UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

May 28, 2020

Mr. Thomas Grace
Director-Environmental, Health and Safety
Caithness Long Island, LLC
565 Fifth Avenue, 29th Floor
New York, NY 10017-2478
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RE: Prevention of Significant Deterioration (PSD) of Air Quality Draft Permit Revision: Caithness Long Island Energy Center

Dear Mr. Grace:

On December 31, 2019, the United States Environmental Protection Agency, Region 2 Office (EPA) received Caithness Long Island Energy Center (CLIEC's) PSD permit application requesting revisions of the PSD permit issued by EPA on April 7, 2006 (2006 PSD Permit)[1].

CLIEC is a 346 megawatts (MW) combined-cycle electric power generating facility located in the town of Brookhaven, Suffolk county, New York, and consists of two identical combined cycle combustion turbines generators (CTGs) and their associated Heat Recovery Steam Generators (HRSG), an auxiliary boiler, a fuel gas heater, and an emergency fire pump. Both the CTGs and auxiliary boiler are permitted to combust natural gas as primary fuel and distillate fuel oil as the back-up fuel. The fuel gas heater and the HRSGs are permitted to combust only natural gas, and the emergency fire pump is permitted to combust only distillate fuel oil. Among other things, the 2006 PSD permit limits the sulfur content of the distillate fuel oil to 0.04 percent by weight (% by weight) and established limits on the amount of fuel oil (in gallons per any consecutive 12-month period) that can be combusted by each of the CTGs, the auxiliary boiler and emergency fire pump. The 2006 PSD Permit includes Best Available Control Technology (BACT) limits for the following air pollutants: nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM), particulate matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}), sulfur dioxide (SO_2) and sulfuric acid mist (H_2SO_4). In 2006, the EPA determined BACT for SO_2 and H_2SO_4 to be the use of natural gas as the primary fuel and the use of fuel oil with 0.04% sulfur content by weight as the backup fuel with restricted amounts of fuel oil usage on an annual basis. No add-on air pollution equipment controls were selected as BACT for SO_2 and H_2SO_4.

On December 31, 2019, CLIEC requested that EPA revise the 2006 PSD permit to lower the sulfur content of the distillate fuel oil from 0.04% to 0.0015% by weight. The basis for this request is a change in a SIP-approved New York regulation[2] which, as of July 1, 2016, requires a facility that uses distillate fuel oil, such as CLIEC, to use ultra-low sulfur diesel (ULSD) fuel oil with a sulfur-in-fuel content of 0.0015% by weight. CLIEC seeks to remove from the PSD permit: 1) the oil-fired mass emission rates of SO_2 and H_2SO_4 expressed in pounds per hour (lb/hr) and pounds per

[1] A copy of the 2006 PSD permit is available on the EPA website at https://www.epa.gov/caa-permitting/caithness-long-island-llc-brookhaven-ny
[2] 6 NYCRR Part 225-1.2 "Sulfur-in-fuel-limitations" with an effective date of April 5, 2013 and approved by the EPA into the SIP on August 23, 2018.

million British Thermal Units (lb/MMBTU) for the CTGs and 2) the oil-fired mass emission rates of SO_2 expressed in lb/MMBTU for the auxiliary boiler and emergency fire pump. The justification for this request is that New York's new sulfur in fuel limit of 0.0015 is more stringent than the sulfur content limit of 0.04% stipulated in the 2006 PSD permit. Compliance with the new 2016 NY sulfur-in-fuel limit will in effect restrict CLIEC's SO_2 and H_2SO_4 emissions, ensuring that the 2006 oil-fired emission rates cannot be exceeded. In fact, the lower sulfur-in-fuel limit would result in oil-fired emission rates of SO_2 and H_2SO_4 to be approximately 27 times lower than those permitted by the 2006 PSD permit. The revisions requested by CLIEC do not modify the limits on the amount of the fuel oil that can be combusted by each of the CTGs, auxiliary boiler or the emergency fire pump. Further, the proposed revisions will not result in any emission increases. On the contrary, they will result in significant decreases of SO_2 and H_2SO_4 emissions.

Based upon CLIEC's application, the EPA has made a preliminary determination to approve the CLIEC's PSD permit revisions subject to public review. A detailed description of the 2006 PSD Permit conditions altered by the proposed revisions is included in the attached Fact Sheet (Enclosure I) and is also available on the EPA's website at https://www.epa.gov/caa-permitting/caa-permits-issued-epa-region-2#pendingpsd. The draft permit conditions are found in Enclosure II.

