



State of Ohio Environmental Protection Agency

Street Address:

1800 WaterMark Drive
Columbus, OH 43215-1099

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

Mailing Address:

P.O. Box 1049
Columbus, OH 43216-1049

09/10/98

CERTIFIED MAIL

01-25-04-0319

RE: Final Chapter 3745-35 Permit To Operate

Ross Products Division, Abbot Laboratories
Gregory L. Spotts
585 Cleveland Avenue
Columbus, OH 43215-1755

Dear Gregory L. Spotts:

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. It is also requested by the Director that a copy of the appeal be served upon the Environmental Enforcement Section of the Office of the Attorney General. 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 Central District Office at (614) 728-3778.

Very truly yours,

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

cc: Central District Office

Jim Orlemann, DAPC Engineering

Becky Castle, DAPC PMU



PERMIT TO OPERATE AN EMISSIONS UNIT

Effective Date: 09/10/98

Facility ID: 01-25-04-0319

Expiration Date: 09/10/03

FINAL ISSUE

This document constitutes issuance for:

Ross Products Division, Abbot Laboratories
585 Cleveland Avenue
Columbus, OH 43215-1755

of a permit to operate for:

B005 (Boiler #5 (98 MMBtu/Hr Gas/Oil))
Natural gas/ #2 Fuel oil fired boiler for plant process steam/heating operation

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:

Central District Office
3232 Alum Creek Drive
PO Box 1049
Columbus, OH 43216-1049
(614) 728-3778

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 Central District Office.

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

OHIO ENVIRONMENTAL PROTECTION AGENCY

A handwritten signature in cursive script, reading "Donald R. Schreyer", is written over a horizontal line.

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>
98 MMBtu/hr, natural gas and number two oil fired Nebraska boiler	OAC Rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.
	OAC Rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per million Btu (MMBtu) of actual heat input.
	OAC Rule 3745-18-06(D)	SO2 emissions shall not exceed 1.60 pounds per MMBtu of actual heat input.
	40 CFR Part 52.1881(b)27(v)	The emission limitation in this rule is less stringent than 40 CFR 60 Subpart Dc.
	40 CFR Part 52.1881(b)27(v)	SO2 emissions shall not exceed 4.80 pounds per MMBtu of actual heat input.
	OAC Rule 3745-35-07	The emission limitation in this rule is less stringent than 40 CFR 60 Subpart Dc.
	OAC Rule 3745-35-07	The yearly sulfur dioxide emissions for B003, B004 and B005 shall not exceed 99 tons per year;
	OAC Rule 3745-31-05 PTI No. 01-3420	The yearly nitrogen oxides emissions for B003, B004 and B005 shall not exceed 95 tons per 365-day rolling period.
	40 CFR 60 Subpart Dc	Use of low NOx burners, use of #2 fuel oil (sulfur content less than 0.5 per cent) and natural gas as fuel. 0.50 pound of SO2 per MMBtu when burning oil or facility shall combust oil that contains equal to or less than 0.5 weight percent sulfur.
		Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except for one 6-minute period per hour of not more than 27% of opacity.

2. Additional Terms and Conditions

None

B. Operational Restrictions

1. The maximum annual fuel oil consumption rate for B003, B004, and B005 shall not exceed 2.0 million gallons (containing a sulfur content of 0.5% by weight or less) and 5.5 million gallons (containing a sulfur content of 0.05% by weight or less), based upon a rolling, 365-day summation of the consumption rates.
2. For the purpose of demonstrating compliance during the first 12 calendar months of operation covered by this permit, the rolling 365-day natural gas/fuel oil usages (gallons/rolling 365-day) and SO₂/NO_x emissions shall be calculated based upon the actual fuel (oil/natural gas) usages and SO₂/NO_x emissions from this source during the 365-day period prior to issuance of this permit.
3. Oil Quality Specifications

The quality of oil burned in B004 and B005 shall meet, on an as-received basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.5 pound of sulfur dioxide/MMBtu actual heat input.

Compliance with this specification shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

C. Monitoring and/or Record Keeping Requirements

1. Requirements for the Sampling and Analysis of the Oil Burned

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in B003, B004 and B005. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

2. For each shipment of oil received for burning in B003, B004 and B005, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content. The facility shall maintain the following records:
 - a. the total quantity of fuel oil received in each shipment (gallons);
 - b. the sulfur content (percent) of the oil received in each shipment;
 - c. the heat content (Btu/gallon) of the oil received in each shipment;
 - d. the sulfur dioxide emission rate (pounds SO₂ per million Btu actual heat input) for the fuel oil received in each shipment; and
 - e. monthly calculations of the weighted average sulfur content, heat content, and SO₂ emission rate for the oil received during each calendar month, and the total gallons of fuel oil burned in this boiler during the month.

C. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall maintain daily records of the following information:
- a. The fuel oil (containing a sulfur content of 0.5% by weight or less) consumption rate for B003, B004 and B005.
 - b. The rolling, 365-day summation of the consumption rates for fuel oil (containing a sulfur content of 0.5% by weight or less) for B003, B004 and B005.
 - c. The fuel oil (containing a sulfur content of 0.05% by weight or less) consumption rate for B003, B004 and B005.
 - d. The rolling, 365-day summation of the consumption rates for fuel oil (containing a sulfur content of 0.05% by weight or less) for B003, B004 and B005.
 - e. The natural gas consumption rate for B003, B004 and B005.
The rolling, 365-day summation of the consumption rates for natural gas for B003, B004 and B005.
 - g. The calculated nitrogen oxides emissions for B003, B004 and B005.
 - h. The rolling, 365-day summation of nitrogen oxides emissions for B003, B004 and B005.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 365-day fuel oil consumption rate limitations. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under paragraph 3.
2. The permittee shall submit semi-annual reports which identify any exceedances of the SO₂ emission limitation listed in Section A.1 of these terms and conditions, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, then the report shall state that no exceedances occurred during that six-month period.
These semi-annual reports shall be submitted by February 15 and August 15 of each year and shall cover the oil shipments received during the previous six calendar months.
3. The permittee shall submit semi-annual reports which identify any exceedances of the NO_x emission limitation listed in Section A.1 of these terms and conditions, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, then the report shall state that no exceedances occurred during that six-month period.
These semi-annual reports shall be submitted by February 15 and August 15 of each year and shall cover the oil shipments received during the previous six calendar months.
4. The permittee shall also submit annual reports which specify the total fuel consumption (natural gas and oil), and the SO₂ and NO_x emissions for B003, B004 and B005. These reports shall be submitted by January 31 of each year.

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):

1.a Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu (mmBtu) of actual heat input.

Applicable Compliance Method:

For the use of natural gas, compliance shall be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (96,078 ft³/hr) by the AP-42 (Fifth Edition) emission factor for natural gas combustion (5 lbs/MMft³), and dividing by the maximum hourly heat input capacity of the emissions unit (98 MMBtu/hr). For the use of number two fuel oil, compliance shall be determined by multiplying the maximum fuel oil capacity of the emissions unit (710 gal/hr) by the AP-42 emission factor for number two fuel oil combustion (2 lb/1000 gal), and dividing by the maximum hourly heat input capacity of the emissions unit (98 MMBtu/hr). If required, the permittee shall demonstrate compliance with this limitation in accordance with the method(s) and procedures specified in OAC rule 3745-17-03(B)(9).

E. Testing Requirements (continued)

1.b Emission Limitation:

SO₂ emissions shall not exceed 0.5 pound per million Btu of actual heat input.

Applicable Compliance Method:

Compliance shall be determined by the recordkeeping requirements in Section C.2.

1.c Emission limitation:

The yearly sulfur dioxide emissions for B003, B004 and B005 shall not exceed 99 tons per year.

Applicable Compliance Method:

Oil usage restriction in B.1 and associated record keeping and reporting requirements.

Sulfur dioxide emissions shall be calculated by taking the actual volume-weighted average sulfur content of the fuel oil (in weight percent) and multiplying it by the fuel density (lbs/gallon), volume of oil used (gallons/year), and the molecular weight ratio of SO₂ to S (2:1), and dividing by 2,000 lbs/ton to get sulfur dioxide emissions in tons/year.

1.d Emission limitation:

The yearly nitrogen oxides emissions for B003, B004 and B005 shall not exceed 95 tons per 365-day rolling period.

Applicable Compliance Method for B003:

Multiply the actual natural gas consumption (MMft³) with the AP-42 (revised as of February, 1998) emission factor (280 lbs/MMft³) and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Applicable Compliance Method for B004 and B005:

Multiply the actual natural gas consumption (MMft³) with an emission factor (based on test data) of 100 lbs/MMft³ and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Applicable Compliance Method for B003, B004 and B005 for fuel oil fired NO_x emissions:

Multiply the actual oil consumption (gallons/year) with the AP-42 emission factor (20 lbs/1000 gallons) and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Compliance with the 95 tons per 365-day rolling period shall be determined by adding the nitrogen oxides emissions for B003, B004 and B005.

