtu heat input. [40 CFR 60.4330] *Note that, based on the design and pursuant to Condition III(a)(2)(4), the Permittee cannot burn greater than 50% natural gas in the equipment at any time.*

D. NOx emissions from each turbine without supplemental firing shall not exceed 20 ppmvd at 15% O_2. [40 CFR 60.4320 and 60.4325 and 20 DCMR 204] *Note that this is a streamlined emission rate limit. This level represents the Lowest Achievable Emission Rate (LAER) under 20 DCMR 204 and is more stringent than the limits found in 40 CFR 60, Subpart KKKK for NOx emissions cited above. Compliance with this condition will ensure compliance with both requirements.*

E. NOx emissions from each turbine when fired with supplemental duct burner firing shall not exceed 22 ppmvd at 15% O_2. [40 CFR 60.4320 and 60.4325 and 20 DCMR 204] *Note that this is a streamlined emission rate limit. This level represents the Lowest Achievable Emission Rate (LAER) under 20 DCMR 204 and is more stringent than the limits found in 40 CFR 60, Subpart KKKK for NOx emissions cited above. Compliance with this condition will ensure compliance with both requirements.*

2. Operational Limitations:

A. The primary fuel for each of the combustion gas turbines shall be digester gas. A fuel blend of up to 36% natural gas (on a heating value basis) with the balance of at least 64% digester gas is permitted. The sulfur content, regardless of fuel type or blend shall be no more than 94 ppmv and shall be low enough to ensure compliance with Condition III(a)(1)(C). [20 DCMR 201]

B. The Permittee shall install and maintain approved totalizing digester gas and natural gas fuel meters on each turbine.

C. The Permittee shall operate and maintain the combustion turbines in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. [40 CFR 60.4333]

3. Monitoring and Testing:

A. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, and annually thereafter (no more than 14 months after the previous performance test), the Permittee shall conduct a Department- approved compliance source test for NOx in accordance with 40 CFR 60.8 and 40 CFR 60.4400, on each of the three gas turbines for each of the operational modes, specifically, the combustion turbine with unfired HRSG and the combustion turbine with supplementally fired HRSG (by duct burner), to demonstrate compliance with the emissions limitations contained in Conditions III(a)(1)(D) and (E). The annual test shall be performed no sooner than 9 months and no later than 14 months after the previous source test. [20 DCMR 502, 40 CFR 60.8, 40 CFR 60.4340, and 40 CFR 60.4400]

B. The sample port design and locations shall be approved by the Department prior to installation. [20 DCMR 502]

C. In addition to the requirements of 40 CFR 60.4400, the annual source test, performed in accordance with a Permittee - furnished test protocol approved by the Department, shall be used to determine the following [20 DCMR 502]:

i. Digester gas flow rate to each turbine (dry basis);

ii. Concentrations of carbon dioxide (CO_2), methane, and total non-methane organic compounds (NMOC) (all in dry basis) in digester gas;

iii. Exhaust gas flow rate from each gas turbine (dry basis); and

iv. Exhaust gas concentrations (dry basis) of NO_x, CO, NMOC, and O_2 in the stack gas.

D. The source test report shall provide the emissions results for NO_x, CO and NMOC in the following units: ppmv, dry (corrected to 15% oxygen), lb/hour, and lb/MMBtu heat input (HHV basis). [20 DCMR 502]

E. To demonstrate ongoing compliance with the NO_x and CO emissions limitations in Condition I(j), Condition III(a)(1) and Condition III, Table 2, the Permittee shall measure and record the 15 minute average concentrations of NO_x and CO, corrected to 15% oxygen (dry basis), from each operating turbine by testing the flue gas with either a Department-approved hand-held analyzer or a proposed

alternative test method acceptable to the Department. This testing shall be performed at a frequency of at least once per calendar month. [20 DCMR 502]

F. The emissions of NO_x and CO shall be determined by mass balance using the analytic test results in conjunction with the turbine flue gas flow rate. When actual flue gas rate measurements are not available, the Permittee shall assume 19.94 dscf flue gas per dscf digester gas, corrected to 15% oxygen, dry basis or other factor determined to be more accurate by the Department. [20 DCMR 502]

G. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the combustion turbines, and once every five years thereafter, the Permittee shall perform testing with and without supplemental duct firing using methods approved in advance by the Department to determine compliance with the emission limits contained in Condition III, Table 2 and Condition III(a)(1) of this permit, except for NOx, which shall be tested for in accordance with and at the frequency outlined in Condition III(a)(3)(A). If the testing performed to meet the 180 day deadline is determined, by the Department, not to be representative of maximum operations due to delays in full startup, the Department may require additional testing at a time following completion of startup to ensure that representative testing is performed.

H. Permittee shall submit a suitable test method for showing compliance with the sulfur content requirement of Condition III(a)(2)(A) that is consistent with the requirements of 40 CFR 60.4360. Such a test method shall be approved by the Department prior to conducting the test.

I. Permittee shall obtain approval for the testing and furnish the Department with a written report of the results of the performance tests and/or compliance tests in accordance with the following requirements [20 DCMR 502]:

i. One (1) original test protocol shall be submitted to the following address a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.

Chief, Compliance and Enforcement Branch
Air Quality Division
1200 First Street NE, 5th Floor
Washington, DC 20002

ii. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall finalize the test date with the assigned inspector in the Compliance and Enforcement Branch. The Department must have the opportunity to observe the test for the results to be considered for acceptance.

iii. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. One (1) original copy of the test report shall be submitted to the address in Condition III(a)(3)(I)(i) above.

iv. The final report of the results shall include the emissions test report (including raw data from the test) as well as a summary of the test results and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:

1. A statement that the Permittee has reviewed the report from the emissions testing firm and agrees with the findings.

2. Permit number(s) and condition(s) which are the basis for the compliance evaluation.

3. Summary of results with respect to each permit condition.

4. Statement of compliance or non-compliance with each permit condition for compliance with which was tested.

v. The results of the testing must demonstrate to the Department's satisfaction that the emission units are operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance, the Permittee shall propose corrective action(s). Failure to demonstrate compliance through the testing may result in enforcement action.

vi. For each affected unit that performs annual performance tests in accordance with 40 CFR 60.4340(a), the Permittee must submit a written report of the results of each performance test to the U.S. EPA before the close of business on the 60th day following the completion of the performance test. [40 CFR 60.4375].

J. The total sulfur content of the fuels used in the combustion turbines shall be monitored in accordance with the requirements of 40 CFR 60.4360. Alternatively, if applicable, the Permittee may avoid monitoring the total sulfur content of the fuels if they can be demonstrated not to exceed concentration that would lead to potential SO_2 emissions 0.060 lbs SO_2/MMBtu heat input in accordance with 40 CFR 60.4365. The Department must approve any such demonstration.

4. Record Keeping Requirements: [20 DCMR 200.7]

A. The Permittee shall maintain all records, including records of visual inspections, necessary for determining compliance with this permit in a readily accessible

~~location for five (5) years and shall make these records available to the Department upon written or verbal request.~~

~~B. At a minimum, the following information shall be recorded and maintained in accordance with Condition III(a)(4)(A) of this permit. All such records must be either initialed or signed by the person recording the information or maintained in a verifiable electronic system whose information can be certified as to its accuracy.~~

~~i. Monthly records of the quantity of digester gas (thousand scf) burned in each turbine;~~

~~ii. Monthly records of the quantity of natural gas (thousand scf) burned in each turbine; and~~

~~iii. Records of all NO_x and CO measurements (in ppmvd, at 15% oxygen, and calculated in lb/hr, as applicable) as well as all test results.~~

~~iv. Records of total emissions of each pollutant covered by Condition III, Table 2, from each turbine, kept in a 12-month rolling sum format.~~

~~5. Reporting Requirements: [20 DCMR 200.7]~~

~~The Permittee shall comply with all the reporting requirements contained in Condition III (a)(3) of this permit, in addition to complying with Condition II(f).~~

b. Auxiliary Steam Boiler AB: One (1) 62.52 MMBtu/hr HHV heat input (DG)/61.79 MMBtu/hr HHV heat input (NG), Low-NO_x auxiliary boiler (AB).

1. Emission Limitations:

A. The auxiliary boiler (AB) shall not emit pollutants in excess of those levels specified in Condition I(j) and Condition III, Table 2. [20 DCMR 201]

~~B. Particulate emissions (total filterable only) from the AB when burning digester gas or natural gas as applicable, shall not exceed 0.065 pounds per million Btu. [20 DCMR 600.1]~~

~~C. Sulfur dioxide emissions shall not exceed 0.05% by volume in the flue gas. Adding air as a diluent to comply with this condition is prohibited. [20 DCMR 803]~~

2. ~~Operational Limitations:~~

   A. ~~The fuel for the auxiliary boiler is limited to natural gas or digester gas. The sulfur content for either fuel shall be no more than 94 ppmv. [20 DCMR 201]~~

   B. ~~The auxiliary boiler may only operate during any of the following conditions: [20 DCMR 201]~~

      i. ~~During the first 180 days that the Combined Heat and Power (CHP) commences operation (start-up period); or~~

      ii. ~~As the backup source of steam for the CAMBI process and only when at least two (2) duct burners trains are out of service, provided such system upset or outage is reported to the Department pursuant to the reporting requirements in Condition III(b)(5) of this permit.~~

   C. ~~The Permittee shall install and maintain approved totalizing gas fuel meters to track digester gas and natural gas combustion (individually) in the AB.~~

   D. ~~The following fuel quantity consumption limits shall not be exceeded in any 12 month rolling period for maintenance and testing: [20 DCMR 201]~~

      i. ~~Digester gas in the AB shall not exceed 41.7 million cubic feet; and~~

      ii. ~~Natural gas in the AB shall not exceed 24.2 million cubic feet.~~

   E. ~~The use of natural gas in the auxiliary boiler is permitted when digester gas is unavailable or of an insufficient quantity for required steam production, in addition to operating per Condition III(b)(2)(D) above . [20 DCMR 201]~~

   G. ~~The AB may not operate in excess of 400 hours per 12 month rolling period for maintenance and testing, but may operate as needed beyond this limit for conditions described in Condition III(b)(2)(B)(ii). This maintenance and testing time shall include operation during maintenance and testing of the CT/HRSG trains.~~

3. Monitoring and Testing:

   A. Within 60 days after achieving the maximum production rate at which the AB will be operated, but not later than 180 days after initial startup using natural gas and subsequently, within 60 days of achieving the maximum production rate at which the AB will be operated, but not later than 180 days after initial startup using digester gas, the Permittee shall conduct a Department- approved compliance source test in accordance with a Department-approved test protocol furnished by the Permittee for the auxiliary boiler, in order to demonstrate

compliance with the emissions limitations contained in Condition III(b)(1) of this permit. The test shall be performed for each fuel every five (5) years or sooner if the Department determines that a cause exists for enhanced testing frequency. The Department will consider extensive operation of the AB when determining if cause exists for an increased frequency of testing. [20 DCMR 502]

B. The sample port design and locations shall be approved by the Department prior to installation. [20 DCMR 502]

C. In addition to the requirements in Condition III(b)(3)(A), the source tests shall be used to determine the following [20 DCMR 502]:

i. Digester gas flow rate to the auxiliary boiler (dry basis);

ii. ~~Concentrations of carbon dioxide (CO_2), methane and total non-methane organic compounds (NMOC) (all in dry basis) in digester gas;~~

iii. Exhaust gas flow rate from the auxiliary boiler (dry basis); and

iv. Exhaust gas concentrations (dry basis) of NO_x, ~~CO, NMOC,~~ and O_2 in the stack gas.

D. The source test report shall provide the emissions results for NO_x, ~~CO and NMOC~~ in the following units: ppmv, dry (corrected to 3% and 15% oxygen), lb/hour, and lb/MMBtu heat input (HHV basis) shall be in accordance with a Permittee-furnished test protocol approved by the Department [20 DCMR 502]

E. To demonstrate ongoing compliance with the nitrogen oxide ~~and carbon monoxide~~ emissions limitations in Condition III(b) (1) of this permit, the Permittee shall measure and record the 15 minute average concentrations of NO_x ~~and CO~~, corrected to 15% oxygen (dry basis), from the auxiliary boiler by testing the flue gas with a Department-approved hand-held analyzer. This testing shall be performed at a frequency of at least once per calendar month. The Permittee may propose an alternative method to perform this system testing. If acceptable to the Department, this alternative test method may be used instead of the hand-held analyzer test. [20 DCMR 502]

F. The emissions of NO_x ~~and CO~~ shall be determined by mass balance using the analytic test results in conjunction with the emission unit gas flow rate. When actual flue gas rate measurements are not available, the Permittee shall assume 19.94 dscf flue gas per dscf digester gas, corrected to 15% oxygen, dry basis or other factor determined to be more accurate by the Department. [20 DCMR 502]

G. The Permittee shall obtain approval for the testing and furnish the Department with a ~~written~~ report of the results of the performance tests and/or compliance tests in accordance with the following requirements [20 DCMR 502]:

~~i. One (1) original test protocol shall be submitted to the following address a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.~~

~~Chief, Compliance and Enforcement Branch~~
~~Air Quality Division~~
~~1200 First Street NE, 5th Floor~~
~~Washington, DC 20002~~

~~ii. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall finalize the test date with the assigned inspector in the Compliance and Enforcement Branch. The Department must have the opportunity to observe the test for the results to be considered for acceptance.~~

~~iii. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. One (1) original copy of the test report shall be submitted to the address in Condition III(b)(3)(G)(i) above.~~

iv. The final report of the results shall include the emissions test report (including raw data from the test) as well as a summary of the test results and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:

1. A statement that the Permittee has reviewed the report from the emissions testing firm and agrees with the findings.

2. Permit number(s) and condition(s) which are the basis for the compliance evaluation.

3. Summary of results with respect to each permit condition.

4. Statement of compliance or non-compliance with each permit condition for compliance with which was tested.

v. The results of the testing must demonstrate to the Department's satisfaction that the emission unit is operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance, the Permittee shall propose corrective action(s).

~~Failure to demonstrate compliance through the testing may result in enforcement action.~~

4. Record Keeping Requirements: [20 DCMR 200.7]

   A. The Permittee shall maintain all records, ~~including records of visual inspections,~~ necessary for determining compliance with this permit in a readily accessible location for five (5) years and shall make these records available to the Department upon written or verbal request.

   B. At a minimum, the following information shall be recorded and maintained in accordance with Condition III(b)(4)(A) of this permit. All such records must be either initialed or signed by the person recording the information or maintained in a verifiable electronic system whose information can be certified as to its accuracy.

      ~~i. Monthly records of the quantity of digester gas (thousand scf) and natural gas (thousand scf) burned in the boiler [40 CFR 60.48c(g)(2)];~~

      ~~ii. 12-month rolling records of the hours of operation of the unit, keeping track of maintenance and testing operations separately from total operations;~~

      ~~iii. Records of the reasons for the use of the AB each time it is operated;~~

      iv. Records of all NO_x ~~and CO~~ measurements (ppmvd, at 3% and 15% oxygen, and calculated in lb/hr, as applicable) as well as all test results; and

      v. Records of total emissions of each pollutant covered by Condition III, Table 2 from the AB, kept in a 12-month rolling sum format.