Enclosure III is a copy of the public announcement that briefly describes the revisions to the 2006 PSD Permit, offers the public the opportunity to comment on the draft permit conditions, provides information on how to request a public hearing, and provides information on appeal procedures. The public announcement will be published on the EPA's website at https://www.epa.gov/caa-permitting/draft-prevention-significant-deterioration-air-quality-permit-revisions-caithness. Written comments concerning this draft PSD permit revision will be due by the date provided in the public announcement.

The final permit decision on CLIEC's PSD permit application will be issued after the close of the public comment period. If no comments are received, and the EPA makes no changes from the draft to the final permit, the final permit decision will become effective upon issuance and will be published in the Federal Register as a final agency action. If comments were received, or EPA made changes to the draft permit, the effective date of the permit will be based on the requirements of 40 C.F.R. §124.15. Please refer to the "Procedures for Decision making" regulations codified at 40 C.F.R. part 124 and the public announcement referenced above for more details on permit effective dates and appeal procedures. Upon completion of the administrative appeal process, if applicable, the final permit decision will be published in the Federal Register as a final Agency action. Judicial review of this final action is available in the United States Court of Appeals within 60 days from the date on which this action appears in the Federal Register. A petition for administrative review is a prerequisite to seeking judicial review of final agency actions.

If you have any questions, please call Ms. Suilin Chan, Chief, Permitting Section, Air Programs Branch, at 212-637-4019 or at chan.suilin@epa.gov.

Sincerely,

Richard Ruvo, Acting Director
Air and Radiation Division

Enclosures: I through III

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The Caithness Long Island Energy Center (CLIEC) Project is subject to the following conditions.

I. Permit Expiration

This PSD Permit shall become invalid if construction:

A. has not commenced (as defined in 40 CFR Part 52.21(b)(9)) within 18 months of the effective date of this permit;
B. is discontinued for a period of 18 months or more; or
C. is not completed within a reasonable time.

II. Notification of Commencement of Construction and Startup

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 facility 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 within fifteen (15) days after such date.

III. Plant Operations

All equipment, facilities, and systems 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 the emissions sources are operating. CLIEC shall demonstrate initial and continuous compliance with the operating, emission and other limits according to the performance testing and compliance assurance and all other requirements of this permit.

IV. Right to Entry

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:

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A. 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;

B. at reasonable times to access and to copy any records required to be kept under the terms and conditions of this PSD Permit;

C. to inspect any equipment, operation, or method required in this PSD Permit; and

D. to sample emissions from the source relevant to this permit.

V. Transfer of Ownership

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.

VI. Operating Requirements and Stack Parameters

A. Combustion Turbine and Duct Burner

1. The Siemens Westinghouse 501F combustion turbine shall be limited to a maximum design heat input rate of 2,221 million British Thermal Units per hour (MMBTU/hr) when firing natural gas and 2,125 MMBTU/hr when firing distillate oil, based on the higher heating value (HHV) of the fuel.

2. Except for startup and shutdown, the combustion turbine shall only be allowed to operate at or above 75% load.

3. While the combustion turbine (CT) is firing natural gas, the Heat Recovery Steam Generator (HRSG) may combust natural gas in the duct burner up to a maximum heat capacity of 494 MMBTU/hr, HHV.

4. While the combustion turbine is firing fuel oil and during fuel switching, the HRSG may combust natural gas in the duct burner up to a maximum heat input capacity of 369 MMBTU/hr, HHV.

5. The duct burner may operate a maximum of 4,380 hours during any 12-month consecutive period.

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6. For the purposes of this PSD permit, startup and shutdown shall be defined as:

    a. Startup for the combustion turbine is defined as the period beginning with the initial firing of fuel in the combustion turbine combustor and ending at the time when the load has increased to 75% of base load. Startups with the auxiliary boiler are defined as those starts in which the auxiliary boiler is operating, and the air-cooled condenser pressure is less than 15 inches of mercury absolute, the HP drum pressure is greater than or equal to 75 pounds per square inch (psig) and the IP drum pressure is at least 35 psig.

