

Permit ID: 3-1326-00275/00009 02/03/2016

**Facility Identification Data** 

Name: CRICKET VALLEY ENERGY CENTER

Address: 2241 ST RTE 22 DOVER PLAINS, NY 12522

Owner/Firm

Name: CRICKET VALLEY ENERGY CENTER LLC

Address: 31 MILK ST STE 1001 BOSTON, MA 02109, USA

Owner Classification: Corporation/Partnership

**Permit Contacts** 

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# Permit Description Introduction

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this permit review report, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

# **Summary Description of Proposed Project**

Cricket Valley Energy Center LLC (CVEC) is proposing to construct the Cricket Valley Energy Center (the Facility), a nominal net 1,000-megawatt (MW) combined-cycle gas turbine electric generating facility, on a site located in Dover, Dutchess County, New York. The project was previously approved (ASF Permit ID: 3-1326-00275/00004) by the New York State Department of Environmental Conservation (NYSDEC). The initial permit was issued on September 27, 2012 and an 18-month



Permit ID: 3-1326-00275/00009 02/03/2016

extension was granted by the NYSDEC on March 18, 2014 as construction had not commenced within 18 months from issuance of the initial permit. CVEC does not anticipate commencement of construction by the end of the 18-month extension period on September 27, 2015. However, CVEC anticipates that construction will commence in early 2016 and, therefore, this application is being submitted to obtain a new Air Title V permit for the Facility.

The Facility, as documented in this permit application, is consistent with the current permit referenced above. The Facility will consist of three General Electric (GE) Model 7FA.05 combustion turbine generators (CTGs) operating in combined-cycle mode with supplemental firing of the heat recovery steam generators (HRSGs); natural gas will be the sole fuel fired in the CTGs and duct burners. The Facility will include a natural gas-fired auxiliary boiler, four ultra-low sulfur distillate (ULSD) fired black-start generator engines and a ULSD-fired emergency fire pump engine. Since issuance of the original permit, GE has improved the performance of the 7FA.05 CTG and as a result, the maximum heat input to this model turbine has increased since the original approval. To accommodate this increase in heat input to the CTG, the maximum duct firing rate has been reduced. The auxiliary boiler, black-start generator engines and emergency fire pump engine will have the same rating and emissions as those contained in the original permit. In addition to the air emitting equipment, the Facility will include three steam turbine generators (STGs), an air cooled condenser (ACC) and associated auxiliary equipment and systems. Each combined cycle generating unit consisting of the CTG, HRSG and STG will be exhausted through its own stack.

Air emissions from the proposed Facility primarily consist of products of combustion from the CTGs, HRSG duct burners, and ancillary combustion sources. Dutchess County is designated as in attainment with respect to the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants with the exception of ozone. Based upon the potential to emit (PTE) estimates, the Facility is subject to Prevention of Significant Deterioration (PSD) requirements for emissions of carbon monoxide (CO); nitrogen oxides (NOx); particulate matter (PM) with a diameter equal to or less than 10 microns (PM10), PM with a diameter equal to or less than 2.5 microns (PM2.5); greenhouse gases (GHG); sulfuric acid mist (H2SO4); and volatile organic compounds (VOC). In accordance with the NYSDEC's Nonattainment New Source Review (NNSR) permitting program, the Facility is also subject to NNSR for emissions of NOx and VOC.

#### **Attainment Status**

CRICKET VALLEY ENERGY CENTER is located in the town of DOVER in the county of DUTCHESS. The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

# Criteria Pollutant Attainment Status

Particulate Matter (PM)	ATTAINMENT
Particulate Matter< 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	MODERATE NON-ATTAINMENT
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

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<sup>\*</sup> Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.



Permit ID: 3-1326-00275/00009 02/03/2016

\*\* NOx has a separate ambient air quality standard in addition to being an ozone precursor.

# **Facility Description:**

The Facility site is located in Dover, Dutchess County, New York. The Facility will use GE 7FA.05 combustion turbine technology; supplemental (duct) firing in the combined-cycle unit HRSGs will be incorporated into the Facility's design. An auxiliary boiler will be used to assist plant start-up and maintain warm or hot-start conditions during standby periods. The sole fuel for the CTGs, duct burners and auxiliary boiler will be natural gas. ULSD will be the sole fuel for the black-start generator engines and emergency fire pump engine. An ACC will be used for circulating water cooling and, therefore, this system component will not be an emission source.

#### COMBINED CYCLE COMBUSTION TURBINES

The Facility's major equipment will include three CTGs, three supplementary-fired HRSG units, three STGs, and the ACC. This equipment is described in more detail below.

#### **Combustion Turbine Generators**

Thermal energy will be produced in the three CTGs through the combustion of natural gas. Each CTG is capable of running independently of the other. The thermal energy is converted to mechanical energy in the CTG that drives its integral compressor and electric generator. The maximum heat input rate of each CTG while firing natural gas will be 2,333 million British thermal units per hour (mmBtu/hr) (higher heating value [HHV]) at 100 percent load, 59 degrees Fahrenheit (°F) and 60 percent (%) relative humidity. The maximum heat input rate at the minimum ambient temperature of -8 degrees Fahrenheit is 2,395 mmBtu/hr. Each CTG will generate 228 MW at 100% load, 59 °F and 60% relative humidity.

#### Heat Recovery Steam Generators and Duct Burners

In combined-cycle configuration, each CTG will exhaust through a dedicated HRSG to generate steam from the waste-heat energy in the exhaust gas. Each HRSG will be equipped with supplemental firing via a duct burner. The duct burners provide additional thermal energy to the HRSG, to provide more steam to the STG during periods of high electricity demand. The duct burners will be natural gas-fired and each will have a nominal maximum input capacity of 247 mmBtu/hr (HHV). The duct burners will not always operate at maximum capacity; their use will vary based upon temperature and operating condition.

#### Steam Turbine Generator/Condensers

Steam generated in the HRSGs will be expanded through multi-stage, reheat-capable, condensing steam turbines. The discharge steam from the steam turbines will be directed to air-cooled condensers. The air-cooled condenser is the heat sink for the heat released by the condensing steam. Rotational power created by the steam turbines will be converted to electric power via the connected generators. The STGs will each generate 139 MW with its associated CTG operating at 100% load, 59 °F and 60% relative humidity with duct firing.

#### Air-Cooled Condenser

The condensing steam needs a cooled heat sink in order to be reused as boiler feed water. This cooling is accomplished by means of an ACC. The ACC functions by transferring the heat released by the condensing steam through finned tubes that are externally cooled by ambient air that is blown across the tubes. There are no emissions from the ACC.

