

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

**Facility Identification Data**

Name: FREEPORT POWER PLANT #2  
Address: 289 BUFFALO AVE  
FREEPORT, NY 11520

**Owner/Firm**

Name: VILLAGE OF FREEPORT  
Address: 46 N OCEAN AVE  
FREEPORT, NY 11520-3023, USA  
Owner Classification: Municipal

**Permit Contacts**

Division of Environmental Permits:  
Name: CHRISTOPHER M HOGAN  
Address: 625 BROADWAY  
ALBANY, NY 12233

Division of Air Resources:  
Name: MATTHEW REIS  
Address: 625 BROADWAY  
ALBANY, NY 12233  
Phone:5184028401

Air Permitting Contact:  
Name: HUBERT BIANCO  
Address: 220 WEST SUNRISE HIGHWAY  
FREEPORT, NY 11520

**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**

This permit modification is being proposed as a reopening of the Title V facility permit originally issued to the permittee on November 12, 1998. Review of the 1998 permit suggested that additional requirements needed to be added to the permit to assure compliance with state and federal applicable requirements. Additionally, past stack tests suggested that the diesels have operated in violation of the state and federal limits on the emission of oxides of nitrogen (NOx) and particulates.

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



The provisions of this permit modification are intended to supplement the present permit to include all standards and requirements that apply under state and federal regulations. This permit is also intended to bring the diesels into compliance with state and federal regulations limiting NOx and particulates. This will be accomplished by the permanent decommissioning and shutdown of the two existing diesel generators.

In place of the diesel generators, the Village of Freeport proposes to construct and operate one LM-6000 gas turbine generator, or an equivalent unit. The existing diesel generators will be permanently shut down when this new turbine commences commercial operation. They must be decommissioned within 60 days of shutdown.

The construction of the new turbine will be authorized through the issuance of a separate state facility permit addressing the requirements applying to the LM-6000. Within one year of the commencement of operation of the new LM-6000, the Village will be required to apply for a Title V permit modification to the facility's issued Title V permit that merges the requirements applying to the LM-6000 with those that apply to an existing Curtiss-Wright turbine to be covered under the reopened Title V permit.

Until the shutdown of the diesels takes place, their operation is limited under an agreement with the Long Island Power Authority (LIPA). The diesel generators will co-exist for a short period with the new turbine during its "shakedown" period. The state permit for the new turbine will prohibit the operation of the diesel generators at the same time as the new turbine during the shakedown period.

This permit additionally requires the permanent shutdown of the diesels as of the date on which the new turbine commences commercial operation. A November 30, 2003 date is set in the permit as a deadline for the shutdown of the diesels.

The existing Curtiss-Wright turbine will continue to operate at this facility. This unit must be tested under this permit to demonstrate that it is in compliance with the applicable NOx and particulate emission limits as well as all other applicable requirements in state and federal rules.

The hours of operation of the Curtiss-Wright turbine will be limited after the issuance of this permit. Limits have been placed on the number of hours that this unit can operate during the NOx Budget control period from May 1 through September 30 each year that will allow this unit to avoid the need to comply with the state NOx Budget rules by capping emissions of NOx from this unit. Operation of the Curtiss-Wright turbine between September 15 and April 30 of each year (the September 15 and September 30 dates originate in different regulations) is limited to 500 hours.

The Village operates a small (2.8 million Btu per hour) package boiler for on-site utilities. This unit has recently been converted to gas and is considered to be exempt for the purposes of this permit.

No new requirements will become effective for this facility during the permit term.

**Attainment Status**

FREEPORT POWER PLANT #2 is located in the town of HEMPSTEAD in the county of NASSAU. 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

New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 1-2820-00358/00002 Modification Number: 1



01/22/2004

air pollutant.)

Criteria Pollutant	Attainment Status
Particulate Matter (PM)	ATTAINMENT
Particulate Matter < 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	SEVERE 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

This facility is an electric power generating facility operated by the Village of Freeport. The primary source of this power are two 95 million Btu per hour (mmBtu/hr) diesel-powered generators. A 280 mmBtu/hr Curtiss-Wright simple cycle turbine generator also operates at the facility, and is presently prohibited from operating more than 500 hours per year. Finally, there is a 2.8 mmBtu/hr package boiler in operation at this facility for the provision of routine utilities at the facility. This unit has recently been converted to burning natural gas and is exempt from permitting requirements.

Permit Structure and Description of Operations

The Title V permit for FREEPORT POWER PLANT #2 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.

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



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.

FREEPORT POWER PLANT #2 is defined by the following emission unit(s):

Emission unit 200002 - Diesel engine #2 rated at 95 million Btu/hr. This engine fires #2 fuel oil.

Emission unit 200002 is associated with the following emission points (EP):  
00002

It is further defined by the following process(es):

Process: 202 is located at GROUND FLOOR, Building PP2 - This process is the firing of #2 fuel oil in diesel engine #2.

Emission unit 200001 - Diesel engine #1 rated at 95 million Btu/hr. This engine fires #2 fuel oil.

Emission unit 200001 is associated with the following emission points (EP):  
00001

It is further defined by the following process(es):

Process: 201 is located at GROUND FLOOR, Building PP2 - This process is the firing of #2 fuel oil in diesel engine #1

Emission unit 200004 - Simple cycle combustion turbine rated at 280 million Btu/hr. This turbine fires #2 fuel oil.

Emission unit 200004 is associated with the following emission points (EP):  
00004

It is further defined by the following process(es):

Process: 203 is located at GROUND FLOOR, Building PP2 - This process is the firing of #2 fuel oil in the existing Curtiss-Wright combustion turbine.

**Title V/Major Source Status**

FREEPORT POWER PLANT #2 is subject to Title V requirements. This determination is based on the following information:

This facility is classified as "major" for Title V permitting purposes. Its emissions exceed the "major facility" threshold levels for NOx, SO2, CO, particulates and VOC's. The classification of the facility as "major" triggers the requirement to obtain a Title V permit in order to operate.

**Program Applicability**

The following chart summarizes the applicability of FREEPORT POWER PLANT #2 with regards to the principal air pollution regulatory programs:

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



<b>Regulatory Program</b>	<b>Applicability</b>
PSD	NO
NSR (non-attainment)	NO
NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	NO
NSPS	NO
TITLE IV	NO
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



**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**

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 out of compliance with specific requirements (see attached compliance schedule)  
Compliance Schedule:

<b>Location</b>	<b>Short Description</b>	<b>Regulation</b>
<b>Facility/EU/EP/Process/ES</b>		
2-00001/00001/201/00001	Particulate emissions.	6NYCRR 227.2(b)(1)
2-00002/00002/202/00002	Particulate emissions.	6NYCRR 227.2(b)(1)
2-00001/00001/201/00001	Emission limitations for lean	6NYCRR 227-
2.4(f)(2)(ii)	burn engines firing other fuels by themselves or in combination with gas.	
2-00002/00002/202/00002	Emission limitations for lean	6NYCRR 227-
2.4(f)(2)(ii)	burn engines firing other fuels by themselves or in combination with gas.	

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



**Compliance Discussion:**

FREEPORT POWER PLANT #2 is in violations of the following requirement(s): APPLICABLE EMISSION STANDARDS & NO<sub>x</sub> BUDGET ISSUES

NO<sub>x</sub> Emission Standards:

The review of past stack test results indicates that the operation of the diesel engines has resulted in past exceedances of the NO<sub>x</sub> emission limit under 6 NYCRR Part 227. Specifically, the emissions from the diesel generators at this facility have been determined to be out of compliance with the 9.0 grams per brake horsepower per hour restriction on the emission of nitrogen oxides (NO<sub>x</sub>) under 227-2.4(f)(2)(ii).

In 1995, the permittee requested a variance from the 9.0 grams per brake horsepower per hour limit for NO<sub>x</sub>. This request contained an evaluation of control technologies available to meet this limit. Variances are allowed under subdivision 227-2.5(c) and may be granted where the owner/operator demonstrates that compliance with the applicable NO<sub>x</sub> emission limits in Part 227 are not economically or technically feasible, and provides that a permittee can request that the Department set a higher unit specific emission limit based on the capabilities of combustion modifications or other emission reduction measures. This alternative RACT emission limit must be approved as a revision to New York's State Implementation Plan. The 1995 analysis of NO<sub>x</sub> control technologies potentially applicable to the diesels was updated in August of 2002.

The permittee has several options to achieve compliance with the NO<sub>x</sub> RACT limit, including: (1) obtaining a variance from the Department and a SIP revision from EPA; (2) controlling emissions from the stack to reduce emissions below the 9.0 grams per brake horsepower per hour limit; or (3) decommissioning the diesel engines. This permit requires that the diesel engines (Emission Units 00001 & 00002 in this permit) be decommissioned in accordance with an enforceable compliance schedule, and this requirement is consistent with the permittee's publicly stated intentions.

Since the permittee will permanently shut the diesel generators down, no further action on the variance request is planned. Until the diesels are decommissioned, the 9.0 grams per brake horsepower per hour restriction on the emission of nitrogen oxides (NO<sub>x</sub>) under 227-2.4(f)(2)(ii) will continue to apply and has been placed in this permit. Additionally, a compliance plan by which the diesels will come into compliance with this standard has been incorporated into the permit. Essentially, these diesel generators will not cause an exceedance of this standard at the end of the term of the compliance plan because the diesels will no longer operate. Because the diesels will be shut down, stack testing for compliance with the NO<sub>x</sub> limit will not be required.

This permit also requires stack testing of the existing Curtiss-Wright turbine to determine its compliance with the applicable NO<sub>x</sub> emission standards. For this unit, the limit is 100 ppmvd corrected to 15% oxygen. If the unit cannot meet this limit, the permittee will be allowed to apply for a variance to this limit as provided for under subdivision 227-2.5(c) of the Department's regulations.

Particulate Emission Standards:

For particulates, the emission limit in New York State's federally-approved State Implementation Plan (SIP) of 0.10 pounds per million Btu in 227.2(b)(1) applies to the diesel generators. The Curtiss-Wright

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



turbine is additionally subject to the 0.10 pounds per million BTU standard that appears in subdivision 227-1.2(a)(1).

Past stack testing indicated that these diesel generators were operating out of compliance with the applicable standard. Subdivisions 227-1.2(c) and 227.2(c) provide that an exception to this standard can be granted if requested by the permittee provided specific conditions are met. According to subdivision 227-1.2(c), which is presently in effect, "Upon written application by a source owner, the commissioner may except such person from the provisions of this section for a period not exceeding one year if the applicant can demonstrate to the satisfaction of the commissioner, by acceptable diffusion analysis or other acceptable method, that the emissions from his stationary combustion installation will not cause any applicable ambient air quality standard for particulates to be exceeded. Any exception granted by the commissioner shall include the condition that the source shall not cause air pollution or contravention of any air quality standard. The commissioner may extend the exception provided the source owner has complied with all such conditions."

In August of 2002, the permittee submitted a "NOx RACT Update for Power Plant #2" in which current control options for particulates were explored. Since the permittee will permanently shut down the diesel generators, no further action on this submission as it relates to the diesel generators is planned. Until the diesels are decommissioned, the 0.10 pounds per million Btu limit on the restriction on the emission of particulates under Part 227 will continue to apply and has been placed in this permit.

To address the non-compliance of the diesels with the above standard, a compliance plan by which the facility will come into compliance with this standard has been incorporated into the permit. Essentially, these diesel generators will not cause an exceedance of this standard at the end of the term of the compliance plan because the diesels will no longer operate. Because the diesels will be shut down, stack testing for compliance with the particulate limit will not be required.

This permit also requires stack testing of the existing Curtiss-Wright turbine to determine its compliance with the applicable particulate emission standards described above. If this unit cannot meet these limits, the permittee will be allowed to apply for an exception to this limit as provided for under subdivisions 227-1.2(c) and 227.2(c) of the Department's regulations.

**NOx Budget Requirements (6 NYCRR Part 204 & Subpart 227-3):**

New York State NOx Budget programs are contained in Part 204 and Subpart 227-3. Subpart 227-3 applied through 2002. Part 204 contains the NOx budget requirements for the time period beginning in mid-2002. The only unit at this facility potentially subject to NOx Budget requirements is the existing Curtiss-Wright turbine.

Subdivision 204-1.4(b) provides an exemption from NOx Budget requirements if the hours of operation of this unit are limited such that the Curtiss-Wright turbine's potential to emit does not exceed 25 tons per year. Limiting the operation of this turbine to a maximum of 133 hours per year will keep emissions from exceeding this threshold. This limit on hours of operation has been placed in the permit.

**SIC Codes**

SIC or Standard Industrial Classification code is an industrial code developed by the

# New York State Department of Environmental Conservation

## Permit Review Report

Permit ID: 1-2820-00358/00002 Modification Number: 1

01/22/2004



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
2-01-001-02	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - DISTILLATE OIL (DIESEL) Reciprocating
2-01-001-09	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - DISTILLATE OIL (DIESEL) TURBINE: EXHAUST

### 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.

New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 1-2820-00358/00002 Modification Number: 1

01/22/2004



Cas No.	Contaminant Name	PTE	
		lbs/yr	Range
000630-08-0	CARBON MONOXIDE		>= 250 tpy
007439-92-1	LEAD (HAP)		> 0 but < 10 tpy
0NY210-00-0	OXIDES OF NITROGEN		>= 250 tpy
0NY075-00-0	PARTICULATES		>= 50 tpy but < 100 tpy
007446-09-5	SULFUR DIOXIDE		>= 250 tpy
0NY998-00-0	VOC		>= 50 tpy but < 100 tpy

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**Item A: Sealing - 6NYCRR Part 200.5**

The Commissioner may seal an air contamination source to prevent its operation if compliance with 6 NYCRR Chapter III is not met within the time provided by an order of the Commissioner issued in the case of the violation. Sealing means labeling or tagging a source to notify any person that operation of the source is prohibited, and also includes physical means of preventing the operation of an air contamination source without resulting in destruction of any equipment associated with such source, and includes, but is not limited to, bolting, chaining or wiring shut control panels, apertures or conduits associated with such source.

No person shall operate any air contamination source sealed by the Commissioner in accordance with this section unless a modification has been made which enables such source to comply with all requirements applicable to such modification.

Unless authorized by the Commissioner, no person shall remove or alter any seal affixed to any contamination source in accordance with this section.

**Item B: Acceptable Ambient Air Quality - 6NYCRR Part 200.6**

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

**Item C: Maintenance of Equipment - 6NYCRR Part 200.7**

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

**Item D: Unpermitted Emission Sources - 6NYCRR Part 201-1.2**

If an existing emission source was subject to the permitting requirements of 6NYCRR Part 201 at the time of construction or modification, and the owner and/or operator failed to apply for a permit for such emission source then the following provisions apply:

- (a) The owner and/or operator must apply for a permit for such emission source or register the facility in accordance with the provisions of Part 201.
- (b) The emission source or facility is subject to all regulations that were applicable to it at the time of construction or modification and any subsequent requirements applicable to existing sources or facilities.

**Item E: Emergency Defense - 6NYCRR Part 201-1.5**

An emergency constitutes an affirmative defense to an action brought 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 properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An emergency occurred and that the facility owner and/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;
- (3) During the period of the emergency the facility owner and/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 and/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 and/or operator seeking to establish the occurrence of an emergency has the burden of

**New York State Department of Environmental Conservation  
Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

**Item F: Recycling and Salvage - 6NYCRR Part 201-1.7**

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of 6 NYCRR.