5. Reporting Requirements: [20 DCMR 200.7]

   A. The Permittee shall comply with all the reporting requirements in Condition III(b)(3) of this permit, ~~in addition to complying with Condition II(f)~~. [20 DCMR 201]

   ~~B. The Permittee shall, within 48 hours of becoming aware of an out-of-service situation or malfunction of the CT/HRSG trains, that would require the operation of the auxiliary boiler to provide back-up steam for the CAMBI process, report the incident to the Department pursuant to Condition II (f)(2).[20 DCMR 201]~~

   ~~C. The Permittee shall submit notification to the Administrator of the date of construction or reconstruction and actual start-up of the auxiliary boiler, as provided in 40 CFR 60.7. This notification shall include:~~

i. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;

ii. If applicable, a copy of any federally enforceable requirements that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR 60.42c or 40 CFR 60.43c; and

iii. The annual capacity factor at which the Permittee anticipates operating. [40 CF60.48c]

c. Duct Burners DB-1, DB-2, and DB-3: Three (3) 21 MMBtu/hr HHV heat input (DG) duct burners.

1. Emission Limitations:

A. Each of the duct burners (DB), shall not emit pollutants in excess of those levels specified in Condition I(j) and Condition III, Table 2. [20 DCMR 201]

B. In addition to the requirements in Condition III, Table 2, particulate emissions (total filterable only) from each of the DB turbines shall not exceed 0.085 pounds per million Btu for each DB. [20 DCMR 600.1]

C. Sulfur dioxide emissions shall not exceed 0.05% by volume in the flue gas. Adding air as a diluent to comply with this condition is prohibited. [20 DCMR 803]

D. NOx emissions from the turbine/HRSG trains exhaust (while supplemental firing with duct burners) shall not exceed 22 ppmvd at 15% O_2 as required by Condition III(a)(1)(E). [20 DCMR 204 and 40 CFR 60.4320] *Note that this is a streamlined permit condition. LAER required under 20 DCMR 204 is more stringent than the requirements of 40 CFR 60.4320, therefore compliance with 20 DCMR 204 will ensure compliance with 40 CFR 60.4320.*

E. NOx emissions from CT/HRSG/DB train shall not exceed 5.22 lb/hr (the cumulative lb/hr emission rate contained in Condition III, Table 2 of this permit) as measured at the HRSG exhaust. [20 DCMR 201]

2. Operational Limitations:

A. The Permittee shall install and maintain approved totalizing digester gas fuel meters to track digester gas combustion in the duct burners.

B. Only digester gas may be combusted in the duct burners

C. Each duct burner shall not burn more than 306.6 million cubic feet of digester gas in any 12 month rolling period. [20 DCMR 201]

3. Monitoring and Testing:

A. The Permittee shall perform testing for compliance with the NOx emission limits contained in Condition III(c)(1) of this permit in accordance with the requirements of Condition III(a)(3)(A) and 40 CFR 60, Subpart KKKK. Testing shall be performed for compliance with the remaining emissions limits contained in Condition III(c)(1) of this permit in accordance with the requirements of Condition III(a)(3)(G). [40 CFR 60.8, 40 CFR 60.4340, 40 CFR 60.4400, and 20 DCMR 502]

B. For a combined cycle and CHP turbine systems with supplemental heat (duct burner), the Permittee must measure the total NOx emissions after the duct burner, and not directly after the turbine. The duct burner must be in operation during the performance test. [40 CFR 60.4400(b)(2)]

C. The sample port design and locations shall be approved by the Department prior to installation. [20 DCMR 201]

D. In addition to the requirements in Condition III(c)(3)(A), the annual source test shall be used to determine the following [20 DCMR 502]:

i. Digester gas flow rate to each duct burner (dry basis);

ii. Digester gas concentrations (dry basis) of carbon dioxide (CO_2), methane, total non-methane organic compounds (NMOC);

iii. Exhaust gas flow rate from each gas duct burner (dry basis); and

iv. Exhaust gas concentrations (dry basis) of NOx, CO, NMOC, and O_2 in the stack gas.

E. The source test report shall provide the emissions results for NOx, CO and NMOC in the following units: ppmv, dry (corrected to 15% oxygen), lb/hour, and lb/MMBtu heat input (HHV basis)[20 DCMR 502]

F. To demonstrate ongoing compliance with the NOx and CO emissions limitations in Condition III(c)(1) of this permit, the Permittee shall perform regular testing in accordance with Conditions III(a)(3)(E) and (F) of this permit. [20 DCMR 502]

G. The Permittee shall obtain approval for the testing and furnish the Department with a written report of the results of the performance tests and/or compliance tests in accordance with the following requirements [20 DCRM 502]:

i. One (1) original test protocol shall be submitted to the following address a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.

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Air Quality Division
1200 First Street NE, 5th Floor
Washington, DC 20002

ii. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall finalize the test date with the assigned inspector in the Compliance and Enforcement Branch. The Department must have the opportunity to observe the test for the results to be considered for acceptance.

iii. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. One (1) original copy of the test report shall be submitted to the address in Condition III(e)(3)(G)(i) above.

iv. The final report of the results shall include the emissions test report (including raw data from the test) as well as a summary of the test results and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:

1. A statement that the Permittee has reviewed the report from the emissions testing firm and agrees with the findings.

2. Permit number(s) and condition(s) which are the basis for the compliance evaluation.

3. Summary of results with respect to each permit condition.

4. Statement of compliance or non-compliance with each permit condition for compliance with which was tested.

v. The results of the testing must demonstrate to the Department's satisfaction that the emission units are operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance the Permittee shall propose corrective action(s). Failure to demonstrate compliance through the test may result in enforcement action.

H. The total sulfur content of the fuels used in the duct burners shall be monitored in accordance with the requirements of 40 CFR 60.4360. Alternatively, if applicable,

the Permittee may avoid monitoring the total sulfur content of the fuels if they can be demonstrated not to exceed concentration that would lead to potential SO_2 emissions 0.060 lbs SO_2/MMBtu heat input in accordance with 40 CFR 60.4365. The Department must approve any such demonstration.

4. Record Keeping Requirements: [20 DCMR 200.7]

   A. The Permittee shall maintain all records, including records of visual inspections, necessary for determining compliance with this permit in a readily accessible location for five (5) years and shall make these records available to the Department upon written or verbal request.

   B. At a minimum, the following information shall be recorded and maintained in accordance with Condition III(c)(4)(A) of this permit. All such records must be either initialed or signed by the person recording the information or maintained in a verifiable electronic system whose information can be certified as to its accuracy.

      i. Monthly records of the quantity of digester gas (thousand scf) burned in each of the duct burners;

      ii. Records of all NOx and CO measurements (in ppmvd, at 15% oxygen, and calculated lb/hr, applicable);

      iii. Records of the results of all test results; and

      iv. Records of total emissions of each pollutant covered by Condition III, Table 2 from each duct burner, kept in a 12-month rolling sum format.

5. Reporting Requirements: [20 DCMR 200.7]

   A. The Permittee shall comply with all the reporting requirements in Condition III(c)(3) of this permit, in addition to complying with Condition II(f) as applicable. [20 DCMR 201]

   B. The Permittee shall, within 48 hours of becoming aware of an out-of-service situation or malfunction of a duct burner that could result in flaring of excess digester gas, report the incident to the Department pursuant to Condition II (f)(2) [20 DCMR 201]

d. Flares EF-1, EF-2, and SF: Two (2) 126 MMBtu/hr digester gas Emergency Flares (EF-1, and EF-2), and One (1) 6.14 MMBtu/hr digester gas Siloxane Flare (SF).