    b. For any startup without the auxiliary boiler, the duration shall not exceed 199 minutes for any given cold startup (>48 hours since shutdown), 199 minutes for any given warm startup (between 12 to 48 hours since shutdown) and 102 minutes for any given hot startup (12 hours or less since shutdown). For any startup with the auxiliary boiler, the duration shall not exceed 115 minutes for any given cold startup or warm startup and 102 minutes for any given hot startup.

    c. Shutdown for the combustion turbine is defined as the period of time beginning with the load decreasing from 75% of peak rated load and ending with the cessation of operation of fuel flow to the combustion turbine. The duration of any shutdown shall not exceed 90 minutes.

    d. During startup and shutdown of the combustion turbine, CLIEC shall comply with all mass emission limits in Section VIII of this permit except for NO_x, CO and PM/PM_{10}. CLIEC shall also comply with the opacity limit during each startup and shutdown. For NO_x, CO and PM/PM_{10}, CLIEC must comply with the emission limits specified in items e through l below during startup and shutdown. The total number of startup-shutdown cycles for the combustion turbine shall be limited to 260 during any consecutive 12-month period, out of which a maximum of 20 can be on oil.

    e. For natural gas startups without the auxiliary boiler, NO_x, CO and PM/PM_{10} total emissions shall be limited to 488 lbs, 2,813 lbs and 75 lbs, respectively for cold and warm startups. Compliance shall be determined by taking the total pounds per event as measured by the CEMS for NO_x and CO.

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f. For natural gas startups with the auxiliary boiler, NO_x, CO and PM/PM_{10} total emissions shall be limited to 191 lbs, 1,083 lbs and 51 lbs, respectively for cold and warm startups. Compliance shall be determined by taking the total pounds per event as measured by the CEMS for NO_x and CO.

g. For natural gas startups with or without the auxiliary boiler, NO_x, CO and PM/PM_{10} total emissions shall be limited to 127 lbs, 891 lbs and 26 lbs, respectively for a hot startup.

h. For fuel oil startups without the auxiliary boiler, NO_x, CO and PM/PM_{10} total emissions shall be limited to 1,136 lbs, 3,757 lbs and 745 lbs, respectively for cold and warm startups. Compliance shall be determined by taking the total pounds per event as measured by the CEMS for NO_x and CO.

i. For fuel oil startups with the auxiliary boiler, NO_x, CO and PM/PM_{10} total emissions shall be limited to 413 lbs, 1,781 lbs and 557 lbs, respectively for cold and warm startups. Compliance shall be determined by taking the total pounds per event as measured by the CEMS for NO_x and CO.

j. For fuel oil startups with or without the auxiliary boiler, NO_x, CO and PM/PM_{10} total emissions shall be limited to 277 lbs, 1,520 lbs and 266 lbs, respectively for a hot startup.

k. For each shutdown while the combustion turbine is firing fuel oil, NO_x, CO and PM/PM_{10} total emissions shall not exceed 156 lbs, 850 lbs and 113 lbs, respectively.

l. For each shutdown while the combustion turbine is firing natural gas, NO_x, CO and PM/PM_{10} total emissions shall not exceed 77 lbs, 511 lbs and 12 lbs, respectively.

7. At all times, including periods of startup, shutdown, and malfunction, CLIEC shall use best practices to maintain and operate the combustion turbine, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to EPA and/or NYSDEC which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the plant.

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8. Exhaust gases from the combustion turbine/duct burner shall be directed to a single stack that rises to 170 feet above grade with a flue diameter of 20 feet.

B. Auxiliary Boiler

1. The auxiliary boiler shall be limited to a maximum design heat input rate of 29.4 million British Thermal Units per hour (MMBTU/hr) when firing natural gas and 28.0 MMBTU/hr when firing fuel oil.

2. The auxiliary boiler may operate up to a maximum of 4,800 hours during any 12-month consecutive period.

3. As part of the total 4,800 hours of operation, the auxiliary boiler may fire fuel oil for a maximum of 400 hours during any 12-month consecutive period.

4. Exhaust gases from the auxiliary boiler shall be directed to a stack that rises to 170 feet above grade with a flue diameter of 2.0 feet.

C. Fuel Gas Heater

1. The fuel gas heater shall be limited to a maximum design heat capacity of 4.32 million British Thermal Units per hour (MMBTU/hr).

2. Exhaust gases from the fuel gas heater shall be directed to a stack that rises to 26 feet above grade with a flue diameter of 1.33 feet.

D. Emergency Diesel Fire Pump

1. The emergency diesel fire pump shall be limited to a maximum design heat capacity of 2.24 million British Thermal Units per hour (MMBTU/hr).

2. The emergency diesel fire pump may operate up to a maximum of 4 hours per day and 375 hours during any 12-month consecutive period.

3. Exhaust gases from the emergency diesel fire pump shall be directed to a stack that rises to 7.25 feet above grade with a flue diameter of 0.5 feet.

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VII. Fuel Requirements

A. Combustion Turbine and Duct Burner

1. The combustion turbine shall only burn natural gas and/or ultra-low sulfur distillate oil.

2. The duct burner shall only burn natural gas.

3. The natural gas burned in the combustion turbine and duct burner shall have a maximum sulfur content of 0.35 grains per 100 standard cubic feet (gr/dscf).

4. The sulfur content of the distillate oil burned in the combustion turbine shall not exceed 0.0015 percent by weight.

5. The maximum amount of the ultra-low sulfur distillate oil burned in the combustion turbine shall not exceed 10,928,571 gallons during any consecutive 12-month period.

B. Auxiliary Boiler

1. The auxiliary boiler shall only burn natural gas and/or ultra-low sulfur distillate oil.

2. With the exception of turbine startups, the auxiliary boiler shall not operate simultaneously with the combustion turbine.

3. The natural gas burned in the auxiliary boiler shall have a maximum sulfur content of 0.35 grains per 100 standard cubic feet.

4. The sulfur content of the distillate oil burned in the auxiliary boiler shall not exceed 0.0015 percent by weight.

5. The maximum amount of ultra-low sulfur distillate oil burned in the auxiliary boiler shall not exceed 95,714 gallons during any 12-month consecutive period.

C. Fuel Gas Heater

1. The fuel gas heater shall only burn natural gas with a maximum sulfur content of 0.35 grains per 100 standard cubic feet.

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D. Emergency Diesel Fire Pump

1. The emergency diesel fire pump shall burn ultra-low sulfur distillate fuel oil with a maximum sulfur content of 0.0015 percent by weight.

2. The maximum amount of the ultra-low sulfur distillate fuel oil burned in the fire pump shall not exceed 6,000 gallons during any 12-month consecutive period.

VIII. Emission Limitations

A. Combustion Turbine and Duct Burner

1. Oxides of Nitrogen (NO_x)

   a. The concentration of NO_x in the exhaust gas during natural gas firing of the CT both with and without supplemental firing of the HRSG shall not exceed 2.0 parts-per-million by volume on a dry basis (ppmvd), corrected to 15% oxygen and 0.0076 lbs/MMBTU.

   b. The NO_x concentration in the exhaust gas during fuel oil firing of the CT with no supplemental firing of the HRSG shall not exceed 6.0 ppmvd, corrected to 15% oxygen and 0.025 lbs/MMBTU.

   c. The NO_x concentration in the exhaust gas during fuel oil firing of the CT and supplemental firing of the HRSG shall not exceed 6.8 ppmvd, corrected to 15% oxygen and 0.027 lb/MMBTU.

2. Carbon Monoxide (CO)

   a. The concentration of CO in the exhaust gas during natural gas firing of the CT and no supplemental firing of the HRSG shall not exceed 2.0 ppmvd, corrected to 15% oxygen and 0.0047 lb/MMBTU.

   b. The concentration of CO in the exhaust gas during natural gas firing of the CT with supplemental firing of the HRSG shall not exceed 2.0 ppmvd, corrected to 15% oxygen and 0.0046 lb/MMBTU.

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c. The concentration of CO in the exhaust gas during fuel oil firing of the CT at loads between 90% and 100% load and no supplemental firing of the HRSG shall not exceed 2.0 ppmvd, corrected to 15% oxygen and 0.0050 lb/MMBTU.

d. The concentration of CO in the exhaust gas during fuel oil firing of the CT at loads greater than or equal to 75% and less than 90% load with no supplemental firing of the HRSG shall not exceed 4.0 ppmvd, corrected to 15% oxygen and 0.010 lb/MMBTU.

e. The concentration of CO in the exhaust gas during fuel oil firing of the CT and supplemental firing of the HRSG shall not exceed 4.0 ppmvd, corrected to 15% oxygen and 0.010 lb/MMBTU.

3. Particulate Matter/Particulate Matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM/PM_{10})

a. The mass emission rate of PM/PM_{10} in the exhaust gas during natural gas firing of the CT and no supplemental firing of the HRSG shall not exceed 11.7 lb/hr and 0.0055 lb/MMBTU.

b. The mass emission rate of PM/PM_{10} in the exhaust gas during natural gas firing of the CT and supplemental firing of the HRSG shall not exceed 17.0 lb/hr and 0.0066 lb/MMBTU.

c. The mass emission rate of PM/ PM_{10} in the exhaust gas during fuel oil firing of the CT at loads between 90% and 100% load and no supplemental firing of the HRSG shall not exceed 98.3 lb/hr and 0.051 lb/MMBTU.

d. The mass emission rate of PM/ PM_{10} in the exhaust gas during fuel oil firing of the CT at loads greater than or equal to 75% and less than 90% load with no supplemental firing of the HRSG shall not exceed 98.3 lb/hr and 0.061 lb/MMBTU.

e. The mass emission rate of PM/ PM_{10} in the exhaust gas during fuel oil firing of the CT and with supplemental firing of the HRSG shall not exceed 100.3 lb/hr and 0.041 lb/MMBTU.

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4. Sulfur Dioxide (SO_2)

   a. The gas fired mass emission rate of SO_2 in the exhaust gas with no supplemental firing of the HRSG shall not exceed 2.4 lb/hr and 0.0011 lb/MMBTU.

   b. The gas fired mass emission rate of SO_2 in the exhaust gas during supplemental firing of the HRSG shall not exceed 2.9 lb/hr and 0.0011 lb/MMBTU.

5. Sulfuric Acid Mist (H_2SO_4)

   a. The gas fired mass emission rate of H_2SO_4 in the exhaust gas with no supplemental firing of the HRSG shall not exceed 0.9 lb/hr and 0.0004 lb/MMBTU.

   b. The gas fired mass emission rate of H_2SO_4 in the exhaust gas during supplemental firing of the HRSG shall not exceed 1.1 lb/hr and 0.0004 lb/MMBTU

6. Opacity

   Opacity of emissions shall not exceed 20% except for one period of not more than 6 minutes in any 60-minute interval when the opacity shall not exceed 27%.

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B. Auxiliary Boiler

1. Oxides of Nitrogen (NO_x)

   a. NO_x emissions during natural gas firing of the auxiliary boiler shall be controlled through the use of low NO_x burners and flue gas recirculation to a rate no greater than 0.011 lbs/MMBTU.

   b. NO_x emissions during fuel oil firing of the auxiliary boiler shall be controlled through the use of low NO_x burners and flue gas recirculation to a rate no greater than 0.10 lbs/MMBTU.

2. Carbon Monoxide (CO)

   a. CO emissions during natural gas firing of the auxiliary boiler shall be controlled through good boiler design and good combustion practices to a rate no greater than 0.036 lb/MMBTU.

   b. CO emissions during fuel oil firing of the auxiliary boiler shall be controlled through good boiler design and good combustion practices to a rate no greater than 0.039 lb/MMBTU.

3. Particulate Matter/Particulate Matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM/PM_{10})

   a. PM/PM_{10} emissions during natural gas firing of the auxiliary boiler shall be controlled through the use of low sulfur fuels and shall not exceed 0.0033 lb/MMBTU.

   b. PM/ PM_{10} emissions during fuel oil firing of the auxiliary boiler shall be controlled through the use of low sulfur fuels and shall not exceed 0.015 lb/MMBTU.

4. Sulfur Dioxide (SO_2)

   a. SO_2 emissions during natural gas firing of the auxiliary boiler shall be controlled through the use of low sulfur fuels and shall not exceed 0.0005 lb/MMBTU.

5. Opacity

   Opacity of emissions shall not exceed 20% except for one period of not more than 6 minutes in any 60-minute interval when the opacity shall not exceed 27%.

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C. Fuel Gas Heater

1. Oxides of Nitrogen (NO_x)

   NO_x emissions from the heater shall be controlled with forced draft low NO_x burners to a rate not to exceed 0.050 lb/MMBTU.

2. Carbon Monoxide (CO)

   CO emissions shall be controlled by the use of good combustion controls and shall not exceed 0.098 lb/MMBTU.

3. Particulate Matter/Particulate Matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM/PM_{10})

   PM/PM_{10} emissions shall be controlled through the use of low sulfur fuel to a rate no greater than 0.0088 lb/MMBTU.

4. Sulfur Dioxide (SO_2)

   SO_2 emissions shall be controlled by the use of low sulfur fuels to a rate no greater than 0.0011 lb/MMBTU.

5. Opacity

   Opacity of emissions shall not exceed 20% except for one period of not more than 6 minutes in any 60-minute interval when the opacity shall not exceed 27%.

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D. Emergency Diesel Fire Pump

1. Oxides of Nitrogen (NO_x)

   NO_x emissions shall be controlled by the use of good combustion practices and shall not exceed 1.97 lb/MMBTU.

2. Carbon Monoxide (CO)

   CO emissions shall be controlled by the use of good combustion practices and shall not exceed 0.09 lb/MMBTU.

3. Particulate Matter/Particulate Matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM/PM_{10})

   PM/PM_{10} emissions shall be controlled by the use of low sulfur fuels and shall not exceed 0.03 lb/MMBTU.

4. Opacity

   Opacity of emissions shall not exceed 20% except for one period of not more than 6 minutes in any 60-minute interval when the opacity shall not exceed 27%.

IX. Pollution Control Equipment and Opacity Measurement

1. Each unit shall operate in accordance with its design specified parameters. This includes continuously operating all proposed control devices in a manner consistent with good air pollution control practice for minimizing emissions.

2. For the combustion turbine and duct burner, CLIEC shall install and utilize low NO_x burners for natural gas firing and a water injection system for fuel oil firing. CLIEC shall monitor the water to fuel ratio to ensure proper control of NO_x emissions. In addition to the low NO_x burners and water injection system, CLIEC shall install and continuously operate a Selective Catalytic Reduction (SCR) system for NO_x control.

3. CLIEC shall install an oxidation catalyst in the HRSG to control CO and VOC emissions from the combustion turbine and duct burner. The oxidation catalyst shall be utilized whenever the combustion turbine is operating.

4. CLIEC shall install low NO_x burners and flue gas recirculation to control NO_x emissions from the auxiliary boiler. These controls shall be used at all times when the auxiliary boiler is operating.

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5. CLIEC shall install forced draft low NO_x burners to control NO_x emissions from the fuel gas heater. The forced draft low NO_x burners shall operate whenever the fuel gas heater is operating.

6. While firing gaseous fuels, CLIEC shall conduct monthly opacity observations at the turbine, auxiliary boiler, and fuel gas heater emission points in accordance with 40 CFR Part 60, Method 9. The opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Alternatively, CLIEC may install and operate a Continuous Opacity Monitoring System that meets the requirements of 40 CFR Part 60.

7. While firing distillate fuel oil, CLIEC shall conduct daily opacity observations at the turbine and auxiliary boiler emission points in accordance with 40 CFR Part 60,Method 9. The opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Alternatively, CLIEC may install and operate a Continuous Opacity Monitoring System that meets the requirements of 40 CFR Part 60.

8. Each time the fire pump is tested for operational readiness, CLIEC shall use 40 CFR Part 60, Method 22 to determine if visible emissions are present. In addition, CLIEC shall conduct annual opacity observations at the fire pump emission point in accordance with 40 CFR Part 60, Method 9.

X. Continuous Emission Monitoring (CEM) Requirements

1. Prior to conducting the initial performance tests required by Section XI of this permit and thereafter, CLIEC shall install, calibrate, maintain, and operate:

   a. a CEM to measure and record stack gas carbon monoxide concentrations from the combustion turbine and duct burner stack. The system shall meet all applicable EPA monitoring performance specifications (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 4, and Appendix F).

   b. a CEM to measure and record stack gas NO_x (as measured as NO_2) concentrations from the combustion turbine and duct burner stack. The system shall meet all applicable EPA monitoring performance specifications (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F).

   c. a CEM to measure and record stack gas oxygen concentrations from the combustion turbine and duct burner stack. The system shall meet all applicable EPA monitoring performance specifications (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 3, and Appendix F).

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d. a continuous monitoring system to measure and record stack gas temperatures, fuel flow rate and water to fuel ratios from the combustion turbine. These systems shall meet all applicable EPA monitoring performance specifications.

e. a continuous monitoring system to measure and record fuel flow to the duct burner, fuel gas heater and auxiliary boiler. Upon EPA or NYSDEC request, CLIEC shall conduct a performance evaluation of the monitors.

2. Not less than 90 days prior to the date of startup of the combustion turbine/duct burner, CLIEC shall submit a written report to EPA of a Quality Assurance Project Plan for the certification of the combustion turbine and duct burners monitoring systems. Any comments provided to CLIEC by EPA on the written plan shall be responded to in an expeditious manner. Performance evaluation of the monitoring systems may not begin until the Quality Assurance Project Plan has been approved by EPA.

3. CLIEC shall conduct performance evaluations of the continuous monitoring systems during the initial performance testing required under this Permit or within 30 days thereafter in accordance with the applicable performance specifications in 40 CFR Part 60, Appendix B, and 40 CFR Part 52, Appendix E. CLIEC shall notify EPA at least 15 days in advance of the date upon which demonstration of the monitoring system(s) performance will commence.

4. CLIEC shall submit a written report to EPA of the results of all monitor performance specification evaluations conducted on the monitoring system(s) within 60 days of the completion of the tests. The monitoring systems must meet all the requirements of the applicable performance specification test in order for the monitors to be certified.

XI. Performance Testing Requirements

1. CLIEC shall conduct initial performance tests for the combustion turbine and duct burner, the auxiliary boiler and the fuel gas heater. Within 60 days after achieving the maximum production rate of each unit, but no later than 180 days after initial startup as defined in 40 CFR Part 60.2, CLIEC shall submit the results of the performance tests for NO_x, CO, PM/PM_{10}, SO_2 and H_2SO_4. Once the initial performance tests are complete, CLIEC shall conduct additional stack testing once every five years from the date of the initial performance test for the combustion turbine/duct burner and auxiliary boiler (for those pollutants for which a CEM is not required). All performance tests shall be conducted at base load conditions, with and without supplemental firing of the HRSG (for the combustion turbine), 75% load conditions and/or other loads specified by EPA.

2. Three test runs shall be conducted for each load condition and compliance for each operating mode shall be based on the average emission rate of these runs.

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3. At least 60 days prior to actual testing, CLIEC shall submit to the EPA a Quality Assurance Project Plan detailing methods and procedures to be used during the performance stack testing. A Quality Assurance Project Plan that does not have EPA approval may be grounds to invalidate any test and require a re-test.

4. CLIEC shall use the following test methods, or a test method which would be applicable at the time of the test and detailed in a test protocol approved by EPA:

    a. Performance tests to determine the stack gas velocity, sample area, volumetric flow rate, molecular composition, excess air of flue gases, and moisture content of flue gas shall be conducted using 40 CFR Part 60, Appendix A, Methods 1, 2, 3, and 4.

    b. Performance tests for the emissions of PM10 shall be conducted using 40 CFR Part 51, Appendix M, Method 201 (exhaust gas recycle), Method 201A (constant flow rate) or Method 5, and Method 202. PM10 emissions shall be the sum of non condensible emissions determined using Method 201, 201A or Method 5 and condensible emissions determined using Method 202.

    c. Performance tests for the emissions of CO shall be conducted using 40 CFR Part 60, Appendix A, Method 10.

    d. Performance tests for the emissions of NO_x shall be conducted using 40 CFR Part 60, Appendix A, Method 7E.

    e. Performance tests for the emissions of SO_2 shall be conducted using 40 CFR Part 60, Appendix A, Method 6 or 6C.

    f. Performance tests for the emissions of H_2SO_4 shall be conducted using 40 CFR Part 60, Appendix A, Method 8.

    g. Performance tests for the visual determination of the opacity of emissions from the stack shall be conducted using 40 CFR Part 60, Appendix A, Method 9 and the procedures stated in 40 CFR Part 60.11 or using a Continuous Opacity Monitoring system meeting the requirements of 40 CFR Part 60.

5. Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.

6. Additional performance tests may be required at the discretion of the EPA or NYSDEC for any or all of the above pollutants.

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7. For performance test purposes, sampling ports, platforms and safe access shall be provided by CLIEC on each unit in accordance with 40 CFR Part 60.8(e).

8. CLIEC shall submit a written report to EPA of the results of all emission testing within 60 days of the completion of the performance test, but in any event, no later than 180 days after initial startup of each unit.

9. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

XII. Fuel Sampling Requirements

1. CLIEC shall verify that the sulfur content of the fuels being burned meets the specifications outlined in Section VII of this permit.