**Item G: Prohibition of Reintroduction of Collected Contaminants to the Air - 6NYCRR Part 201-1.8**

No person shall unnecessarily remove, handle, or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

**Item H: Public Access to Recordkeeping for Title V Facilities - 6NYCRR Part 201-1.10(b)**

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 6NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

**Item I: Proof of Eligibility for Sources Defined as Exempt Activities - 6 NYCRR Part 201-3.2(a)**

The owner and/or operator of an emission source or unit that is eligible to be exempt, may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source 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 which contains emission sources or units subject to 6 NYCRR Subpart 201-3, 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.

**Item J: Proof of Eligibility for Sources Defined as Trivial Activities - 6 NYCRR Part 201-3.3(a)**

The owner and/or operator of an emission source or unit that is listed as being trivial in 6 NYCRR Part 201 may be required to certify that it operates within the specific criteria described in 6 NYCRR Subpart 201-3. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

make them available to representatives of the Department upon request.

Department representatives must be granted access to any facility which contains emission sources or units subject to 6 NYCRR Subpart 201-3, 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.

**Item K: Timely Application for the Renewal of Title V Permits - 6 NYCRR Part 201-6.3(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 L: Certification by a Responsible Official - 6 NYCRR Part 201-6.3(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 M: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.5(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 N: Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR Part 201-6.5(a)(3)**

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 O: Providing Information Upon Request - 6 NYCRR Part 201-6.5(a)(4)**

The permittee shall furnish to the Department, within a reasonable time, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

The permittee shall also, on request, furnish the Department with copies of records required to be kept by the permit. Where information is claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

**Item P: Cessation or Reduction of Permitted Activity Not a Defense - 6NYCRR Part 201-6.5(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 Q: Property Rights - 6 NYCRR Part 201-6.5(a)(6)**

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

**Item R: Fees - 6 NYCRR Part 201-6.5(a)(7)**

The owner and/or operator of a stationary source shall pay fees to the department consistent with the fee schedule authorized by 6 NYCRR Subpart 482-2.

**Item S: Right to Inspect - 6 NYCRR Part 201-6.5(a)(8)**

Upon presentation of credentials and other documents, as may be required by law, the permittee shall allow the Department or an authorized representative to perform the following:

- i. Enter upon the permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- iii. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- iv. As authorized by the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

**Item T: Severability - 6 NYCRR Part 201-6.5(a)(9)**

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

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 U: Progress Reports and Compliance Schedules - 6 NYCRR Part 201-6.5(d)(5)**

Progress reports consistent with an applicable schedule of compliance must be submitted at least semiannually on a calendar year basis, or at a more frequent period if specified in the applicable requirement or by the Department elsewhere in this permit. These reports shall be submitted to the Department within 30 days after the end of a reporting period. Such progress reports shall contain the following:

- i. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
- ii. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

**Item V: Off Permit Changes - 6 NYCRR Part 201-6.5(f)(6)**

No permit revision will be required for operating changes that contravene an express permit term, provided that such changes would not violate applicable requirements as defined under this Part or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting, or compliance certification permit terms and conditions. Such changes may be made without requiring a permit revision, if the changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions) provided that the facility provides the Administrator and the Department with written notification in advance of the proposed changes within a minimum of 7 days as required by 6 NYCRR §201-6.5(f)(6).

**Item W: Permit Shield - 6 NYCRR Part 201-6.5(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,

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

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 X: Reopening for Cause - 6 NYCRR Part 201-6.5(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 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 201-6.7 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

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

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 Y: Required Emission Tests - 6 NYCRR Part 202-1.1**

An acceptable report of measured emissions shall be submitted, as may be required by the Commissioner, to ascertain compliance or noncompliance with any air pollution code, rule, or regulation. Failure to submit a report acceptable to the Commissioner within the time stated shall be sufficient reason for the Commissioner to suspend or deny an operating permit. Notification and acceptable procedures are specified in 6NYCRR Part 202-1.

**Item Z: Visible Emissions Limited - 6 NYCRR Part 211.3**

Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

**Item AA: Open Fires - 6 NYCRR Part 215**

No person shall burn, cause, suffer, allow or permit the burning in an open fire of garbage, rubbish for salvage, or rubbish generated by industrial or commercial activities.

**Item BB: 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

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

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 CC: 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 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.

New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 1-2820-00358/00002 Modification Number: 1

01/22/2004



Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Short Description	Condition
FACILITY	ECL 19-0301	Powers and Duties of the Department with respect to air pollution control	1-31
FACILITY	40CFR 68	Chemical accident prevention provisions	1-10
FACILITY	40CFR 82-F	Protection of Stratospheric Ozone - recycling and emissions reduction	1-11
FACILITY	6NYCRR 200.6	Acceptable ambient air quality.	1-2, 1-1
2-00001/00001/201/00001	6NYCRR 200.6	Acceptable ambient air quality.	1-12
2-00002/00002/202/00002	6NYCRR 200.6	Acceptable ambient air quality.	1-18
2-00004/00004/203/00004	6NYCRR 200.6	Acceptable ambient air quality.	1-24
FACILITY	6NYCRR 201-1.4	Unavoidable noncompliance and violations	1-32
FACILITY	6NYCRR 201-6	Title V Permits and the Associated Permit Conditions	32, 26, 33
FACILITY	6NYCRR 201-6.5(c)	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring	1-3
FACILITY	6NYCRR 201-6.5(c)(2)	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring	1-4
FACILITY	6NYCRR 201-6.5(c)(3)(ii)	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring	1-5
FACILITY	6NYCRR 201-6.5(e)	Compliance Certification	1-6
FACILITY	6NYCRR 202-2.1	Emission Statements - Applicability	28
FACILITY	6NYCRR 202-2.5	Emission Statements - record keeping requirements.	29
2-00004/00004/203/00004	6NYCRR 204-1.4	Applicability	1-25
FACILITY	6NYCRR 211.2	General Prohibitions - air pollution prohibited.	44
FACILITY	6NYCRR 211.3	General Prohibitions - visible emissions limited	1-7, 1-8
FACILITY	6NYCRR 225-1.8	Reports, sampling and analysis.	1-9
2-00001/00001/201/00001	6NYCRR 227.2(b)(1)	Particulate emissions.	1-16, 1-17
2-00002/00002/202/00002	6NYCRR 227.2(b)(1)	Particulate emissions.	1-22, 1-23
2-00004/00004/203/00004	6NYCRR 227.2(b)(1)	Particulate emissions.	1-30
2-00004/00004/203/00004	6NYCRR 227-1.2(a)(1)	Particulate Emissions from Liquid Fuels.	1-26
2-00001/00001/201/00001	6NYCRR 227-1.3(a)	Smoke Emission	1-13



**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**

2-00002/00002/202/00002	6NYCRR 227-1.3(a)	Limitations. Smoke Emission Limitations.	1-19
2-00004/00004/203/00004	6NYCRR 227-1.3(a)	Smoke Emission Limitations.	1-27
2-00004/00004/203/00004	6NYCRR 227-2.4(e)(1)(ii)	RACT requirements for Simple cycle and regenerative combustions turbines firing multiple fuels.	1-28
2-00004/00004/203/00004	6NYCRR 227-2.4(e)(4)	Control requirements for turbines firing other fuels	1-29
2-00001/00001/201/00001	6NYCRR 227-2.4(f)(2)(ii)	Emission limitations for lean burn engines firing other fuels by themselves or in combination with gas.	1-14, 1-15
2-00002/00002/202/00002	6NYCRR 227-2.4(f)(2)(ii)	Emission limitations for lean burn engines firing other fuels by themselves or in combination with gas.	1-20, 1-21

**Applicability Discussion:**

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

ECL 19-301.

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.

6NYCRR Part 200-6

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

6NYCRR Part 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.

6NYCRR Part 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

**New York State Department of Environmental Conservation  
Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

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.

6NYCRR Part 201-6.5(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.

6NYCRR Part 201-6.5(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.

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 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

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.

6NYCRR Part 211-.2

This regulation prohibits any emissions of air contaminants to the outdoor atmosphere which may be detrimental to human, plant or animal life or to property, or which unreasonably interferes with the comfortable enjoyment of life or property regardless of the existence of any specific air quality standard or emission limit.

6 NYCRR Part 211.3

This condition requires that the opacity (i.e., the degree to which emissions other than water reduce the transmission of light) of the emissions from any air contamination source be less than 20 percent (six minute average) except for one

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**



**01/22/2004**

continuous six-minute period per hour of not more than 57 percent.

40 CFR Part 68.

This Part lists the regulated substances and their 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.

**Facility Specific Requirements**

In addition to Title V, FREEPORT POWER PLANT #2 has been determined to be subject to the following regulations:

40CFR 68

This Part lists the regulated substances and their applicability thresholds and sets the requirements for stationary sources concerning the prevention of accidental releases of these substances. Notwithstanding the indication at the heading to this section, this facility is not specifically subject to 40 CFR Part 68. Rather, this provision is placed in Title V permits to advise facility owners of their obligations in cases where this rule does apply.

6NYCRR 201-6.5 (c)

This requirement specifies what information must be included in any records and reports that are to be maintained or submitted as a result of any compliance monitoring. Records of all monitoring data and support information is to be retained for a period of at least 5 years from the date of the monitoring, sampling, measurement, report, or application. Reports of any required monitoring as a result of a federally applicable requirement needs to be submitted every 6 months, at a minimum. Finally, the permit needs to include a notification and reporting process for permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6NYCRR 201-6.5 (c) (2)

This requirement specifies what information must be included in any records and reports that are to be maintained or submitted as a result of any compliance monitoring. Records of all monitoring data and support information is to be retained for a period of at least 5 years from the date of the monitoring, sampling, measurement, report, or application. Reports of any required monitoring as a result of a

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



federally applicable requirement needs to be submitted every 6 months, at a minimum. Finally, the permit needs to include a notification and reporting process for permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6NYCRR 201-6.5 (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.

6NYCRR 204-1.4

New York State NOx Budget programs are contained in Part 204 and Subpart 227-3. Subpart 227-3 applied through 2002. Part 204 contains the NOx budget requirements for the time period beginning in mid-2002. The only unit at this facility potentially subject to NOx Budget requirements is the existing Curtiss-Wright turbine.

Subdivision 204-1.4 provides an exemption from NOx Budget requirements if the hours of operation are limited such that the potential to emit for the affected unit does not exceed 25 tons during the May 1 through September 30 control period per year. Limits on operating hours placed in this permit restrict the emissions from the Curtiss-Wright turbine below this level. As such, this unit will be exempt from NOx Budget requirements once this permit is issued.

6NYCRR 225-1.8

This regulation requires an owner or operator of a facility which purchases and fires coal and/or oil to submit reports to the commissioner containing fuel analysis data, information on the quantity of the fuel received, burned, and results of any stack sampling, stack monitoring and any other procedures to ensure compliance with the provisions of 6 NYCRR Part 225-1. This requirement has been incorporated into this permit.

6NYCRR 227 .2 (b) (1)

This regulation is from the 1972 version of Part 227 and still remains as an active provision of New York's state implementation plan (SIP). The rule establishes a particulate limit of 0.10 lbs/mmBtu based on a 2 hour average emission for (1) any oil fired stationary combustion installation; or (2) any coal fired stationary combustion installation of more than 250 mmBtu/hr total heat input. This limit applies to the two diesel generators at this facility, and to the existing Curtiss-Wright turbine.

This permit requires that the permittee stack test the existing turbine to demonstrate compliance with this limit. The permittee is required, under this permit, to submit an acceptable protocol, conduct the stack testing, and submit a report after each test according to a schedule in the permit.

During the stack testing of the existing turbine, fuel flow must be monitored and recorded. After compliance has been demonstrated, the turbine will not be allowed to operate at a greater fuel flow rate than was in effect during stack testing. Monitoring of fuel flow must be conducted to ensure that the unit does not operate at a higher level than it did during the test.

If the existing Curtiss-Wright turbine cannot meet this limit, the permittee will be allowed to apply for an exception to

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



this limit as provided for under subdivision 227.2(c) of the Department's regulations.

The diesel unit will meet this limit by shutting down permanently.

6NYCRR 227-1.2 (a) (1)

Paragraph 227-1.2(a)(1) establishes a particulate 0.10 lbs per mmBtu for stationary combustion units of greater than 250 mmBtu/hr heat input capacity which fire coal, oil, or coal derived fuels.

The existing Curtiss-Wright turbine's capacity has been given as 280 mmBtu/hr, so this requirement applies to it in addition to the 0.10 lbs/mmBtu limit under subdivision 227.2(b)(1). Both of these requirements are federally-enforceable and both are included in this permit as being applicable to the Curtiss-Wright turbine since the averaging times on which they are based are different. The limit in 227.2(b)(1) is based on a two hour averaging time. The limit in 227-1.2(a)(1) does not have an averaging time associated with it within the rule. However, the EPA test method used to determine compliance is based on a one hour averaging time, so this is the averaging time on which compliance will be determined.

This permit requires that the permittee stack test the existing turbine to demonstrate compliance with this limit. The permittee is required, under this permit, to submit an acceptable protocol, conduct the stack testing, and submit a report after each test according to a schedule in the permit.

During stack testing, fuel flow must be monitored and recorded. After compliance has been demonstrated, the turbine will not be allowed to operate at a greater fuel flow rate than was in effect during stack testing. Monitoring of fuel flow must be conducted to ensure that the unit does not operate at a higher level than it did during the test.

If the existing Curtiss-Wright turbine cannot meet this limit, the permittee will be allowed to apply for an exception to this limit as provided for under subdivision 227-1.2(c) of the Department's regulations.

6NYCRR 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. These restrictions have been incorporated into this permit along with compliance monitoring measures to ensure compliance with these limits. This restriction applies to both diesel generators and the existing Curtiss-Wright turbine.

6NYCRR 227-2.4 (e) (1) (ii)

NO<sub>x</sub> emissions for the existing Curtiss-Wright turbine are limited to 100 ppmvd corrected to 15% O<sub>2</sub> for simple cycle turbines capable of firing a combination of fuels.

This permit requires that the permittee stack test the existing turbine to demonstrate compliance with this limit. The permittee is required, under this permit, to submit an acceptable protocol, conduct stack testing, and submit a report after each test according to a schedule in the permit.

During stack testing, fuel flow must be monitored and recorded. After compliance has been demonstrated, the turbine will not be allowed to operate at a greater fuel flow rate than was in effect



**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**

during stack testing. Monitoring of fuel flow must be conducted to ensure that the unit does not operate at a higher level than it did during the test. If this unit cannot meet this limit, the permittee will be allowed to apply for a variance to this limit as provided for under subdivision 227-2.5(c) of the Department's regulations.

6NYCRR 227-2.4 (e) (4)

NOx emissions for the Curtiss-Wright turbine are limited to 100 ppmvd corrected to 15% O2 during the period from May 1st through September 15th per the provisions of paragraph 227-2.4(e)(4). For this limit to apply only during this time period, the turbine must not operate more than 500 hours during the period of September 16 to April 30 of each year.

In the case of this permit, a limit has been placed on the number of hours that the turbine can operate from September 16 through April 30. This relieves the permittee from the 100 ppm NOx limit outside of the May 1 through September 15 period, but also restricts the operation during this time.

6NYCRR 227-2.4 (f) (2) (ii)

NOx emissions from the diesel generators are limited to 9.0 grams per brake-horsepower per hour on a one hour average while firing distillate oil. Compliance with this limit will be achieved by permanently decommissioning both Fiat diesel generating units.

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.

**Compliance Certification**

Summary of monitoring activities at FREEPORT POWER PLANT #2:

<b>Location Facility/EU/EP/Process/ES</b>	<b>Type of Monitoring</b>	<b>Cond No.</b>
FACILITY	record keeping/maintenance procedures	1-1
FACILITY	record keeping/maintenance procedures	1-2
2-00001/00001/201/00001	monitoring of process or control device parameters as surrogate	1-12
2-00002/00002/202/00002	monitoring of process or control device parameters as surrogate	1-18
2-00004/00004/203/00004	monitoring of process or control device parameters as surrogate	1-24
FACILITY	record keeping/maintenance procedures	1-5
FACILITY	record keeping/maintenance procedures	1-6
FACILITY	record keeping/maintenance procedures	28
2-00004/00004/203/00004	work practice involving specific operations	1-25
FACILITY	monitoring of process or control device parameters as surrogate	1-7
FACILITY	monitoring of process or control device parameters as surrogate	1-8
FACILITY	record keeping/maintenance procedures	1-9
2-00001/00001/201/00001	monitoring of process or control device parameters as surrogate	1-16
2-00002/00002/202/00002	monitoring of process or control device parameters as surrogate	1-22



**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**

2-00004/00004/203/00004	intermittent emission testing	1-30
2-00004/00004/203/00004	intermittent emission testing	1-26
2-00001/00001/201/00001	monitoring of process or control device parameters as surrogate	1-13
2-00002/00002/202/00002	monitoring of process or control device parameters as surrogate	1-19
2-00004/00004/203/00004	monitoring of process or control device parameters as surrogate	1-27
2-00004/00004/203/00004	intermittent emission testing	1-28
2-00004/00004/203/00004	work practice involving specific operations	1-29
2-00001/00001/201/00001	monitoring of process or control device parameters as surrogate	1-14
2-00002/00002/202/00002	monitoring of process or control device parameters as surrogate	1-20

**Basis for Monitoring**

Shutdown of the Diesels:

The permittee has proposed to construct a new LM-6000 turbine at this facility. Once the turbine has commenced commercial operation, the diesels must be permanently shut down. This requirement has been incorporated into this permit under the authority of 6 NYCRR section 200.6, which is enforceable by both the state and federal government. November 30, 2003, has been included in this permit as a deadline for the shutdown of the diesels. If the new turbine is able to commence commercial operation before this date, the diesel generators must be shut down at the same time as commercial operation of the new turbine begins. In any case, the diesel generators shall not be allowed to operate after the date on which the new turbine commences commercial operation.

Under the same authority, the permittee is only allowed to operate the diesels under the agreement with LIPA that permits operating only under specific conditions. This is allowed only until the diesels are shut down.

Particulate Limits on the Diesels & Existing Turbine:

Paragraph 227.2(b) of the SIP-approved Part 227 limits particulate emissions from oil-fired stationary combustion installations such as diesel engines and the existing turbine to 0.10 pounds per million Btu. The 0.10 pounds per million Btu limit per the requirements of 227-1.2(a)(1). Also applies to the existing turbine.

As such, the particulate limits in this permit are set at 0.10 pounds per million Btu for the diesels' and the existing turbine's operation under 227.2(b)(1), and 227-1.2(a)(1) and 227.2(b)(1), respectively. The difference between the requirements of 227-1.2(a)(1) and 227.2(b) is in the averaging time for the standard. Part 227-1.2(a)(1) does not specify an averaging time for compliance while 227.2(b)(1) specifies a two hour averaging time. The averaging time for 227-1.2(a)(1) is generally assumed to be one hour since the EPA method used to determine compliance is based primarily on this time period. The 0.10 pounds per million Btu limit has been placed under both citations requiring compliance under the appropriate averaging times.

The permittee will decommission the two existing Fiat diesel generators and install a new LM-6000 turbine (or its equivalent) in the second half of 2003. Since past stack tests have suggested that the diesels are not in compliance with the 0.10 pounds per million Btu limit, these units must be brought into

## New York State Department of Environmental Conservation

### Permit Review Report

Permit ID: 1-2820-00358/00002 Modification Number: 1

01/22/2004



compliance. This will be done by shutting them down under the term of compliance plans placed in the permit according to a schedule in these plans.

The existing Curtiss-Wright turbine will continue to be in service at the facility after the replacement of the diesels. This permit requires that this turbine be stack tested to determine compliance with the particulate standards. If this unit cannot meet these limits, the permittee will be allowed to apply for an exception to this limit as provided for under subdivisions 227-1.2(c) and 227.2(c) of the Department's regulations. The permittee will be required to monitor the rate of fuel flow into the turbine during the stack tests. When testing is complete, the turbine's fuel flow will be restricted to that highest flow measured during stack tests.

#### NOx Emissions from the Diesels:

Part 227-2.4(f)(2)(ii) requires that NOx emissions from the diesels not exceed 9.0 grams per brake horsepower-hour. This limit has been placed in this permit. Past stack tests have suggested that the diesels are not in compliance with this limit, however. The permittee has several options to achieve compliance, including: (1) obtaining a variance from NYSDEC and a SIP revision from EPA; (2) controlling emissions from the stack to reduce emissions below the 9.0 grams per brake horsepower per hour limit; or (3) decommissioning the diesel engines. This permit requires that the diesel engines (Emission Units 00001 & 00002 in this permit) be decommissioned in accordance with an enforceable compliance schedule, and this requirement is consistent with the permittee's publicly stated intentions.

#### NOx Emissions from the Existing Curtiss-Wright Turbine:

Part 227-2.4(e)(1)(ii) requires that NOx emissions not exceed 100 ppmvd corrected to 15% oxygen from combustion turbines. Stack testing is necessary to demonstrate compliance with this limit both under 201-6.5(e) which requires a means of determining compliance with applicable requirements and directly under paragraph 227-2.6(a)(7). To do this, stack testing of the turbine will be required. Further, the permittee will be required to monitor the rate of fuel flow into the turbine during the tests. When testing is complete, the turbine's fuel flow will be restricted to that highest flow measured during stack tests. If this unit cannot meet the above NOx limit, the permittee will be allowed to apply for a variance to this limit as provided for under subdivision 227-2.5(c) of the Department's regulations.

#### Fuel Sulfur Limit:

Part 225 provides that the Department may require any facility owner or operator who purchases coal and/or oil to submit reports containing fuel analysis and purchase information, and maintain these records for at least three years. This requirement has been incorporated into the permit.

Additionally, Section 225-1.2 sets a limit on the maximum fuel sulfur content for distillate fuels (such as #2 fuel oil) at 0.37% for the area in which this facility is located. The permittee presently burns #2 fuel oil with a sulfur content of 0.20%, and has accepted this limit in this permit. The fuel sulfur limit in this permit includes the contribution, if any, of additives blended with the fuel oil. This limit will continue to be in effect until the diesels are shut down.

To assure compliance with this restriction, the facility will be required to maintain fuel certifications provided by the fuel supplier(s) for each delivery of oil. These records will be required to be maintained

## New York State Department of Environmental Conservation

### Permit Review Report

Permit ID: 1-2820-00358/00002 Modification Number: 1

01/22/2004



for at least five years. Summaries of the certifications must be provided with the twice-annual progress reports and the annual compliance certifications. This method of determining compliance is the standard method of determining fuel sulfur compliance and is also the required means of determining compliance in federal rules such as 40 CFR 60.48c.

This applies to both diesels (Emission Units 00001 & 00002), and the existing turbine (Emission Unit 00004).

#### Opacity:

Part 227-1.3(a) contains opacity limitations for internal combustion engines, boilers and turbines. This limit restricts the opacity of smoke from stacks for these operations from exceeding 20% on a six minute average basis except that the opacity may be allowed to up to 27% for one six minute block average period once per hour. For any source at this facility not covered by Part 227, the permit contains the requirements in Part 211, restricting opacity to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity. This requirement appears automatically in any Title V permit.

Continuous opacity monitors are not required for diesels or turbines of the size and/or type of equipment at this facility. They are required for stationary combustion installations over 250 million Btu per hour heat input (see subdivision 227-1.4(a)), which is larger than the diesel units at this facility, and they are not required for gas turbines such as the Curtiss-Wright unit.

The other options for opacity monitoring under 227-1.3(b) include Method 9 observations or "considering other credible evidence." Method 9 observations are conducted by qualified observers who have been trained to quantify opacity by observing the plume and estimating the percent of light transmission being obscured being caused by the presence of smoke. These observations are typically done by certified Department and EPA staff, but can also be conducted by other trained and certified individuals. Recertification is required every six months. The testimony of qualified observers has been admitted routinely in enforcement cases in the past.

While Part 227 provides that Method 9 analyses are acceptable methods for determining compliance with the opacity standards for these units, the circumstances under which Method 9 analyses are required are not defined. The Department has developed a standard method that results in a consistent approach to determining compliance with the opacity requirements of Part 227 as well as other rules which contain an opacity limit. The approach requires that the facility owner look for the presence of visible emissions once per day. If visible emissions are detected two days in a row, a Method 9 observation must be done by a certified individual within two business days of the occurrence.

This method is more structured and routine than past treatment of opacity requirements in which problems may have occurred for some time before the Department became aware of them and sent a certified observer to document the violation. The approach in this permit allows the smoke condition to exist for only two days before a Method 9 analysis is necessary. It should be noted that the presence of visible emissions is not necessarily an indication that the opacity limit is being exceeded, only that it may need to be assessed by Method 9 if it persists for two days. Since the use of a continuous emissions monitor is not a requirement for this facility, and federal regulations do not contain any further opacity monitoring requirements for units such as those at this facility, this has become the standard approach to

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 1-2820-00358/00002 Modification Number: 1**

**01/22/2004**



monitoring opacity for operations such as this.

The placement of this requirement in this permit does not preclude the Department or the EPA from conducting a Method 9 observation when deemed to be necessary.

Finally, this approach has been used in many permits and has been found by the EPA under the Title V program to be an acceptable method for opacity monitoring for these situations.

This monitoring method applies in the permit to both diesels (Emission Units 00001 & 00002), and the existing Curtiss-Wright turbine (Emission Unit 00004).