1. Emission Limitations:

A. Each of the emergency flares and the siloxane flare shall not emit pollutants in excess of those specified in Condition I(j) and Condition III, Tables 2 ~~and 3~~. [20 DCMR 201]

~~B. Particulate emissions (total filterable only) from EF-1, EF-2 and SF when burning digester gas, shall not exceed 0.056 pounds per million Btu for EF-1 and EF-2, and 0.114 pounds per million Btu for SF. [20 DCMR 600.1]~~

~~C. Sulfur dioxide emissions shall not exceed 0.05% by volume in the flue gas. Adding air as a diluent to comply with this condition is prohibited. [20 DCMR 803]~~

~~D. Visible emissions shall not be emitted into the outdoor atmosphere from the emission units and control equipment, except that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period during start-up, cleaning, adjustment of combustion controls, if any, or malfunction of the equipment [20 DCMR 606.1]~~
~~*Note that 20 DCMR 606 is subject to an EPA-issued call for a State Implementation Plan (SIP) revision (known as a "SIP call") requiring the District to revise 20 DCMR 606. See "State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction", 80 Fed. Reg. 33840 (June 12, 2015). It is likely that this federal action will result in changes to the requirements of 20 DCMR 606. Any such changes, once finalized in the DCMR, will supersede the language of Condition III(d)(1)(D) as stated above.*~~

2. Operational Limitations:

~~A. The primary fuel for the flares shall be digester gas with sulfur content of no more than 94 ppmv. [20 DCMR 201]~~

~~B. The emergency flares may only operate during any of the following conditions in which the auxiliary boiler is unavailable or the CHP facilities may not be able to utilize the digester gas that is produced in the MPT:[20 DCMR 201]~~

~~i. During the first 180 days that the Combined Heat and Power (CHP) commences operation (start-up period);~~

ii. Under emergency situations; and

iii. During system upsets;

Such non-routine circumstances in Condition III(d)(2)(B) must be reported to the Department pursuant to the reporting requirements in Condition III(d)(5) of this permit.

C. The Permittee shall install and maintain an approved totalizing digester gas fuel meters to track each fuel combusted in the flares and the pilots.

D. Only digester gas may be combusted in the flares except that natural gas may be used in the flare pilots.

E. The quantity of digester gas to be combusted per 12-month rolling period in each of the emergency flares, and the siloxane flare must not exceed the following: [20 DCMR 201]

i. Emergency flare (maintenance and testing) EF-1 and EF-2: 84 MMCF per flare;

ii. Emergency flare CHP shakedown (start-up): 907.20 MMCF per flare;

iii. Siloxane flare, SF: 44.82 MMCF.

F. The pilot lights listed below shall burn only natural gas and usage shall not exceed the following:

i. Emergency flare pilots shall not use in excess of 5.3 MMCF per 12-month rolling period per flare; and

ii. The siloxane flare pilot light shall not use in excess of 0.515 MMCF per 12-month rolling period.

G. Under no circumstance must digester gas be vented into the atmosphere uncontrolled. [20 DCMR 107.1 and 201]

H. Each of the emergency flares shall not operate in excess of 400 hours per year for maintenance and testing (unlimited for emergency conditions, if the CTs, DBs, and AB cannot handle the digester gas load due to unavailability), except pilot light operation. [20 DCMR 201]

I. The siloxane removal flare shall be operated no more than 4,380 hours per year, except pilot light operation.

~~J. The emergency flares shall be operated with a pilot light present at all times. [20 DCMR 107.1]~~

~~K. The siloxane combustion flare may not operate until the Permittee confirms that the pilot light is operating properly. [20 DCMR 201]~~

3. Monitoring and Testing:

A. Within 60 days of initial startup and once every five years thereafter, the Permittee shall conduct a Department- approved compliance source test at multiple loads of EF-1, EF-2, and SF in accordance with 40 CFR 60.8 or a similar protocol acceptable to the Department, to demonstrate compliance with the emissions limitations contained in Condition III(d)(1) of this permit ~~except that PM and HAP emissions from EF-1 and EF-2 shall be estimated by digester gas sampling as follows~~. [20 DCMR 502]

~~To coincide with the testing schedule required by this condition, the Permittee shall sample digester gas for siloxane content and, with this data calculate PM emissions assuming that PM emissions are equal to the quantity of silicon dioxide (SiO_2) that would be formed if all silicon in the siloxane sampled is converted to PM.~~

~~Also to coincide with the testing schedule required by this condition, the Permittee shall determine the HAP metals content of the digester gas using a Department-approved method, and assume that all HAP metals in the digester gas are emitted through the flares. Such results shall be compared to the applicable total HAPs emission limits.~~

B. The sample port design and locations shall be approved by the Department prior to installation. The testing to meet the requirements of Condition III(d)(3)(A) shall be performed at least once every five years, ~~though additional testing may be required at other times pursuant to Condition II(d)(2)~~. [20 DCMR 502]

C. The source testing shall be used to determine the following [20 DCMR 502]:

i. Digester gas flow rate to each of the flares (dry basis);

ii. ~~Concentrations of carbon dioxide (CO_2), methane, total non-methane organic compounds (NMOC) and total sulfur content (all in dry basis) in digester gas;~~

iii. Exhaust gas flow rate from each of the flares (dry basis); and

iv. Exhaust gas concentrations (dry basis) of NO_x, ~~CO, NMOC,~~ and O_2 in the stack gas.

D. The source test report shall provide the emissions results for NO_x, ~~CO and NMOC~~ in the following units: ppmv, dry (corrected to 15% oxygen), lb/hour, and lb/MMBtu heat input (HHV basis). [20 DCMR 502]

~~E. The Permittee shall monitor the presence of flare pilot flame in the flares (continuously for EF-1 and EF-2 and at appropriate times for SF) by the use of an appropriate flame detector device. [20 DCMR 201]~~

~~F. The Permittee shall monitor the number of hours of operation of the siloxane removal flare and emergency flares and the reasons for each instance of operation to ensure compliance with Condition III(d)(2)(H) and (I).~~

~~G. To demonstrate compliance with the visible emission requirements of Condition III(d)(1)(D), the Permittee shall use either Method 9 or Method 22 of Appendix A of 40 CFR 60 and shall perform such testing on an annual basis by procedures and at a time approved in advance by the Department. [20 DCMR 502]~~

H. The Permittee shall obtain approval for the testing and furnish the Department with a ~~written~~ report of the results of the performance tests and/or compliance tests in accordance with the following requirements [20 DCMR 502]:

~~i. One (1) original test protocol shall be submitted to the following address a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.~~

~~Chief, Compliance and Enforcement Branch~~
~~Air Quality Division~~
~~1200 First Street NE, 5th Floor~~
~~Washington, DC 20002~~

~~ii. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall finalize the test date with the assigned inspector in the Compliance and Enforcement Branch. The Department must have the opportunity to observe the test for the results to be considered for acceptance.~~

~~iii. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. One (1) original copy of the test report shall be submitted to the address in Condition III(d)(3)(H)(i) above.~~

iv. The final report of the results shall include the emissions test report (including raw data from the test) as well as a summary of the test results and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:

1. A statement that the Permittee has reviewed the report from the emissions testing firm and agrees with the findings.

2. Permit number(s) and condition(s) which are the basis for the compliance evaluation.

3. Summary of results with respect to each permit condition.

4. Statement of compliance or non-compliance with each permit condition for compliance with which was tested.

v. The results must demonstrate to the Department's satisfaction that the emission units are operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance the Permittee shall propose corrective action(s). ~~Failure to demonstrate compliance through the test may result in enforcement action.~~

4. Record Keeping Requirements: [20 DCMR 200.7]

A. The Permittee shall maintain all records, ~~including records of visual inspections,~~ necessary for determining compliance with this permit in a readily accessible location for five (5) years and shall make these records available to the Department upon written or verbal request.