1.e Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

F. Miscellaneous Requirements

1. Sections A,B,C,D,E and F of these terms and conditions constitute the federally enforceable portions of this permit.



PERMIT TO OPERATE AN EMISSIONS UNIT

Effective Date: 09/10/98

Facility ID: 01-25-04-0319

Expiration Date: 09/10/03

FINAL ISSUE

This document constitutes issuance for:

Ross Products Division, Abbot Laboratories
585 Cleveland Avenue
Columbus, OH 43215-1755

of a permit to operate for:

B004 (Boiler #4 (98 MMBtu/Hr Gas/Oil))
Natural gas/ #2 Fuel oil fired boiler for plant process steam/heating operation

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.

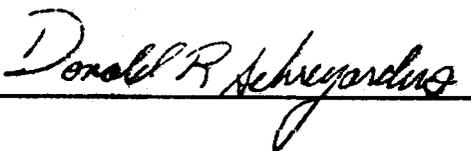
The following Ohio EPA District Office or local air agency has jurisdiction in the area in which the facility is located:

Central District Office
3232 Alum Creek Drive
PO Box 1049
Columbus, OH 43216-1049
(614) 728-3778

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 Central District Office.

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
98 MMBtu/hr, natural gas and number two oil fired Nebraska boiler	OAC Rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.
	OAC Rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per million Btu (MMBtu) of actual heat input.
	OAC Rule 3745-18-06(D)	SO ₂ emissions shall not exceed 1.60 pounds per MMBtu of actual heat input.
	40 CFR Part 52.1881(b)27(v)	The emission limitation in this rule is less stringent than 40 CFR 60 Subpart Dc.
	40 CFR Part 52.1881(b)27(v)	SO ₂ emissions shall not exceed 4.80 pounds per MMBtu of actual heat input.
	OAC Rule 3745-35-07	The emission limitation in this rule is less stringent than 40 CFR 60 Subpart Dc.
	40 CFR 60 Subpart Dc	The yearly sulfur dioxide emissions for B003, B004 and B005 shall not exceed 99 tons per year;
		The yearly nitrogen oxides emissions for B003, B004 and B005 shall not exceed 95 tons per 365-day rolling period.
		0.50 pound of SO ₂ per MMBtu when burning oil or facility shall combust oil that contains equal to or less than 0.5 weight percent sulfur.
		Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except for one 6-minute period per hour of not more than 27% of opacity.

2. Additional Terms and Conditions

None

B. Operational Restrictions

1. The maximum annual fuel oil consumption rate for B003, B004, and B005 shall not exceed 2.0 million gallons (containing a sulfur content of 0.5% by weight or less) and 5.5 million gallons (containing a sulfur content of 0.05% by weight or less), based upon a rolling, 365-day summation of the consumption rates.
2. For the purpose of demonstrating compliance during the first 12 calendar months of operation covered by this permit, the rolling 365- day natural gas/fuel oil usages (gallons/rolling 365-day) and SO₂/NO_x emissions shall be calculated based upon the actual fuel (oil/natural gas) usages and SO₂/NO_x emissions from this source during the 365-day period prior to issuance of this permit.
3. Oil Quality Specifications

The quality of oil burned in B004 and B005 shall meet, on an as-received basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.5 pound of sulfur dioxide/MMBtu actual heat input.

Compliance with this specification shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

C. Monitoring and/or Record Keeping Requirements

1. Requirements for the Sampling and Analysis of the Oil Burned

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in B003, B004 and B005. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

2. For each shipment of oil received for burning in B003, B004 and B005, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content. The facility shall maintain the following records:
 - a. the total quantity of fuel oil received in each shipment (gallons);
 - b. the sulfur content (percent) of the oil received in each shipment;
 - c. the heat content (Btu/gallon) of the oil received in each shipment;
 - d. the sulfur dioxide emission rate (pounds SO₂ per million Btu actual heat input) for the fuel oil received in each shipment; and
 - e. monthly calculations of the weighted average sulfur content, heat content, and SO₂ emission rate for the oil received during each calendar month, and the total gallons of fuel oil burned in this boiler during the month.

C. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall maintain daily records of the following information:
 - a. The fuel oil (containing a sulfur content of 0.5% by weight or less) consumption rate for B003, B004 and B005.
 - b. The rolling, 365-day summation of the consumption rates for fuel oil (containing a sulfur content of 0.5% by weight or less) for B003, B004 and B005.
 - c. The fuel oil (containing a sulfur content of 0.05% by weight or less) consumption rate for B003, B004 and B005.
 - d. The rolling, 365-day summation of the consumption rates for fuel oil (containing a sulfur content of 0.05% by weight or less) for B003, B004 and B005.
 - e. The natural gas consumption rate for B003, B004 and B005.
 - f. The rolling, 365-day summation of the consumption rates for natural gas for B003, B004 and B005
 - g. The calculated nitrogen oxides emissions for B003, B004 and B005.
 - h. The rolling, 365-day summation of nitrogen oxides emissions for B003, B004 and B005.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 365-day fuel oil consumption rate limitations. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under paragraph 3.
2. The permittee shall submit semi-annual reports which identify any exceedances of the SO₂ emission limitation listed in Section A.1 of these terms and conditions, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, then the report shall state that no exceedances occurred during that six-month period.

These semi-annual reports shall be submitted by February 15 and August 15 of each year and shall cover the oil shipments received during the previous six calendar months.
3. The permittee shall submit semi-annual reports which identify any exceedances of the NO_x emission limitation listed in Section A.1 of these terms and conditions, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, then the report shall state that no exceedances occurred during that six-month period.

These semi-annual reports shall be submitted by February 15 and August 15 of each year and shall cover the oil shipments received during the previous six calendar months.
4. The permittee shall also submit annual reports which specify the total fuel consumption (natural gas and oil), and the SO₂ and NO_x emissions for B003, B004 and B005. These reports shall be submitted by January 31 of each year.

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):

1.a Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu (mmBtu) of actual heat input

Applicable Compliance Method

For the use of natural gas, compliance shall be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (96,078 ft³/hr) by the AP-42 (Fifth Edition) emission factor for natural gas combustion (5 lbs/MMft³), and dividing by the maximum hourly heat input capacity of the emissions unit (98 MMBtu/hr). For the use of number two fuel oil, compliance shall be determined by multiplying the maximum fuel oil capacity of the emissions unit (710 gal/hr) by the AP-42 emission factor for number two fuel oil combustion (2 lb/1000 gal), and dividing by the maximum hourly heat input capacity of the emissions unit (98 MMBtu/hr). If required, the permittee shall demonstrate compliance with this limitation in accordance with the method(s) and procedures specified in OAC rule 3745-17-03(B)(9).

E. Testing Requirements (continued)

1.b Emission Limitation:

SO₂ emissions shall not exceed 0.5 pound per million Btu of actual heat input.

Applicable Compliance Method

Compliance shall be determined by the recordkeeping requirements in Section C.2.

1.c Emission limitation:

The yearly sulfur dioxide emissions for B003, B004 and B005 shall not exceed 99 tons per year.

Applicable Compliance Method:

Oil usage restriction in B.1 and associated record keeping and reporting requirements.

Sulfur dioxide emissions shall be calculated by taking the actual volume-weighted average sulfur content of the fuel oil (in weight percent) and multiplying it by the fuel density (lbs/gallon), volume of oil used (gallons/year), and the molecular weight ratio of SO₂ to S (2:1), and dividing by 2,000 lbs/ton to get sulfur dioxide emissions in tons/year.

1.d Emission limitation:

The yearly nitrogen oxides emissions for B003, B004 and B005 shall not exceed 95 tons per 365-day rolling period.

Applicable Compliance Method for B003:

Multiply the actual natural gas consumption (MMft³) with the AP-42 (revised as of February, 1998) emission factor (280 lbs/MMft³) and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Applicable Compliance Method for B004 and B005:

Multiply the actual natural gas consumption (MMft³) with an emission factor (based on test data) of 100 lbs/MMft³ and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Applicable Compliance Method for B003, B004 and B005 for fuel oil fired NO_x emissions:

Multiply the actual oil consumption (gallons/year) with the AP-42 emission factor (20 lbs/1000 gallons) and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Compliance with the 95 tons per 365-day rolling period shall be determined by adding the nitrogen oxides emissions for B003, B004 and B005.

1.e Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

F. Miscellaneous Requirements

1. Sections A,B,C,D,E and F of these terms and conditions constitute the federally enforceable portions of this permit.



PERMIT TO OPERATE AN EMISSIONS UNIT

Effective Date: 09/10/98

Facility ID: 01-25-04-0319

Expiration Date: 09/10/03

FINAL ISSUE

This document constitutes issuance for:

Ross Products Division, Abbot Laboratories
585 Cleveland Avenue
Columbus, OH 43215-1755

of a permit to operate for:

B003 (Boiler #3 (115 MMBTu/Hr Gas/Oil))
Natural gas/ #2 Fuel oil fired boiler for plant process steam/heating operation

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).

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.

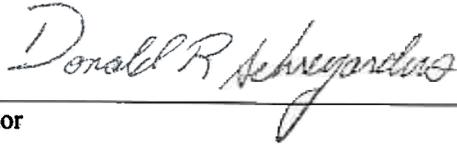
The following Ohio EPA District Office or local air agency has jurisdiction in the area in which the facility is located:

Central District Office
3232 Alum Creek Drive
PO Box 1049
Columbus, OH 43216-1049
(614) 728-3778

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 Central District Office.

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

OHIO ENVIRONMENTAL PROTECTION AGENCY

A handwritten signature in cursive script that reads "Donald R. Schregardus". The signature is written in black ink and is positioned above a horizontal line.

Director

Part II: Special Terms and Conditions

A. Applicable Emissions Limitations and/or Control Requirements

- 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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
115 MMBtu/hr, natural gas and number two oil fired Murray boiler	OAC Rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.
	OAC Rule 3745-17-10(B)(1)	Particulate emissions shall not exceed 0.020 pound per million Btu (MMBtu) of actual heat input.
	40 CFR Part 52.1881(b)27(ii)	SO2 emissions shall not exceed 1.5 pounds per MMBtu of actual heat input.
	OAC Rule 3745-35-07	The yearly sulfur dioxide emissions for B003, B004 and B005 shall not exceed 99 tons per year;
	OAC Rule 3745-18-06(D)	The yearly nitrogen oxides emissions for B003, B004 and B005 shall not exceed 95 tons per 365-day rolling period.
		SO2 emissions shall not exceed 1.6 pounds per million Btu of actual heat input.
		The emission limitation in this rule is less stringent than 40 CFR Part 52.1881(b)27(ii).

2. Additional Terms and Conditions

None

B. Operational Restrictions

- The maximum annual fuel oil consumption rate for B003, B004, and B005 shall not exceed 2.0 million gallons (containing a sulfur content of 0.5% by weight or less) and 5.5 million gallons (containing a sulfur content of 0.05% by weight or less), based upon a rolling, 365-day summation of the consumption rates.
- For the purpose of demonstrating compliance during the first 12 calendar months of operation covered by this permit, the rolling 365- day natural gas/fuel oil usages (gallons/rolling 365-day) and SO2/NOx emissions shall be calculated based upon the actual fuel (oil/natural gas) usages and SO2/NOx emissions from this source during the 365-day period prior to issuance of this permit.
- Oil Quality Specifications

The quality of oil burned in B003 shall meet, on an as-received basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.5 lbs of sulfur dioxide/MMBtu actual heat input.

Compliance with this specification shall be determined using the analytical results provided by the permittee or oil supplier for each shipment of oil.

C. Monitoring and/or Record Keeping Requirements

1. Requirements for the Sampling and Analysis of the Oil Burned

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in B003, B004 and B005. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

2. For each shipment of oil received for burning in B003, B004 and B005, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content. The facility shall maintain the following records:

- a. the total quantity of fuel oil received in each shipment (gallons);
- b. the sulfur content (percent) of the oil received in each shipment;
- c. the heat content (Btu/gallon) of the oil received in each shipment;
- d. the sulfur dioxide emission rate (pounds SO₂ per million Btu actual heat input) for the fuel oil received in each shipment; and
- e. monthly calculations of the weighted average sulfur content, heat content, and SO₂ emission rate for the oil received during each calendar month, and the total gallons of fuel oil burned in this boiler during the month.

3. The permittee shall maintain daily records of the following information:

- a. The fuel oil (containing a sulfur content of 0.5% by weight or less) consumption rate for B003, B004 and B005.
- b. The rolling, 365-day summation of the consumption rates for fuel oil (containing a sulfur content of 0.5% by weight or less) for B003, B004 and B005.
- c. The fuel oil (containing a sulfur content of 0.05% by weight or less) consumption rate for B003, B004 and B005.
- d. The rolling, 365-day summation of the consumption rates for fuel oil (containing a sulfur content of 0.05% by weight or less) for B003, B004 and B005.
- e. The natural gas consumption rate for B003, B004 and B005.
- f. The rolling, 365-day summation of the consumption rates for natural gas for B003, B004 and B005
- g. The calculated nitrogen oxides emissions for B003, B004 and B005.
- h. The rolling, 365-day summation of nitrogen oxides emissions for B003, B004 and B005.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 365-day fuel oil consumption rate limitations. These reports are due by the dates described in Part 1 - General Terms and Conditions of this permit under paragraph 3.
2. The permittee shall submit semi-annual reports which identify any exceedances of the SO₂ emission limitation listed in Section A.1 of these terms and conditions, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, then the report shall state that no exceedances occurred during that six-month period.

These semi-annual reports shall be submitted by February 15 and August 15 of each year and shall cover the oil shipments received during the previous six calendar months.

D. Reporting Requirements (continued)

3. The permittee shall submit semi-annual reports which identify any exceedances of the NOx emission limitation listed in Section A.1 of these terms and conditions, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, then the report shall state that no exceedances occurred during that six-month period.

These semi-annual reports shall be submitted by February 15 and August 15 of each year and shall cover the oil shipments received during the previous six calendar months.

4. The permittee shall also submit annual reports which specify the total fuel consumption (natural gas and oil), and the SO₂ and NO_x emissions for B003, B004 and B005. These reports shall be submitted by January 31 of each year.

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):

1.a Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu (mmBtu) of actual heat input.

Applicable Compliance Method:

For the use of natural gas, compliance shall be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (112,745 ft³/hr) by the AP-42 (Fifth Edition) emission factor for natural gas combustion (5 lbs/MMft³), and dividing by the maximum hourly heat input capacity of the emissions unit (115 MMBtu/hr). For the use of number two fuel oil, compliance shall be determined by multiplying the maximum fuel oil capacity of the emissions unit (833 gal/hr) by the AP-42 emission factor for number two fuel oil combustion (2 lb/1000 gal), and dividing by the maximum hourly heat input capacity of the emissions unit (115 MMBtu/hr). If required, the permittee shall demonstrate compliance with this limitation in accordance with the method(s) and procedures specified in OAC rule 3745-17-03(B)(9).

1.b Emission Limitation:

SO₂ emissions shall not exceed 1.5 pounds per million Btu of actual heat input.

Applicable Compliance Method

Compliance shall be determined by the recordkeeping requirements in Section C.2.

1.c Emission limitation:

The yearly sulfur dioxide emissions for B003, B004 and B005 shall not exceed 99 tons per year.

Applicable Compliance Method:

Oil usage restriction in B.1 and associated record keeping and reporting requirements. Sulfur dioxide emissions shall be calculated by taking the actual volume-weighted average sulfur content of the fuel oil (in weight percent) and multiplying it by the fuel density (lbs/gallon), volume of oil used (gallons/year), and the molecular weight ratio of SO₂ to S (2:1), and dividing by 2,000 lbs/ton to get sulfur dioxide emissions in tons/year.

E. Testing Requirements (continued)

1.d Emission limitation:

The yearly nitrogen oxides emissions for B003, B004 and B005 shall not exceed 95 tons per 365-day rolling period.

Applicable Compliance Method for B003:

Multiply the actual natural gas consumption (MMft³) with the AP-42 (revised as of February, 1998) emission factor (280 lbs/MMft³) and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Applicable Compliance Method for B004 and B005:

Multiply the actual natural gas consumption (MMft³) with an emission factor (based on test data) of 100 lbs/MMft³ and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Applicable Compliance Method for B003, B004 and B005 for fuel oil fired NO_x emissions:

Multiply the actual oil consumption (gallons/year) with the AP-42 emission factor (20 lbs/1000 gallons) and divide by 2000 lbs/ton to get nitrogen oxides emissions in tons/year.

Compliance with the 95 tons per 365-day rolling period shall be determined by adding the nitrogen oxides emissions for B003, B004 and B005.

1.e Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

F. Miscellaneous Requirements

1. Sections A,B,C,D,E and F of these terms and conditions constitute the federally enforceable portions of this permit.