



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

JUL - 8 2016

Mr. Maxwell George
Environmental Affairs Manager
Virgin Islands Water and Power Authority
P.O. Box 1450
St. Thomas, U.S. Virgin Islands 00804

Re: Final Significant Modification-Prevention Significant Deterioration (PSD) Permits- Continuous Opacity Monitors (COMs)-Virgin Islands Water and Power Authority's (VIWAPA) -St. Thomas and St. Croix

Dear Mr. George:

On March 18, 2015, the Region 2 Office of the U.S. Environmental Protection Agency (EPA) received VIWAPA's letter and a consolidated briefing package requesting multiple changes to the St. Thomas permits (STT) and one change to the St. Croix permits (STX). VIWAPA made its initial request on October, 21, 2014, provided additional information on January 30, 2015 and during a meeting on February 5, 2015. The requests are related to: 1) Sulfuric Acid Mist emission measurement and limit for the Combustion Turbine Unit 23 (STT); 2) Particulate matter emission limit for the Combustion Turbine Unit 18 (STT); 3) Volatile Organic Compound emission limit for Combustion Turbine Unit 18 (STT); 4) Removal of Continuous Opacity Monitoring requirements from multiple St. Thomas and St. Croix units and, 5) PSD non-applicability analyses for installing two duct burners (STT). Today's final permit modifications cover only the request to remove conditions requiring that VIWAPA operate COMs on all the PSD permitted combustion turbines and Heat Recovery Steam Generators (HRSG).

On March 31, 2016, EPA issued a preliminary determination, subject to public review, to approve the modifications to the multiple PSD permits for the St. Thomas and St. Croix plants. No comments were submitted to EPA during the 30-day public review period, which commenced upon publication of EPA's preliminary determination in the *Virgin Islands Daily News* on April 13, 2016, and expired on May 12, 2016. As such, no changes have been made from the draft modified PSD permits issued to VIWAPA on March 31, 2016, to the final permits that are being issued today. This letter and its enclosures represent EPA's final permit decision. A project description and summary of the control technologies to be used are provided in Enclosure I. The permit conditions are delineated in Enclosure II. This final permit decision becomes effective today. Since no comments were received during the public comment period, this permit may not be challenged under the Consolidated Permit Regulations, codified at 40 CFR Part 124, that apply to EPA's processing of this permit decision and no judicial review is available. Notice of the Agency's final action with respect to this permit will be published in the Federal Register. Under Section 307(b) of the Act, this final Agency action shall not be subject to judicial review in civil or criminal proceedings for enforcement.

If you have any questions regarding this letter, please call Mr. Steven C. Riva, Chief, Permitting Section, Air Programs Branch, at (212) 637-4074.

Sincerely,



John Filippelli, Director *Ar*
Clean Air and Sustainability Division

Enclosures

cc: Verline Marcellin, VIDPNR
Angela Arnold, VIDPNR
Michael Lukey, ARCADIS

Enclosure I

Virgin Islands Water and Power Authority (VIWAPA) Combustion Turbine (Unit 23), St. Thomas Final Modified Permit (July, 2016)

Today's (July, 2016) Revision

The Virgin Islands Water and Power Authority (VIWAPA) is requesting that EPA modify the existing permits for the Combustion Turbine Unit 23 located in St. Thomas. Today's modification will remove the requirements that VIWAPA operate Continuous Opacity Monitors on Unit 23 and instead comply with the State Implementation Plan's opacity requirements with EPA's Method 9 and 22. Also, in today's action EPA is modifying the permit to update all the addresses where the reports should be submitted.