B. At a minimum, the following information shall be recorded and maintained in accordance with Condition III(d)(4)(A) of this permit. All such records must be either initialed or signed by the person recording the information or maintained in a verifiable electronic system whose information can be certified as to its accuracy.

i. ~~Monthly records of the quantity of digester gas (thousand scf) burned in each flare;~~

ii. Records of all NO_x ~~and CO~~ measurements (in ppmvd, at 15% oxygen, and calculated in lb/hr, as applicable) as well as all required test results;

iii. ~~Records of fuels consumed pursuant to Condition III(d)(2)(E) and (F);~~ and

iv. Records of total emissions of each pollutant covered by Condition III, Table 2, from each flare, kept in a 12-month rolling sum format.

5. Reporting Requirements: [20 DCMR 200.7]

A. The Permittee shall comply with all the reporting requirements in Condition III(d)(3) of this permit, ~~in addition to complying with Condition II(f) as~~

~~applicable~~. [20 DCMR 201]

B. ~~The Permittee shall, within 48 hours of becoming aware of an out-of-service situation or malfunction of the flares, report the incident to the Department pursuant to Condition II(f)(2). [20 DCMR 201]~~

e. ~~Biochemical treatment, Anaerobic Digestion and Final Dewatering Processes:~~

~~The Biosolids management project which includes the Main Process Train, Combined Heat and Power and Final Dewatering cover the following processes that produce objectionable odor that must be handled with Best Management Practices for effectiveness of the odor control equipment in this permit:~~

- ~~Raw Sludge Blending and Screening;~~
- ~~Pre-dewatering~~
- ~~Thermal Hydrolysis Process;~~
- ~~Anaerobic Digestion;~~
- ~~Digester Gas Management;~~
- ~~Odor Control;~~
- ~~Final Dewatering~~

1. ~~Emission Limitation:~~

~~An emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life or property is prohibited. [20 DCMR 903.1]~~

2. ~~Operational Limitations:~~

A. ~~The Permittee shall ensure that fugitive odor emissions from the processes listed above are minimized by ensuring that foul air from the thickened solids storage/blending, pre-CAMBI dewatering centrifuges, dewatered biosolids storage, and digested biosolids storage are vented to the MPTOS bioscrubber. The MPTOS shall be operated per Condition III(g)(2)(A). [20 DCMR 201]~~

B. ~~The Permittee shall ensure that fugitive odor emissions from the processes listed above are minimized by ensuring that foul air from the storage of Class B and Class A biosolids are vented to the new DSLF scrubber (when operational). [20 DCMR 201]~~

C. ~~The Permittee shall ensure that fugitive odor emissions from the processes listed above are minimized by ensuring that foul air from post-CAMBI final dewatering belt filter presses are vented to the FDFOS. [20 DCMR 201]~~

D. The digester gas produced in the Main Process Train shall be abated at all times by combustion at any or all of the following sources: MPT-EF-1, and EF-2, CHP-SF, CT1, CT2 and CT3, DB1, DB2 and DB3 and the AB in accordance with Condition III(a)(2)(A), Conditions III(b)(2)(B) and (D), Conditions III(c)(2)(B) and (C) and Conditions III(d)(2)(B) and (E) of this permit. [20 DCMR 201]

E. The Permittee shall maintain the foul air conveyance systems so that foul air is completely vented to the appropriate odor control system. [20 DCMR 201]

3. Monitoring and Testing:

A. The Permittee shall monitor the fuel sulfur content to ensure compliance with Condition III(a)(1)(C) of this permit.[20 DCMR 201]

B. The Permittee shall develop a fuel sulfur monitoring plan for combusting digester gas in the gas turbines, the duct burners and the auxiliary boiler in accordance with 40 CFR 60.4360. This plan must be submitted to and approved by the Department before the issuance of an operating permit for the equipment.

C. The Permittee shall ensure that spent wash water draining to the collection tank does not contain objectionable level of odor or ammonia. [20 DCMR 201]

D. Whenever odor complaints are received by the Permittee, the Permittee shall investigate the cause of the alleged odor and take any appropriate actions to correct the problem when identified.

4. Record Keeping Requirements: [20 DCMR 200.7]

A. The Permittee shall maintain all records, including records of visual inspections, necessary for determining compliance with this permit in a readily accessible location for five (5) years and shall make these records available to the Department upon written or verbal request.

B. At a minimum, the Permittee must keep a service log on all process monitors (PM) and maintain a current summed quarterly service outage time in minutes. The log must include the date, time and length the PM was out of service. The facility shall not use the PM downtime as a shield of a known violation of an emission standard or other known compliance problem. [20 DCMR 201]

C. The Permittee shall maintain records of all odor complaints received by the Permittee related to the facility as well as records of the actions taken to investigate and correct any deficiencies identified.

5. Reporting Requirements: [20 DCMR 200.7]

The Permittee shall comply with all the reporting requirements pursuant to Condition III(f)(4) of this permit, in addition to complying with Condition II(f) as applicable. [20 DCMR 201]

f. Lime Storage Silos LS1 and LS2 and Particulate Control Devices Lime Silo Baghouses LS1-BH and LS2-BH: Two (2) cylindrical silos, LS1 and LS2, with bin vent baghouses LS1-BH and LS2-BH (respectively).

1. Emission Limitations:

A. The discharge of particulate matter into the atmosphere from any process shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas. Additionally, emissions from the lime storage silos and associated baghouses shall not exceed 36.2 pounds per hour. [20 DCMR 603.1 and 20 DCMR Chapter 6, Appendix 6-1]

B. Visible emissions shall not be emitted into the outdoor atmosphere from the emission units and control equipment, except that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two (2) minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period during start-up, cleaning, or malfunction of the equipment [20 DCMR 606.1]

Note that 20 DCMR 606 is subject to an EPA-issued call for a State Implementation Plan (SIP) revision (known as a "SIP call") requiring the District to revise 20 DCMR 606. See "State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction", 80 Fed. Reg. 33840 (June 12, 2015). It is likely that this federal action will result in changes to the requirements of 20 DCMR 606. Any such changes, once finalized in the DCMR, will supersede the language of Condition III(f)(1)(B) as stated above.

C. An emission into the atmosphere odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life or property is prohibited. [20 DCMR 903.1] *Note: This condition is District enforceable only.*

D. The Permittee shall ensure that fugitive dust emissions from the facility are minimized in accordance with the operational standards found in Condition II(e).

E. The emission of fugitive dust from any material handling, screening, crushing, grinding, conveying, mixing, or other industrial-type operation or process is prohibited. [20 DCMR 605.2]

2. Operational Limitations:

A. The baghouses shall remain operative or effective, and shall not be removed [20 DCMR 107.1, 20 DCMR 201]. In order to ensure that this occurs, the following steps shall be implemented:

i. The differential pressure across the bags shall be maintained between 2 and 4 inches of water (or other range that has received written approval from the Department based on a future submission justifying such change) whenever lime is being loaded into the lime storage silos LS1 and LS2.

ii. The baghouses shall maintain particulate matter (PM) removal efficiencies of at least 99.9%.

iii. A set of replacement bags for LS1-BH1 and LS2-BH2, as specified by the manufacturer and rated to be at least 99.9% efficient at removing particulate matter, must be kept on site at all times (except for a reasonable amount of time following a bag change-out to obtain a new spare set of bags).

iv. Permittee shall comply with Condition II(c) of this permit for the control of fugitive dust at the facility. [20 DCMR 201]

B. The Permittee shall operate and maintain LS1, LS2, L1-BH1 and LS2-BH in accordance with manufacturers' specifications and recommendations.

