State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
HAMILTON COUNTY

Street Address:
122 S. Front Street
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 14-05284

DATE: 5/14/2002

University of Cincinnati
Jan-Arthur Utrecht
P.O. Box 210218
Cincinnati, OH 45221

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

CC: **USEPA** **HCDES**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 5/14/2002**
Terms and Conditions	**Effective Date: 5/14/2002**

FINAL PERMIT TO INSTALL 14-05284

Application Number:	14-05284
APS Premise Number:	1431384117
Permit Fee:	**$400**
Name of Facility:	University of Cincinnati
Person to Contact:	Jan-Arthur Utrecht
Address:	P.O. Box 210218 Cincinnati, OH 45221

Location of proposed air contaminant source(s) [emissions unit(s)]:
8570 Reading Road
Cincinnati, **Ohio**

Description of proposed emissions unit(s):
Patholocical waste incinerator with fabric filter.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
PM/PM10	1.31
NOx	2.34
CO	1.94
OC	0.20
SO2	1.43
Pb	0.05
HCl	0.96

Emissions Unit ID: **N001**

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
N001 - Pathological waste incinerator with fabric filter	OAC rule 3745-31-05(A)(3) OAC rule 3745-17-07(A) OAC rule 3745-17-09(B) OAC rule 3745-17-09(C)

Applicable Emissions Limitations/Control Measures	
0.534 lb/hr and 2.34 TPY NOx 0.443 lb/hr and 1.94 TPY CO 0.33 lb/hr and 1.43 TPY SO_2 0.3 lb/hr and 1.31 TPY PM/PM10 0.045 lb/hr and 0.20 TPY OC 0.011 lb/hr and 0.05 TPY Pb(Lead) 0.22 lb/hr HCl and 0.96 TPY HCl	
Visible particulate emissions from the stack shall not exceed 5% opacity as a six-minute average except for one six-minute period in any continuous sixty-minute period during which the opacity shall not exceed 10% as a six-minute average.	
The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-09(B) and 3745-17-09(C).	
The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	
0.10 pound PM/100 pounds material charged	
See term A.2.b.	

2. Additional Terms and Conditions

2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by maintaining a secondary combustion chamber temperature at 1800 degrees Fahrenheit or greater during operation of the incinerator, employing a fabric filter to control particulate emissions and

meeting the specified emission rates.

2.b Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

2.c The hourly and annual emission limitations outlined above are based on the emissions unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.

B. Operational Restrictions

1. The incinerator shall be designed, built and operated with a primary and secondary combustion chamber with primary and secondary burners. The secondary combustion chamber shall provide at least two seconds of retention time with a minimum exit gas temperature of 1800 degrees Fahrenheit during each cycle.

2. The type of waste to be burned in this emissions unit shall be limited to type zero and type four waste (pathological).

3. Proper operating procedures shall be employed at all times during the operation of this emissions unit. These procedures shall include a pre-heating cycle as specified by the manufacturer, or an equivalent pre-heating system. The preheated temperature for the secondary combustion chamber of the incinerator shall be at least 1800 degrees Fahrenheit.

4. The permittee shall not burn infectious waste, as defined in OAC rule 3745-75-01(C)(5), in this emissions unit.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the secondary combustion chamber temperature, in degrees Fahrenheit, while the incinerator is in operation. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The monitoring and recording devices shall be capable of accurately measuring the desired parameter.

2. The permittee shall maintain a log of all periods of time when the emissions unit is in operation and the secondary combustion chamber was less than 1800 degrees Fahrenheit.

D. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of all periods of time during which the secondary combustion chamber was less than 1800 degrees Fahrenheit while the incinerator was in operation. The notification shall include a copy of such record, including any corrective action(s) taken, and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitation:
   0.10 pound PM/100 pounds of material charged

   Applicable Compliance Method:
   Compliance with this mass emission limitation shall be based upon stack testing conducted using Method 5 from 40 CFR Part 60.

   b. Emission Limitation:
   0.3 lb/hr and 1.31 TPY PM/PM10

   Applicable Compliance Method:
   The 0.3 lb/hr emission limitation is based on the allowable from OAC rule 3745-17-09(B). The 1.31 TPY limitation was developed by multiplying the 0.3 lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

   c. Emission Limitation:
   0.534 lb/hr and 2.34 TPY NOx

   Applicable Compliance Method:
   The 0.534 lb/hr emission limitation is based on the emission factor from AP-42, 5th Edition, Chapter 2, Table 2.3-1 of 3.56 lbs NOx/ton material charged. The 2.34 TPY limitation was developed by multiplying the 0.534 lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Emission Limitation:
0.443 lb/hr and 1.94 TPY CO

Applicable Compliance Method:
The 0.443 lb/hr emission limitation is based on the emission factor from AP-42, 5th Edition, Chapter 2, Table 2.3-1of 2.95 lbs CO/ton material charged. The 1.94 TPY limitation was developed by multiplying the 0.443 lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

e. Emission Limitation:
0.045 lb/hr and 0.20 TPY OC

Applicable Compliance Method:
The 0.045 lb/hr emission limitation is based on the emission factor from AP-42, 5th Edition, Chapter 2, Table 2.3-2 of 0.299 lbs OC/ton material charged . The 0.20 TPY limitation was developed by multiplying the 0.045 lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

f. Emission Limitation:
0.33 lb/hr and 1.43 TPY SO_2

Applicable Compliance Method:
The 0.33 lb/hr emission limitation is based on the emission factor from AP-42, 5th Edition, Chapter 2, Table 2.3-1 of 2.17 lbs SO_2/ton material charged. The 1.43 TPY limitation was developed by multiplying the 0.33 lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

g. Emission Limitation:
0.011 lb/hr and 0.05 TPY Pb

Applicable Compliance Method:
The 0.011 lb/hr emission limitation is based on the emission factor from AP-42, 5th Edition, Chapter 2, Table 2.3-2 of 0.0728 lbs Pb/ton material charged. The 0.05 TPY limitation was developed by multiplying the 0.011 lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

h. Emission Limitation:
0.22 lb/hr HCl and 0.96 TPY HCl

Applicable Compliance Method:
Compliance with this 0.22 lb/hr emission limitation shall be based upon stack testing conducted using Method 26 or 26A from 40 CFR Part 60. The 0.96 TPY limitation was developed by multiplying the 0.22 lb/hr limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

i. Compliance with the visible particulate limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.

j. Compliance with the secondary combustion chamber minimum temperature requirement shall be demonstrated by the recordkeeping requirements specified in sections C.1. and C.2.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within three months after startup of this emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit of 0.10 pound PM/100 pounds of material charged , the hourly emission rate of 0.22 pound of HCl per hour and the visible particulate emission limitation outlined in Part II.A.1.

c. The following test methods shall be employed to demonstrate compliance with the allowable emission rates.

i. Compliance with this mass emission limitation of 0.10 pound PM/100 pounds of material charged shall be based upon stack testing conducted using Method 5 from 40 CFR Part 60.

ii. Compliance with the 0.22 lb/hr HCl emission limitation shall be based upon stack testing conducted using Method 26 or 26A from 40 CFR Part 60.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA's refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s).

F. Miscellaneous Requirements

None