Project Description (2003):

On June 9, 2003, VIWAPA proposed to install and operate a new 39 megawatt (MW) GE Frame 6 simple cycle gas turbine unit, also known as Unit 23, at its Krum Bay site in St. Thomas, Virgin Islands. This Unit 23 will produce electricity from a General Electric Frame 6 combustion gas turbine. The gas turbine will use number 2 distillate oil (0.15% sulfur) as the only fuel. The combustion turbine generator will consist of a compressor, combustor, turbine, and generator. Energy is generated at the combustion turbine by drawing in ambient air with the compressor, heating the air by means of burning fuel and expanding the hot combustion gases in a 4-stage turbine. The VIWAPA St. Thomas facility currently includes two existing steam electric generating boilers (Units 11 and 13), five combustion turbines (Units 12, 14, 15, 18, and 22) and one heat recovery steam generator (HRSG) that is operated in a combined cycle mode with Units 15 and 18 and the existing steam generators. The boilers use no. 6 fuel oil whereas all the turbines and the HRSG use no. 2 distillate fuel oil. The current rated capacity at this site is 154 MW. The emission control and air quality impacts analyses are provided below.

PSD-Affected Pollutants Emitted for Unit 23: The facility is classified as a major stationary source because it has the potential to emit more than 100 tons per year of at least one pollutant regulated by the Clean Air Act. The proposed facility is subject to the Prevention of Significant Deterioration of Air Quality (PSD) standards for oxides of nitrogen (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), particulate matter (PM), particulate matter less than 10 microns (PM₁₀), and volatile organic compounds (VOC). Table I summarizes this new unit's PSD analyses.

VIWAPA Unit 23 Emissions and Control Equipment: The proposed Unit will employ Best Available Control Technology to control the pollutants described above. Table I-A provides the summary of proposed emissions and controls for this Unit.

Combustion Turbine Unit 23:

Emissions of nitrogen oxides will be controlled by the use of a steam or water injection process into the combustion system. The steam/water to fuel ratio for each unit shall be established during performance testing and shall be incorporated into the Title V Permit.

Emissions of sulfur dioxide shall be controlled by the use of low sulfur No.2 fuel oil in which the sulfur content will not exceed 0.15 % by weight.

Emissions of carbon monoxide, particulate matter less than 10 microns, and volatile organic compounds will be controlled by implementing good combustion practices. VIWAPA shall be required to operate each turbine within the designed combustion parameters of the General Electric Frame 6 combustion turbine. In addition, VIWAPA shall be required to monitor the combustion temperature and fuel flow rate of each turbine, and VIWAPA shall be required to maintain each turbine in good working order.

VIWAPA Unit 23- St. Thomas

Table I. PSD Analyses for Unit 23

POLLUTANT	PSD SIGNIFICANT EMISSION RATE TONS/YEAR	VIWAPA Unit 23 EMISSIONS TONS/YEAR	PSD APPLICABLE
Nitrogen Oxides (NO _x)	40	592	Yes
Sulfur Dioxide (SO ₂)	40	313	Yes
Sulfuric Acid Mist (H ₂ SO ₄)	7	33	Yes
Particulate Matter - Total (PM)	25	131	Yes
Particulate Matter less than 10 microns (PM ₁₀)	15	131	Yes
Carbon Monoxide (CO)	100	355	Yes
Volatile Organic Compounds (VOC)	40	66	Yes
Lead	0.6	0.027	No

Table I-A. Emissions and Controls

POLLUTANT	EMISSION LIMITS FOR NEW TURBINE	EMISSION CONTROL FOR NEW TURBINE
SO ₂	71.4 lbs/hr	LOW SULFUR No. 2 FUEL (0.15%)
NO _x	42-84 PPMDV (78-135 lbs/hr)	WATER/STEAM INJECTION
Sulfuric Acid	7.5 lbs/hr	LOW SULFUR No. 2 FUEL (0.15%)
PM/PM-10	30 lbs/hr (PM) 30 lbs/hr (PM-10)	COMBUSTION CONTROL
CO	174 PPMDV @ MIN LOAD 81 lbs/hr	COMBUSTION CONTROL
VOC	53 PPMDV @ MIN LOAD	COMBUSTION CONTROL