C. The Permittee shall ensure that the provision of 20 DCMR 900 pertaining to engine idling are met at the facility, including by material delivery trucks servicing the lime storage silos.

D. The Permittee shall ensure that persons actually participating in the maintenance and operation of sources and equipment are adequately trained and serviced so as to minimize the production of emissions during operation. [20 DCMR 606.5]

3. Monitoring and Testing:

A. The Permittee shall monitor the status and level of repair of LS1-BH and LS2-BH, and all other process equipment at the facility to ensure compliance with Condition III(f)(2)(A)of this permit.

B. The Permittee shall monitor the facility to ensure that odors, fugitive dust, and other nuisance air pollutants are not emitted in such quantities as to create a violation of Condition III(f)(1)(C), (D), or (E) of this permit.

C. The Permittee shall monitor the training records of staff and contractors to ensure compliance with Condition III(f)(2)(D) of this permit.

D. The Permittee shall monitor the stores of spare bags for the baghouse to ensure compliance with Conditions III(f)(2)(A)(ii) and (iii) of this permit.

E. The Permittee shall monitor the differential pressure across the baghouse to ensure compliance with Condition III(f)(2)(A)(i) of this permit. If the differential pressure drifts outside of the specified range, action shall be taken to identify the problem and correct it promptly.

F. The Permittee shall monitor the idling of vehicles at the facility sufficiently to ensure compliance with Condition III(f)(2)(C) of this permit.

G. The Permittee shall conduct weekly observations of visible emissions from the outlet of the baghouses during material deliveries (or each delivery, if deliveries are less frequent than weekly) and shall perform a walk-through of the lime storage area to identify any sources of fugitive dust emissions. Such visible emissions observations need not be performed in accordance with Reference Method 9, but may instead be only observations for the presence or absence of visible emissions (similar to the procedures set forth in EPA Reference Method 22).

H. If visible emissions are observed via the monitoring performed in accordance with Condition III(f)(3)(G) or at any other time, this occurrence shall be reported to the Department. The Permittee shall then either shut the process down and make the necessary repairs/adjustments to correct the problem or shall make arrangements for prompt observation by an individual certified in accordance with EPA Reference Method 9 to determine compliance with Condition III(f)(1)(B).

I. In addition to the above testing requirements, the Department reserves the right to require additional testing as it deems necessary to determine compliance with applicable requirements. [20 DCMR 502.1]

4. Record Keeping Requirements: [20 DCMR 200.7]

A. The Permittee shall maintain all records, including records of visual inspections, necessary for determining compliance with this permit in a readily accessible location for five (5) years and shall make these records available to the Department upon written or verbal request.

B. At a minimum, the following information shall be recorded and maintained in accordance with Condition III(f)(4)(A) of this permit. All such records must be either initialed or signed by the person recording the information or maintained in a verifiable electronic system whose information can be certified as to its accuracy.

i. Records of all maintenance performed on LS1, LS2, LS1-BH and LS2-BH shall be maintained. These records shall include the date of the maintenance activity, the reason it was undertaken, and the results of the activity. Note that, among other activities, bag replacement in the baghouses is considered maintenance and shall be recorded appropriately. Such records shall include the number of bags replaced, the control efficiency rating of the bags, and the remaining number of back-up bags maintained on-site.

ii. At least once each day that the baghouses are in use, while the baghouses are in use, the differential pressure across each baghouse shall be recorded. Any readings outside the range specified pursuant to Condition III(f)(2)(A)(i) shall include an explanation of what was done diagnose and correct the deviation.

iii. Records of the training of the operators and maintenance staff to minimize the production of emissions during operation shall be maintained.

iv. Records of the data collected and results of all testing performed pursuant to Conditions III(f)(3)(G), (H), and (I) shall be maintained.

v. Records of the results of the weekly visible emissions observations required under Conditions III(f)(3)(G) shall be maintained and updated at the time of the observations.

5. Reporting Requirements: [20 DCMR 200.7]

A. The Permittee shall comply with the reporting requirements in Condition III(f)(3)(H) of this permit, in addition to complying with Condition II(f) as applicable. [20 DCMR 201]

B. The Permittee shall, within 48 hours of becoming aware of an out-of-service situation or malfunction of the baghouses that results in or may have resulted in excess emissions, report the incident to the Department pursuant to Condition II(f)(2).[20 DCMR 201]

C. Whenever it is necessary to shut down a baghouse without shutting down the rest of the process, the Permittee must report the planned shutdown to the Department at least 48 hours prior to shutdown. The prior notice must include, but is not limited to the following [20 DCMR 107.2]:

i. Identification of the specific facility to be taken out of service, as well as its location and permit number.

ii. The expected length of time that the air pollution control equipment will be out of service.

iii. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period.

iv. Measures that will be taken to minimize the length of shutdown period.

v. The reasons that it would be impossible or impractical to shutdown the source operation during the maintenance period.

Prior to undertaking this shutdown, the approval of the Department must be obtained.

g. Odor Scrubbers MPTOS and FDFOS: One (1) 44,800 scfm biotrickling filter, main process train odor scrubber (MPTOS) and One (1) 54,000 scfm dual stage final dewatering facility odor scrubber (FDFOS)

1. Emission Limitations:

A. Main Process Train Odor Scrubber (MPTOS)

The Permittee shall ensure that odor emissions from the thickened solids storage/blending pre-CAMBI dewatering centrifuges, dewatered biosolids storage, and digested biosolids storage are vented to MPTOS bioscrubber in accordance with Condition III(e)(2).

The Permittee shall ensure that the MPTOS odor scrubber is operated so as to achieve the following removal efficiencies or rates when operated to control odorous compounds per III(g)(3)(I)(ii) [20 DCMR 201]:

i. Total Reduced Sulfur Compounds: For inlet concentrations greater than 1 ppm, removal of a minimum of 50 percent of total reduced sulfur compounds from the MPT scrubber air stream or for inlet concentrations less than or equal to 1 ppm, a maximum outlet concentration of 0.5 ppmv total reduced sulfur compounds, whichever results in a higher outlet controlled emission rate; and

ii. H_2S: For inlet concentrations greater than 1 ppm, removal of a minimum of 95 percent of hydrogen sulfide from the MPT scrubber air stream or for inlet concentration less than or equal 1 ppm, a maximum outlet concentration of 0.05 ppmv of hydrogen sulfide, whichever results in a higher outlet controlled emission rate.

B. Final Dewatering Facilities Odor Scrubber (FDFOS)

The Permittee shall ensure that odor emissions from the post-CAMBI final dewatering belt filter presses are vented to the FDFOS scrubber in accordance with Condition III(e)(2) as applicable.

The Permittee shall ensure that the scrubbing systems covered by this permit are properly operated to maintain the following manufacture's specified levels of control [20 DCMR 201]:

i. Ammonia: For inlet concentrations greater than 20 ppmv, removal of a minimum of 99 percent of ammonia from foul air stream associated with the silo vent, sludge loading, centrifuge vent and other related dewatering activities associated with the final dewatering facilities(i.e. FDFOS air stream), or for inlet concentrations less than or equal to 20 ppmv, a maximum outlet concentration of 0.2 ppmv ammonia, whichever results in a higher outlet controlled emission rate;

ii. Total Reduced Sulfur compounds: For inlet concentrations greater than 1 ppmv, removal of a minimum of 80 percent of total reduced sulfur compounds from the FDFOS air stream, or for inlet concentrations less than or equal to 1 ppmv, a maximum outlet concentration of 0.2 ppmv total reduced sulfur compounds, whichever results in a higher outlet emission rate; and

iii. H_2S: For inlet concentrations greater than 10 ppmv, removal of a minimum of 99 percent of hydrogen sulfide from the FDFOS air stream, or for inlet concentrations less than or equal to 10 ppmv, a maximum outlet concentration of 0.1 ppmv of hydrogen sulfide, whichever results in a higher outlet emission rate.

C. Visible emissions shall not be emitted into the outdoor atmosphere from the MPTOS and FDOS systems or associated equipment covered by this permit. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of this condition, this condition shall not be applicable. [20 DCMR 201]

2. Operational Limitations:

A. The MPTOS and FDFOS scrubber systems shall remain operative and effective, and shall not be removed except as specified in Condition III(g)(5)(B) [20 DCMR 107.1] The MPTOS shall operate with only water flow (without organisms) whenever the inlet H_2S concentration is not in excess of 6.0 ppm as identified by the monitoring required in Condition III(g)(3)(I). Whenever the H_2S concentration exceeds 6.0 ppm, operation of the MPTOS with organisms shall commence as identified in Condition III(g)(3)(I). In order to ensure that the MPTOS and

FDFOS scrubber systems meet the requirements of this condition, the following steps shall be implemented:

i. The odor scrubber system shall be operated as designed and detailed in the permit application and the manufacturer's recommendations on scrubber operation, and as necessary to maintain the pollutant removal efficiencies or outlet concentrations listed in Condition III(g)(1)(A) and (B);

ii. The chemical storage tanks, including the sodium hypochlorite tanks, sodium hydroxide tanks, sulfuric acid tanks associated with the FDFOS or MPTOS and other auxiliary equipment shall be maintained in accordance with manufacturer's recommendations to minimize fugitive emissions of ammonia, H_2S and other malodorous compounds and to ensure proper scrubbing action;

iii. Scrubbing liquid must recirculate continuously at the designed flow rate as determined by the operational status of the constant speed pump so as to minimize chemical and water usage.

iv. The MPTOS media and biofilm are to be kept adequately moistened by continuously recirculating the counter current flowing water to ensure optimal microbial growth, proper nutrient utilization rate, and humidification of the foul air.

v. Permittee shall ensure that the biotrickling scrubber and the nutrient systems of the MPTOS are operated and maintained in accordance with manufacturer's recommendations for optimal operation.

vi. Chemical handling and utilization shall be done in a manner consistent with good engineering practice.

vii. The FDFOS scrubber solution pH shall be maintained within +/- 0.5 pH units from the set points of 2.0 and 9.5, at the first and second stages of the odor scrubbing system, respectively. Permit deviations occur when the system triggers an alarm at a pH of 5 for stage 1 and pH of 7 for stage 2. These set points may be changed based on the results of performance testing. Any such change must be approved in writing by the Department. Deviation levels may be changed by the Department if it is shown that the established levels do not ensure continuous compliance with the emission limits established in Condition III(g)(1)(B) of this permit.

viii. The FDFOS scrubber solution oxidation reduction potential (ORP) shall be maintained within +/- 20 mV from the set points of +600 mV, in the second stage of the odor scrubbing system. Permit deviations occur when the system triggers an alarm at ORP +400. The ORP set point may be changed based on

~~the results of performance testing. Any such change must be approved in writing by the Department. Deviation levels may be changed by the Department if it is shown that the established levels do not ensure continuous compliance with the emission limits established in Condition III(g)(1)(B) of this permit.~~

~~ix. The MPTOS bioscrubber shall be operated to maintain 17.5 seconds of residence time to ensure effective treatment of the foul air.~~

~~3.~~ ~~Monitoring and Testing Requirements:~~

~~A. The Permittee shall monitor the status and level of repair of the odor scrubber systems to ensure compliance with Condition III(g)(2)(A) of this permit.~~

~~B. The Permittee shall monitor the facility to ensure that odor, and other nuisance air pollutants are not emitted in such quantities as to create a violation of Condition II(b)(2) of this permit.~~

~~C. The Permittee shall inspect the chemical storage tanks, scrubbers, and auxiliary equipment on as-needed basis, but no less frequently than twice a year to ensure they are in good operational condition, and that they are maintained to minimize leakage of odorous air.~~

~~D. The Permittee shall monitor all performance metrics as detailed in the manufacturer's operational manual to ensure that the scrubbers operate as designed at all times.~~

~~E. The Permittee shall monitor the recirculation pump status (on/off), scrubber solution pH in both odor scrubber stages, the scrubber ORP in the second stage and the differential pressure across the packed section of the scrubber system to ensure compliance with Conditions III(g)(2)(A)(iii), (iv), (vii), and (viii) and Condition III(g)(3)(G).~~

~~F. The Permittee shall ensure that the pH and ORP systems for the FDFOS are calibrated in accordance with their manufacturer's specifications.~~

~~G. Whenever the differential pressure across the scrubber exceeds twice the normal operating level, the scrubber packing shall be inspected and cleaned in accordance with the manufacturer's recommendations. The scrubber packing and biofilm media shall be inspected and, if necessary, cleaned, at least once each year.~~

~~H. The Permittee shall inspect the demister within each scrubber system and clean, if necessary, at least once each calendar quarter for the first year of operation after issuance of this permit. The Permittee shall document the condition of the demister at the time of each inspection. If minimal cleaning is necessary, the~~

~~Permittee may submit documentation to the Department requesting a less frequent inspection and cleaning frequency. If justified, the Department may allow a reduced frequency of inspection and cleaning, but the frequency shall be no less frequent than semi-annually. If the documentation does not justify a less frequent schedule of inspection and cleaning, the Permittee shall maintain the quarterly inspection and cleaning frequency for the duration of the permit.~~

~~I. Permittee shall collect quarterly H_2S samples from the inlet to each MPTOS scrubber section (3 samples each, 6 in total) as follows:~~

~~i. If H_2S measurements exceed 6.0 ppm at any time, collect samples twice daily.~~

~~ii. If the H_2S measurements in excess of 6.0 ppm are sustained for 3 days, the scrubber must be seeded. Full start-up of the scrubber must be completed within two (2) weeks of the seeding (check immersion heater, install and calibrate new pH probes, check controls, etc.). Once seeded, daily measurements of H_2S concentration shall occur except as specified below.~~

~~iii. If the 6.0 ppm H_2S concentration is not sustained for more than 3 days, continue daily sampling for 10 days.~~

~~iv. Reduce frequency to weekly after 10 days of inlet H_2S concentration below 6.0 ppm.~~

~~v. After two (2) weeks of inlet H_2S concentrations measurements below 6.0 ppm, reduce sampling frequency to monthly.~~

~~vi. Reduce sampling to quarterly after two (2) months of inlet H_2S concentrations measurements below 6.0 ppm.~~

~~J. Within twelve (12) months of issuance of this permit, during normal operations of the odor scrubbers and feeding equipment, the Permittee shall conduct testing, using methods determined to be acceptable to the Department, to document compliance with the emission limits of Condition III(g)(1). The testing shall be performed in accordance with the following requirements:~~

~~i. One (1) original test protocol shall be submitted to the following address a minimum of thirty (30) days in advance of the proposed test date. The test shall be conducted in accordance with Federal and District requirements.~~

~~Chief, Compliance and Enforcement Branch~~
~~Air Quality Division~~
~~1200 First Street NE, 5th Floor~~
~~Washington DC 20002~~

ii. The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall finalize the test date with the assigned inspector in the Permitting and Enforcement Branch. The Department must have the opportunity to observe the test for the results to be considered for acceptance.

iii. The final results of the testing shall be submitted to the Department within sixty (60) days of the test completion. One (1) original copy of the test report shall be submitted to the address in Condition III(g)(3)(J)(i) above.

iv. The final report of the results shall include the emissions test report (including raw data from the test) as well as a summary of the test results and a statement of compliance or non-compliance with permit conditions to be considered valid. The summary of results and statement of compliance or non-compliance shall contain the following information:

1. A statement that the Permittee has reviewed the report from the emissions testing firm and agrees with the findings.

2. Permit number(s) and condition(s) which are the basis for the compliance evaluation.

3. Summary of results with respect to each permit condition.

4. Statement of compliance or non-compliance with each permit condition for compliance with which was tested.

v. The results of the testing must demonstrate to the Department's satisfaction that the emission units are operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance the Permittee shall propose corrective action(s). Failure to demonstrate compliance through the test may result in enforcement action.

K. In addition to the testing required pursuant to Condition III(g)(3)(J), the Permittee shall conduct and allow the Department access to conduct tests of air pollution emissions from any source as requested. [20 DCMR 502.1]

4. Record Keeping Requirements: [20 DCMR 200.7]

A. The Permittee shall maintain all records, including records of visual inspections, and samples taken from MPTOS necessary for determining compliance with this permit in a readily accessible location for five (5) years and shall make these records available to the Department upon written or verbal request.

B. At a minimum, the following information shall be recorded and maintained in accordance with Condition III(g)(4)(A) of this permit. All such records must be either initialed or signed by the person recording the information or maintained in a verifiable electronic system whose information can be certified as to its accuracy:

i. At least once daily records of:

1. Recirculation Pump status;

2. Differential pressure readings across the packed section of the scrubber systems;

3. pH readings for the first and second stages if applicable, of the scrubber systems; and

4. ORP readings in the second stage of the odor applicable scrubbing system.

ii. Records of all routine and non-routine maintenance performed on the scrubber systems. These records shall include a description of the problems being corrected, the maintenance activity, and a statement indicating whether or not the problem was corrected;

iii. Records of any unpermitted releases from the scrubber systems;

iv. Records of any equipment shutdowns related to improper operation of a control device and records of any control device malfunctions; and

v. Records of the training of the operators and maintenance staff to minimize the production of emissions during operation shall be maintained.

vi. Records of all MPTOS inlet H_2S concentration sampling.

C. The Permittee shall maintain a record of the following required preventive maintenance activities in order to demonstrate compliance with Conditions III(g)(1), III(g)(2)(A)(i), III(g)(3)(G) and (H):

i. Weekly Maintenance:

Documentation that any accumulated water from exhaust stack has been drained;

ii. Monthly Maintenance:

~~Documentation that any accumulated liquid from suction duct was checked for and, if present, drained;~~

~~iii. Quarterly Maintenance (or per a modified schedule as specified in Condition III(g)(3)(H):~~

~~Documentation that the demister within each scrubber was inspected and cleaned (when necessary), as well as documentation of the condition of the demister at the time of inspection;~~

~~iv. Semi-Annual Maintenance:~~

~~1. Verification that the scrubber and associated equipment are operating properly;~~
~~2. Documentation of the draining and flushing of scrubber sumps; and~~

~~3. Documentation that the sump level sight glass was cleaned.~~

~~v. Annual Maintenance:~~

~~Documentation of the inspection of scrubber packing and cleaning (as necessary), in accordance with Condition III(g)(3)(G).~~

~~The frequency of the above maintenance may be modified with the written approval of the Department. To obtain approval, the Permittee shall submit a written request with a technical justification for such a change.~~

~~D. Material Safety Data Sheets for all chemicals to be used in the scrubber system shall be kept at the chemical storage room at all times and be available to inspectors.~~

~~5. Reporting Requirements:[20 DCMR 200.7]~~

~~A. The facility shall, within 30 days of start-up, submit the initial differential pressure across the media at start-up. Thereafter, the value shall be used as a basis for determining the need to clean the media pursuant to Condition III(g)(3)(G).~~

~~B. Whenever it is necessary to shut down part of the odor control scrubber system without shutting down the rest of the process, the Permittee must report the planned shutdown to the Department at least 48 hours prior to shutdown by a method that will allow the Department to review the proposal prior to the shutdown. The prior notice must include, but is not limited to the following [20 DCMR 107.2]:~~

~~i. Identification of the specific facility to be taken out of service, as well as its~~

location and permit number;

ii. The expected length of time that the air pollution control equipment will be out of service;

iii. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;

iv. Measures that will be taken to minimize the length of shutdown period; and

v. The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.

Unless the Department objects, an automatic approval of the shutdown process is deemed exist.

C. The Permittee shall notify the Department orally within 24 hours of the time the Permittee learns of any deviation from the requirements of Conditions III(g) (1) and (2) above. The Permittee shall provide a written report of such deviations within 5 days to the Department. Each such written report shall include an explanation for the cause of the deviation to the best of knowledge of the Permittee.

D. All reports required pursuant to this permit shall be submitted to:

Chief, Compliance and Enforcement Branch
Air Quality Division
1200 First Street NE, 5th Floor
Washington DC 20002

h. Miscellaneous/Insignificant Activities:

1. The Department does not consider the "miscellaneous activities" (also commonly known as "insignificant activities") listed in Condition III(h)(2) to be significant sources when considered alone. However, they are subject to the General Regulatory Requirements (Condition I) and General Permit Conditions (Condition II) of this permit as well as the conditions specified below for each unit type.

2. The following miscellaneous activities [Make-Up Air Handling Units (MUAH) Less than 5 million Btu/hr heat input with equivalent combined full load of 33.11 MMBtu/hr and total space heat requirements of 94.8 MMCF/yr] are subject to Conditions III(h)(1), (3), and (4) (where applicable). *Note that if any individual unit(s) in the final design is to exceed* 5 *MMBTU/hr, a permit amendment will be required prior to construction.*

A. Final Dewatering Building: 12 units, 0.750 MMBtu/hr each, and 1unit,1.00 MMBtu/hr (10.00 MMBtu/hr total);

B. CHP Gas Condition Facility: 2 units, 0.70 MMBtu/hr each (1.40 MMBtu/hr total);

C. CHP Gas Blower Building: 1 unit, 0.25 MMBtu/hr total heat requirement;

D. CHP Turbine Plant: 3 units, 0.70 MMBtu/hr each (2.10 MMBtu/hr total);

E. MPT Pre-Dewatering Building: 2 units, 3.52MMBtu/hr each, and 1 unit 3.17 MMBtu/hr (10.21 MMBtu/hr total);

F. MPT Digester Building: 1 unit, 2.20 MMBtu/hr total heat requirement; and

G. Sludge Screening Building: 1 unit, 2.38 MMBtu/hr total heat requirement; and

H. Solids Blending Building: 4 units, 1.145 MMBtu/hr each (4.58 MMBtu/hr total)

3. The total fuel usage of the space heaters, also known as Make-Up Air Handling Units (MUAH), shall not exceed 94.8 MMCF of natural gas per 12 month rolling period. This limit only applies to the units listed under Condition III(h)(2) of this permit.

4. The Permittee must comply with the following with regard to the operation of the MUAH: [20 DCMR 201]

   A. The Permittee shall monitor monthly fuel records and rolling 12-month natural gas consumption records to ensure compliance with Condition III(h)(3). [20 DCMR 500.1]

   C. The Permittee must keep a log of fuel usage, updated at least monthly, showing the type and quantity of fuel used in all MUAHs using totalizing natural gas meters for buildings and units subject to this permit. These records shall kept on a 12 month rolling basis and be included with the annual report of emissions required by Condition II(f)(3). [20 DCMR 500.1]

If you have any questions, please call me at (202) 535-1747 or John Nwoke at (202) 724-7778.

Sincerely,

Stephen S. Ours, P.E.
Chief, Permitting Branch

SSO:JCN

cc: John C. Nwoke
Atakilti Tesfai