2. CLIEC shall not accept any distillate fuel oil with a sulfur content greater than 0.0015% by weight. Prior to unloading the oil from the supplier, CLIEC shall verify that the sulfur content of the oil being delivered is no greater than 0.0015% by weight by evaluating the fuel oil analyses conducted by the supplier and/or by independently analyzing and confirming the sulfur content of the fuel oil.

3. Compliance with the sulfur content standards for liquid and gaseous fuels shall be determined using the testing methods established in 40 CFR 60.335(b)(10). Compliance with the natural gas sulfur content requirement shall be determined monthly.

XIII. Record keeping Requirements

1. Logs shall be kept and updated daily to record the following:

   a. the gallons of fuel oil fired in the combustion turbine, auxiliary boiler and diesel fire pump;

   b. the hours of operation of the duct burner, auxiliary boiler and diesel fire pump;

   c. the fuel flow to the duct burner and the maximum heat input capacity using a natural gas heating value of 22,685 Btu/lb (HHV);

   d. the beginning, duration and completion of each startup and shutdown for the combustion turbine;

   e. the total pounds of NO_x and CO, as measured by the CEM, for each startup and shutdown of the combustion turbine;

f. the gallons of fuel burned in the diesel fire pump as determined by measuring the tank level before and after each run;

g. any adjustments and maintenance performed on the combustion turbine/duct burner, auxiliary boiler, fuel gas heater and diesel fire pump;

h. any adjustments and maintenance performed on monitoring systems;

i. all fuel sampling results; the distillate fuel oil supplier's or CLIEC's analyses verifying that the sulfur content is no greater than 0.0015%; and

j. all calculations, opacity readings, CEM summaries and information related to emission determinations.

2. All monitoring records, fuel sampling test results, calibration test results and logs must be maintained for a period of five years after the date of record and made available upon request. All rolling averages shall be computed as required in this permit.

XIV. Reporting Requirements

1. CLIEC shall submit a written report of all excess emissions to EPA for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each quarter and shall include the information specified below:

   a. The magnitude of excess emissions computed in accordance with 40 CFR Part 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions and whether the excess emissions occurred during startup, shutdown or malfunction.

   b. The nature and cause of any malfunction (if known) and the corrective action taken, or preventive measures adopted shall also be reported.

   c. 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 repairs or adjustments.

   d. When no excess emissions have occurred or the monitoring systems have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

   e. Results of quarterly monitor performance audits, as required in 40 CFR Part 60, Appendix F (including the Data Assessment Report) and all information required by the reporting requirements in 40 CFR 60.7 including excess emissions and CEMS downtime summary sheets.

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f. Any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emission limit stated in this permit and any corrective actions and/or preventative measures taken on any unit must be reported by telephone within 2 business days to:

Air Compliance Branch
Division of Enforcement and Compliance Assistance
U.S. Environmental Protection Agency
Region 2
290 Broadway - 21st Floor
New York, New York 10007-1866
(212)637-3000

g. In addition, the U.S. EPA's Air Compliance Branch shall be notified in writing within fifteen (15) days of any such failure referenced in item f above. This notification shall include a description of the malfunctioning equipment or abnormal operation; the date of the initial failure; the period of time over which emissions were increased due to the failure; the cause of the failure; the estimated resultant emissions in excess of those allowed under this permit; and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.

2. All reports and Quality Assurance Project Plans required by this permit shall be submitted to:

Chief, Air Compliance Branch
U.S. Environmental Protection Agency
Region 2
290 Broadway - 21st Floor
New York, New York 10007

3. Copies of all reports and Quality Assurance Project Plans shall also be submitted to:

Chief, Air Programs Branch - Permitting Section
U.S. Environmental Protection Agency
Region 2
290 Broadway - 25th Floor
New York, NY 10007

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Region 2 CEM Coordinator
U. S. Environmental Protection Agency
Air and Water Q/A Team
Monitoring & Assessment Branch
2890 Woodbridge Avenue - MS - 220
Edison, New Jersey 08837-3679

Regional Air Pollution Control Engineer
New York State Department of Environmental Conservation
Region 1
SUNY at Stony Brook
Campus Loop Road
Building 40, Room 121
Stony Brook NY 11790-2356

XV. Other Requirements

1. CLIEC shall meet all other applicable federal, state and local requirements, including but not limited to those contained in the New York State Implementation Plan (SIP) and the Provisions of the New Source Performance Standards (NSPS) (40 CFR Part 60, Subparts A, GG, Da, Dc and Kb) and Part 61.