*All ppmdv emission limits are corrected to 15% oxygen

VIWAPA St. Thomas Unit 23- Air Quality Analyses

The following Tables summarize the air quality impact analyses performed for the permit of Unit 23. Table II illustrates the impacts due solely from Unit 23 emissions. It shows that the impacts from Unit 23 are greater than the significant impact levels which means that a cumulative source analysis of the PSD Increment and NAAQS is required (in this case for PM10, SO₂, and NO_x). It also shows that impacts from Unit 23 are below the PSD ambient air monitoring de minimis levels which allows EPA to exempt the facility from conducting a one year, pre-permit application monitoring analysis. Table III illustrates compliance with the PSD Increment and NAAQS in St. Thomas due to the combined impacts from Unit 23, the other Units at the VIWAPA St. Thomas facility and other surrounding facilities. Table IV illustrates compliance with the Class I Area PSD Increment and NAAQS in St. John due to the combined impacts from Unit 23, the other Units at the VIWAPA St. Thomas facility and other surrounding facilities. Class I areas have stricter Increment standards due to their pristine nature.

Below are some key points to note regarding the air quality analyses in Table II - IV:

- SO₂ impacts are based on 0.2 % sulfur in fuel although this number was reduced to 0.15% in this permit.
- Impacts from Unit 22 and Unit 23 are based on the operating load which lead to worst case impacts. This was determined to be under idle loads for all pollutants except SO₂ which had worst case impacts at 100% load. All other Units in the cumulative analysis were modeled at 100% load.

- NOx impacts from VIWAPA Units 15, 18, 22 and 23 are based on a Nitrogen in fuel concentration of 1000ppm by weight.
- EPA determined that VIWAPA may be exempt from installing preconstruction ambient air monitors since the impacts from the proposed Unit 23 are below the PSD Preconstruction Monitoring de minimis levels.
- The model used to determine the impacts is the EPA proposed model, AERMOD.

Table II. Air Quality Impacts due to Unit 23 Only (Concentrations in ug/m3)

Pollutant Averaging Period	Modeled Impact Unit 23	Significant Impact Level	Increment & NAAQS Required?	Monitoring Exemption Level	Existing Monitored Concentration	VIWAPA Exempt from Installing Monitor?
PM ₁₀ 24 hour Annual	9 1	5 1	YES YES	10 ---	97 28	YES
SO ₂ 3 hour 24 hour Annual	27 11 3	25 5 1	YES YES YES	--- 13 ---	Not Available Not Available 5	YES
NO ₂ Annual	5	1	YES	14	8	YES
CO 1 hour 8 hour	118 52	2000 500	NO NO	--- 575	15,463 6,367	YES

Table III . Cumulative Source PSD Increment and NAAQS in St. Thomas

Pollutant Averaging Period	Modeled Class II Increment	Class II Increment	Modeled + Background NAAQS*	NAAQS
PM ₁₀ 24 hour Annual	22 5	30 17	120 36	150 50
SO ₂ 3 hour 24 hour Annual	91 18 10	512 91 20	554 145 40	1300 365 80
NO ₂				

Annual	15	25	65	100
CO				
1 hour	NonApplicable	NonApplicable	16,124	40,000
8 hour	NonApplicable	NonApplicable	6,698	10,000

* Except for SO₂, this column represents the sum of the total modeled impacts from all facilities on St. Thomas (VIWAPA and other nearby facilities) plus a measured value obtained from a representative monitor to account for emissions from any unmodeled source (e.g., mobile sources). Since there is no representative SO₂ monitor in the area, VIWAPA requested a waiver from the preconstruction ambient air monitoring requirements for this pollutant. Since the modeled impacts from the new unit 23 are below the PSD preconstruction monitoring de minimis levels, and all major sources of SO₂ are accounted for in the modeling analysis and shown to be well below the NAAQS, EPA granted the waiver request.

