


ALLEGHENY COUNTY HEALTH DEPARTMENT



AIR QUALITY PROGRAM
301 39th Street, Bldg. #7
Pittsburgh, PA 15201-1891

Synthetic Minor Source *Operating Permit*

<u>Issued To:</u>	Duquesne University	<u>ACHD Permit #:</u>	0193a
<u>Facility:</u>	Duquesne University 600 Forbes Avenue Pittsburgh, PA 15282	<u>Date of Issuance:</u>	September 30, 2011
		<u>Amended</u>	June 3, 2014
		<u>Expiration Date:</u>	September 29, 2016
		<u>Renewal Date:</u>	March 30, 2016

Issued By: 
Sandra L. Etzel
Air Pollution Control Mgr.

Prepared By: Gregson Vaux
Air Quality Engineer

TABLE OF CONTENTS

I.	CONTACT INFORMATION.....	3
II.	FACILITY DESCRIPTION.....	4
III.	GENERAL CONDITIONS - MINOR SOURCE	7
IV.	SITE LEVEL TERMS AND CONDITIONS.....	15
V.	EMISSION UNIT LEVEL TERMS AND CONDITIONS.....	22
	A. COMBUSTION TURBINE (TG001):.....	22
	B. BOILERS (B001, B002, B003, B004A - B004G):.....	25
	C. NO. 2 FUEL OIL-FIRED EMERGENCY GENERATORS:	28
	D. NATURAL GAS-FIRED EMERGENCY GENERATORS:	31
	E. LABORATORIES (LABS):	34
	F. MAINTENANCE PAINTING (PAINT):	36
VI.	MISCELLANEOUS	38
	A. DIESEL FUEL STORAGE TANKS:	38
	B. PAVED ROADS AND PARKING LOTS (ROADS):	38
	C. COOLING TOWER	38
VII.	ALTERNATIVE OPERATING SCENARIOS	40
VIII.	EMISSIONS LIMITATIONS SUMMARY	41

AMENDMENTS:

<i>DATE</i>	<i>SECTION(S)</i>
-------------	-------------------

03/25/2014	Section II – Facility Description revised; Table II-1 revised to add cooling tower; Section VI.C (cooling tower) added.
------------	---

I. CONTACT INFORMATION

Facility Location: Duquesne University
Utilities Building
1000 Gibbon Street
Pittsburgh, PA 15282

Permittee/Owner: Duquesne University
600 Forbes Avenue
Pittsburgh, PA 15282

Permittee/Operator: Duquesne University
(same as above)

Responsible Official: George Bender
Title: Director, Environmental Health and Safety
Company: Duquesne University
Address: 600 Forbes Avenue
Pittsburgh, PA 15282
Telephone Number: (412) 396-5329
Fax Number: (412) 396-5654
E-mail Address: benderg@duq.edu

Facility Contact: George Bender
Title: Director, Environmental Health and Safety
Telephone Number: (412) 396-5329
Fax Number: (412) 396-5654
E-mail Address: benderg@duq.edu

AGENCY ADDRESSES:

ACHD Contact: Chief Engineer
Allegheny County Health Department
Air Quality Program
301 39th Street, Building #7
Pittsburgh, PA 15201-1891

II. FACILITY DESCRIPTION

[This section is provided for informational purposes only and is not intended to be an applicable requirement.]

Duquesne University is a private educational institution located in Pittsburgh, PA. The Physical Plant for the university consists of one (1) electricity and steam and chiller water co-generation facility, powered by one 5,200 kilowatt Solar Taurus 60 SoLoNOx natural-gas-fired combustion turbine with a 31,300 gallon per minute cooling tower. There are eight (8) natural gas-fired boilers used for heating. There are sixteen (16) natural gas-fired emergency generators and fifteen (15) diesel-fired emergency generators located in various buildings on the campus. There are fifteen (15) fuel oil storage tanks for the diesel fired generators. There are laboratories using chemicals containing VOC. There are paved roads and parking lots. There is maintenance painting. The facility is a synthetic minor source for nitrogen oxides (NOx). The facility is a minor source of particulate matter (PM), particulate matter of 10 microns or less in diameter (PM10), sulfur dioxide (SO₂), volatile organic compounds (VOCs), carbon monoxide (CO), and Hazardous Air Pollutants (HAPs), as defined in section 2101.20 of Article XXI.

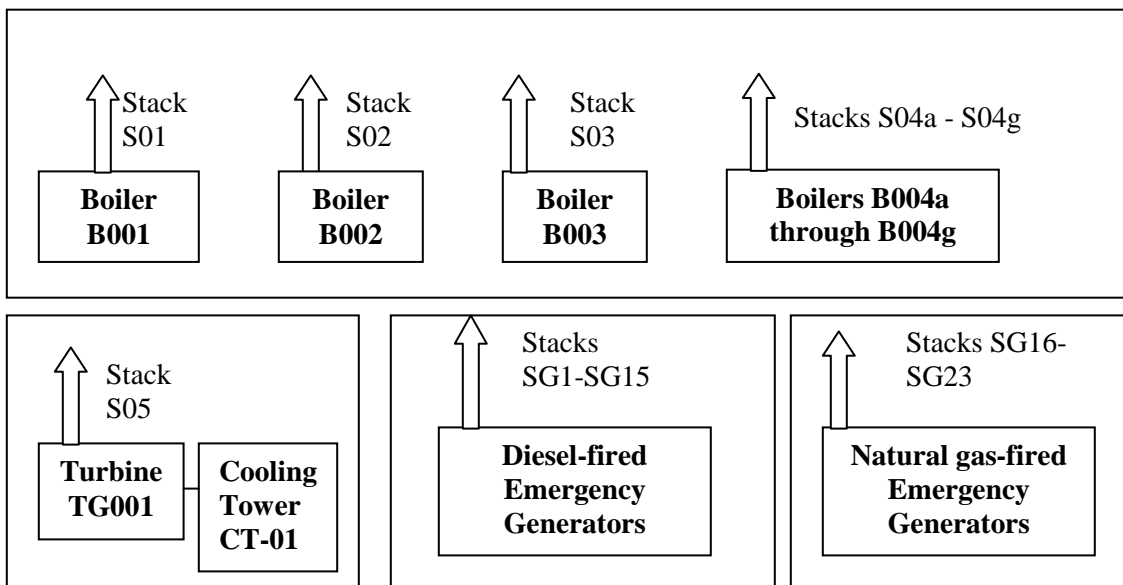
The emission units regulated by this permit are summarized in Table II-1:

TABLE II-1: Emission Unit Identification

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
TG001	Solar Taurus 60S Combustion Turbine	SoLoNOx Emission Control	54.15 MMBtu/hr	Natural Gas	S05
B001	Steam Boiler	None	20.7 MMBtu/hr	Natural Gas	S01
B002	Steam Boiler	None	20.7 MMBtu/hr	Natural Gas	S02
B003	Steam Boiler	None	20.7 MMBtu/hr	Natural Gas	S03
B004a	A.J. Palumbo Parker Boiler (2)	None	3.6 MMBtu/hr	Natural Gas	S04a
B004b	A.J. Palumbo RBI Futera Fusion Water Heater Boiler (2 units)	None	2.5 MMBtu/hr	Natural Gas	S04b
B004c	Mendel Weil-McLain Boiler	None	0.78 MMBtu/hr	Natural Gas	S04c
B004d	Taburitzan Weil-McLain Boiler	None	0.78 MMBtu/hr	Natural Gas	S04d
B004e	Taburitzan Weil-McLain Boiler	None	0.78 MMBtu/hr	Natural Gas	S04e
B004f	Cooper Burnham Hydronic Boiler	None	1.32 MMBtu/hr	Natural Gas	S04f
B004g	Libermann Bryan Boiler (2 units)	None	3.00 MMBtu/hr	Natural Gas	S04g
Assumption	Fifteen (15) Emergency Generators	None	150 kW	No. 2 Fuel Oil	SG1 - SG15
Bayer			500 kW		
Brottier #1			100 kW		
Brottier #2			60 kW		
Duquesne Towers			450 kW		
Fisher Hall			60 kW		
Forbes Garage			25 kW		
Gumberg Library			30 kW		
Law School			100 kW		
Locust Garage			20 kW		
Music School			12 kW		
Power Center			275 kW		
Rockwell Hall #1			12 kW		
St. Martin's			150 kW		
Vickroy Hall			350 kW		
Administration	Fourteen (14) Emergency Generators	None	12.5 kW	Natural Gas	SG16 - SG23
A.J. Palumbo			70 kW		
Canevin Hall #1			7.5 kW		
Canevin Hall #2			35 kW		
College Hall #1			30 kW		
College Hall #2			7 kW		
Duquesne Union			40 kW		

Fisher Hall			30 kW		
Mellon - East			45 kW		
Mellon - West			40 kW		
Public Safety			80 kW		
Rangos SHS			35 kW		
Rockwell Hall #2			35 kW		
Rockwell Hall #3			100 kW		
PAINT	Maintenance Painting	None	450 gallons/yr	latex and oil-base paints	-
ROADS	Paved Roads and Parking Lots	None	-	-	-
CT-01	Cooling Tower	None	31,300 Gallons per minute	Water	-
LABS	Laboratories	None	-	Various chemicals	Varies

Process Flow Diagrams



DECLARATION OF POLICY

Pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Accordingly, pollution prevention measures should be integrated into air pollution control programs wherever possible, and the adoption by sources of cost-effective compliance strategies, incorporating pollution prevention, is encouraged. The Department will give expedited consideration to any permit modification request based on pollution prevention principles.

The permittee is subject to the terms and conditions set forth below. These terms and conditions constitute provisions of *Allegheny County Health Department Rules and Regulations, Article XXI Air Pollution Control*. The subject equipment has been conditionally approved for operation. The equipment shall be operated in conformity with the plans, specifications, conditions, and instructions which are part of your application, and may be periodically inspected for compliance by the Department. In the event that the terms and conditions of this permit or the applicable provisions of Article XXI conflict with the application for this permit, these terms and conditions and the applicable provisions of Article XXI shall prevail. Additionally, nothing in this permit relieves the permittee from the obligation to comply with all applicable Federal, State and Local laws and regulations.

III. GENERAL CONDITIONS - Minor Source

1. Prohibition of Air Pollution (§2101.11)

It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI. The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:

- a. Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;
- b. Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or
- c. May reasonably be anticipated to endanger the public health, safety, or welfare.

2. Definitions (§2101.20)

- a. Except as specifically provided in this permit, terms used retain the meaning accorded them under the applicable provisions and requirements of Article XXI or the applicable federal or state regulation. Whenever used in this permit, or in any action taken pursuant to this permit, the words and phrases shall have the meanings stated, unless the context clearly indicates otherwise.
- b. Unless specified otherwise in this permit or in the applicable regulation, the term “year” shall mean any twelve (12) consecutive months.

3. Conditions (§2102.03.c)

It shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02, for any person to fail to comply with any terms or conditions set forth in this permit.

4. Certification (§2102.01)

Any report, or compliance certification submitted under this permit shall contain written certification by a responsible official as to truth, accuracy, and completeness. This certification and any other certification required under this permit shall be signed by a responsible official of the source, and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. Transfers (§2102.03.e)

This permit shall not be transferable from one person to another, except in accordance with Article XXI §2102.03.e and in cases of change-in-ownership which are documented to the satisfaction of the Department, and shall be valid only for the specific sources and equipment for which this permit was issued. The transfer of permits in the case of change-in-ownership may be made consistent with the administrative permit amendment procedure of Article XXI §2103.14.b The required documentation and fee must be received by the Department at least 30 days before the intended transfer date.

6. Term (§2103.12.e, §2103.13.a)

- a. This permit shall remain valid for five (5) years from the date of issuance, or such other shorter period if required by the Clean Air Act, unless revoked. The terms and conditions of an expired permit shall automatically continue pending issuance of a new operating permit provided the permittee has submitted a timely and complete application and paid applicable fees required under Article XXI Part C, and the Department through no fault of the permittee is unable to issue or deny a new permit before the expiration of the previous permit.
- b. Expiration. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with the requirements of Article XXI Part C.

7. Need to Halt or Reduce Activity Not a Defense (§2103.12.f.2)

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

8. Property Rights (§2103.12.f.4)

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

9. Duty to Provide Information (§2103.12.f.5)

- a. The permittee shall furnish to the Department in writing within a reasonable time, any information that the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of any records required to be kept by the permit.
- b. Upon cause shown by the permittee the records, reports, or information, or a particular portion thereof, claimed by the permittee to be confidential shall be submitted to the Department in accordance with the requirements of Article XXI, §2101.07.d.4. Information submitted to the

Department under a claim of confidentiality, shall be available to the US EPA and the PADEP upon request and without restriction. Upon request of the permittee the confidential information may be submitted to the USEPA and PADEP directly. Emission data or any portions of any draft, proposed, or issued permits shall not be considered confidential.

10. Modification of Section 112(b) Pollutants which are VOCs or PM₁₀ (§2103.12.f.7)

Except where precluded under the Clean Air Act or federal regulations promulgated under the Clean Air Act, if this permit limits the emissions of VOCs or PM₁₀ but does not limit the emissions of any hazardous air pollutants, the mixture of hazardous air pollutants which are VOCs or PM₁₀ can be modified so long as no permit emission limitations are violated. A log of all mixtures and changes shall be kept and reported to the Department with the next report required after each change.

11. Right to Access (§2103.12.h.2)

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized Department and other federal, state, county, and local government representatives to:

- a. Enter upon the permittee's premises where a permitted source is located or an emissions-related activity is conducted, or where records are or should be kept under the conditions of the permit;
- b. Have access to, copy and remove, at reasonable times, any records that must be kept under the conditions of the permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. As authorized by either Article XXI or the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

12. Certification of Compliance (§2103.12.h.5,)

- a. The permittee shall submit on an annual basis, certification of compliance with all terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification of compliance shall be made consistent with General Condition III.4 above and shall include the following information at a minimum:
 - 1) The identification of each term or condition of the permit that is the basis of the certification;
 - 2) The compliance status;
 - 3) Whether any noncompliance was continuous or intermittent;
 - 4) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with the provisions of this permit; and
 - 5) Such other facts as the Department may require to determine the compliance status of the source.
- b. All certifications of compliance must be submitted to the Department by November 30 of each year for the time period beginning October 1 of the previous year and ending September 30 of the same year. The first report shall be due November 30, 2012 for the time period beginning on the issuance date of this permit through September 30, 2012.

13. Record Keeping Requirements (§2103.12.j.1)

- a. The permittee shall maintain records of required monitoring information that include the following:
 - 1) The date, place as defined in the permit, and time of sampling or measurements;
 - 2) The date(s) analyses were performed;
 - 3) The company or entity that performed the analyses;
 - 4) The analytical techniques or methods used;
 - 5) The results of such analyses; and
 - 6) The operating parameters existing at the time of sampling or measurement.
- b. The permittee shall maintain and make available to the Department, upon request, records including computerized records that may be necessary to comply with the reporting and emission statements in Article XXI §2108.01.e. Such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions.

14. Retention of Records (§2103.12.j.2)

The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

15. Reporting Requirements (§2103.12.k)

- a. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.
- b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.
- c. All reports submitted to the Department shall comply with the certification requirements of General Condition III.4 above.
- d. Semiannual reports required by this permit shall be submitted to the Department as follows:
 - 1) One semiannual report is due by October 31 of each year for the time period beginning April 1 and ending September 30.
 - 2) One semiannual report is due by April 30 of each year for the time period beginning October 1 and ending March 31.
 - 3) The first semiannual report shall be due April 30, 2012 for the time period beginning on the issuance date of this permit through March 31, 2012.
- e. Annual reports required by this permit shall be submitted to the Department October 31 of each year for the time period beginning October 1 of the preceding year and ending September 30 of

the current year. The first annual report shall be due October 31, 2012 for the time period beginning on the issuance date of this permit through September 30, 2012.

16. Severability Requirement (§2103.12.1)

The provisions of this permit are severable, and if any provision of this permit is determined by a court of competent jurisdiction to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

17. Existing Source Reactivations (§2103.13.d)

The permittee shall not reactivate any source that has been out of operation or production for a period of one year or more unless the permittee has submitted a reactivation plan request to, and received a written reactivation plan approval from, the Department. Existing source reactivations shall meet all requirements of Article XXI §2103.13.d.

18. Administrative Permit Amendment Procedures (§2103.14.b)

An administrative permit amendment may be made consistent with the procedures of Article XXI §2103.14.b and §2103.24.b. Administrative permit amendments are not authorized for any amendment precluded by the Clean Air Act or the regulations there under.

19. Revisions and Minor Permit Modification Procedures (§2103.14.c)

Sources may apply for revisions and minor permit modifications on an expedited basis in accordance with Article XXI §2103.14.c and §2103.24.a.

20. Significant Permit Modifications (§2103.14.d)

Significant permit modifications shall meet all requirements of the applicable subparts of Article XXI, Part C, including those for applications, fees, public participation, review by affected States, and review by EPA, as they apply to permit issuance and permit renewal. The approval of a significant permit modification, if the entire permit has been reopened for review, shall commence a new full five (5) year permit term. The Department shall take final action on all such permits within nine (9) months following receipt of a complete application.

21. Duty to Comply (§2103.12.f.1)

The permittee shall comply with all permit conditions and all other applicable requirements at all times. Any permit noncompliance constitutes a violation of the Clean Air Act, the Air Pollution Control Act, and Article XXI and is grounds for any and all enforcement action, including, but not limited to, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

22. Renewals (§2103.13.b.)

Renewal of this permit is subject to the same fees and procedural requirements, including those for public participation and affected State and EPA review, that apply to initial permit issuance. The application for renewal shall be submitted at least six (6) months but not more than eighteen (18) months prior to expiration of this permit. The application shall also include submission of a supplemental compliance review as required by Article XXI §2102.01.

23. Reopenings for Cause (§2103.15, §2103.12.f.3)

- a. This permit shall be reopened and reissued under any of the following circumstances:
- 1) Additional requirements under the Clean Air Act become applicable to a major source with a remaining permit term of three (3) or more years. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended solely due to the failure of the Department to act on a permit renewal application in a timely fashion.
 - 2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.
 - 3) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.
 - 4) The Administrator or the Department determines that this permit must be reissued or revoked to assure compliance with the applicable requirements.
- b. 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. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in this permit.

24. Annual Operating Permit Administration Fee (§2103.40)

In each year during the term of this permit, on or before the last day of the month in which the application for this permit was submitted, the permittee shall submit to the Department, in addition to any other applicable administration fees, an Annual Operating Permit Administration Fee in accordance with §2103.40. by check or money order payable to the "Allegheny County Air Pollution Control Fund" in the amount specified in the fee schedule applicable at that time.

25. Other Requirements not Affected (§2104.08, §2105.02)

Compliance with the requirements of this permit shall not in any manner relieve any person from the duty to fully comply with any other applicable Federal, State, or County statute, rule, regulation, or the like, including but not limited to the odor emission standards under Article XXI §2104.04, any applicable NSPSs, NESHAPs, MACTs, or Generally Achievable Control Technology (GACT) standards now or hereafter established by the EPA, and any applicable requirements of BACT or LAER as provided by Article XXI, any condition contained in any applicable Installation or Operating Permit and/or any additional or more stringent requirements contained in an order issued to such person pursuant to Article XXI Part I.

26. Termination of Operation (§2108.01.a)

In the event that operation of any source of air contaminants is permanently terminated, the person responsible for such source shall so report, in writing, to the Department within 60 days of such termination.

27. Tests by the Department (§2108.02.d)

Notwithstanding any tests conducted pursuant to Article XXI §2108.02, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the person responsible for such source or equipment shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.

28. Other Rights and Remedies Preserved (§2109.02.b)

Nothing in this permit shall be construed as impairing any right or remedy now existing or hereafter created in equity, common law or statutory law with respect to air pollution, nor shall any court be deprived of such jurisdiction for the reason that such air pollution constitutes a violation of this permit.

29. Enforcement and Emergency Orders (§2109.03, §2109.05)

- a. The person responsible for this source shall be subject to any and all enforcement and emergency orders issued to it by the Department in accordance with Article XXI §2109.03, §2109.04 and §2109.05.
- b. Upon request, any person aggrieved by an Enforcement Order or Emergency Order shall be granted a hearing as provided by Article XXI §2109.03.d; provided however, that an Emergency Order shall continue in full force and effect notwithstanding the pendency of any such appeal.
- c. Failure to comply with an Enforcement Order or immediately comply with an Emergency Order shall be a violation of this permit thus giving rise to the remedies provided by Article XXI §2109.02.

30. Penalties, Fines, and Interest (§2109.07.a)

A source that fails to pay any fee required under this permit when due shall pay a civil penalty of 50% of the fee amount, plus interest on the fee amount computed in accordance with Article XXI §2109.06.a.4 from the date the fee was required to be paid. In addition, the source may have this permit revoked for failure to pay any fee required.

31. Appeals (§2109.10)

In accordance with State Law and County regulations and ordinances, any person aggrieved by an order or other final action of the Department issued pursuant to Article XXI or any unsuccessful petitioner to the Administrator under Article XXI Part C, Subpart 2, shall have the right to appeal the action to the Director in accordance with the applicable County regulations and ordinances.

32. Risk Management (§2104.08, 40 CFR Part 68)

Should this stationary source, as defined in 40 CFR Part 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in Part 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by *General Condition III.12* above.

33. Circumvention (§2101.14)

For purposes of determining compliance with the provisions of this permit and Article XXI, no credit shall be given to any person for any device or technique, including but not limited to the operation of any source with unnecessary amounts of air, the combining of separate sources except as specifically permitted by Article XXI and the Department, the use of stacks exceeding Good Engineering Practice height as defined by regulations promulgated by the US EPA at 40 CFR §§51.100 and 51.110 and Subpart I, and other dispersion techniques, which without reducing the amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise violate the provisions of this Article; except that, for purposes of determining compliance with Article §2104.04 concerning odors, credit for such devices or techniques, except for the use of a masking agent, may be given.

34. Duty to Supplement and Correct Relevant Facts (§2103.12.d.2)

- a. The permittee shall provide additional information as necessary to address requirements that become applicable to the source after the date it files a complete application but prior to the Department taking action on the permit application.
- b. The permittee shall provide supplementary fact or corrected information upon becoming aware that incorrect information has been submitted or relevant facts were not submitted.
- c. Except as otherwise required by this permit and Article XXI, the Clean Air Act, or the regulations thereunder, the permittee shall submit additional information as necessary to address changes occurring at the source after the date it files a complete application but prior to the Department taking action on the permit application.
- d. The applicant shall submit information requested by the Department which is reasonably necessary to evaluate the permit application.

35. Effect (§2102.03.g.)

- a. Except as specifically otherwise provided under Article XXI, Part C, issuance of a permit pursuant to Article XXI Part B or Part C shall not in any manner relieve any person of the duty to fully comply with the requirements of this permit, Article XXI or any other provision of law, nor shall it in any manner preclude or affect the right of the Department to initiate any enforcement action whatsoever for violations of this permit or Article XXI, whether occurring before or after the issuance of such permit. Further, except as specifically otherwise provided under Article XXI Part C the issuance of a permit shall not be a defense to any nuisance action, nor shall such permit be construed as a certificate of compliance with the requirements of this permit or Article XXI.

36. Installation Permits (§2102.04.a.1.)

It shall be a violation of this permit giving rise to the remedies set forth in Article XXI Part I for any person to install, modify, replace, reconstruct, or reactivate any source or air pollution control equipment which would require an installation permit or permit modification in accordance with Article XXI Part B or Part C.

IV. SITE LEVEL TERMS AND CONDITIONS

1. Reporting of Upset Conditions (§2103.12.k.2)

The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2. Visible Emissions (§2104.01.a)

Except as provided for by Article XXI §2108.01.d pertaining to a cold start, no person shall operate, or allow to be operated, any source in such manner that the opacity of visible emissions from a flue or process fugitive emissions from such source, excluding uncombined water:

- a. Equal or exceed an opacity of 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or,
- b. Equal or exceed an opacity of 60% at any time.

3. Odor Emissions (§2104.04) (County-only enforceable)

No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such source are perceptible beyond the property line.

4. Materials Handling (§2104.05)

The permittee shall not conduct, or allow to be conducted, any materials handling operation in such manner that emissions from such operation are visible at or beyond the property line.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or any order under Article XXI, and all equivalent compliance techniques approved by the Department, shall be properly installed, maintained, and operated consistently with good air pollution control practice.

6. Open Burning (§2105.50)

No person shall conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an Open Burning Permit to such person in accordance with Article XXI §2105.50 or where the open burning is conducted solely for the purpose of non-commercial preparation of food for human consumption, recreation, light, ornament, or provision of warmth for outside workers, and in a manner which contributes a negligible amount of air contaminants.

7. Shutdown of Control Equipment (§2108.01.b)

- a. In the event any air pollution control equipment is shut down for reasons other than a breakdown, the person responsible for such equipment shall report, in writing, to the Department the intent to shut down such equipment at least 24 hours prior to the planned shutdown. Notwithstanding the submission of such report, the equipment shall not be shut down until the approval of the Department is obtained; provided, however, that no such report shall be required if the source(s)

served by such air pollution control equipment is also shut down at all times that such equipment is shut down.

- b. The Department shall act on all requested shutdowns as promptly as possible. If the Department does not take action on such requests within ten (10) calendar days of receipt of the notice, the request shall be deemed denied, and upon request, the owner or operator of the affected source shall have a right to appeal in accordance with the provisions of Article XI.
- c. The prior report required by Site Level Condition IV.7.a above shall include:
 - 1) Identification of the specific equipment to be shut down, its location and permit number (if permitted), together with an identification of the source(s) affected;
 - 2) The reasons for the shutdown;
 - 3) The expected length of time that the equipment will be out of service;
 - 4) Identification of the nature and quantity of emissions likely to occur during the shutdown;
 - 5) Measures, including extra labor and equipment, which will be taken to minimize the length of the shutdown, the amount of air contaminants emitted, or the ambient effects of the emissions;
 - 6) Measures which will be taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impracticable to shut down or curtail the affected source(s) during the shutdown; and
 - 7) Such other information as may be required by the Department.

8. Breakdowns (§2108.01.c)

- a. In the event that any air pollution control equipment, process equipment, or other source of air contaminants breaks down in such manner as to have a substantial likelihood of causing the emission of air contaminants in violation of this permit, or of causing the emission into the open air of potentially toxic or hazardous materials, the person responsible for such equipment or source shall immediately, but in no event later than sixty (60) minutes after the commencement of the breakdown, notify the Department of such breakdown and shall, as expeditiously as possible but in no event later than seven (7) days after the original notification, provide written notice to the Department.
- b. To the maximum extent possible, all oral and written notices required shall include all pertinent facts, including:
 - 1) Identification of the specific equipment which has broken down, its location and permit number (if permitted), together with an identification of all related devices, equipment, and other sources which will be affected.
 - 2) The nature and probable cause of the breakdown.
 - 3) The expected length of time that the equipment will be inoperable or that the emissions will continue.
 - 4) Identification of the specific material(s) which are being, or are likely to be emitted, together with a statement concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality.
 - 5) The estimated quantity of each material being or likely to be emitted.
 - 6) Measures, including extra labor and equipment, taken or to be taken to minimize the length of the breakdown, the amount of air contaminants emitted, or the ambient effects of the emissions, together with an implementation schedule.

- 7) Measures being taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impractical to shut down the source(s), or any part thereof, during the breakdown.
- c. Notices required shall be updated, in writing, as needed to advise the Department of changes in the information contained therein. In addition, any changes concerning potentially toxic or hazardous emissions shall be reported immediately. All additional information requested by the Department shall be submitted as expeditiously as practicable.
- d. Unless otherwise directed by the Department, the Department shall be notified whenever the condition causing the breakdown is corrected or the equipment or other source is placed back in operation by no later than 9:00 AM on the next County business day. Within seven (7) days thereafter, written notice shall be submitted pursuant to Paragraphs a and b above.
- e. Breakdown reporting shall not apply to breakdowns of air pollution control equipment which occur during the initial startup of said equipment, provided that emissions resulting from the breakdown are of the same nature and quantity as the emissions occurring prior to startup of the air pollution control equipment.
- f. In no case shall the reporting of a breakdown prevent prosecution for any violation of this permit or Article XXI.

9. Cold Start (§2108.01.d)

In the event of a cold start on any fuel-burning or combustion equipment, except stationary internal combustion engines and combustion turbines used by utilities to meet peak load demands, the person responsible for such equipment shall report in writing to the Department the intent to perform such cold start at least 24 hours prior to the planned cold start. Such report shall identify the equipment and fuel(s) involved and shall include the expected time and duration of the startup. Upon written application from the person responsible for fuel-burning or combustion equipment which is routinely used to meet peak load demands and which is shown by experience not to be excessively emissive during a cold start, the Department may waive these requirements and may instead require periodic reports listing all cold starts which occurred during the report period. The Department shall make such waiver in writing, specifying such terms and conditions as are appropriate to achieve the purposes of Article XXI. Such waiver may be terminated by the Department at any time by written notice to the applicant.

10. Monitoring of Malodorous Matter Beyond Facility Boundaries (§2104.04)

The permittee shall take all reasonable action as may be necessary to prevent malodorous matter from becoming perceptible beyond facility boundaries. Further, the permittee shall perform such observations as may be deemed necessary along facility boundaries to insure that malodorous matter beyond the facility boundary in accordance with Article XXI §2107.13 is not perceptible and record all findings and corrective action measures taken.

11. Emissions Inventory Statements (§2108.01.e)

- a. Emissions inventory statements in accordance with §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are required by the EPA or that analysis of the data on a more frequent basis is necessary to

implement the requirements of Article XXI or the Clean Air Act.

- b. The failure to submit any report or update within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

12. Orders (§2108.01.f)

In addition to meeting the requirements of General Condition III.26 and Site Level Conditions IV.7 through IV.11, inclusive, the person responsible for any source shall, upon order by the Department, report to the Department such information as the Department may require in order to assess the actual and potential contribution of the source to air quality. The order shall specify a reasonable time in which to make such a report.

13. Violations (§2108.01.g)

The failure to submit any report or update thereof required by General Condition III.26 and Site Level Conditions IV.7 through IV.12 above, inclusive, within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

14. Emissions Testing (§2108.02)

- a. **Orders.** The person responsible for any source shall, upon order by the Department, conduct, or cause to be conducted, such emissions tests as specified by the Department within such reasonable time as is specified by the Department. Test results shall be submitted in writing to the Department within 20 days after completion of the tests, unless a different period is specified in the Department's order. Emissions testing shall comply with all applicable requirements of Article XXI §2108.02.e.
- b. **Tests by the Department:** Notwithstanding any tests conducted pursuant to this permit, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the permittee shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.
- c. **Testing Requirements.** No later than 45 days prior to conducting any tests required by this permit, the person responsible for the affected source shall submit for the Department's approval a written test protocol explaining the intended testing plan, including any deviations from standard testing procedures, the proposed operating conditions of the source during the test, calibration data for specific test equipment and a demonstration that the tests will be conducted under the direct supervision of persons qualified by training and experience satisfactory to the Department to conduct such tests. In addition, at least 30 days prior to conducting such tests, the person responsible shall notify the Department in writing of the time(s) and date(s) on which the tests will be conducted and shall allow Department personnel to observe such tests, record data, provide pre-weighed filters, analyze samples in a County laboratory and to take samples for independent analysis. Test results shall be comprehensively and accurately reported in the units of measurement specified by the applicable emission limitations of this permit.
- d. Test methods and procedures shall conform to the applicable reference method set forth in this

permit or Article XXI Part G, or where those methods are not applicable, to an alternative sampling and testing procedure approved by the Department consistent with Article XXI §2108.02.e.2.

- e. **Violations:** The failure to perform tests as required by this permit or an order of the Department, the failure to submit test results within the time specified, the knowing submission of false information, the willful failure to submit complete results, or the refusal to allow the Department, upon presentation of a search warrant, to conduct tests, shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

15. Abrasive Blasting (§2105.51)

- a. Except where such blasting is a part of a process requiring an operating permit, no person shall conduct or allow to be conducted, abrasive blasting or power tool cleaning of any surface, structure, or part thereof, which has a total area greater than 1,000 square feet unless such abrasive blasting complies with all applicable requirements of Article XXI §2105.51.
- b. In addition to complying with all applicable provisions of §2105.51, no person shall conduct, or allow to be conducted, abrasive blasting of any surface unless such abrasive blasting also complies with all other applicable requirements of Article XXI unless such requirements are specifically addressed by §2105.51.

16. Asbestos Abatement (§2105.62, §2105.63)

In the event of removal, encasement, or encapsulation of Asbestos-Containing Material (ACM) at a facility or in the event of the demolition of any facility, the permittee shall comply with all applicable provisions of Article XXI §2105.62 and §2105.63.

17. Permit Source Premises (§2105.40)

- a. **General.** No person shall operate, or allow to be operated, any source for which a permit is required by Article XXI Part C in such manner that emissions from any open land, roadway, haul road, yard, or other premises located upon the source or from any material being transported within such source or from any source-owned access road, haul road, or parking lot over five (5) parking spaces:
 - 1) Are visible at or beyond the property line of such source;
 - 2) Have an opacity of 20% or more for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or
 - 3) Have an opacity of 60% or more at any time.
- b. **Deposition on Other Premises.** Visible emissions from any solid or liquid material that has been deposited by any means from a source onto any other premises shall be considered emissions from such source within the meaning of Site Level Condition IV.17.a above.

18. Parking Lots and Roadways (§2105.42)

- a. The permittee shall not maintain for use, or allow to be used, any parking lot over 50 parking spaces or used by more than 50 vehicles in any day or any other roadway carrying more than 100 vehicles in any day or 15 vehicles in any hour in such manner that emissions from such parking

lot or roadway:

- 1) Are visible at or beyond the property line;
 - 2) Have an opacity of 20% or more for a period or periods aggregating more than three (3) minutes in any 60 minute period; or
 - 3) Have an opacity of 60% or more at any time.
- b. Visible emissions from any solid or liquid material that has been deposited by any means from a parking lot or roadway onto any other premises shall be considered emissions from such parking lot or roadway.
- c. Site Level Condition IV.18.a above shall apply during any repairs or maintenance done to such parking lot or roadway.
- d. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.18 may be enforced by any municipal or local government unit having jurisdiction over the place where such parking lots or roadways are located. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.18.

19. Demolition (§2105.47)

- a. No person shall conduct, or allow to be conducted, any demolition activities in such manner that the opacity of the emissions from such activities equal or exceed 20% for a period or periods aggregating more than three (3) minutes in any 60 minute period.
- b. Notwithstanding any other provisions of this permit, the prohibitions of Site Level Condition IV.19 may be enforced by any municipal or local government unit having jurisdiction over the place where such demolition activities occur. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.19.

20. Fugitive Emissions (§2105.49)

The person responsible for a source of fugitive emissions, in addition to complying with all other applicable provisions of this permit shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne. Such actions may include, but are not limited to:

- a. The use of asphalt, oil, water, or suitable chemicals for dust control;
- b. The paving and maintenance of roadways, parking lots and the like;
- c. The prompt removal of earth or other material which has been deposited by leaks from transport, erosion or other means;
- d. The adoption of work or other practices to minimize emissions;
- e. Enclosure of the source; and
- f. The proper hooding, venting, and collection of fugitive emissions.

21. Episode Plans (§2106.02)

The permittee shall upon written request of the Department, submit a source curtailment plan, consistent

with good industrial practice and safe operating procedures, designed to reduce emissions of air contaminants during air pollution episodes. Such plans shall meet the requirements of Article XXI §2106.02.

22. New Source Performance Standards (§2105.05)

- a. It shall be a violation of this permit giving rise to the remedies provided by §2109.02 of Article XXI for any person to operate, or allow to be operated, any source in a manner that does not comply with all requirements of any applicable NSPS now or hereafter established by the EPA, except if such person has obtained from EPA a waiver pursuant to Section 111 or Section 129 of the Clean Air Act or is otherwise lawfully temporarily relieved of the duty to comply with such requirements.
- b. Any person who operates, or allows to be operated, any source subject to any NSPS shall conduct, or cause to be conducted, such tests, measurements, monitoring and the like as is required by such standard. All notices, reports, test results and the like as are required by such standard shall be submitted to the Department in the manner and time specified by such standard. All information, data and the like which is required to be maintained by such standard shall be made available to the Department upon request for inspection and copying.

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. Combustion Turbine (TG001):

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
TG001	Solar Taurus 60S Combustion Turbine	SoLoNOx Emission Control	54.15 MMBtu/hr	Natural Gas	S05

1. Restrictions:

- a. Only commercial quality natural gas shall be combusted in the combustion turbine. (§2103.12.a.2.B; §2104.03.a.1; §2102.04.b.6; 40 CFR 60.333(a) & (b))
- b. The permittee shall limit NO_x emissions from the stationary gas turbine to 0.060 percent NO_x by volume at 15 percent oxygen and on a dry basis. (40 CFR 60.332(a)(2))
- c. The permittee shall submit an Installation Permit Application and receive Department approval prior to replacing the engine core in the stationary gas turbine. (§2102.04.a)
- d. Emissions from combustion turbine TG001 shall not exceed the emissions limitations in Table V-A-1 below: (§2102.04.b.6; §2104.02.a.1; IP#96-0193-I001; §2103.20.b.4)

TABLE V-A-1: Emission Limitations for Combustion Turbine TG001

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year)¹
PM	0.99	4.3
PM ₁₀	0.99	4.3
SO ₂	0.05	0.2
NO _x	11.0	48.2
VOC	8.00	35.0
CO	7.07	31.0

¹ A year is defined as any consecutive 12-month period.

2. Testing Requirements:

- a. Testing is required annually for the natural gas turbine using a portable analyzer for NO_x, CO and VOC. (§2103.12.h.1; §2102.04.b.6; IP#96-0193-I001; §2103.20.b.4)
- b. Emissions testing for nitrogen oxides, carbon monoxide, VOC and formaldehyde shall be performed at least once every five (5) years in accordance with Article XXI, §2108.02d .Testing shall be in accordance with EPA Reference Test Methods. (§2103.12.h.1; §2102.04.b.6)
- c. The permittee shall perform the emissions testing required by V.A.2.b above within 180 days of the issuance of this permit. (§2103.12.h.1; §2102.04.b.6)
- d. Testing for nitrogen oxides and carbon monoxide shall be conducted in accordance with applicable U.S. EPA test methods 7 through 7E and 10 through 10B. (§2103.12.h.1)

- e. Testing for VOC shall be conducted in accordance with applicable U.S. EPA test method 18 or 25. Testing for formaldehyde shall be conducted in accordance with applicable U.S. EPA test method 320 or 323. (§2103.12.h.1)
- f. The permittee shall submit the stack test report within 60 days after the completion of the stack testing. (§2103.12.h.1)
- g. The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 (§2103.12.h.1)

3. Monitoring Requirements:

- a. The permittee shall record the hours of operation and the amount of fuel usage on a monthly basis. (§2103.12.i)
- b. The permittee shall demonstrate that the gaseous fuel meets the definition of natural gas in §60.331(u), by presenting a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or representative fuel sampling data which shows that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. (§2103.12.i) (40 CFR 60.334(h)(3))

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data required by Condition V.A.3 for the combustion turbine TG001: (§2103.12.j)
 - 1) Total operating hours (monthly and 12-month rolling total);
 - 2) Records of fuel consumption;
 - 3) Records of fuel sulfur content; and
 - 4) Records of operation, maintenance, inspection, tune-up, calibration and/or replacement of combustion equipment.
- b. The permittee shall keep records of episodes of non-compliance with Conditions V.A.1.a through V.A.1.d above and corrective actions taken shall be recorded upon occurrence. (§2103.12.j)

5. Reporting Requirements:

- a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15. The reports shall contain all required information for the time period of the report:
 - 1) Monthly and 12-month rolling total data required to be recorded by condition V.A.4.a; and
 - 2) Non-compliance information required to be recorded by condition V.A.4.b;
- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 if appropriate.

6. Work Practice Standards:



**EMISSION UNIT LEVEL
TERMS AND CONDITIONS**

**Duquesne University
Operating Permit #0193**

The Permittee shall maintain the combustion turbine in accordance with manufacturer's recommendations and good engineering practices. (§2103.12.a.2.B)

B. Boilers (B001, B002, B003, B004a - B004g):

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
B001	Steam Boiler	None	20.7 MMBtu/hr	Natural Gas	S01
B002	Steam Boiler	None	20.7 MMBtu/hr	Natural Gas	S02
B003	Steam Boiler	None	20.7 MMBtu/hr	Natural Gas	S03
B004a	A.J. Palumbo Parker Boiler (2)	None	3.6 MMBtu/hr	Natural Gas	S04a
B004b	A.J. Palumbo RBI Futera Fusion Water Heater Boiler (2 units)	None	2.5 MMBtu/hr	Natural Gas	S04b
B004c	Mendel Weil-McLain Boiler	None	0.78 MMBtu/hr	Natural Gas	S04c
B004d	Tamburitzan Weil-McLain Boiler	None	0.78 MMBtu/hr	Natural Gas	S04d
B004e	Tamburitzan Weil-McLain Boiler	None	0.78 MMBtu/hr	Natural Gas	S04e
B004f	Cooper Burnham Hydronic Boiler	None	1.32 MMBtu/hr	Natural Gas	S04f
B004g	Libermann Bryan Boiler (2 units)	None	3.00 MMBtu/hr	Natural Gas	S04g

1. Restrictions:

- a. Only natural gas shall be combusted in the boilers. (§2103.12.a.2.B; §2104.03.a.1)
- b. Particulate emissions from boilers B001, B002, B003, B004a, B004b, B004c, B004d, B004e, B004f and B004g shall not exceed 0.008 lb/MMBtu of actual heat input at any time while combusting natural gas. (§2104.02.a.1)
- c. Boilers B001, B002, and B003 shall not exceed the emissions limitations in Table V-B-1 below: (§2103.12.a.2.B; §2104.02.a.1; §2104.03.a.2.A)

TABLE V-B-1: Emission Limitations for Boilers B001, B002, and B003

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)			TOTAL ANNUAL EMISSION LIMIT (tons/year) ¹		
	B001	B002	B003	B001	B002	B003
PM	0.17	0.17	0.17	0.73	0.73	0.73
PM ₁₀	0.17	0.17	0.17	0.73	0.73	0.73
SO ₂	0.01	0.01	0.01	0.06	0.06	0.06
NO _x	2.31	2.31	2.31	10.1	10.1	10.1
VOC	0.13	0.13	0.13	0.56	0.56	0.56
CO	1.94	1.94	1.94	8.50	8.50	8.50

¹ A year is defined as any consecutive 12-month period.

- d. Boilers B004a, B004b, B004c, B004d, and B004e shall not exceed the emissions limitations in Table V-B-2 below: (§2103.12.a.2.B; §2104.02.a.1; §2104.03.a.2.A)

TABLE V-B-2: Emission Limitations for Boilers B004a, B004b, B004c, B004d, B004e, B004f and B004g

POLLUTANT	TOTAL ANNUAL EMISSION LIMIT (tons/year) ¹
	B004a through B004g
PM	0.45
PM ₁₀	0.45
SO ₂	0.04
NO _x	6.24
VOC	0.34
CO	5.24

¹ A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 (§2103.12.h.1)

3. Monitoring Requirements:

The permittee shall install and maintain the necessary meter(s) to determine and to record the amount of monthly fuel usage. The permittee can use a common meter(s) and operating records for individual boilers to determine the unit monthly fuel usage for Boilers B001, B002 and B003. The monthly fuel usage for boilers B004a-g can be aggregated. (§2102.04.e)

4. Record Keeping Requirements:

- a. The permittee shall record and maintain records of the amounts of each fuel combusted monthly. (§2103.12.j)
- b. Records of monthly fuel consumption and the name of the natural gas supplier shall be kept to by the facility. (§2103.12.j)
- c. Records of all cold starts shall be kept by the facility.
- d. A cold start record shall include at a minimum, the date, time, duration and reason for the cold start. (§2103.12.j)

5. Reporting Requirements:

- a. The permittee shall submit semiannual reports to the Department in accordance with General Condition III.15.d above. (§2103.12.k)
- b. The annual report shall include the following information: (§2103.12.k)
 - 1) Calendar dates covered in the reporting period;

- 2) Unit monthly and 12-month rolling total fuel usage for Boilers B001, B002 and B003.
 - 3) Total monthly and 12-month rolling total fuel usage for Boilers B004a-g.
 - 4) Records of all cold starts;
 - 5) Reasons for any noncompliance with the emission standards; and
 - 6) A certified statement signed by the responsible official that the records of fuel supplier certifications submitted represent all of the fuel combusted during the month.
- c. The Department waives the 24-hour notification of all cold starts. This waiver may be terminated by the Department at any time by written notice to the applicant. (§2108.08.d)

6. Work Practice Standards:

The Permittee shall maintain the boilers in accordance with manufacturer's recommendations and good engineering practices. (§2103.12.a.2.B)

C. No. 2 Fuel Oil-fired Emergency Generators:

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
Assumption	Fifteen (15) Emergency Generators	None	150 kW	No. 2 Fuel Oil	SG1 - SG15
Bayer			500 kW		
Brottier #1			100 kW		
Brottier #2			60 kW		
Duquesne Towers			450 kW		
Fisher Hall			60 kW		
Forbes Garage			25 kW		
Gumberg Library			30 kW		
Law School			100 kW		
Locust Garage			20 kW		
Music School			12 kW		
Power Center			275 kW		
Rockwell Hall #1			12 kW		
St. Martin's			150 kW		
Vickroy Hall			350 kW		

1. Restrictions:

- a. The operation of each emergency generator shall be limited to one hundred fifty (150) hours per twelve (12) consecutive month period. (§2103.20.b.4)
- b. The operation of each emergency generator shall be limited to testing and maintenance and those times when power supplied by a public utility is unavailable. (§2103.20.b.4)
- c. Particulate emissions from each diesel fuel-fired emergency generator shall not exceed 0.28 lb/MMBtu of actual heat input at any time while combusting grade No. 2 fuel oil. (§2104.02.a.1)
- d. The permittee shall not combust or allow to be combusted fuel oil with greater than 0.5% sulfur content (by weight) at any time. (§2104.03.a.2.A)
- e. Emissions from each emergency generator shall not exceed the emissions limitations in Tables V-C-1, V-C-2, and V-C-3 below. (§2103.12.a.2.B, §2104.02.a.1; §2103.20.b.4)

**TABLE V-C-1:
Limited Emissions for Each Diesel-fired Generator**

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)							
	Assumption	Bayer	Brottier #1	Brottier #2	Duquesne Towers	Fisher Hall	Forbes Garage	Gumberg Library
PM	0.51	1.70	0.34	0.20	1.53	0.20	0.08	0.10
PM ₁₀	0.51	1.70	0.34	0.20	1.53	0.20	0.08	0.10
SO ₂	0.47	1.58	0.32	0.19	1.42	0.19	0.08	0.09
NO _x	7.17	23.90	4.78	2.87	21.51	2.87	1.20	1.43
VOC	0.57	1.90	0.38	0.23	1.71	0.23	0.10	0.11
CO	1.55	5.15	1.03	0.62	4.64	0.62	0.26	0.31

**TABLE V-C-2:
Limited Emissions for Each Diesel-fired Generator**

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)						
	Law School	Locust Garage	Music School	Power Center	Rockwell Hall #1	St. Martin's	Vickroy Hall
PM	0.34	0.07	0.04	0.93	0.04	0.51	1.19
PM ₁₀	0.34	0.07	0.04	0.93	0.04	0.51	1.19
SO ₂	0.32	0.06	0.04	0.87	0.04	0.47	1.11
NO _x	4.78	0.96	0.57	13.15	0.57	7.17	16.73
VOC	0.38	0.08	0.05	1.05	0.05	0.57	1.33
CO	1.03	0.21	0.12	2.83	0.12	1.55	3.61

TABLE V-C-3: Emission Limitations for All Diesel-fired Generators

POLLUTANT	COMBINED ANNUAL EMISSION LIMIT (tons/year) ¹
PM	0.42
PM ₁₀	0.32
SO ₂	0.73
NO _x	6.92
CO	0.42
VOC	1.53

¹ A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 entitled "Emissions Testing." (§2103.12.h.1)

3. Monitoring Requirements:

The permittee shall install and maintain the necessary meter(s) or equivalent method to determine and to record the operating hours for each emergency generator. (§2102.04.e)

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data for each generator: (§2103.12.j)
 - 1) Fuel consumption (monthly, and 12-month), type of fuel consumed and suppliers' certification of sulfur content, and heating value;
 - 2) Hours of operation per generator (each instance); total operating hours (monthly and 12-month rolling); and
 - 3) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.
- b. Records of diesel fuel certifications from fuel suppliers shall be maintained per shipment. Certifications shall include the name of the supplier and a statement from the supplier that the fuel complies with ASTM D975 "Standard Specifications for Diesel Fuel Oils". (§2103.12.j)
- c. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.j)

5. Reporting Requirements:

- a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15.d above. The reports shall contain all required information for the time period of the report:
 - 1) Monthly and 12-month data required to be recorded by condition V.C.4.a;
 - 2) Non-compliance information required to be recorded by condition V.C.4.c; and
 - 3) Fuel oil certifications and a statement from the permittee that the record of fuel supplier certifications represents all the fuel oil used during the reporting period.
- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 if appropriate.

6. Work Practice Standards:

The permittee shall operate and maintain the emergency generators and emergency compressor in accordance with manufacturers' specifications and good engineering practices. (§2103.12.a.2.B)

D. Natural Gas-fired Emergency Generators:

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
Administration	Fourteen (14) Emergency Generators	None	12.5 kW	Natural Gas	SG16 - SG23
A.J. Palumbo			70 kW		
Canevin Hall #1			7.5 kW		
Canevin Hall #2			35 kW		
College Hall #1			30 kW		
College Hall #2			7 kW		
Duquesne Union			40 kW		
Fisher Hall			30 kW		
Mellon - East			45 kW		
Mellon - West			40 kW		
Public Safety			80 kW		
Rangos SHS			35 kW		
Rockwell Hall #2			35 kW		
Rockwell Hall #3			100 kW		

1. Restrictions:

- a. Only natural gas shall be combusted in the natural gas-fired emergency generators. (§2103.12.a.2.B; §2104.03.a.1)
- b. The operation of each emergency generator shall be limited to testing and maintenance and those times when power supplied by a public utility is unavailable. (§2103.20.b.4)
- c. Particulate emissions from each natural gas-fired emergency generator shall not exceed 0.012 lb/MMBtu of actual heat input at any time while combusting natural gas. (§2104.02.a.1)
- d. Emissions from each emergency generator shall not exceed the emissions limitations in Tables V-D-1, V-D-2, and V-D-3 below. (§2103.12.a.2.B, §2104.02.a.1; §2103.20.b.4)

TABLE V-D-1: Emission Limitations for Natural Gas-fired Generators

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)							
	Administration	A.J. Palumbo	Canevin Hall #1	Canevin Hall #2	College Hall #1	College Hall #2	Duquesne Union	Fisher Hall
PM	0.002	0.008	0.001	0.006	0.005	0.001	0.007	0.005
PM ₁₀	0.002	0.008	0.001	0.006	0.005	0.001	0.007	0.005
SO ₂	8.E-05	4.E-04	5.E-05	2.E-04	2.E-04	4.E-05	3.E-04	2.E-04
NO _x	0.306	1.715	0.184	0.858	0.735	0.172	0.980	0.735
VOC	0.004	0.022	0.002	0.011	0.010	0.002	0.013	0.010
CO	0.474	2.652	0.284	1.326	1.137	0.265	1.516	1.137

TABLE V-D-2: Emission Limitations for Natural Gas-fired Generators

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)					
	Mellon - East	Mellon - West	Public Safety	Rangos SHS	Rockwell Hall #2	Rockwell Hall #3
PM	0.008	0.007	0.009	0.006	0.006	0.011
PM ₁₀	0.008	0.007	0.009	0.006	0.006	0.011
SO ₂	3.E-04	3.E-04	5.E-04	2.E-04	2.E-04	6.E-04
NO _x	1.103	0.980	1.960	0.858	0.858	2.450
VOC	0.014	0.013	0.026	0.011	0.011	0.032
CO	1.705	1.516	3.031	1.326	1.326	3.789

TABLE V-D-3: Emission Limitations for All Natural Gas-fired Generators

POLLUTANT	COMBINED ANNUAL EMISSION LIMIT (tons/year) ¹
PM	0.006
PM ₁₀	0.006
SO ₂	3.E-04
NO _x	1.04
CO	0.014
VOC	1.61

¹ A year is defined as any consecutive 12-month period.

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.14 entitled "Emissions Testing." (§2103.12.h.1)

3. Monitoring Requirements:

The permittee shall install and maintain the necessary meter(s) to determine and to record the amount of operating hours. (§2102.04.e)

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data for each generator: (§2103.12.j)
 - 1) Total operating hours (monthly and 12-month); and
 - 2) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.
- b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.j)

5. Reporting Requirements:

- a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15.d above. The reports shall contain all required information for the time period of the report:

- 1) Monthly and 12-month data required to be recorded by condition V.D.4.a above;
 - 2) Non-compliance information required to be recorded by condition V.D.4.b above; and
- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 if appropriate.

6. Work Practice Standards:

The permittee shall operate and maintain the emergency generators in accordance with manufacturers' specifications and good engineering practices. (§2103.12.a.2.B)

E. Laboratories (LABS):

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
LABS	Laboratories	None	-	Various chemicals	Varies

1. Requirements:

Emissions from the laboratories shall not exceed the emissions limitations in Tables V-E-1 below. (§2103.12.a.2.B)

TABLE V-E-1: Emission Limitations for Laboratories

POLLUTANT	COMBINED ANNUAL EMISSION LIMIT (tons/year) ¹
VOC	9.43
Single HAP	3.97
Total HAPs	8.51

¹ A year is defined as any consecutive 12-month period.

2. Testing Requirements:

None except as specified elsewhere.

3. Monitoring Requirements:

None except as specified elsewhere.

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following data for the laboratory chemicals used: (§2103.12.j)

- 1) Annual records of the amount of each type of chemical used;
- 2) The MSDS sheet for each chemical used shall be maintained on site;
- 3) Annual records of the amount of chemicals shipped offsite for recycling; and
- 4) Annual records of the amount of VOC and HAP emitted.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.j)

5. Reporting Requirements:

a. The permittee shall report the following information to the Department annually in accordance with General Condition III.15.e above. The reports shall contain all required information for the time period of the report:

- 1) Monthly and 12-month data required to be recorded by condition V.E.4.a;
 - 2) Non-compliance information required to be recorded by condition V.E.4.b.
- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 if appropriate.

6. Work Practice Standards:

None except as specified elsewhere.

F. Maintenance Painting (PAINT):

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
PAINT	Maintenance Painting	None	450 gallons/yr	latex and oil-base paints	-

1. Requirements:

Emissions from the maintenance painting shall not exceed the emissions limitations in Tables V-F-1 below. (§2103.12.a.2.B)

TABLE V-F-1: Emission Limitations for Maintenance Painting

POLLUTANT	COMBINED ANNUAL EMISSION LIMIT (tons/year)¹
VOC	0.38

¹ A year is defined as any consecutive 12-month period.

2. Testing Requirements:

None except as specified elsewhere.

3. Monitoring Requirements:

None except as specified elsewhere.

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following data for the paints used: (§2103.12.j)

- 1) Annual records of the amount of each type of paint used;
- 2) The MSDS sheet for each type of paint used;
- 3) Annual records of the amount of paints shipped offsite for recycling; and
- 4) Annual records of the amount of VOC and HAP emitted.

b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.j)

5. Reporting Requirements:

a. The permittee shall report the following information to the Department annually in accordance with General Condition III.15.e above. The reports shall contain all required information for the time period of the report:

- 1) 12-month data required to be recorded by condition V.F.4.a;
- 2) Non-compliance information required to be recorded by condition V.F.4.b.



**EMISSION UNIT LEVEL
TERMS AND CONDITIONS**

**Duquesne University
Operating Permit #0193**

- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8 if appropriate.

6. Work Practice Standards:

None except as specified elsewhere.

VI. MISCELLANEOUS

A. Diesel Fuel Storage Tanks:

ID	SOURCE DESCRIPTION	MAXIMUM CAPACITY	FUEL/RAW MATERIAL
Assumption	Fifteen (15) Storage Tank	370 gallons	No. 2 Fuel Oil
Bayer		180 gallons	
Brottier #1		366 gallons	
Brottier #2		140 gallons	
Duquesne Towers		660 gallons	
Fisher Hall		200 gallons	
Forbes Garage		275 gallons	
Gumberg Library		50 gallons	
Law School		125 gallons	
Locust Garage		25 gallons	
Music School		50 gallons	
Power Center		525 gallons	
Rockwell Hall #1		50 gallons	
St. Martin's		194 gallons	
Vickroy Hall		500 gallons	

1. Restrictions:

The permittee shall operate and maintain the storage tanks in accordance with manufacturers' specifications and good engineering practices. (§2103.12.a.2.B)

B. Paved Roads and Parking Lots (ROADS):

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL
ROADS	Paved Roads and Parking Lots	None	-	-

1. Restrictions:

Particulate emissions from the paved roads shall be controlled by sweeping of the road surface on an as-needed basis to control fugitive particulate due to any spilled materials. (§2103.12.a.2.B)

C. Cooling Tower

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL
CT-01	Cooling tower for combustion turbine TG001	None	1.88 million gallons/hr	Water

1. Restrictions:

- a. The cooling tower shall use treated city-provided water at all times.
- b. The cooling tower shall be equipped with drift eliminators which shall operate at all times of unit operation and shall achieve a drift of 0.0005% or less.
- c. The cooling tower shall be operated and maintained in accordance with the manufacturer's specifications and instructions.

VII. ALTERNATIVE OPERATING SCENARIOS

There are no alternative operating scenarios.

VIII. EMISSIONS LIMITATIONS SUMMARY

[This section is provided for informational purposes only and is not intended to be an applicable requirement.]

The annual emission limitations for the Duquesne University facilities are summarized in the following table:

**TABLE VIII-1 - Emission Limitations Summary
(Including Fugitive Emissions)**

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year)¹
PM	11.2
PM ₁₀	8.07
SO ₂	1.18
NO _x	93.3
VOC	47.3
CO	65.0
Single HAP (Chloroform)	3.97
Total HAPs	10.4

¹ A year is defined as any consecutive 12-month period.