#### EMISSION CONTROLS



Permit ID: 3-1326-00275/00009

02/03/2016

The emission control technologies proposed for the CTG and duct burner exhaust gases include dry low NOx (DLN) combustors, selective catalytic reduction (SCR) to control NOx emissions, and oxidation catalysts to control CO and VOC emissions. DLN combustors are integrated within each CTG, and SCR and oxidation catalysts are located within each HRSG. The DLN combustors control NOx formation during natural gas firing by pre-mixing fuel and air immediately prior to combustion. Pre-mixing inhibits NOx formation by minimizing both the flame temperature and the concentration of oxygen (O2) at the flame front. Emissions of SO2, PM10/PM2.5, and H2SO4 will be minimized through use of natural gas as the sole fuel in the CTGs and duct burners. SCR and oxidation catalysts are discussed further in the sections below.

#### Selective Catalytic Reduction

SCR, a post-combustion chemical process, will be installed in the HRSGs to treat exhaust gases downstream of the CTGs. The SCR process will use 19% aqueous ammonia (NH3) as a reagent. Aqueous NH3 will be injected into the flue gas stream upstream of the SCR catalyst, allowing it to thoroughly mix with the CTG exhaust prior to contact with the catalyst bed. The catalyst bed will be located in a temperature zone of the HRSG where the catalyst is most effective. The mixture will pass over the catalyst and the NOx will be reduced to nitrogen gas (N2) and water (H2O). The SCR system will reduce NOx concentrations to 2.0 parts per million by volume dry basis corrected to 15 percent O2 (ppmvdc), with or without duct-firing at all steady-state load conditions and ambient temperatures. A small amount of NH3 will remain un-reacted through the catalyst, which is called "ammonia slip." The ammonia slip will be limited to 5.0 ppmvdc at all load conditions and ambient temperatures.

### Oxidation Catalyst

An oxidation catalyst system will be located within each HRSG to control emissions of CO and VOC. Exhaust gases from the CTGs will flow through the catalyst bed where excess air will oxidize the CO and VOC to form carbon dioxide (CO2) and H2O. The oxidation catalyst system will reduce CO concentrations to 2.0 ppmvdc in the exhaust gas, with or without duct-firing at all steady-state load conditions and ambient temperatures. VOC concentrations will be limited to 1.8 ppmvdc and 0.7 ppmvdc on natural gas with and without duct firing, respectively.

#### ANCILLARY EQUIPMENT

The proposed Facility will utilize ancillary support equipment including an auxiliary boiler, black-start emergency generators, emergency fire pump, aqueous NH3 storage tanks, and other small, integrated tanks providing ULSD in the emergency equipment and for water storage. This equipment is discussed further in the sections below.

#### Auxiliary Boiler

The auxiliary boiler will use natural gas as the exclusive fuel and operate as needed to keep the HRSG warm during periods of facility shutdown and provide steam to the STG during start-ups. The auxiliary boiler will have a maximum input capacity of 60 mmBtu/hr, and will be limited to 4,500 hours of total operation per year. The boiler will utilize ultra-low NOx burners and flue gas recirculation to control emissions.

#### Emergency Black-Start Diesel Generator Engines

The Facility will have four black-start generator engines fired with ULSD, each with a rated electrical output of 3,000 kilowatts (kW). The black-start generators will be used to start the combustion turbines in



Permit ID: 3-1326-00275/00009

02/03/2016

the event of a total power failure. All four black-start generator engines will be required to start one of the combined cycle turbines. Once the first CTG is operating at steady state load, power from the operating CTG will be used to start the other turbines. The black-start generators will only be used during periods when power from the grid is unavailable and will typically only operate for testing and to maintain operational readiness in the event of an emergency. Therefore, operating hours will be limited to 500 hours per year per engine. Each black-start generator engine will have an associated small ULSD storage tank and will utilize an integrated SCR to control NOx emissions.

#### Emergency Diesel Fire Pump Engine

The Facility will have a 460-horsepower (hp) emergency fire pump engine to provide on-site firefighting capabilities independent of the off-site electrical utilities grid. The emergency fire pump will fire ULSD fuel and will typically only operate for testing and to maintain operational readiness in the event of an emergency. Similar to the emergency generators, it will be limited to a maximum of 500 operating hours per year. The fire pump engine will have an associated small ULSD storage tank. There will be no add-on emission controls associated with the fire pump engine.

#### Aqueous Ammonia Storage Tanks

The proposed Facility will have two tanks for storage of 19% aqueous NH3 for use in the SCR system. The tanks will be equipped with secondary containment sized to accommodate the entire volume of one tank and sufficient freeboard for precipitation. The tanks will be located outdoors within an impermeable containment area. The floor of the containment area will be covered with plastic balls designed to float on the liquid surface in the event of a spill, thereby reducing the exposed surface area and associated evaporation rate.

#### **Permit Structure and Description of Operations**

The Title V permit for CRICKET VALLEY ENERGY CENTER

is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process. A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:

combustion - devices which burn fuel to generate heat, steam or power

incinerator - devices which burn waste material for disposal

control - emission control devices

process - any device or contrivance which may emit air contaminants

that is not included in the above categories.

#### CRICKET VALLEY ENERGY CENTER is defined by the following emission unit(s):

Emission unit U00002 - This emission unit consists of one combustion turbine generator and one heat recovery steam generator with supplemental duct firing. Both sources exhaust through a common stack.



Permit ID: 3-1326-00275/00009

02/03/2016

Emission unit U00002 is associated with the following emission points (EP): EP002

Process: P04 This process represents natural gas combustion in the combustion turbine and the duct burner. Dry low NOx combustion technology and selective catalytic reduction will be used to control NOx emissions from the process. An oxidation catalyst will be used to control emissions of carbon monoxide and VOC.

Emission unit U00003 - This emission unit consists of one combustion turbine generator and one heat recovery steam generator with supplemental duct firing. Both sources exhaust through a common stack.

Emission unit  $\,$  U00003  $\,$  is associated with the following emission points (EP):  $\,$  EP003

Process: P05 This process represents natural gas combustion in the combustion turbine and the duct burner. Dry low NOx combustion technology and selective catalytic reduction will be used to control NOx emissions from the process. An oxidation catalyst will be used to control emissions of carbon monoxide and VOC.

Emission unit U00004 - This emission unit represents the emergency fire pump at the facility.

Emission unit  $\,$  U00004 is associated with the following emission points (EP):  $\,$  EP004

Process: P06 This process represents diesel oil combustion in the emergency fire pump. The emergency fire pump will operate no more than 500 hours per year.

Emission unit U00001 - This emission unit consists of one combustion turbine generator, one heat recovery steam generator with supplemental duct firing, one auxiliary boiler, and four black start generators. Emissions from all equipment in this unit exhaust through a common stack.

Emission unit  $\,$  U00001 is associated with the following emission points (EP):  $\,$  EP001

Process: P01 This process represents natural gas combustion in the combustion turbine and the duct burner. Dry low NOx combustion technology and selective catalytic reduction will be used to control NOx emissions from the process. An oxidation catalyst will be used to control emissions of carbon monoxide and VOC.

Process: P02 This process represents natural gas combustion in the auxiliary boiler. Hours of operation of the boiler will be limited to 4500 hours per year, which equates to 270 million cubic feet of natural gas consumption per year.

Process: P03 This process represents diesel oil combustion in the four black start emergency generators. These units will be limited to 500 hours of run time per year.

#### Title V/Major Source Status

CRICKET VALLEY ENERGY CENTER is subject to Title V requirements. This determination is based on the following information:



Permit ID: 3-1326-00275/00009

02/03/2016

This facility has PTE values above major source thresholds for the following pollutants: NOx, VOC, PM2.5/PM10, CO and CO2e.

Facility PTEs for Criteria Pollutants (tpy)					
NOx CO VOC SO2 PM2.5/PM10 Lead					
266.4	318.2	96.2	38.0	175.4	0.0013

# **Program Applicability**

The following chart summarizes the applicability of CRICKET VALLEY ENERGY CENTER with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability

PSD	YES
NSR (non-attainment)	NO
NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	NO
NSPS	YES
TITLE IV	YES
TITLE V	YES
TITLE VI	NO
RACT	NO
SIP	YES

#### NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52, 6 NYCRR 231-7, 231-8) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NSR New Source Review (6 NYCRR 231-5, 231-6) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NESHAP National Emission Standards for Hazardous Air Pollutants (40 CFR 61, 6 NYCRR 200.10) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

MACT Maximum Achievable Control Technology (40 CFR 63, 6 NYCRR 200.10) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.



Permit ID: 3-1326-00275/00009

02/03/2016

NSPS New Source Performance Standards (40 CFR 60, 6 NYCRR 200.10) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

Title IV Acid Rain Control Program (40 CFR 72 thru 78, 6 NYCRR 201-6) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

Title VI Stratospheric Ozone Protection (40 CFR 82, Subpart A thru G, 6 NYCRR 200.10) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

RACT Reasonably Available Control Technology (6 NYCRR Parts 212.10, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

SIP State Implementation Plan (40 CFR 52, Subpart HH, 6 NYCRR 200.10) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

#### **Compliance Status**

Facility is in compliance with all requirements.

#### SIC Codes

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis

of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

SIC Code Description

4911 ELECTRIC SERVICES

#### **SCC Codes**

SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information. Each SCC represents

a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.



Permit ID: 3-1326-00275/00009 02/03/2016

SCC Code	Description
1-02-006-02	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - NATURAL GAS 10-100 MMBtu/Hr
2-01-002-01	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION
	ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - NATURAL GAS Turbine
2-02-001-02	INTERNAL COMBUSTION ENGINES - INDUSTRIAL INDUSTRIAL INTERNAL COMBUSTION ENGINE - DISTILLATE OIL(DIESEL) Reciprocating

#### **Facility Emissions Summary**

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	<b>Contaminant Name</b>	PTE	
		lbs/yr	
000106-99-0	1,3-BUTADIENE	•	> 0 but < 10 tpy
000075-07-0	ACETALDEHYDE		> 0 but < 10 tpy
000107-02-8	ACROLEIN		> 0 but < 10 tpy
007664-41-7	AMMONIA		>= 100 tpy but < 250
			tpy
000120-12-7	ANTHRACENE		> 0 but < 10 tpy
007440-38-2	ARSENIC		> 0 but < 10 tpy
007440-39-3	BARIUM		> 0 but < 2.5 tpy
000071-43-2	BENZENE		> 0 but < 10 tpy
000056-55-3	BENZO (A) ANTHRACENE		> 0 but < 10 tpy
000050-32-8	BENZO (A) PYRENE		> 0 but < 10 tpy
007440-41-7	BERYLLIUM		> 0 but < 10 tpy
000106-97-8	BUTANE		>= 10 tpy but < 25
			tpy
007440-43-9	CADMIUM		> 0 but < 10 tpy
000124-38-9	CARBON DIOXIDE		>= 100,000 tpy
0NY750-00-0	CARBON DIOXIDE		>= 100,000 tpy
	EQUIVALENTS		
000630-08-0	CARBON MONOXIDE		>= 250 tpy but <



# Permit ID: 3-1326-00275/00009 02/03/2016

		75,000 tpy
007440-47-3	CHROMIUM	> 0 but < 10 tpy
000218-01-9	CHRYSENE	> 0 but < 10 tpy > 0 but < 10 tpy
007440-48-4	COBALT	> 0 but < 10 tpy
007440-50-8	COPPER	> 0 but < 2.5 tpy
000053-70-3	DIBENZ[A,H]ANTHRACENE	> 0 but < 10 tpy
000033-70-3	ETHANE	>= 25 tpy but < 40
000071 01 0		tpy
000100-41-4	ETHYLBENZENE	> 0 but < 10 tpy
000050-00-0	FORMALDEHYDE	> 0 but < 10 tpy
000110-54-3	HEXANE	> 0 but < 10 tpy
007439-92-1	LEAD	> 0 but < 10 tpy
007439-96-5	MANGANESE	> 0 but < 10 tpy
007439-97-6	MERCURY	> 0 but < 10 tpy
007439-98-7	MOLYBDENUM	> 0 but < 2.5 tpy
000091-20-3	NAPHTHALENE	> 0 but < 10 tpy
007440-02-0	NICKEL METAL AND	> 0 but < 10 tpy
	INSOLUBLE COMPOUNDS	
0NY210-00-0	OXIDES OF NITROGEN	>= 250 tpy but <
		75,000 tpy
0NY075-00-0	PARTICULATES	>= 100 tpy but < 250
		tpy
000109-66-0	PENTANE	>= 10 tpy but < 25
		tpy
000085-01-8	PHENANTHRENE	> 0 but < 10 tpy
0NY075-02-5	PM 2.5	>= 100 tpy but < 250
		tpy
0NY075-00-5	PM-10	>= 100 tpy but < 250
		tpy
130498-29-2	POLYCYCLIC AROMATIC	> 0 but < 10 tpy
	HYDROCARBONS	
000074-98-6	PROPANE	>= 10 tpy but < 25
		tpy
000075-56-9	PROPANE, 1,2-EPOXY-	> 0 but < 10 tpy
000115-07-1	PROPYLENE	> 0 but < 2.5 tpy
000129-00-0	PYRENE	> 0 but < 10 tpy
007782-49-2	SELENIUM	> 0 but < 10 tpy
007446-09-5	SULFUR DIOXIDE	>= 25 tpy but < 40
0.05554 00 0	0111 F110 T 0 1 0 T D	tpy
007664-93-9	SULFURIC ACID	>= 10 tpy but < 25
		tpy
000108-88-3	TOLUENE	> 0 but < 10 tpy
0NY100-00-0	TOTAL HAP	>= 10 tpy but < 25
007440 62 2	MITTAKIKATI	tpy
007440-62-2	VANADIUM	> 0 but < 2.5 tpy
0NY998-00-0	VOC	>= 50 tpy but < 100
001220 20 7	VVIENE M O C D	tpy
001330-20-7	XYLENE, M, O & P MIXT.	> 0 but < 10 tpy
007440-66-6	ZINC	> 0 but < 2.5 tpy
00/440-00-0	ZIIIC	> 0 Duc < 2.5 cpy

# NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

# Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through



Permit ID: 3-1326-00275/00009

02/03/2016

properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;
- (2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;
- (3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- (4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- (b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
- (c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

# Item B: Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10(b) The Department will make available to the public any permit application, compliants to the public any permit application.

The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

# Item C: Timely Application for the Renewal of Title V Permits -6 NYCRR Part 201-6.2(a)(4)

Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

#### Item D: Certification by a Responsible Official - 6 NYCRR Part 201-6,2(d)(12)

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

# Item E: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.4(a)(2)

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

Item F: Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR Part 201-6.4(a)(3)



Permit ID: 3-1326-00275/00009

02/03/2016

This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

# Item G: Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.4(a)(5)

It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

#### Item H: Property Rights - 6 NYCRR 201-6.4(a)(6)

This permit does not convey any property rights of any sort or any exclusive privilege.

#### Item I: Severability - 6 NYCRR Part 201-6.4(a)(9)

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

# Item J: Permit Shield - 6 NYCRR Part 201-6.4(g)

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;
- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

#### Item K: Reopening for Cause - 6 NYCRR Part 201-6.4(i)

This Title V permit shall be reopened and revised under any of the following circumstances:

i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be



Permit ID: 3-1326-00275/00009

02/03/2016

completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 2 01-6.7 and Part 621.

- ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.
- iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

# Item L: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

#### Item M: Federally Enforceable Requirements - 40 CFR 70.6(b)

All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

#### NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: General Provisions for State Enforceable Permit Terms and Condition - 6



Permit ID: 3-1326-00275/00009

02/03/2016

#### NYCRR Part 201-5

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

#### **Regulatory Analysis**

Location Facility/EU/EP/Process	Regulation s/ES	Condition	Short Description
 FACILITY	ECL 19-0301	89	Powers and Duties of the Department with respect to air
FACILITY	40CFR 60-A.13	56	<pre>pollution control General provisions - Monitoring requirements</pre>
FACILITY	40CFR 60-A.4	48	General provisions - Address
FACILITY	40CFR 60-A.7(a)(1)	49	Notification and Recordkeeping
FACILITY	40CFR 60-A.7(b)	50	Notification and Recordkeeping
FACILITY	40CFR 60-A.7(f)	51	Notification and Recordkeeping
FACILITY	40CFR 60-A.8(b)	52	Performance Tests
FACILITY	40CFR 60-A.8(d)	53	Performance Tests
FACILITY	40CFR 60-A.8(e)	54	Performance Tests
FACILITY	40CFR 60-A.8(f)	55	Performance Tests
U-00001/-/P02/AUX01		75	Reporting and Recordkeeping Requirements.
U-00001/-/P02/AUX01	40CFR 60-Dc.48c(g)(2)	76	Alternative recordkeeping
FACILITY	40CFR 60-IIII.4205(b)	57	Emission Standards - 2007 or later Emergency Non Fire Pump Stationary CI-IC Engines Displacing < 30 liters/cylinder
FACILITY	40CFR 60-IIII.4205(c)	58	Emission Standards - Stationary CI-IC Fire Pump Engines Displacing < 30 liters/cylinder
FACILITY	40CFR 60-IIII.4211(a)	59	Stationary Compression Ignition Engines - Compliance Requirements



# Permit ID: 3-1326-00275/00009 02/03/2016

FACILITY	40CFR 60-IIII.4211(c)	60	Stationary Compression Ignition Engines - Compliance
FACILITY	40CFR 68	19	Demonstration Chemical accident prevention provisions
FACILITY	40CFR 72	61	Permits regulation
FACILITY	40CFR 82-F	20	Protection of
DA CTI TINV	40CFR 97-AAAAA.406	62	Stratospheric Ozone - recycling and emissions reduction
FACILITY	40CFR 97-AAAAA.406	62	Transport Rule (TR) NOx Annual Trading Program Standard Requirments
FACILITY	40CFR 97-BBBBB.506	63	Transport Rule (TR) NOx Ozone Season Trading Program Standard Requirment
FACILITY	40CFR 97-CCCCC.606	64	Transport Rule (TR) SO2 Group 1 Trading Program Standard
FACILITY	6NYCRR 200.1(cq)	21	Requirments Definition for
FACILITY	6NYCRR 200.6	1	Emergency Generator Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	10, 22, 23	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	90	Unavoidable
			noncompliance and
	CNIV.CDD 201 1 4/-)	2.4	violations
FACILITY	6NYCRR 201-1.4(a)	24	Unavoidable noncompliance and
			violations -
			maintenance and/or
			startup/shutdown
FACILITY	6NYCRR 201-1.7	11	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	12	Prohibition of reintroduction of
			collected
			contaminants to the
			air
FACILITY	6NYCRR 201-3.2(a)	13	Exempt Activities -
FACILITY	6NYCRR 201-3.3(a)	14	Proof of eligibility Trivial Activities -
111011111	511 clat 201 5.5 (a)	11	proof of eligibility
FACILITY	6NYCRR 201-6	25, 65, 66	Title V Permits and the Associated Permit
FACILITY	6NYCRR 201-6.4(a)(4)	15	Conditions General Conditions -
			Requirement to
	CHICADO 001 ( 1/-) / (7)		Provide Information
FACILITY	6NYCRR 201-6.4(a)(7)	2	General Conditions - Fees
FACILITY	6NYCRR 201-6.4(a)(8)	16	General Conditions -
FACILITY	6NYCRR 201-6.4(c)	3	Right to Inspect Recordkeeping and
			Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.4(c)(2)	4	Records of
			Monitoring, Sampling
	CANAGED 0.01	-	and Measurement
FACILITY	6NYCRR 201- 6.4(c)(3)(ii	5	Reporting Requirements -
	J. 1 (J) (J) (11		TOTALL CHICITOD -



# Permit ID: 3-1326-00275/00009 02/03/2016

			Deviations and
FACILITY	6NYCRR 201-6.4(d)(4)	26	Noncompliance Compliance Schedules
FACILITY	6NYCRR 201-6.4(e)	6	- Progress Reports Compliance
FACILITY	6NYCRR 201-6.4(f)(6)	17	Certification Off Permit Changes
FACILITY	6NYCRR 202-1.1	18	Required emissions
FACILITY	6NYCRR 202-1.2	27	tests. Notification.
FACILITY	6NYCRR 202-2.1	7	Emission Statements -
FACILITY	6NYCRR 202-2.3	28	Applicability Emission Statement -
FACIBITI	UNICKN 202-2.3	20	Required contents of an emission
D3 077 7000	C1777GDD 000 0 4		statement.
FACILITY	6NYCRR 202-2.4	29	Emission Statement - methods and
			procedures
FACILITY	6NYCRR 202-2.5	8	Emission Statements - record keeping
			requirements.
FACILITY	6NYCRR 211.1	30	General Prohibitions - air pollution
			prohibited
FACILITY	6NYCRR 211.2	91	General Prohibitions - visible emissions
			limited.
FACILITY	6NYCRR 215.2	9	Open Fires - Prohibitions
FACILITY	6NYCRR 225-1.2(g)	31	Sulfur-in-Fuel
FACILITY	6NYCRR 225-1.2(h)	32	Limitations Sulfur-in-Fuel
FACIBITI	0N1CKK 225-1.2(II)	32	Limitations
FACILITY	6NYCRR 227-1.3	33	Smoke Emission Limitations.
FACILITY	6NYCRR 227-1.3(a)	34	Smoke Emission
FACILITY	6NYCRR 231-5.3	35	Limitations. Permit content and
FACILITI	6NICRR 231-3.3	33	terms of issuance
FACILITY	6NYCRR 231-5.4	36, 37, 38	Lowest achievable emission rate (LAER)
U-00001/-/P02	6NYCRR 231-5.4	67, 68, 69	Lowest achievable
U-00001/-/P03	6NYCRR 231-5.4	77, 78	emission rate (LAER) Lowest achievable
		,,, ,	emission rate (LAER)
U-00004/-/P06	6NYCRR 231-5.4	83, 84	Lowest achievable emission rate (LAER)
FACILITY	6NYCRR 231-5.5	39, 40	Emission offset
FACILITY	6NYCRR 231-7.5	41	requirements Permit content and
			terms of issuance
FACILITY	6NYCRR 231-7.6	42, 43, 44, 45, 46, 47	Best available control technology
/ /			(BACT)
U-00001/-/P02	6NYCRR 231-7.6	70, 71, 72, 73, 74	Best available control technology
			(BACT)
U-00001/-/P03	6NYCRR 231-7.6	79, 80, 81, 82	Best available control technology
			(BACT)
U-00004/-/P06	6NYCRR 231-7.6	85, 86, 87, 88	Best available control technology
			(BACT)
FACILITY	6NYCRR 242-1.5	92, 93, 94	CO2 Budget Trading



# Permit ID: 3-1326-00275/00009 02/03/2016

			Program - Standard requirements
FACILITY	6NYCRR 242-4	95	CO2 Budget Trading
			Program - Compliance
			certification
FACILITY	6NYCRR 242-8	96	CO2 Budget Trading
			Program - Monitoring
			and reporting
U-00001	6NYCRR 251.3(a)	98	CO2 Emission Limit
U-00002	6NYCRR 251.3(a)	99	CO2 Emission Limit
U-00003	6NYCRR 251.3(a)	100	CO2 Emission Limit
FACILITY	6NYCRR 251.6(d)	97	Vendor Certified Fuel
			Receipts

#### **Applicability Discussion:**

Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

#### ECL 19-0301

This section of the Environmental Conservation Law establishes the powers and duties assigned to the Department with regard to administering the air pollution control program for New York State.

#### 6 NYCRR 200.6

Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

#### 6 NYCRR 200.7

Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

#### 6 NYCRR 201-1.4

This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up, shutdown, malfunction or upset in the event that these are unavoidable.

#### 6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

#### 6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

# 6 NYCRR 201-3.2 (a)

An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

# 6 NYCRR 201-3.3 (a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition,



Permit ID: 3-1326-00275/00009 02/03/2016

department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

#### 6 NYCRR Subpart 201-6

This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

## 6 NYCRR 201-6.4 (a) (4)

This mandatory requirement applies to all Title V facilities. It requires the permittee to provide information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

#### 6 NYCRR 201-6.4 (a) (7)

This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

#### 6 NYCRR 201-6.4 (a) (8)

This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

## 6 NYCRR 201-6.4 (c)

This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

#### 6 NYCRR 201-6.4 (c) (2)

This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

#### 6 NYCRR 201-6.4 (c) (3) (ii)

This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

#### 6 NYCRR 201-6.4 (d) (5)



Permit ID: 3-1326-00275/00009 02/03/2016

This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

# 6 NYCRR 201-6.4 (e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

#### 6 NYCRR 201-6.4 (f) (6)

This condition allows changes to be made at the facility, without modifying the permit, provided the changes do not cause an emission limit contained in this permit to be exceeded. The owner or operator of the facility must notify the Department of the change. It is applicable to all Title V permits which may be subject to an off permit change.

#### 6 NYCRR 202-1.1

This regulation allows the department the discretion to require an emission test for the purpose of determining compliance. Furthermore, the cost of the test, including the preparation of the report are to be borne by the owner/operator of the source.

#### 6 NYCRR 202-2.1

Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calENDar year.

#### 6 NYCRR 202-2.5

This rule specifies that each facility required to submit an emission statement must retain a copy of the statement and supporting documentation for at least 5 years and must make the information available to department representatives.

#### 6 NYCRR 211.2

This regulation limits opacity from sources to less than or equal to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

#### 6 NYCRR 215.2

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

#### 40 CFR Part 68

This Part lists the regulated substances and there applicability thresholds and sets the requirements for stationary sources concerning the prevention of accidental releases of these substances.

#### 40 CFR Part 82, Subpart F

Subpart F requires the reduction of emissions of class I and class II refrigerants to the lowest achievable level during the service, maintenance, repair, and disposal of appliances in accordance with section 608 of the Clean Air Act AmENDments of 1990. This subpart applies to any person servicing, maintaining, or repairing appliances except for motor vehicle air conditioners. It also applies to persons disposing of appliances, including motor vehicle air conditioners, refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment. Those individuals, operations, or activities affected by this rule, may be required to comply with specified disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.



Permit ID: 3-1326-00275/00009

02/03/2016

# **Facility Specific Requirements**

In addition to Title V, CRICKET VALLEY ENERGY CENTER has been determined to be subject to the following regulations:

## 40 CFR 60.13

This regulation specifies how monitoring shall be performed and which methods and appendices are used to determine if the monitoring is adequate and in compliance with the regulated standards.

#### 40 CFR 60.4

This condition lists the USEPA Region 2 address for the submittal of all communications to the "Administrator". In addition, all such communications must be copied to NYSDEC Bureau of Quality Assurance (BQA).

#### 40 CFR 60.4205 (b)

This requirement applies to owners and operators of 2007 model year and later emergency stationary CI IC engines with a displacement less than 30 liters/cylinder that are not fire pump engines. An applicable source must comply with the emission standards for new nonroad CI engines for all pollutants (HC, PM, NOx, NMHC + NOx and CO) for the same model year and maximum engine power as per 40 CFR 60.4202.

## 40 CFR 60.4205 (c)

This requirement applies to stationary compression ignition IC fire pump engines displacing less than 30 liters/cylinder.

#### 40 CFR 60.4211 (a)

This regulation states that the owner or operator and must comply with the emission standards specified in 40 CFR 60 Subpart IIII and must operate and maintain the stationary compression ignition internal combustion engine and control device according to the manufacturer's written instructions.

#### 40 CFR 60.4211 (c)

The owner or operator of a stationary CI internal combustion engine must comply with the emission standards specified in 40 CFR 60 Subpart IIII and must do all of the following:

- (1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
- (2) Change only those emission-related settings that are permitted by the manufacturer; and
- (3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to the facility.

# 40 CFR 60.48c (a)

This regulation requires the owner and operator of each affected facility to submit notification of the date of construction or reconstruction, anticipated startup, and actual startup of the facility. The notification must include the following information:



Permit ID: 3-1326-00275/00009 02/03/2016

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
- (2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR 60.42c., or 40 CFR 60.43c.
- (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

# 40 CFR 60.48c (g) (2)

This regulation allows the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f) to demonstrate compliance with the SO<sub>2</sub>standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

#### 40 CFR 60.7 (a) (1)

Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

A notification of the date construction (or reconstruction as defined under 40 CFR Part 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

# 40 CFR 60.7 (b)

This regulation requires the owner or operator to maintain records of the occurrence and duration of any startup, shutdown, or malfunction of the source or control equipment or continuous monitoring system.

#### 40 CFR 60.7 (f)

This condition specifies requirements for maintenance of files of all measurements, including continuous monitoring system (CMS), monitoring device, and performance testing measurements; all CMS performance evaluations; all CMS or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices for at least two years.

#### 40 CFR 60.8 (b)

This regulation contains the requirements for Performance test methods and procedures, to be used by the owner or operator , of the affected facility.

# 40 CFR 60.8 (d)

This regulation contains the requirements for advance notification of Performance (stack) testing.

# 40 CFR 60.8 (e)



Permit ID: 3-1326-00275/00009 02/03/2016

This regulation requires the facility to provide appropriate sampling ports, safe platforms and utilities as necessary for Performance (stack) testing.

# 40 CFR 60.8 (f)

This regulation requires that Performance (stack) tests consist of three runs unless otherwise specified. The rule also designates the allowable averaging methods for the analysis of the results.

#### 40 CFR 97.406

- (1) The facility shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with §§97.413 through 97.418 of Subpart AAAA. The facility shall notify the Department of this representative (and alternative) with contact information upon issuance of this permit and when any changes are made to the representative (or alternative) or their contact information.
- (2) The facility, and the designated representative, of each TR NOX Annual source (facility) and each TR NOx Annual Unit at the facility shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.430 through 97.435 of Subpart AAAAA and subpart H of part 75 of this chapter. This includes but is not limited to: requirements for installation, certification, and data accounting for all required monitoring systems; requirements for recording, reporting, and quality-assurance of the data; and certification of compliance of such data. Data from continuous emission monitoring equipment are submitted quarterly (calendar year). These reports are generally due 30 days after the end of a calendar quarter. All other monitoring data are submitted to the DEC semiannually (calendar year). These reports are due on January 30th and July 30th of each year.
- (3) The emissions data determined shall be used to calculate allocations of TR NOx Annual allowances and to determine compliance with the TR NOx Annual emissions limitation and assurance provisions. As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOx Annual facility and each TR NOx Annual Unit at the facility shall hold, in the facilities compliance account, TR NOx Annual allowances available for deduction for such control period under \$97.424(a) in an amount not less than the tons of total NOx emissions for such control period from all TR NOX Annual Units at the facility.

#### 40 CFR 97.506

- (1) The facility shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with §§97.513 through 97.518 of Subpart BBBB. The facility shall notify the Department of this representative (and alternative) with contact information upon issuance of this permit and when any changes are made to the representative (or alternative) or their contact information.
- (2) The facility, and the designated representative, of each TR NOx Ozone Season source (facility) and each TR NOx Ozone Season Unit at the facility shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.530 through 97.535 of Subpart BBBBB and subpart H of part 75 of this chapter. This includes but is not limited to: requirements for installation, certification, and data accounting for all required monitoring systems; requirements for recording, reporting, and quality-assurance of the data; and certification of compliance of such data. Data from continuous emission monitoring equipment are submitted quarterly (calendar year). These reports are generally due 30 days after the end of a calendar quarter. All other monitoring data are submitted to the DEC semiannually (calendar year). These reports are due on January 30th and July 30th of each year.



Permit ID: 3-1326-00275/00009

02/03/2016

(3) The emissions data determined shall be used to calculate allocations of TR NOx Ozone Season allowances and to determine compliance with the TR NOx Ozone Season emissions limitation and assurance provisions. As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NOx Ozone Season facility and each TR NOx Ozone Season Unit at the facility shall hold, in the facilities compliance account, TR NOx Ozone Season allowances available for deduction for such control period under §97.524(a) in an amount not less than the tons of total NOx emissions for such control period from all TR NOx Ozone Season Units at the facility.

#### 40 CFR 97.606

- (1) The facility shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with §§97.613 through 97.618 of Subpart CCCCC. The facility shall notify the Department of this representative (and alternative) with contact information upon issuance of this permit and when any changes are made to the representative (or alternative) or their contact information.
- (2) The facility, and the designated representative, of each TR SO2 Group 1 source (facility) and each TR SO2 Group 1 Unit at the facility shall comply with the monitoring, reporting, and recordkeeping requirements of §§97.630 through 97.635 of Subpart CCCCC and subpart H of part 75 of this chapter. This includes but is not limited to: requirements for installation, certification, and data accounting for all required monitoring systems; requirements for recording, reporting, and quality-assurance of the data; and certification of compliance of such data. Data from continuous emission monitoring equipment are submitted quarterly (calendar year). These reports are generally due 30 days after the end of a calendar quarter. All other monitoring data are submitted to the DEC semiannually (calendar year). These reports are due on January 30th and July 30th of each year.
- (3) The emissions data determined shall be used to calculate allocations of TR SO2 Group 1 allowances and to determine compliance with the TR SO2 Group 1 emissions limitation and assurance provisions. As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO2 Group 1 facility and each TR SO2 Group 1 Unit at the facility shall hold, in the facilities compliance account, TR SO2 Group 1 allowances available for deduction for such control period under \$97.624(a) in an amount not less than the tons of total SO2 emissions for such control period from all TR SO2 Group 1 Units at the facility.

#### 40 CFR Part 72

In order to reduce acid rain in the U.S. and Canada, Title IV of the Clean Air Act Amendments of 1990 requires the establishment of a program to reduce emissions of SO2 and NOx (sulfer dioxide and oxides of nitrogen). Fossil fuel burning electric utility companies are a major source of these contaminants in the US. These sources where regulated in a phased approach. Phase I, which began in 1995, requires 110 of the higher-emitting utility plants in the eastern and Midwest states to meet intermediate SO2 emission limitations. Phase II, which began in 2000, tightens the emission limitations and expands the coverage to most fossil fuel burning utilities. The utilities are given "allowances" which is a limited authorization to emit one ton of SO2. The utilities are required to limit SO2 emissions to the number of allowances they hold. Some can benefit however by reducing their emissions and selling their excess allowances. Part 72 contains the means of implementing this portion of Title IV of the Clean Air Act.



Permit ID: 3-1326-00275/00009

02/03/2016

#### 6 NYCRR 200.1 (cq)

The emergency generators, as well as the emergency fire pump engine, are limited to 500 hours of operation per year, rolled monthly, in order to be considered emergency units. The facility must maintain records on site tracking the hours of operation, rolling the hours monthly.

#### 6 NYCRR 201-1.4 (a)

All activities involving equipment maintenance or start-up/shutdown that may result in a violation of an emission standard need to be recorded and a written report must be submitted to the department. The report should describe why the violation was unavoidable and include the time, frequency and duration of the maintenance and/or start-up/shutdown activities and the identification of air

contaminants, and the estimated emission rates. Sources which are subject to a continuous monitoring and quarterly reporting requirement are exempt from the above.

#### 6 NYCRR 202-1.2

This regulation specifies that the department is to be notified at least 30 days in advance of any required stack test. The notification is to include a list of the procedures to be used that are acceptable to the department. Finally, free access to observe the stack test is to be provided to the department's representative.

#### 6 NYCRR 202-2.3

This rule specifies the information to be included in a required emission statement.

#### 6 NYCRR 202-2.4

This regulation specifies that any required emission statement must be submitted to the Department before April 15 each year for emissions of the previous calendar year. The regulation also establishes a set of acceptable emissions estimation methods that may be used including the use of monitoring methods, if accepted by the department, and the transmittal of the emission statement information to the Department. Finally, such information may be designated as confidential, as per department approval, except for the following information: emissions, estimated emissions method, and the Source Classification Code.

#### 6 NYCRR 211.1

This regulation requires that no person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property.

#### 6 NYCRR 225-1.2 (g)

Sulfur-in-fuel limitations for the purchase of distillate oil on or after July 1, 2014.

#### 6 NYCRR 225-1.2 (h)

Sulfur-in-fuel limitation for the firing of distillate oil on or after July 1, 2016.



Permit ID: 3-1326-00275/00009

02/03/2016

#### 6 NYCRR 227-1.3

This regulation requires a limitation and compliance monitoring for opacity from a stationary combustion installation.

#### 6 NYCRR 227-1.3 (a)

This regulation prohibits any person from operating a stationary combustion installation which emits smoke equal to or greater than 20% opacity except for one six-minute period per hour of not more than 27% opacity.

#### 6 NYCRR 231-5.3

Facility-wide PTEs for LAER pollutants.

#### 6 NYCRR 231-5.4

This section outlines what LAER is and how it is determined.

#### 6 NYCRR 231-5.5

This section states what the emission offset requirements are for a facility subject to this Subpart.

#### 6 NYCRR 231-7.5

This section states what an applicant's permit must and will contain for conditions.

#### 6 NYCRR 231-7.6

This section outlines what BACT is and how it is determined.

#### 6 NYCRR 242-1.5

His regulation requires that the facility hold enough carbon dioxide allowances in their carbon dioxide budget at least equal to the amount of carbon dioxide emitted from the facility each year.

# 6 NYCRR 251.3 (a)

This subdivision contains the emission limit requirements for CO2 from boilers that are permitted to fire greater than 70 percent fossil fuel, combined cycle combustion turbines, or stationary internal combustion engines that fire only gaseous fuel.

#### 6 NYCRR 251.6 (d)

This subdivision sets the requirements for the maintenance of Vendor certified fuel receipts.



Permit ID: 3-1326-00275/00009

02/03/2016

# 6 NYCRR Subpart 242-4

This citation requires that an Annual Compliance Certification report be submitted by March 1st, on an annual basis, certifying compliance with the CO2 Budget Trading Program.

# 6 NYCRR Subpart 242-8

Citation 6NYCRR Part 242-8.5 requires that the record keeping and reporting requirements of 40 CFR Part 75.73 and 6NYCRR Part 242-2.1(e) be followed, that a CO2 monitoring plan(s) be submitted, that the CO2 emission monitor(s) be certified, and that CO2 emissions be reported quarterly in an electronic format.

# Compliance Certification Summary of monitoring activities at CRICKET VALLEY ENERGY CENTER:

Location Facility/EU/EP/Process/ES	Cond No	Type of Monitoring
FACILITY	49	record keeping/maintenance procedures
U-00001/-/P02/AUX01	75	record keeping/maintenance procedures
FACILITY	57	record keeping/maintenance procedures
FACILITY	58	record keeping/maintenance procedures
FACILITY	59	record keeping/maintenance procedures
FACILITY	60	record keeping/maintenance procedures
FACILITY	62	record keeping/maintenance procedures
FACILITY	63	record keeping/maintenance procedures
FACILITY	64	record keeping/maintenance procedures
FACILITY	21	work practice involving specific operations
FACILITY	22	work practice involving specific operations
FACILITY	23	continuous emission monitoring (cem)
FACILITY	24	record keeping/maintenance procedures
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
FACILITY	7	record keeping/maintenance procedures
FACILITY	31	work practice involving specific operations
FACILITY	32	work practice involving specific operations
FACILITY	33	monitoring of process or control device parameters as surrogate
FACILITY	34	intermittent emission testing
FACILITY	35	record keeping/maintenance procedures
FACILITY	36	intermittent emission testing
FACILITY	37	intermittent emission testing
FACILITY	38	continuous emission monitoring (cem)
U-00001/-/P02	67	work practice involving specific operations
U-00001/-/P02	68	intermittent emission testing
U-00001/-/P02	69	intermittent emission testing
U-00001/-/P03	77	monitoring of process or control device parameters as surrogate
U-00001/-/P03	78	monitoring of process or control device parameters as surrogate
U-00004/-/P06	83	monitoring of process or control device parameters as surrogate
U-00004/-/P06	84	monitoring of process or control device parameters as surrogate
FACILITY	39	record keeping/maintenance procedures



# Permit ID: 3-1326-00275/00009 02/03/2016

FACILITY	40	record keeping/maintenance procedures
FACILITY	41	record keeping/maintenance procedures
FACILITY	42	work practice involving specific operations
FACILITY	43	intermittent emission testing
FACILITY	44	intermittent emission testing
FACILITY	45	intermittent emission testing
FACILITY	46	continuous emission monitoring (cem)
FACILITY	47	intermittent emission testing
U-00001/-/P02	70	work practice involving specific operations
U-00001/-/P02	71	intermittent emission testing
U-00001/-/P02	72	intermittent emission testing
U-00001/-/P02	73	intermittent emission testing
U-00001/-/P02	74	monitoring of process or control device parameters
		as surrogate
U-00001/-/P03	79	monitoring of process or control device parameters
		as surrogate
U-00001/-/P03	80	monitoring of process or control device parameters
		as surrogate
U-00001/-/P03	81	monitoring of process or control device parameters
		as surrogate
U-00001/-/P03	82	intermittent emission testing
U-00004/-/P06	85	monitoring of process or control device parameters
		as surrogate
U-00004/-/P06	86	monitoring of process or control device parameters
		as surrogate
U-00004/-/P06	87	monitoring of process or control device parameters
		as surrogate
U-00004/-/P06	88	intermittent emission testing
FACILITY	93	record keeping/maintenance procedures
FACILITY	94	record keeping/maintenance procedures
FACILITY	95	record keeping/maintenance procedures
FACILITY	96	record keeping/maintenance procedures
U-00001	98	continuous emission monitoring (cem)
U-00002	99	continuous emission monitoring (cem)
U-00003	100	continuous emission monitoring (cem)
FACILITY	97	record keeping/maintenance procedures

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#### **Basis for Monitoring**

Cricket Valley Energy Center is proposing to construct a facility that will include combined cycle combustion turbines, heat recovery steam generators, duct burners, an auxiliary boiler, emergency generators and a fire pump engine. These emission sources are subject to numerous State and Federal regulations under 6 NYCRR and 40 CFR, respectively.

The site of the proposed facility is located with the Ozone Transport Region, which is classified as Moderate Non-Attainment for ozone. PTE levels for both NOx and VOC exceed the applicable significant project thresholds located in Table 3 of 6 NYCRR Part 231-13.3. The facility has conducted a LAER analysis for each emission source and has obtained the necessary emission offsets, as required by 6 NYCRR Part 231-5. Similarly, the PTE levels for CO, PM2.5/PM10, H2SO4 and CO2e all exceed the significant project thresholds listed in Table 6 of 6 NYCRR Part 231-13.6. A BACT analysis has been completed for each emission source and appropriate emission limits have been assigned. The RACT/BACT/LAER Clearinghouse was utilized to choose the most appropriate emission rates and limits for each applicable source. The emissions abatement techniques associated with this permit include selective catalytic reduction, oxidation catalysts, dry low NOx combustors, flue gas recirculation, low sulfur fuels and restricted operating hours. Compliance with the established emission limits will be verified through CEMS, performance testing and vendor certifications.



Permit ID: 3-1326-00275/00009 02/03/2016

The monitoring and reporting requirements under 6 NYCRR Part 231-5.4 and Part 231-7.6 vary for each pollutant and source. For the combustion turbine generators; NOx and CO will be measured continuously with the CEMS and reported quarterly; VOC, PM, and H2SO4 emissions will be measured through performance testing which will be conducted once during the term of the permit; and the heat rate will be tested on an annual basis. For the auxiliary boiler; NOx, VOC, CO, PM, and H2SO4 emissions will be measured through performance testing which will be conducted as a single occurrence; and CO2e will be measured monthly and reported quarterly as outlined in 6 NYCRR Part 251.6. For the emergency generators, as well as the fire pump engine; NOx, VOC, CO, H2SO4 and PM emissions will be verified through vendor guarantees, with the Department reserving the right to require performance testing in the future; and CO2e emissions will be measured monthly with records maintained on site.

In addition to the requirements outlined in 6 NYCRR Part 231, general permitting, testing and reporting requirements are included in this permit under 6 NYCRR Parts 200, 201 and 202. The facility is subject to New Source Performance Standards and all applicable provisions of 40 CFR Part 60.

A CEMS will be utilized to monitor emissions from the combustion turbines. Requirements for installing, operating and maintaining this system are described in 6 NYCRR Part 227-2.6(b) and 40 CFR Part 75.

The facility is required to apply for an Acid Rain permit as stated in 40 CFR Part 72.

Ammonia emissions caused by the selective catalytic reduction system will be continuously monitored to ensure that the 5.0 ppm limit is not exceeded. The concentration of ammonia stored on site is limited to 19 percent. Concentration levels must be monitored after every delivery to verify that this limit is not exceeded.

The combustion turbines and associated duct burners are subject to emission limits and compliance requirements 40 CFR Part 60, Subpart KKKK (Standards of Performance for Stationary Combustion Turbines). The emission limits determined through the LAER and BACT analyses are more stringent than those required under KKKK. Applicable monitoring, recordkeeping and reporting requirements under KKKK still apply. By being subject to KKKK, the turbines are exempt from requirements in 40 CFR Part 60, Subpart GG.

The auxiliary boiler is subject to applicable testing, recording and reporting requirements under 40 CFR Part 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units). The boiler is exempt from 40 CFR Part 63, Subpart JJJJJJ requirements because it is a gas-fired unit.

The emergency generators and fire pump engine are all subject to emission limit requirements under 40 CFR Part 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines). Emission limits for NOx and VOC established for LAER are lower than those required under IIII. For CO and PM2.5/PM10, the BACT analysis concluded that the limits set forth in IIII will satisfy BACT requirements.

The combustion turbines, associated duct burners and auxiliary boiler are all subject to NOx RACT requirements under 6 NYCRR Part 227-2 (Reasonably Available Control Technology for Major Facilities of Oxides of Nitrogen). The emission limits determined through the LAER analysis are more stringent than the presumptive limits in 227-2. Monitoring, performance testing, recordkeeping and reporting requirements under 227-2 still apply. The emergency generators and fire pump engine are all exempt from 227-2 requirements because of their emergency status.



Permit ID: 3-1326-00275/00009 02/03/2016

Also required under 6 NYCRR Part 227 is a limit on opacity, as outlined in Part 227-1.3. All stationary combustion installations are subject to a 20 percent opacity limit, using a 6 minute average and allowing for one 6 minute period per hour of not more than 27 percent opacity. The sources must be monitored while they are operating and corrective actions must be recorded if any are necessary. Reporting of any corrective action or Method 9 Opacity Test performed must be done on a semi-annual basis.

Sulfur content restrictions for fuel oil are described in 6 NYCRR Part 225-1. The sulfur content of the oil must be verified for every oil delivery to ensure compliance with the limit. The emergency generators and the fire pump engine will burn only ultra-low sulfur diesel with a sulfur content limit of 0.0015 percent by weight. Reports must be submitted on a semi-annual basis.

The combustion turbines, associated duct burners and auxiliary boiler will only burn natural gas will a sulfur content limit of 0.4 gr/100 dscf. This sulfur limit will be monitored as required under appropriate 6 NYCRR Part 231-7.6 conditions.

The facility is subject to CO2 Budget Trading Program requirements under 6 NYCRR Part 242 and CO2 Performance Standards for Major Electric Generating Facilities under 6 NYCRR Part 251.

Standard requirements for NOx and SO2 Trading Programs are included under 40 CFR Part 97, Subparts AAAAA, BBBBB and CCCCC.

The facility is not a major source of HAPs, and is therefore exempt from requirements under 40 CFR Part 60, Subpart YYYY (National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines).