New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 7-5032-00019/00016 **12/7/01 08:28:27**

Facility Identification Data
Name: AES CAYUGA
Address: 228 CAYUGA DRIVE
City: LANSING

Owner/Firm
Name: AES EASTERN ENERGY LP
City: ARLINGTON
State: VA Country: USA Zip: 22209
Owner Classification: Corporation/Partnership

Permit Contacts
Division of Environmental Permits:
Name: MICHAEL K. BARYLSKI

Division of Air Resources:
Name: REGINALD G. PARKER

Air Permitting Facility Owner Contact:
Name: AES CAYUGA

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)(2) 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 while the permit review report is based on information found in the accompanying permit, it is not an enforceable document and therefore, has no legal standing.

Summary Description of Proposed Project
THIS IS AN INITIAL TITLE V APPLICATION FOR AES CAYUGA STATION, AN EXISTING ELECTRIC GENERATING STATION. AES CAYUGA STATION CONSISTS OF TWO BOILERS FEEDING STEAM TO TWO GENERATORS. THE PLANT HAS A STACK FOR EACH BOILER PLUS A BYPASS STACK (THREE STACKS TOTAL); EACH BOILER HAS THE CAPABILITY OF BEING EXHAUSTED THROUGH ANY OF THE THREE STACKS. AES CAYUGA STATION IS PERMITTED TO BURN BITUMINOUS COAL. ASSOCIATED WITH THE BOILERS IS THE NO. 2 FUEL OIL SYSTEM, COAL HANDLING SYSTEM, LIMESTONE HANDLING SYSTEM, AND OTHER MISCELLANEOUS SOURCES AND ACTIVITIES RELATED TO THE OPERATION OF AN ELECTRIC GENERATING STATION. NO CHANGES IN AES CAYUGA STATION ARE CONTEMPLATED AS A RESULT OF THIS PERMIT APPLICATION.

Attainment Status

AES CAYUGA is located in the town of LANSING in the county of TOMPKINS.
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*	TRANSPORT REGION (NON-ATTAINMENT)
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.
** NOx has a separate ambient air quality standard in addition to being an ozone precursor

Facility Description
AES CAYUGA STATION IS AN ELECTRIC GENERATING STATION CONSISTING OF TWO GENERATOR UNITS. STEAM FOR UNIT 1 IS SUPPLIED BY BOILER 1. STEAM FOR UNIT 2 IS SUPPLIED BY BOILER 2. THE PLANT HAS A STACK FOR EACH BOILER PLUS A BYPASS STACK (THREE STACKS TOTAL). WHILE EACH BOILER NORMALLY EXHAUSTS THROUGH ITS OWN STAC AND THE BYPASS STACK IS USED FOR STARTUP OR EMERGENCY, EACH BOILER HAS THE CAPABILITY OF BEING EXHAUSTED THROUGH ANY OF THE THREE STACKS. AES CAYUGA STATION IS PERMITTED TO BURN BITUMINOUS COAL. ASSOCIATED WITH THE BOILERS ARE A COAL HANDLING SYSTEM (UNLOADING, CONVEYING, ETC)., NO. 2 OR DIESEL FUEL OIL SYSTEM (TANKS AND PIPING) USED FOR STARTUP, FLAME STABILIZATION, AND COAL CAR THAWING, LIMESTONE HANDLING SYSTEM (UNLOADING, CONVEYING, ETC.), AND OTHER MIS CELLANEOUS SOURCES AND ACTIVITIES RELATED TO THE OPERATION OF AN ELECTRIC GENERATING STATION.

Permit Structure and Description of Operations
The Title V permit for AES CAYUGA

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.

AES CAYUGA is defined by the following emission unit(s):
Emission unit M00001 - AES CAYUGA STATION IS AN ELECTRIC GENERATING STATION CONSISTING OF TWO GENERATOR UNITS. THE FOLLOWING IDENTIFIERS WILL BE USED IN RELATION TO THIS EMISSION UNIT. AES CAYUGA BOILERS: EMISSION UNIT M00001. AES CAYUGA STACK 1; EMISSION POINT NEW01. AES CAYUGA STACK 2, EMISSION POINT NEW02. AES CAYUGA BYPASS STACK, EMISSION POINT NEW03; BOILER 1, EMISSION SOURCE B0001. BOILER 1 ELECTRISTATIC PRECIPITATOR, EMISSION SOURCE ESP01. BOILER 1 FLUE GAS DESULFURIZATION SYSTEM, EMISSION SOURCE FDG01. BOILER 1 SELECTIVE CATALYTIC REDUCTION, EMISSION SOURCE SCR01. PROCESSES FOR BOILER 1 ARE: BURNING BITUMINOUS COAL, PROCESS P11; BURNING NO. 2 FUEL OIL, PROCESS P12; BURNING DIESEL FUEL, PROCESS P19. BOILER 2, EMISSION SOURCE B0002. BOILER 2 ELECTROSTATIC PRECIPITATOR, EMISSION SOURCE ESP02. BOILER 2 FLUE GAS DESULFURIZATION SYSTEM, EMISSION SOURCE FGD02. A PERMIT TO INSTALL A SELECTIVE CATALYTIC REDUCTION UNIT FOR BOILER 2 (EMISSION SOURCE SCR02) WAS ISSUED TO AES CAYUGA ON 9/5/00. CONSTRUCTION OF SCR02 MUST COMMENCE BY 8/1/01 OR ELSE AES CAYUGA MUST REAPPLY FOR APPROVAL TO COMMENCE CONSTRUCTION OF SCR02. PROCESSES FOR BOILER 2 ARE: BURNING BITUMINOUS COAL, PROCESS P21; BURNING NO. 2 FUEL OIL, PROCESS P22; BURNING DIESEL FUEL, PROCESS P29.

STEAM FOR UNIT 1 IS SUPPLIED BY EMISSION SOURCE B0001. EMISSION SOURCE B0001 PRIMARILY EXHAUSTS THROUGH EMISSION POINT NEW01, BUT IT HAS THE CAPABILITY OF ALSO EXHAUSTING THROUGH EMISSION POINTS NEW02 AND NEW03. EMISSION SOURCE B0001 IS A COMBUSTION ENGINEERING DRY BOTTOM, TANGENTIALLY FIRED BOILER RATED AT 1,484 MMBTU/HR MAXIMUM HEAT INPUT. THE BOILER BURNS BITUMINOUS COAL AS ITS PRIMARY FUEL. NO. 2 FUEL OIL OR DIESEL FUEL IS USED FOR STARTUP AND FLAME STABILIZATION.

STEAM FOR UNIT 2 IS SUPPLIED BY EMISSION SOURCE B0002. EMISSION SOURCE B0002 PRIMARILY EXHAUSTS THROUGH EMISSION POINT NEW02, BUT IT HAS THE CAPABILITY OF ALSO EXHAUSTING THROUGH EMISSION POINTS NEW01 AND NEW03. EMISSION SOURCE B0002 IS A COMBUSTION ENGINEERING DRY BOTTOM, TANGENTIALLY FIRED BOILER RATED AT 1,517 MMBTU/HR MAXIMUM HEAT INPUT. THE BOILER BURNS BITUMINOUS COAL AS ITS PRIMARY FUEL. NO. 2 FUEL OIL OR DIESEL FUEL IS USED FOR STARTUP AND FLAME STABILIZATION.

EMISSION SOURCES B0001 AND B0002 ARE EACH EQUIPPED WITH AN ELECTROSTATIC PRECIPITATOR TO CONTROL PARTICULATE MATTER EMISSIONS. THE PRECIPITATORS WERE COMPLETELY GUTTED AND REBUILT RECENTLY AS PART OF THE FLUE GAS DESULFURIZATION SYSTEM INSTALLATION. BECAUSE IT WAS ESSENTIALLY A COMPLETE REPLACEMENT, THE PREVIOUS PRECIPITATORS, REFERENCED IN THE DATA SENT TO NYSEG WHEN THE TITLE V APPLICATION FORMS AND INSTRUCTIONS WERE RECEIVED, WILL NOT BE MENTIONED IN THIS APPLICATION. SULFUR DIOXIDE EMISSIONS ARE CONTROLLED BY A FLUE GAS DESULFURIZATION (FGD) SYSTEM CAPABLE OF UP TO 98% REMOVAL EFFICIENCY. THE FGD SYSTEM WAS INSTALLED AS PART OF THE DEPT OF ENERGY'S CLEAN COAL TECHNOLOGY DEMONSTRATION PROGRAM. THERE IS A MODULE FOR EACH BOILER; EACH MODULE HAS ITS OWN STACK. GENERALLY, EMISSION SOURCE B0001 IS CONTROLLED BY EMISSION SOURCE FDG01 AND EMISSION SOURCE B0002 IS CONTROLLED BY EMISSION SOURCE FGD02, BUT THE FDG SYSTEM IS DESIGNED SUCH THAT THE GAS FROM EITHER BOILER CAN BE TREATED BY EITHER MODULE. IN ADDITION, THERE IS A BYPASS STACK WHICH IS USED DURING A BOILER STARTUP AND IN THE CASE OF AN FGD MODULE PROBLEM. NITROGEN OXIDES EMISSIONS ARE CONTROLLED THROUGH THE USE OF A LEVEL III LOW NOX CONCENTRIC FIRING SYSTEM (LNCFS-III) INSTALLED ON EACH BOILER AND GOOD COMBUSTION PRACTICES. THE LNCFS-III WAS ALSO INSTALLED AS PART OF THE DOE CLEAN COAL TECHNOLOGY DEMONSTRATION PROJECT
Emission unit M00001 is associated with the following emission points (EP):
NEW01, NEW02, NEW03
It is further defined by the following process(es):
Process: P11 is located at GROUND, Building BOILER - EMISSION SOURCE B0001 FIRES BITUMINOUS COAL AS ITS BASELINE FUEL. PARTICULATE MATTER EMISSIONS ARE CONTROLLED BY THE USE OF AN ELECTROSTATIC PRECIPITATOR AND/OR A WET SCRUBBER AND MEASURED (WHEN REQUESTED BY DEC) AT THE STACK CURRENTLY IN USE BY EMISSION SOURCE B0001. SULFUR DIOXIDE EMISSIONS ARE CONTROLLED BY A FLUE GAS DESULFURIZATION SYSTEM. NITROGEN OXIDES EMISSIONS ARE CONTROLLED THROUGH THE USE OF LNCFS-III, GOOD COMBUSTION PRACTICES AND A SELECTIVE CATALYTIC REDUCTION UNIT AS REQUIRED. NITROGEN OXIDES ARE LIMITED ON A SYSTEM-WIDE BASIS AS ESTABLISHED IN AES NEW YORK'S NOX RACT COMPLIANCE PLAN. SULFUR DIOXIDE AND NITROGEN OXIDES EMISSIONS ARE MEASURED BY THE CONTINUOUS EMISSION MONITORING SYSTEMS ON
Process: P12 is located at GROUND, Building BOILER - EMISSION SOURCE B0001 USES NO. 2 FUEL OIL AS A STARTUP FUEL AND FOR FLAME STABILIZATION. IT IS USED ON AN AS-NEEDED BASIS. FLUE GAS OPACITY IS CONTROLLED AS NECESSARY THROUGH THE USE OF ESP FIELDS AND/OR A WET SCRUBBER DURING STARTUP. THERE ARE NO SPECIFIC FUEL OIL CONTROLS FOR SULFUR DIOXIDE OR NITROGEN OXIDES EMISSIONS.

SULFUR DIOXIDE AND NITROGEN OXIDES EMISSION S ARE MEASURED BY THE CONTINUOUS EMISSION MONITORING SYSTEMS ON THE STACKS.
Process: P19 is located at GROUND, Building BOILER - EMISSION SOURCE B0001 USES DIESEL FUEL AS A STARTUP AND FOR FLAME STABILIZATION. IT IS USED ON AN AS-NEEDED BASIS. FLUE GAS OPACITY IS CONTROLLED AS NECESSARY THROUGH THE USE OF ESP FIELDS AND/OR A WET SCRUBBER DURING STARTUP. THERE ARE NO SPECIFIC DIESEL FUEL CONTROLS FOR SULFUR DIOXIDE OR NITROGEN OXIDES EMISSIONS. SULFUR DIOXIDE AND NITROGEN OXIDES EMISSIONS ARE MEASURED BY THE CONTINUOUS EMISSION MONITORINNG SYSTEMS ON THE STACKS.
Process: P21 is located at GROUND, Building BOILER - EMISSION SOURCE B0002 FIRES BITUMINOUS COAL AS ITS PRIMARY FUEL. PARTICULATE MATTER EMISSIONS ARE CONTROLLED BY THE USE OF AN ELECTROSTATIC PRECIPITATOR AND/OR A WET SCRUBBER AND MEASURED (WHEN REQUESTED BY DEC) AT THE STACK CURRENTLY IN USE BY EMISSION SOURCE B0002. SULFUR DI OXIDE EMISSIONS ARE CONTROLLED BY A FLUE GAS DESULFURIZATION SYSTEM. NITROGEN OXIDES EMISSIONS ARE CONTROLLED THROUGH THE USE OF LNCFS-III, GOOD COMBUSTION PRACTICES AND A SELECTIVE CATALYTIC REDUCTION UNIT AS REQUIRED. NITROGEN OXIDES LIMITS ON A SYSTEM-WIDE BASIS ARE ESTABLISHED IN AES NEW YORK'S NOX RACT COMPLIANCE PLAN. SULFUR DIOXIDE AND NITROGEN OXIDES EMISSIONS ARE MEASURED BY THE CONTINUOUS EMISSION MONITORING SYSTEMS ON THE STACKS.
Process: P22 is located at GROUND, Building BOILER - EMISSION SOURCE B0002 USES NO. 2 FUEL OIL AS A STARTUP FUEL AND FOR FLAME STABILIZATION. IT IS USED ON AN AS-NEEDED BASIS. FLUE GAS OPACITY IS CONTROLLED AS NECESSARY THROUGH THE USE OF ESP FIELDS AND/OR A WET SCRUBBER DURING STARTUP. THERE ARE NO SPECIFIC FUEL OIL CONTROLS FOR SULFUR DIOXIDE OR NITROGEN OXIDES EMISSIONS. SULFUR DIOXIDE AND NITROGEN OXIDES EMISSION S ARE MEASURED BY THE CONTINUOUS EMISSION MONITORING SYSTEMS ON THE STACKS.
Process: P29 is located at GROUND, Building BOILER - EMISSION SOURCE B0002 USES DIESEL FUEL AS A STARTUP FUEL AND FOR FLAME STABILIZATION. IT IS USED ON AN AS-NEEDED BASIS. FLUE GAS OPACITY IS CONTROLLED AS NECESSARY THROUGH THE USE OF ESP FIELDS AND/OR A WET SCRUBBER DURING STARTUP. THERE ARE NO SPECIFIC DIESEL FUEL CONTROLS FOR SULFUR DIOXIDE OR NITROGEN OXIDES EMISSIONS. SULFUR DIOXIDE AND NITROGEN OXIDES EMISSION S ARE MEASURED BY THE CONTINUOUS EMISSION MONITORING SYSTEMS ON THE STACKS.

Title V/Major Source Status
AES CAYUGA is subject to Title V requirements. This determination is based on the following information:
The facility is major for NOx, SO2, PM, PM-10, CO and HAP potential emissions.

Program Applicability
The following chart summarizes the applicability of AES CAYUGA with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability

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

NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52) - 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 Part 231) - 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) - 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) - 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.

NSPS New Source Performance Standards (40 CFR 60) - 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) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

Title VI Stratospheric Ozone Protection (40 CFR 82, Subparts A thru G) - 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) - 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.

SCC Code	Description
1-01-002-02	EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION ELECTRIC UTILITY BOILER - BITUMINOUS COAL PULVERIZED COAL: DRY BOTTOM (BITUMINOUS COAL)
1-01-005-01	EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION ELECTRIC UTILITY BOILER - DISTILLATE OIL Grades 1 and 2 Oil

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Series 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.	Contaminant Name	PTE	
		lbs/yr	Range
000630-08-0	CARBON MONOXIDE		>= 250 tpy
0NY100-00-0	HAP		>= 250 tpy
007439-92-1	LEAD(HAP)		> 0 but < 10 tpy
0NY210-00-0	OXIDES OF NITROGEN		>= 250 tpy
0NY075-00-0	PARTICULATES		>= 250 tpy
0NY075-00-5	PM-10		>= 250 tpy
007446-09-5	SULFUR DIOXIDE		>= 250 tpy
0 0NY998-00-0	VOC		>= 2.5 tpy but < 10 tpy

Regulatory Analysis

Location	Regulation	Short Description	Condition

Facility/EU/EP/Process/ES

FACILITY	40CFR 72-A.6(a)(1)	The Title IV Phase 1 units are at Dunkirk, Greenidge, Milliken, Northport and Port Jefferson stations only.	49
M-00001	40CFR 72-A.6(a)(2)	The Facilities which are in Phase 2 of Title IV and are listed in Table 2 or 3 of 40 CFR Part 73.10.	58
M-00001/-/P11/B0001	40CFR 73.	Sulfur Dioxide allowance system	63
M-00001/-/P21/B0002	40CFR 73.	Sulfur Dioxide allowance system	71
M-00001/-/P11/B0001	40CFR 76.5(a)(1)	Acid rain Nitrogen Oxides emission reduction program - NOx emission limitations for Group 1 boilers	64
M-00001/-/P21/B0002	40CFR 76.5(a)(1)	Acid rain Nitrogen Oxides emission reduction program - NOx emission limitations for Group 1 boilers	72
FACILITY	40CFR 82-F.	Protection of Stratospheric Ozone - recycling and emissions reduction	50
FACILITY	6NYCRR 200.5	Sealing.	1
FACILITY	6NYCRR 200.6	Acceptable ambient air quality.	2
FACILITY	6NYCRR 200.7	Maintenance of equipment.	3
FACILITY	6NYCRR 201-1.10(b)	Permitting - public access to records kept for Title V permitting	9
FACILITY	6NYCRR 201-1.2	Permitting - unpermitted emission sources	4
FACILITY	6NYCRR 201-1.4	Unavoidable noncompliance and violations	5
M-00001	6NYCRR 201-1.4	Unavoidable noncompliance and violations	53
FACILITY	6NYCRR 201-1.5	Emergency defense	6
FACILITY	6NYCRR 201-1.7	Recycling and Salvage	7
FACILITY	6NYCRR 201-1.8	Prohibition of reintroduction of collected contaminants to the air	8
FACILITY	6NYCRR 201-3.2(a)	Exempt Activities - Proof of eligibility	10
FACILITY	6NYCRR 201-3.3(a)	Trivial Activities - proof of eligibility	11
FACILITY	6NYCRR 201-5.	State Facility Permit General Provisions	82
FACILITY	6NYCRR 201-5.3(b)	Permit Content and Terms of Issuance - permit conditions	83
FACILITY	6NYCRR 201-6.	Title V Permits and the Associated Permit Conditions	12, 13, 15, 16, 18, 19, 20, 21, 22, 24, 51, 52, 14, 17, 23
FACILITY	6NYCRR 201-6.5(c)(3)	Permit conditions for Recordkeeping and Reporting of Compliance	25

		Monitoring	
FACILITY	6NYCRR 201-6.5(e)	Compliance Certification	26
FACILITY	6NYCRR 201-6.5(g)	Permit shield	27, 28
FACILITY	6NYCRR 202-1.1	Required emissions tests.	29
FACILITY	6NYCRR 202-2.1	Emission Statements - Applicability	30
FACILITY	6NYCRR 202-2.5	Emission Statements - record keeping requirements.	31
FACILITY	6NYCRR 204-1.6	Standard Requirements	32
FACILITY	6NYCRR 204-2.1	Authorization and Responsibilities of the NOx Authorized Account Representative	33
FACILITY	6NYCRR 204-4.1	Compliance Certification Report	34, 35, 36
FACILITY	6NYCRR 204-7.1	Submission of NOx Allowance Transfers	37
FACILITY	6NYCRR 204-8.1	General Requirements	39, 40
FACILITY	6NYCRR 204-8.2	Initial Certification and Recertification Procedures	41, 42
FACILITY	6NYCRR 204-8.3	Out of Control Periods	43
FACILITY	6NYCRR 204-8.4	Notifications	38
FACILITY	6NYCRR 204-8.7	Additional Requirements to Provide Heat Input Data for Allocations Purposes	44
FACILITY	6NYCRR 207.2(a)	Episode action plan for significant air contamination source	45
FACILITY	6NYCRR 211.2	General Prohibitions - air pollution prohibited.	84
FACILITY	6NYCRR 211.3	General Prohibitions - visible emissions limited	46
FACILITY	6NYCRR 215.	Open Fires	47
M-00001/-/P12/B0001	6NYCRR 225-1.2(d)	Sulfur-in-fuel limitations - Table 2	65
M-00001/-/P19/B0001	6NYCRR 225-1.2(d)	Sulfur-in-fuel limitations - Table 2	66
M-00001/-/P22/B0002	6NYCRR 225-1.2(d)	Sulfur-in-fuel limitations - Table 2	73
M-00001/-/P29/B0002	6NYCRR 225-1.2(d)	Sulfur-in-fuel limitations - Table 2	74
M-00001/-/P11/B0001	6NYCRR 225-1.5(b)	General Variances Equivalent Emission Rate.	60, 61, 62
M-00001/-/P21/B0002	6NYCRR 225-1.5(b)	General Variances Equivalent Emission Rate.	68, 69, 70
M-00001/NEW01	6NYCRR 225-1.7(c)	Emission and fuel monitoring.	75
M-00001/NEW02	6NYCRR 225-1.7(c)	Emission and fuel monitoring.	78
M-00001/-/P11	6NYCRR 227-1.2(a)(3)	Particulate Emissions Firing Solid Fuel. (see narrative)	59
M-00001/-/P21	6NYCRR 227-1.2(a)(3)	Particulate Emissions Firing Solid Fuel. (see narrative)	67
M-00001/NEW01	6NYCRR 227-1.3	Smoke Emission Limitations.	76
M-00001/NEW02	6NYCRR 227-1.3	Smoke Emission Limitations.	79
M-00001/NEW03	6NYCRR 227-1.3	Smoke Emission Limitations.	81
M-00001/NEW01/P11	6NYCRR 227-2.5(b)	System-wide averaging	77

		option.	
M-00001/NEW02/P21	6NYCRR 227-2.5(b)	System-wide averaging option.	80
FACILITY	6NYCRR 227-3.12	AARs - Authorized Account Representatives.	48
M-00001	6NYCRR 227-3.13	Emissions Monitoring	54
M-00001	6NYCRR 227-3.15	Reporting	55
M-00001	6NYCRR 227-3.16	Annual Reconciliation of Allowances and NOx Emissions	56
M-00001	6NYCRR 227-3.17	Compliance Certification	57

Applicability Discussion:

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

6NYCRR Part 200-.5
Allows for the sealing of non-compliant air contamination sources

6NYCRR Part 200-.6
Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6NYCRR Part 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

6NYCRR Part 201-1.2
Any existing emission source that is required to be permitted or registered but has not done so, must apply for the necessary permit or registration. The source is subject to all regulations that were applicable at the time the original permit or registration was required as well as any subsequent applicable requirements that came into effect since.

6NYCRR Part 201-1.4
This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable emission standard that results from a necessary scheduled equipment maintenance, start-up shutdown, malfunction or upset in the event that these are unavoidable.

6NYCRR Part 201-1.5
An enforcement action may be avoided if the facility can demonstrate that an emergency situation occurred which resulted in an emission limitation or permit violation. The following information would constitute evidence of an emergency situation: a properly signed operating log recorded during the actual event which;

identifies the cause(s) of the emergency, indicates that all equipment was operating properly at the time, the person responsible took all reasonable steps to minimize the exceedance or violation, and that the department was notified of the emergency within 2 working days of the event.

6NYCRR Part 201-1.7
Requires the recycle and salvage of collected air contaminants where practical

6NYCRR Part 201-1.8
Prohibits the reintroduction of collected contaminants to the air

6NYCRR Part 201-1.10(b)
Any permit application, compliance plan, permit, and monitoring and compliance certification report that is submitted as part of the Title V permit process must be made available to the public as per requirements set forth under 6 NYCRR Part 616 - Public Access to Records and section 114(c) of the Clean Air Act Amendments of 1990.

6NYCRR Part 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.

6NYCRR Part 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, 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.

6NYCRR Part 201-5
General Provisions - this requirement applies to those permit terms and conditions which are not federally enforceable; specifies that permittees must maintain emission units and control devices in compliance with all rules; authorizes reasonable access for inspections for department representatives; requires that on-site monitoring recordkeeping be made available for review for at least 5 years.

Permit Exclusion Provisions - specifies those actions, such as administrative orders, suits, claims for natural resource damages, etc that are not affected by the state-only portion of the permit, unless they are specifically addressed by it.

6NYCRR Part 201-5.3(b)
Lists those contaminants subject to contaminant specific requirements

6NYCRR Part 201-6
General provisions for Title V permits including:
Applicable Criteria, Limits, Terms, Conditions and Standards - requires that facility operations take place in accordance with approved criteria, emission limits, terms, conditions and standards as specified in the permit and that any documents required by the federally enforceable portion of the permit be certified by a responsible official

Cessation or Reduction of Permitted Activity Not a Defense - specifies that the cessation or reduction of a permitted activity to maintain compliance is not a defense in an enforcement action

Compliance Requirements - lists the information that must be included in any required compliance monitoring records and reports; and requires; compliance with any approved compliance schedule; the submittal of risk management plans as per 112(r) of the Act if necessary; and the submittal of compliance progress reports on a semiannual basis, at a minimum

Federally-Enforceable Requirements - specifies what permit terms and conditions, in general, are federally enforceable

Fees - requires the permittee to pay any required fees

Monitoring, Related Recordkeeping and Reporting Requirements - requires all compliance monitoring and recordkeeping to be conducted according to the terms and conditions of the permit and any Q/A requirements; any monitoring or support information is to be retained for minimum of 5 years.

Permit Revocation, Modification, Reopening, Reissuance or Termination and Associated Information Submission Requirements - specifies that the permit may be modified, revoked, reopened and reissued, or terminated for cause; and the permittee must furnish information regarding the permit to the department upon reasonable request

Permit Shield - sets forth criteria under which the permit shield applies and what authority the department maintains in pursuing violations
Property Rights - specifies that the permit does not convey any property rights

Reopening Cause - sets forth criteria and procedures for reopening a permit
Right to Inspect - establishes authority whereby department representatives may enter

and inspect a facility

Severability - establishes that the permit continues to be valid in instances where any provisions, parts or conditions of the permit are found to be invalid or are the subject of a challenge

6NYCRR Part 201-6.5(c)(3)
Requires that any reports of any required monitoring must be submitted at a minimum frequency of every 6 months.

6NYCRR Part 201-6.5(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.

6NYCRR Part 201-6.5(g)
Permit Exclusion Provisions - specifies those actions, such as administrative orders, suits, claims for natural resource damages, etc that are not affected by the federally enforceable portion of the permit, unless they are specifically addressed by it.

6NYCRR Part 202-1.1
Specifies that emissions tests may be required to ascertain compliance with any air pollution codes and rules.

6NYCRR Part 202-2.1
Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year.

6NYCRR Part 202-2.5
Specifies the emission statement records that must be maintained for a 5 year period.

6NYCRR Part 211-.2
General air pollution prohibition

6 NYCRR Part 211.3
Restricts the opacity of visible emissions from any air contamination source.

6 NYCRR Part 215
Prohibits open fires at industrial and commercial sites.

40 CFR Part 82, Subpart F
Requires affected permittees to comply with the recycling and emissions reduction

standards specified by this rule when using ozone depleting substances identified under Title VI of the Act. Specifically, these regulations apply to the following persons or activities:
a. Persons opening appliances for maintenance, service, repair, or disposal
b. Equipment used during the maintenance, service, repair, or disposal of appliances
c. Persons performing maintenance, service, repair, or disposal of appliances
d. Persons disposing of small appliances, motor vehicle air conditioners or MVAC's, and MVAC-like appliances
e. Persons owning commercial or industrial process refrigeration equipment
f. Owners/operators of appliances normally containing 50 or more pounds.
If applicable, the above persons or activities may be required to comply with certain disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

Facility Specific Requirements
In addition to Title V, AES CAYUGA has been determined to be subject to the following regulations:

40CFR 72-A.6 (a) (1)
This section references a table containing the list of utilities affected by Phase I of Title IV of the Clean Air Act.

40CFR 72-A.6 (a) (2)
This section references tables containing a list of utilities affected by Phase II of Title IV of the Clean Air Act. It also references the exceptions, or those that are exempt.

40CFR 73 .
The purpose of this part is to establish the requirements and procedures for allocating sulfur dioxide emissions allowances and how to manage them.

40CFR 76 .5 (a) (1)
This rule establishes the NOx emission limit pursuant to the Federal Acid Rain regulations.

6NYCRR 204-1.6
This condition requires the designated representative of the permittee to make submissions for the NOx Bugdet Program. The Program is designed to mitigate the interstate transport of ground level ozone and nitrogen oxides, a ground level ozone precursor.

6NYCRR 204-2.1
This condition states the submission requirements for the NOx Budget Trading Program. The Program is designed to mitigate the interstate transport of ground level ozone and nitrogen oxides, a ground level ozone precursor.

6NYCRR 204-4.1
This condition covers the compliance certification report requirements for the NOx Budget Program.

6NYCRR 204-7.1
This condition lists the requirements for transfer of allowances in the NOx Budget Program.

6NYCRR 204-8.1
This condition lists the general requirements for the NOx Budget trading program. They include, but are not limited to monitoring requirements, certification, record keeping and reporting.

6NYCRR 204-8.2
This condition covers the procedures for initially certifying and recertifying the monitoring systems of the unit meet the requirements of the NOx Budget Program

6NYCRR 204-8.3
This condition states the requirements for data substitution during times when the monitoring systems to not meet applicable quality assurance requirements.

6NYCRR 204-8.4
This condition lists the addresses where monitoring plans and their modifications, compliance certifications, recertifications, quarterly QA/QC reports and petitions for alternative monitoring shall be sent.

6NYCRR 204-8.7
This condition is a requirement for monitoring and reporting if a particular monitoring scenario is utilitzed.

6NYCRR 207 .2 (a)
This condition requires the submittal of an episode action plan upon request of the Commissioner.

6NYCRR 225-1.2 (d)
The sulfur-in-fuel limitations for residual and distillate oil and for solid fuel are listed in Tables 1,2 and 3 or 6 NYCRR Part 225-1.2(c), (d) and (e)

6NYCRR 225-1.5 (b)
This regulation allows the Commissioner of NYSDEC to grant a variance from the sulfur-in-fuel limitations in Tables 1,2 or 3 of 6 NYCRR Part 225-1.2 if the source owner can demonstrate that the emissions of sulfur dioxide will be not be greater than if compliant fuel was used.

6NYCRR 225-1.7 (c)
This regulation requires requires that measurements be made daily of the rate of each fuel burned, the gross heat content and ash content of each fuel burned (determined at least once per week), and the average electrical output (daily) and hourly generation rate.

6NYCRR 227-1.2 (a) (3)

This paragraph only applies to facilities with heat inputs greater than 250 mmBtu/hr which submitted an application for a permit to construct after August 11, 1972.

6NYCRR 227-1.3
This regulation requires a limitation and compliance monitoring for opacity from a stationary combustion installation.

6NYCRR 227-2.5 (b)
The system-wide average shall consist of a weighted average allowable emission rate based upon the weighted average of actual emissions from units that are operating. Excess reductions utilized in the system-wide average may only be counted from the lowest allowable emission rate. Simply put, if there is a more stringent emission limit than RACT already in place on the unit, then excess reductions may only be counted from below that emission rate.

6NYCRR 227-3.12
This condition requires the facility to have an Authorized Account Representative for the Pre 2003 NOx Budget Trading Program.

6NYCRR 227-3.13
This condition included the emissions monitoring requirements for the Pre 2003 NOx Budget Trading Program.

6NYCRR 227-3.15
This condition spells out the reporting requirements for the Pre 2003 NOx Budget Trading Program.

6NYCRR 227-3.16
This condition spells out the requirements for surrender of allowances for the Pre 2003 NOx Budget Program.

6NYCRR 227-3.17
This condition lists the requirements for compliance certification for the Pre 2003 NOx Budget Trading Program.

Non Applicability Analysis
List of non-applicable rules and regulations:

Location Facility/EU/EP/Process/ES	Short Description	Regulation
M-00001	Review of Major Stationary Sources and Major Modifications - Source Applicability	40CFR 52-A.21(i)(1)

Reason: This Non-Applicability determination only applies to the installation of Selective Catalytic Reduction (SCR) NOx control technology. SCR installation on boiler units 1 and 2 is exempt from New Source Performance Standards (NSPS) regulations at 40 CFR 60 as a pollution control project pursuant to 40 CFR 60.14(e)(5). Additionally, SCR installation on boiler units 1 and 2 is exempt from the Federal Prevention of Significant Deterioration of Air Quality (PSD) regulations as a pollution control project, unless the project renders the units

less environmentally beneficial. When operated, the SCR is expected to significantly reduce NOx emissions. However, there are some potential adverse impacts from operation of the SCR which need to be assessed. The Department will make a final determination on whether these impacts make the Units less environmentally beneficial after the following conditions have been met. Approval to commence construction of the Unit 2 SCR is valid through 8/1/01, after which AES must reapply for and receive approval to install the Unit 2 SCR prior to commencing construction.

1. Ammonia Slip. NH3 slip is guaranteed to be less than 2 ppm (2 lb/hr at max load) from the SCR. AES shall conduct a stack test for ammonia in accordance with condition #4 below. This stack test shall be performed at boiler loads representative of normal operation of the Units.

2. SO3 formation. The SCR is guaranteed to convert less than or equal to 1% of SO2 to SO3. AES shall conduct a stack test for SO3 emissions in accordance with condition #4 below. This test shall measure both the SCR inlet and outlet concentrations of SO2 and SO3 emissions.

3. Particulate Formation. The SCR may lead to an increase in particulate emissions due to the formation of ammonia sulfates. AES shall conduct a stack test for particulate and PM-10 emissions in accordance with condition #4 below. This data shall be compared to test data obtained from the Units obtained under similar operating conditions, but without the SCR operating.

4. The above required stack tests shall be conducted within 180 days of first operation of each SCR on Units 1 and 2. AES shall submit a stack test protocol to NYSDEC Region 7 for review at least 60 days prior to conducting testing. AES shall provide at least 30 days prior notice to NYSDEC Region 7 of the test dates. A final test report shall be submitted to NYSDEC Region 7 within 60 days of completion of stack testing.

5. AES shall submit written notification of startup to NYSDEC Region 7 within 15 days of first operation of the SCR on Unit 1 and Unit 2 (separate notifications for each unit).

NOTE: Non-applicability determinations are cited as a permit condition under 6 NYCRR Part 201-6.5(g). This information is optional and provided only if the applicant is seeking to obtain formal confirmation, within an issued Title V permit, that specified activities are not subject to the listed federal applicable or state only requirement. The applicant is seeking to obtain verification that a requirement does not apply for the stated reason(s) and the Department has agreed to include the non-applicability determination in the issued Title V permit which in turn provides a shield against any potential enforcement action.

Compliance Certification

Summary of monitoring activities at AES CAYUGA:

Location Facility/EU/EP/Process/ES	Type of Monitoring	Cond No.
M-00001/-/P11/B0001	continuous emission monitoring (cem)	63
M-00001/-/P21/B0002	continuous emission monitoring (cem)	71
M-00001/-/P11/B0001	continuous emission monitoring (cem)	64
M-00001/-/P21/B0002	continuous emission monitoring (cem)	72
M-00001	record keeping/maintenance procedures	53
FACILITY	record keeping/maintenance procedures	25
FACILITY	record keeping/maintenance procedures	26
FACILITY	record keeping/maintenance procedures	30
FACILITY	record keeping/maintenance procedures	36
FACILITY	record keeping/maintenance procedures	42
FACILITY	record keeping/maintenance procedures	38
FACILITY	record keeping/maintenance procedures	44

FACILITY	record keeping/maintenance procedures	45
M-00001/-/P12/B0001	monitoring of process or control device parameters as surrogate	65
M-00001/-/P19/B0001	monitoring of process or control device parameters as surrogate	66
M-00001/-/P22/B0002	monitoring of process or control device parameters as surrogate	73
M-00001/-/P29/B0002	monitoring of process or control device parameters as surrogate	74
M-00001/-/P11/B0001	continuous emission monitoring (cem)	60
M-00001/-/P11/B0001	continuous emission monitoring (cem)	61
M-00001/-/P11/B0001	continuous emission monitoring (cem)	62
M-00001/-/P21/B0002	continuous emission monitoring (cem)	68
M-00001/-/P21/B0002	continuous emission monitoring (cem)	69
M-00001/-/P21/B0002	continuous emission monitoring (cem)	70
M-00001/NEW01	record keeping/maintenance procedures	75
M-00001/NEW02	record keeping/maintenance procedures	78
M-00001/-/P11	intermittent emission testing	59
M-00001/-/P21	intermittent emission testing	67
M-00001/NEW01	continuous emission monitoring (cem)	76
M-00001/NEW02	continuous emission monitoring (cem)	79
M-00001/NEW03	continuous emission monitoring (cem)	81
M-00001/NEW01/P11	continuous emission monitoring (cem)	77
M-00001/NEW02/P21	continuous emission monitoring (cem)	80
M-00001	record keeping/maintenance procedures	54
M-00001	record keeping/maintenance procedures	55
M-00001	record keeping/maintenance procedures	56
M-00001	record keeping/maintenance procedures	57

Basis for Monitoring

Some monitoring requirements contained in this permit are based on specific monitoring requirements listed in each applicable rule. Other monitoring requirements were specifically established to address the burning of alternative fuel fluff at the facility to ensure that the combustion of this material complies with Department policy for burning alternative fuels