Table IV. Cumulative Source PSD Increment and NAAQS in St. John National Park - Class I Area

Pollutant Averaging Period	Modeled Impact Unit 23	Significant Impact Level	Increment & NAAQS Required?	Modeled Class 1 Increment	Allowable Class 1 Increment	Modeled NAAQS	Allowab. NAAQS
PM ₁₀ 24 hour Annual	0.13 0.0007	0.3 0.15	NO	1.3 0.4	8 4	NonAppl	150 50
SO ₂ 3 hour 24 hour Annual	1.7 0.34 0.002	1 0.2 0.08	YES	4.4 0.8 0.3	25 5 2	9.11 1.55 0.35	1300 365 80
NO ₂ Annual	0.0018	0.1	NO	.01	2.5	1.9	100

ENCLOSURE II
Final Modified Permit
July, 2016

Virgin Islands Water and Power Authority (VIWAPA), St. Thomas
Unit 23- GE Frame 6

I. Unit 23-- 39 MW General Electric Frame 6 Combustion Turbine)- Emission Limits

A. Fuel Oil Usage Limit

1. The total fuel usage for Unit 23 shall not exceed 30,283,320 gallons during any consecutive 365-day period. Daily compliance shall be determined by adding the amount of fuel oil used during each calendar day to the total quantity of fuel oil used in the preceding 364 calendar days.
2. The maximum heat input shall not exceed 484 million British thermal units per hour (MMBTU/hr).
3. The maximum fuel consumption rate shall not exceed 3,457 gallons per hour (gal/hr).
4. The type of fuel is limited to No. 2 fuel oil or distillate fuel oil with a sulfur content of no more than 0.15% sulfur by weight and a nitrogen content of no more than 1000 ppm nitrogen by weight.
5. Tests for percent sulfur in fuel shall be conducted using testing methods established in 40 CFR 60.335. The test for nitrogen in fuel oil can be any one of the ASTM methods from ASTM D6366-99, D4629-02, or D5762-02. VIWAPA shall test for the fuel's nitrogen content daily. The fuel sample shall be drawn from the day or the holding tank that supplies fuel oil to this unit.
6. The maximum capacity of Unit 23 shall be defined as the vendor's design capacity of 39 MW.
7. Percent load shall be determined by the ratio of the actual load in MW to the maximum capacity in MW. The maximum capacity of Unit 23 shall be determined in accordance with Condition (I)(A)(6) above.
8. Unit 23 shall not operate at a capacity of less than 25% except during periods of startup and shutdown as specified in paragraphs II B H and II B I.

B. Sulfur Dioxide (SO₂)/Sulfuric Acid Mist

1. Best Available Control Technology (BACT) is the use of No. 2 fuel oil with a sulfur content of no more than 0.15% sulfur by weight.

2. The sulfur dioxide emissions shall not exceed 71.4 pounds per hour (lbs/hr) at all times. The sulfuric acid mist emissions shall not exceed 7.5 lbs/hr.
3. Initial compliance with the above emission limit shall be demonstrated by stack tests using EPA Reference Method 20 (40 CFR 60 Appendix A). The initial stack test shall be conducted at various loads. These tests shall be conducted according to a written protocol approved by EPA prior to any testing and the requirements in Section II of this permit. Three test runs shall be conducted at four load conditions and compliance shall be based on the average SO₂ emission rate of these test runs. VIWAPA shall demonstrate subsequent compliance with the SO₂ emission rate by calculating emissions based on the maximum delivered fuel sulfur content for the prior 12 months and the maximum hourly usage rate for the week. In these calculations, VIWAPA shall assume that all sulfur is converted to SO₂.

B. Nitrogen Oxides (NO_x)

1. BACT is the use of water injection to control NO_x emissions. VIWAPA must use water injection at all times except during periods of startup and shutdown where the load is less than 25% of capacity.
2. NO_x Emission Limits

NO_x emissions shall not exceed the following at any time:

- a) NO_x emissions shall not exceed 135 lbs/hr calculated as NO₂; and
- b) Concentration of NO_x in the exhaust gas shall not exceed by volume (ppmdv), on a dry basis, corrected to 15% oxygen (as determined by continuous emissions monitoring) on an hourly average basis as follows:

NO_x (ppm) = 42, when fuel oil's nitrogen content is 150 ppm or below; or

NO_x (ppm) = 42 + [(N/10,000)-0.015] x 470.59, where N is the fuel oil's nitrogen content in ppm and it is above 150 ppm

The NO_x concentration value obtained from this equation then shall be used in the equation in 40 CFR 60, Appendix A, Method 19 to calculate the pounds per hour NO_x emission limit.

- c) The compliance with NO_x emissions on an hourly average basis shall be determined as follows: VIWAPA shall analyze the nitrogen content of the fuel oil

daily in accordance with condition (I)(A)(5). The daily nitrogen content of the fuel oil in ppm shall be used to calculate the maximum allowable hourly NO_x emissions using the equations specified in (I)(C)(2)(b) and shall remain in effect until the next fuel sample is collected thereby repeating this process. VIWAPA shall also obtain averages of the measured nitrogen oxide concentrations (in ppm_{dv}) and lbs/hr rate for every hour.

3. The NO_x emission rate shall be tested using EPA Reference Method 20 (see 40 CFR Part 60 Appendix A). These tests shall be conducted according to a written protocol approved by EPA prior to any testing and the requirements in Section II of this permit. Three test runs shall be conducted at four different load conditions (including the minimum point in the range and peak load) and compliance shall be based on the average NO_x emission rate of these test runs.
4. The water-to-fuel ratio for various load conditions will be established during the initial performance testing and reestablished or verified during any subsequent testing. The water-to-fuel ratio values contained in the initial performance test reports required to be submitted to EPA, will become enforceable condition of this permit. In addition, they will be incorporated into VIWAPA's operating permit issued by the Virgin Islands Department of Planning and Natural Resources.

D. Carbon Monoxide (CO)

1. BACT for CO is the use and maintenance of good combustion practices at all times.
2. Emission Limits

CO emissions shall not exceed at any time:

- a) CO emissions shall not exceed 81 lbs/hr; and
- b) CO emissions at various percent load levels shall not exceed the following concentrations corrected to 15% oxygen as determined by continuous emission monitoring (see Condition (I)(A)(7) for the definition of percent load):

Percent Load	CO Concentration (ppm _{dv} @ 15% O ₂)
0 - 29	174
30-79	44
80-99	18
Max	14

3. The CO mass emission rates at various loads will be tested using EPA Reference Method 10 (40 CFR Part 60, Appendix A). These tests shall be conducted according to a written protocol approved by EPA prior to any testing and the requirements in Section II of this permit. Three test runs shall be conducted for each of the four load conditions (percent loads) indicated in the above table and compliance for each operating mode shall be based on the average CO emission rate of these three test runs.

E. Particulate Matter/PM₁₀

1. BACT for PM/PM₁₀ is the use and maintenance of good combustion practices at all times.

2. Emission Limits

The PM/PM₁₀ emissions shall not exceed 30 lbs/hr.

3. The PM emission rate shall be determined using EPA Reference Method 5. The PM₁₀ emission rate shall be determined using EPA Reference Method 201/201A and 202 (40 CFR Part 51, Appendix M). VIWAPA may substitute EPA Reference Method 201/201A with Method 5 upon EPA's approval of the test protocol. These tests shall be conducted according to a written protocol approved by EPA prior to any testing and the requirements in Section II of this permit.. Three test runs shall be conducted at four load conditions and compliance shall be based on the average emission rate of these three test runs.

F. Opacity

Based on the procedures in 40 CFR Part 60, Appendix A, Method 9, the Permittee shall not discharge into the atmosphere any air contaminants with opacity greater than 17 percent except for 3 minutes in any consecutive 30-minute period during which 40 percent shall not be exceeded.

Monitoring and Corrective Action: The Permittee shall conduct daily visual emissions inspections when the units are operating during daylight hours. Visual inspections shall consist of a visual observation of each stack and determination of visible emissions using 40 CFR Part 60, Appendix A, Method 22. If any visible emissions are observed, the Permittee shall do the following:

Within four hours of observing visible emissions, the Permittee shall conduct an opacity test using a certified opacity reader in accordance with Method 9. If the certified visible emissions reading exceeds the 17 percent opacity limit referenced above, then permittee shall verify that the equipment and/or control device causing the visible emissions or opacity is operating

according to the manufacturer specifications. If the equipment or control device is not operating properly, the Permittee shall take a corrective action immediately to eliminate the opacity exceedance. In the event that the exceedance of the 17% opacity standard is not eliminated following immediate implementation of the corrective action, the Permittee shall continue to take corrective actions until the permittee has successfully corrected the opacity problem.

After an initial corrective action is taken, the Permittee shall perform an opacity check via a certified opacity reader in accordance with Method 9 within 24 hours. Such test shall be conducted each day until the permittee has successfully corrected the opacity problem.

Recordkeeping: The Permittee shall maintain records of the visible emissions readings under Method 22 and any opacity tests/inspections under Method 9. If visible emissions or opacity are observed, then records of those readings and all corrective actions shall be maintained.

Reporting: The Permittee shall report any exceedance of the 17 percent opacity limit in the quarterly report. If no exceedance of this permit term occurs, a statement as such shall be included in the quarterly report.

VOC

1. BACT for VOC is the use and maintenance of good combustion practices at all times.
2. Emission Limits

VOC emissions shall not exceed the following at any time:

- a) VOC emissions shall not exceed 15 lbs/hr measured as carbon; and
- b) VOC emissions shall not exceed the following concentrations at the various percent load levels corrected to 15% oxygen (see Condition (I)(A)(7) for the definition of percent load):

Percent Load	Concentration of VOC (ppmdv @ 15% O ₂)
0 - 29	53
30-Max	9

3. The emission rates of VOC will be tested using EPA Reference Method 25A (40 CFR Part 60, Appendix A) and the requirements in Section II of this permit. VIWAPA may subtract methane and ethane emissions using EPA Reference Method 18 from the Method 25A VOC emission determination. These tests shall be conducted according to a written protocol approved by EPA prior to any testing. Three test runs

shall be conducted at four load conditions (percent loads) indicated in the above table and compliance shall be based on the average VOC emission rate of these three test runs.

II Unit 23 (39 MW- General Electric Frame 6) Testing Requirements

VIWAPA shall conduct all performance tests for Unit 23 in accordance with the following:

- A. Within 60 days after achieving maximum production, but no later than 180 days after initial startup as defined in 40 CFR Part 60.2, VIWAPA shall conduct performance stack tests and submit stack test results, on Unit 23 for SO₂, NO_x, PM, PM₁₀, CO, VOCs, and opacity in accordance with the test methods published in 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M.
- B. At least 60 days prior to the actual performance stack test, VIWAPA shall submit to the EPA for approval a Quality Assurance Project Plan (stack test protocol). The Quality Assurance Project Plan shall contain a detailed description of the sampling point location, sampling equipment, sampling and analytical procedures, data-reporting forms, quality assurance procedures and operating conditions for such tests must be submitted to the EPA. A Quality Assurance Project Plan that does not have EPA approval may be grounds to invalidate any test and require a re-test.
- C. Notification of the stack test must be given to EPA and VIDPNR at least 30 days prior to actual testing.
- D. Provide permanent sampling and testing facilities as may be required by the EPA to determine the nature and quantity of emissions from Unit 23. Such facilities shall conform with all applicable laws and regulations concerning safe construction and safe practice.
- E. Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.
- F. Additional performance tests may be required at the discretion of the EPA for any or all of the above pollutants.
- G. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purposes of a performance test.
- H. Start-up for Unit 23 is defined as a period beginning with the turbine ignition to the generator loading to 25% load. The start-up process shall not exceed 16 minutes in duration.
- I. Shutdown for Unit 23 is defined as a period beginning to reduce load from 25% to bringing turbine to no load and zero speed. The shutdown process shall not exceed 20

minutes in duration.

III Unit 23 (39 MW- General Electric Frame 6)- Monitoring Requirements

A. Unit 23

1. Within 180 days of the initial startup of Unit 23 and thereafter, VIWAPA shall install, calibrate, maintain and operate continuous emission monitors or monitoring systems to measure stack emissions and operating parameters indicated below:
Continuous Emission Monitors (CEMs): CO, O₂ and NO_x,
Continuous Monitors: Volumetric stack gas flow rate, stack temperature, water-to-fuel ratio, and fuel flow rate.
2. Not less than 90 days prior to the date of startup of Unit 23, VIWAPA must submit to the EPA a Quality Assurance Project Plan for the certification of the CEM systems. CEM performance testing may not begin until the Quality Assurance project Plan has been approved by EPA.
3. Within 180 days of the initial startup of Unit 23, VIWAPA shall install, calibrate and test each continuous emission monitor (CEM) and recorder listed above. Monitors must comply with EPA performance and siting specifications pursuant to 40 CFR Part 60, Appendix B, Performance Specifications 1-4. Equipment specifications calibration and operating procedures, and data evaluation and reporting procedures shall be submitted to EPA in a performance Specification Test protocol. VIWAPA shall permit the on-site auditing of the CEMs by independent agents of EPA. Data collected from the CEMs will be quality controlled and quality assured in accordance with the procedures specified in 40 CFR Part 60 Appendix F and Method 203.
4. VIWAPA shall submit a written report to EPA of the results of all monitor performance specification tests conducted on the monitoring system(s) within 45 days of the completion of the tests. The continuous emission monitors must meet all the requirements of the applicable performance specification test in order for the monitors to be certified.
5. Logs shall be kept and updated in the specified time frame to record the following:
 - a) the amount of water in gallons per hour used to control NO_x emissions and the water-to- fuel ratio on an hourly basis;
 - b) the No. 2 fuel oil burned in gallons on an hourly and annual (rolling 365-day) basis;
 - c) hours of operation for Unit 23 on a daily basis;
 - d) exceedance of emission limits determined by continuous monitoring measured in

the appropriate units;

e) the sulfur and nitrogen content of all fuel oil burned and the SO₂ emission calculations; and

f) the amount of electrical output in MW on an hourly basis

B. All continuous monitoring records and logs specified in this section must be maintained for at least five years from the date of measurement and made available upon request.

IV. Unit 23 (39 MW- General Electric Frame 6) Reporting Requirements

A. VIWAPA shall conduct performance stack tests and submit stack test results within 60 days after achieving maximum production, but no later than 180 days after initial startup as defined in 40 CFR 60.2 in accordance with 40 CFR 60.8(a).

B. VIWAPA shall submit a written report of all excess emissions, expressed in both ppm and lbs/hr, to EPA for every calendar quarter. All quarterly excess emission reports shall be postmarked by the 30th day following the end of each quarter. The information specified below shall be included in the reports:

1. Specific identification of each period of excess emissions that occurred during start-ups, shutdowns, and malfunctions of the affected facility.
2. The nature and cause of any malfunction (if known) of the affected facility and the corrective action taken or preventative measures adopted.
3. For an excess emissions due to CEM malfunction, provide the date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repair or adjustments.
4. When no excess emissions have occurred or the CEM system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
5. The results of quarterly monitoring performance audits, as required in 40 CFR Part 60, Appendix F (including the Data Assessment Report) and all reporting specified in 40 CFR 60.7 including the submission of excess emissions summary sheets and monitor downtime summary sheets.

C. Upsets/Malfunctions:

1. Malfunction means any sudden, infrequent, and not reasonably preventable failure of an air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or

careless operation are not malfunctions.

2. All upsets/malfunctions must be reported by telephone within 24 hours to the VIDPNR office listed above. A follow-up letter describing the incident, the amount of down time and the corresponding action taken must be submitted within 5 calendar days to Director, Division of Environmental Protection of the VIDPNR at the address listed above. A copy shall be submitted to Director, Caribbean Environmental Protection Division of the U.S. Environmental Protection Agency, Region 2 Office at the address listed below.
- D. Report any deviations that occur during any one hour average when the water to fuel ratio falls below the level needed to maintain compliance as established in Condition (I)(C)(5). These deviations should be made part of the excess emission reports.
- E. The quarterly excess emission reports required in this section shall be sent to the following EPA and VIDPNR personnel:
- Region 2 CEM Coordinator
Monitoring and Management Branch
U.S. EPA Region 2
2890 Woodbridge Avenue
Edison, New Jersey 08837
- The Chief, Multimedia Permit and Compliance Branch
Caribbean Environmental Protection Division
City View Plaza II - Suite 7000
48 Carr. 165 km1.2
Guaynabo, PR 00968-8073
- Director, Division of Environmental Protection
Virgin Islands Department of Planning and Natural Resources
Cyril E. King Airport, 2nd Floor
St. Thomas, U.S. VI 00802
- F. All emission reports, testing reports and start-up notifications required under this permit shall be submitted to Director, Caribbean Environmental Protection Division, U.S.EPA, Region 2 at the address listed above. VIWAPA shall conduct performance stack tests and submit three copies of stack test results within 60 days after achieving maximum production, but no later than 180 days after initial startup as defined in 40 CFR 60.2 in accordance with 40 CFR 60.8(a).
- G. In each report quarter, 95% quality data availability shall be maintained for all gaseous monitors. There shall be a quality assurance plan coupled with a calibration and maintenance program.

V. Unit 23 (39 MW- General Electric Frame 6) Other Permit conditions

- A. This facility is subject to the General Provisions of the NSPS (40 CFR Part 60, Subpart A), and the NSPS for Stationary Gas Turbines (40 CFR Part 60, Subpart GG).
- B. VIWAPA shall meet all other applicable federal, state, and local requirements, including those contained in the Virgin Islands State Implementation Plan (VISIP).
- C. This PSD Permit shall become invalid if construction; 1) has not commenced (as defined in 40 CFR Part 52.21(b)(9)) within 18 months after the approval takes effect; 2) is discontinued for a period of 18 months or more; or 3) is not completed within a reasonable time.
- D. The Regional Administrator (RA) shall be notified in writing of the anticipated date of initial startup (as defined in 40 CFR Part 60.2) of the combustion turbine not more than sixty (60) days nor less than thirty (30) days prior to such date. The RA shall be notified in writing of the actual date of both commencement of construction and startup of the combustion turbine within fifteen (15) days after such date.
- E. All equipment, facilities, and systems, including the combustion and electric generation units, installed or used to achieve compliance with the terms and conditions of this PSD Permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. The continuous emission monitoring systems required by this permit shall be on-line and in operation 95% of the time when turbines are operating.
- F. Pursuant to Section 114 of the Clean Air Act (Act), 42 U.S.C. § 7414, the Administrator and/or his/her authorized representatives have the right to enter and inspect for all purposes authorized under Section 114 of the Act. The permittee acknowledges that the Regional Administrator and/or his/her authorized representatives, upon the presentation of credentials shall be permitted:
 - 1. to enter at any time upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this PSD Permit;
 - 2. at reasonable times to access and to copy any records required to be kept under the terms and conditions of this PSD Permit;
 - 3. to inspect any equipment, operation, or method required in this PSD Permit; and
 - 4. to sample emissions from the source relevant to this permit.
- G. In the event of any changes in control or ownership of facilities to be constructed, this PSD Permit shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this PSD Permit and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator.