



State of Ohio Environmental Protection Agency

Street Address:

Mailing Address:

TELE: (614) 644-3020 FAX: (614) 644-2329

1/20/97

CERTIFIED MAIL

02-47-02-0935

RE: Final Chapter 3745-35 Permit To Operate

BETZEL GREENHOUSE No. 2
Robert Betzel
3225 North Ridge Road
Lorain, OH 44055

Dear Robert Betzel:

The enclosed Permit(s) to Operate allow you to operate the described emissions unit(s) in the manner indicated in the Permit(s). Because each permit contains several terms and conditions, I urge you to read them 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 of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 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 with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's 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

If you have any questions, please contact the Northeast District Office at (216) 425-9171

Very truly yours,

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

cc: Northeast District Office
Jim Orlemann, DAPC Engineering

Becky Castle, DAPC PMU



PERMIT TO OPERATE AN EMISSIONS UNIT

Effective Date: 11/20/97

Facility ID: 02-47-02-0935

Expiration Date: 11/20/00

FINAL ISSUE

This document constitutes issuance for:

BETZEL GREENHOUSE No. 2
38989 Detroit Road
Avon, OH 44011

of a permit to operate for:

B001 (Leffel/Scotch Marine 8.6 mmBtu/hr. coal-fired stoker)
Leffel/Scotch Marine, 8.6 mmBtu/hr., underfeed, coal-fired stoker-boiler used for space heating and soil processing.

PART I General Terms & Conditions

1. Compliance Requirements

The above-described emissions unit is and shall remain in full compliance with all applicable State and federal laws and regulations and the terms and conditions of this permit.

2. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

3. 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.)

4. 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 three 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 the permit. Such records may be maintained in computerized form.

5. 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 and federal 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.

6. 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 unit 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 this emissions unit(s) that is (are) served by such control system(s).

7. Permit Transfers

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

8. 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.

9. Permit Renewal

Approximately six months prior to the expiration date of this permit, a notice regarding the renewal of this permit will be sent to the permittee's designated facility contact. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency. It is the permittee's responsibility to renew this permit even if no notice of its expiration is received.

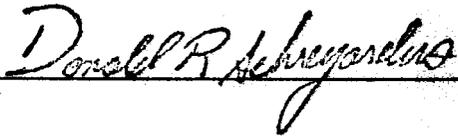
The following Ohio EPA District Office or local air agency has jurisdiction in the area in which the facility is located:

Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(216) 425-9171

You will be contacted approximately six months prior to expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate DO or LAA.

10. The permittee is also subject to the attached special terms and conditions.

OHIO ENVIRONMENTAL PROTECTION AGENCY



Director

Part II: Special Terms and Conditions

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Leffel/Scotch Marine, coal-fired, underfeed, stoker boiler (8.6 mmBtu/hr) (B001)	OAC Rule 3745-17-07(A) OAC Rule 3745-17-10(C) OAC Rule 3745-18-04	<p>a. Per OAC Rule 3745-17-10(C)(1), Figure 1, the particulate emissions from this emissions unit shall not exceed 0.40 pound per million Btu (mmBtu) of heat input.</p> <p>b. Sulfur dioxide (SO₂) emissions from this facility shall not exceed 99.53 tons per year. SO₂ emissions from this single coal-fired emissions unit (B001) shall not exceed 2.99 pounds per million Btu of heat input and 92.7 tons per year. (See Federally Enforceable Emission Requirements For Sulfur Dioxide below).</p>

2. Additional Terms and Conditions

1. VISIBLE EMISSIONS RESTRICTIONS:

- 1.a. This emissions unit shall comply with Ohio EPA regulations in OAC Rule 3745-17-07(A) which limits visible particulate emissions as follows:
- i. Visible particulate emissions from any stack shall not exceed an opacity of twenty (20) percent as a six-minute average.
 - ii. Visible particulate emissions from any stack may exceed twenty percent as a six-minute average for not more than six (6) consecutive minutes in any sixty (60)-minute period, but shall not exceed sixty (60) percent opacity at any time.

2. Additional Terms and Conditions (continued)

- 1.b.** The visible particulate emission limitations specified above shall not apply to the following operations, provided the operations are documented in a boiler operations log kept at the facility:
- i. The start-up of the source for a period of time required to achieve stable combustion conditions but no more than three (3) hours from the moment of start-up. "Start-up" means the commencement of firing of fuel from a cold non-fired condition.

The shutdown of the source for a period of not more than three (3) hours.
 - iii. The malfunction of the source or associated equipment if the owner of the source or operator of the equipment complies with the requirements of OAC Rule 3745-15-06.
 - iv. Intermittent soot-blowing operations (the cleaning of heat transfer surfaces with pressurized air or steam).
 - v. Intermittent ash removal operations (the dumping or pulling of ash).
 - vi. The commencement of increased coal firing from a banked condition for a period not to exceed thirty (30) minutes. "Banked condition" means the condition where the fuel is burned on the grates at rates which are sufficient to maintain ignition only.

This log shall clearly document the date, beginning time, and ending time of the exempted operations listed above.

2. FEDERALLY ENFORCEABLE EMISSION REQUIREMENTS FOR SULFUR DIOXIDE:

- 2.a.** The total annual emissions of SO₂ from all emissions units at this facility shall be limited to 99.53 tons. Since another minor source at this facility, a No.2 oil-fired boiler (B002) with a maximum heat input rate of 5.2 million Btu per hour has maximum potential SO₂ emissions of 6.83 tons per year, the annual allowable emissions from this coal-fired source (B001) shall not exceed 92.7 tons.
- 2.b.** This annual SO₂ emission limitation shall be achieved by restricting both the sulfur content in the coal supply and the maximum number of operating hours (days) of this source in the following manner:
- i. The quality of coal burned in this emissions unit shall meet the following specifications on a dry basis:
 - (a) a sulfur content which is sufficient to comply with an allowable sulfur dioxide emission limitation of 2.99 pounds SO₂ per mmBtu actual heat input;
 - (b) less than 8.0 percent ash; and
 - (c) greater than 13,000 Btu per pound coal.

Compliance with the above-mentioned specifications for sulfur, ash, and heat content shall be determined by using the analytical results provided by the coal supplier for each shipment of coal. The analytical methods for sulfur content, ash content, and heat content in coal shall be: ASTM Method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM Method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; ASTM Method D3174, Ash in the Analysis Sample of Coal and Coke; 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 Isoperibol Calorimeter, respectively.

- ii. The maximum number of hours this emissions unit may operate during any rolling 365-day period is 7211.

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Facility Name: **BETZEL GREENHOUSE No. 2**
Facility ID: **02-47-02-0935**
Emissions Unit: **Leffel/Scotch Marine 8.6 mmBtu/hr. coal-fired s**

2. Additional Terms and Conditions (continued)

2.c. During the first twelve (12) months of operation under this permit, this emissions unit shall not exceed the total number of hours of operation specified for each month in the following table:

CALENDAR MONTH(S) [After Permit Issuance]	CUMULATIVE ALLOWABLE TOTAL HOURS
1	744
2	1464
3	2208
4	2952
5	3672
6	4416
7	5136
8	5880
9	6600
10	7211
11	7211
12	7211

B. Operational Restrictions

1. The maximum heat input to this emissions unit shall not exceed 8.6 million Btu per hour, the maximum rated capacity of this boiler.
2. The steam injection system shall be used at all times during operation of this emissions unit.
3. The use of flyash reinjection in this emissions unit is prohibited.
4. This emissions unit shall employ an overfire air system which is designed, maintained, and operated in accordance with good engineering practices and which minimizes visible emissions.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records for this emissions unit, in addition to those records referred to in Section A.2.1.b. above:
 - 1.a. Daily records of the total hours of operation, including the hours in a banked condition, and the cumulative total of the hours of operation on a rolling 365-day basis. These records shall be signed daily by the owner/operator, attesting to the accuracy of the data.
 - 1.b. For each shipment of coal, the quantity of coal received and the results of the coal supplier's analyses on both an "as-received" and "dry" basis. Data recorded shall include:
 - i. the total quantity of coal received (tons),
 - ii. the sulfur content (percent) of the coal,
 - iii. the ash content (percent) of the coal,
 - iv. the heat content (Btu per pound) of the coal, and
 - v. the SO₂ emission rate (pounds SO₂ per mmBtu actual heat input) for the coal.

Compliance with the applicable SO₂ emission limit, as well as the ash and Btu limitations, shall be determined based on the weighted arithmetic average of all fuel analyses for each calendar month.

[NOTE: A weighted average fuel quality value is determined by multiplying each fuel analysis value (Btu/pound, percent ash, or SO₂ emission rate) by the weight of the shipment of fuel for which the quality value is representative, adding up all the value-weighted products, and dividing the sum of the value-weighted products by the sum of all the shipment weights.]

- 1.c. Monthly calculations of the weighted average SO₂ emission rate, ash content, and heat content for the coal received each calendar month.

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Facility Name: **BETZEL GREENHOUSE No. 2**
Facility ID: **02-47-02-0935**
Emissions Unit: **Leffel/Scotch Marine 8.6 mmBtu/hr. coal-fired s**

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods during which the "Federally Enforceable Requirements for Sulfur Dioxide" were exceeded. These reports shall be submitted to the Ohio EPA within 30 days of each such exceedance and shall include the following information:
 - a. the date of each exceedance;
 - b. the nature or type of each deviation (i.e., coal quality, cumulative hours of operation, etc.); and
 - c. the corrective action taken to rectify the condition which caused the excursion.
2. This facility shall submit semi-annual reports to the Ohio EPA, Northeast District Office, which provide the following information for this emissions unit:
 - 2.a. The total quantity of coal received during each calendar month;
 - 2.b. The weighted average ash content (percent) of the coal received during each calendar month;
The weighted average heat content (Btu per pound) of the coal received during each calendar month;
 - 2.d. The weighted average SO₂ emission rate (pounds SO₂ per mmBtu actual heat input) for the coal received during each calendar month;
 - 2.e. The number of hours of boiler operation for each day during the reporting period and during each calendar month;
The rolling 365-day cumulative total of the hours of operation for each day during the reporting period (after the first 12 months of operation under this permit); and
 - 2.g. A copy of the coal supplier's analyses for each coal shipment received during the reporting period.

All fuel analyses data shall be reported on both an "as-received" and a "dry" basis.

These reports shall be submitted by February 15 and August 15 of each year and shall cover operations for the previous six calendar months (July through December and January through June).

E. Testing Requirements

1. To demonstrate compliance with the allowable particulate emissions limits listed in Section A.1.a. above, the permittee shall, within six (6) months of the issuance of this permit, conduct, or have conducted, performance/emissions testing of this emissions unit in accordance with test methods listed in 40 CFR Part 60, Appendix A, and procedures approved by the Ohio EPA. Two copies of the written test report shall be submitted to the Agency within thirty days of the completion of these tests. This test report shall be signed by the person responsible for the test and shall describe the test procedures followed and the results of such tests. The Director, or an Ohio EPA representative, shall be allowed to witness the tests, examine the testing equipment, and require the acquisition or submission of data and information necessary to assure that source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment. The following format shall be used to fulfill this requirement:
 - 1.a. A completed Intent to Test form shall be submitted to the Ohio EPA, Northeast District Office, at least thirty (30) days in advance of the scheduled test and shall specify the operation parameters, the proposed test procedures, the pollutants to be tested for, and the time, date, place, and person(s) conducting such tests.
 - 1.b. Two copies of the test results shall be submitted to the Ohio EPA, Northeast District Office, within thirty (30) days after completion of the performance test.
 - 1.c. The performance/emissions tests conducted on this emissions unit shall specifically be performed for particulates.
2. For the purpose of determining compliance with OAC Rule 3745-17-07(A), visible particulate emissions shall be determined according to U.S. EPA test method nine (9), "Visible Determination of the Opacity of Emissions from Stationary Sources", as set forth in Chapter 40, Code of Federal Regulations (CFR), Part 60, "Standards of Performance for New Stationary Sources", "Appendix on Test Methods".
3. Compliance with the "Federally Enforceable Requirements for Sulfur Dioxide" shall be demonstrated using engineering calculations based on a compilation of fuel quality data (coal heat and sulfur content) and annual total hours of operation as reported by the permittee per the requirements of Section D.2. above.

5 Facility Name: BETZEL GREENHOUSE No. 2
5 Facility ID: 02-47-02-0935
Emissions Unit: Leffel/Scotch Marine 8.6 mmBtu/hr. coal-fired s

F. Miscellaneous Requirements

1. FEDERAL ENFORCEABILITY:

Sections A - F of these Special Terms and Conditions constitute the federally enforceable portions of this Permit to Operate.

2. An Ohio EPA form, entitled "Auxiliary Boiler Operations Log", or an approved equivalent, shall be used to record the daily boiler operating hours and rolling 365-day cumulative total operating hours as required to demonstrate compliance with this permit.