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Facility Name: **City of Hamilton, Dept Public Utilities**

Application Number: **14-4614**

Date: **February 11, 1999**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(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 are inadequate or cannot meet applicable standards.

If the construction of the proposed source(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 Ohio Administrative Code (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

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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 applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

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PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION 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 and regulations.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **City of Hamilton, Dept Public Utilities** located in **Butler** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

3745-17-10 (C)

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>3745-18-15 (M) (5) *</u>
B009	729 MMBTU/ Hour Coal Fired Boiler	Not Applicable	40 CFR Part 60 Subpart D	

40 CFR Part
52.1881(b) (12) *
3745-17-07 (A) *

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	nal Special Terms and Permit Condition A.1			
	Allowable Mass Emissions and/or Control/Usage Requirements			
	0.10 lb PM/MMBtu of actual heat input.			
	0.10 lb PM/MMBtu of actual heat input.			
	319 TPY PM/PM ₁₀ 0.70 lb NO _x /MMBtu of actual heat input			
	2235 TPY NO _x 1.2 lbs SO ₂ /MMBtu of actual heat input.			
	3832 TPY SO ₂			
	See Additio			

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* The emission limitation established by this rule is less stringent than the limitation established by 40 CFR part 60 Subpart D.

** State enforceable limit only.

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
Organic Compound	8.5**
PM	319
SO ₂	3832
NO _x	2235
CO	71**
PM ₁₀	319

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Hamilton County Dept of Env. Services, 1632 Central Parkway, Cincinnati, Ohio 45210.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

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MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Hamilton County Dept of Env. Services, 1632 Central Parkway, Cincinnati, Ohio 45210.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

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.

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ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. Applicable Emission Limitations and/or Control Requirements

1. Visible particulate emissions shall not exceed 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.
2. The sulfur dioxide emissions shall not exceed 1.2 pounds per MMBtu. When different fossil fuels are burned simultaneously in any combination, the applicable standard shall be determined in accordance with 40 CFR 60.43(b).
3. The nitrogen oxide emissions shall not exceed 0.70 pounds per MMBtu. When different fossil fuels are burned simultaneously in any combination, the applicable standard shall be determined in accordance with 40 CFR 60.44(b).
4. The particulate matter emissions shall not exceed 0.10 pounds per MMBtu.

B. Operational Restrictions

1. None.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect a representative sample of each shipment of coal which is received for burning. The coal sampling shall be performed in accordance with ASTM method D2234, Collection of a Gross Sample of Coal. At the end of each calendar month, the representative samples of coal from all shipments of coal which were received during that calendar month shall be combined into one composite sample.

Each monthly composite sample of coal shall be analyzed for ash content (percent), sulfur content (percent), and heat content (Btu/pound of coal). The analytical methods for ash content, sulfur content and heat content shall be: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM

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method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion

Methods; and ASTM method D2015, Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter,

ASTM method D3286, Gross Calorific Value of Coal and Coke by the Isothermal Bomb Calorimeter, or ASTM method D1989, Standard Test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isooperibol Calorimeters, respectively. Alternative, equivalent methods may be used upon written approval from the Hamilton County Dept of Env. Services.

2. The permittee shall operate and maintain existing equipment to continuously monitor and record the opacity of particulate emissions from this emissions unit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13. If the existing opacity monitor is replaced, then the new monitoring equipment shall be certified in accordance with the requirements of 40 CFR Part 60 Appendix B, Performance Specification 1.

Each continuous emission monitoring system consists of all equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers and data recording/processing hardware and software.

The permittee shall maintain a certification letter from Ohio EPA documenting that the continuous opacity monitoring system has been certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous opacity monitoring system: percent opacity on a 6-minute block average basis, results of daily zero/span calibration checks and magnitude of manual calibration adjustments.

3. The permittee shall operate and maintain equipment to

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continuously monitor and record sulfur dioxide emissions from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75.

Each continuous monitoring system consists of all equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers and data recording/processing hardware and software.

The permittee shall maintain documentation from USEPA or the Ohio EPA that the continuous sulfur dioxide monitoring system has been certified in accordance with

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40 CFR Part 75. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous sulfur dioxide monitoring system: the three hour average emission rate of sulfur dioxide in lb/MMBtu actual heat input, results of daily zero/span calibration checks and magnitude of manual calibration adjustments. In addition, the permittee shall maintain daily records of the total actual heat input values as determined through the F-Factor and carbon dioxide/oxygen calculations as specified in 40 CFR Part 60, Appendix A, Method 19.

4. The permittee shall operate and maintain equipment to continuously monitor and record nitrogen oxide emissions from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75.

Each continuous monitoring system consists of all equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers and data recording/processing hardware and software.

The permittee shall maintain documentation from USEPA or the Ohio EPA that the continuous nitrogen oxide monitoring system has been certified in accordance with 40 CFR Part 75. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous nitrogen oxides monitoring system: the three hour average emission rate of nitrogen oxides in lb/MMBtu actual heat input, results of daily zero/span calibration checks and magnitude of manual calibration adjustments. In addition, the permittee shall maintain daily records of the total actual heat input values as determined through the F-Factor and carbon dioxide/oxygen calculations as specified in 40 CFR Part 60, Appendix A, Method 19.

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5. The permittee shall operate and maintain equipment to continuously monitor and record CO₂ from this emissions unit in percent CO₂. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 and/or 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous CO₂ monitoring system including, but not limited to, percent CO₂ on an instantaneous (one-minute) basis, emissions of CO₂ in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. 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 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.

D. Reporting Requirements

1. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Dept of Env. Services documenting all instances of opacity values in excess of the limitations specified in 40 CFR 60.42(a)(2), detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective actions taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Dept of Env. Services documenting any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The

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permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

2. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Dept of Env. Services documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of SO₂ values in excess of the applicable limit(s) specified in 40 CFR 60.43(a), detailing the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of each 3-hour average above the applicable sulfur dioxide limitation(s).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Dept of Env. Services documenting any continuous SO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and

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reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Dept of Env. Services documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in 40 CFR Part 76, 40 CFR 60.44(a)(3), or any limitations specified in the terms and conditions of this permit.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Dept of Env. Services documenting any continuous NO_x monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating

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time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

4. 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 Hamilton County Department of Environmental Services; and,
 - 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

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be submitted to the Hamilton County Department of Environmental Services. 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 30, April 30, July 30, and October 30 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.)

E. Compliance Methods and Testing Requirements

1. Compliance with the SO₂ limit shall be determined by the continuous sulfur dioxide monitoring system.
2. Compliance with the NO_x limit shall be determined by the continuous nitrogen oxide monitoring system.
3. Compliance with the opacity limit shall be determined by the continuous opacity monitoring system.
4. Compliance with the particulate limit shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.
5. The pounds per hour carbon monoxide (CO) emission limitation was derived by multiplying the CO emissions factor (0.5 pound CO/ton of coal) in AP-42 Section 1.1, Fifth Edition (Table 1.1-3) by the maximum anticipated coal usage value of 64,765 pounds per hour. Note that the maximum anticipated hourly coal usage value was derived by multiplying the maximum anticipated heat input value of 729 Mmbtu/hour by the following heat content value: 11,256 btu/pound (referenced in permittee's air permit to install application number 14-4614, June 6, 1998). The ton per year emission limitation was derived by multiplying the pound per hour emission limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Compliance with the above allowable will be determined via the above calculations.

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6. The pounds per hour organic compound (OC) emission limitation was derived by multiplying the OC emissions factor (0.06 pound OC/ton of coal) in AP-42 Section 1.1, Fifth Edition (Table 1.1-18) by the maximum anticipated coal usage value of 64,765 pounds per hour. Note that the maximum anticipated hourly coal usage value was derived by multiplying the maximum anticipated heat input value of 729 Mmbtu/hour by the following heat content value: 11,256 btu/pound (referenced in permittee's air permit to install application number 14-4614, June 6, 1998). The ton per year emission limitation was derived by multiplying the pound per hour emission limitation by 8,760 hours per year and dividing by 2,000 pounds per ton. Compliance with the above allowable will be determined via the above calculations.