NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Proposed Approval of Construction and Operation Permit
for **Mead Johnson & Company**
in **Vanderburgh County**

CP-163-8495, Plt ID-163-00015

Notice is hereby given that the above company located at 2400 West Lloyd Expressway, Evansville, Indiana, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a permit to construct and operate a modification to the existing pharmaceutical and nutritional products manufacturing plant consisting of the addition of one (1) 95.0 million British thermal units per hour natural gas/No. 2 distillate fuel oil fired boiler. Based on 8,760 hours of operation per year, the sulfur dioxide, nitrogen oxides, and carbon monoxide allowable emissions before control are 36.0, 39.0, and 39.0 tons per year, respectively.

Notice is hereby given that there will be a period of 30 days from the date of publication of this notice during which any interested person may comment on why this proposed permit should or should not be issued. Appropriate comments should be related to air quality issues, interpretation of the applicable state and federal rules, calculations made, technical issues, or the effect that the operation of this facility would have on any aggrieved individuals. A copy of the application and staff review is available for examination at the **Evansville Vanderburgh County Public Library, 22 South East 5th Street, Evansville, Indiana 47708-1694 and the Evansville EPA, 101 North West Martin Luther King Jr. Boulevard, Room 250, Evansville, Indiana 47708.** All comments, along with supporting documentation, should be submitted in writing to the IDEM, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. If appropriate adverse comments concerning the **air pollution impact** of this proposed source are received, together with a request for a public hearing, such a hearing may be held to give further consideration to this application.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the Office of Air Management (OAM), at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have 15 days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Questions should be directed to Trish Earls, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or at 973-575-2555 or at 1-800-451-6027.

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

TE/EVP

CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT
and EVANSVILLE ENVIRONMENTAL PROTECTION AGENCY

Mead Johnson & Company
2400 West Lloyd Expressway
Evansville, Indiana 47721

is hereby authorized to construct

a modification to the existing pharmaceutical and nutritional products manufacturing plant, consisting of the following equipment:

(a) one (1) natural gas fired boiler (Boiler No. 7, Unit ID No. 6-5) rated at 95.0 million (MM) British thermal units (Btu) per hour, using No. 2 distillate fuel oil as a back-up fuel, equipped with low NO_X burners, and exhausting through one (1) stack, identified as 6-5-s.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-163-8495-00015	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).

2. That this permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

Local Agency Requirement

6. That pursuant to 326 IAC 2-1-4 (Operating Permit), this document shall also become the first time state and local operating permit, when prior to start of operation (including testing and de-bugging), the following requirements are met:

   (a) The attached Affidavit of Construction shall be submitted to the Evansville Environmental Protection Agency (EEPA) and the Office of Air Management (OAM), Permit Administration & Development Section.

   (b) The Evansville EPA will verify that the facilities were constructed as proposed.

   (c) Pursuant to Municipal Code of Evansville (MCE) 3.30.18.221 (A)(Permits), a local operating permit must be obtained from Evansville EPA prior to start of operation. The local operating permit process will begin upon:

      (i) Receipt of the Affidavit of Construction by Evansville EPA, and

      (ii) Payment to Evansville EPA of a non-refundable $100.00, for the local operating permit issuance fee.

   Operations may only begin following the receipt of a valid local operating permit, issued by Evansville EPA.

   Pursuant to MCE 3.30.18.221(D), local operating permits shall be issued within a reasonable period of time. Thirty (30) days is considered reasonable in most cases.

   (d) If construction is completed in phases; i.e., the entire construction is not done

continuously, a separate Affidavit of Construction must be submitted for each phase of construction and an application for a local operating permit for each phase made to the Evansville EPA. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(e) The local operating permit issued by the Evansville EPA will contain at a minimum the conditions in the Operating Conditions section of this permit.

(f) The Permittee has submitted their Part 70 permit application (T163-7142-00015) on November 12, 1996, for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

(g) The operation permit will be subject to annual operating permit fees pursuant to 26 IAC 2-7-19 (Fees).

NSPS Reporting Requirement

7. That pursuant to the New Source Performance Standards (NSPS), Part 60.40c through 60.48c, Subpart Dc, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

(a) Commencement of construction date (no later than 30 days after such date);

(b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

(c) Actual start-up date (within 15 days after such date); and

(d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

and

Evansville EPA
101 N.W. Martin Luther King Jr. Boulevard, Room 250
Evansville, Indiana 47708

The application and enforcement of these standards have been delegated to the IDEM-OAM. The requirements of 40 CFR Part 60 are also federally enforceable.

8. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).

2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:

   (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.

   (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.

   (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

   The preventive maintenance plan shall be submitted to IDEM, OAM and Evansville EPA, upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):

   (a) In the event that ownership of this 95 MMBtu per hour boiler is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.

   (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.

   (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

   (a) Violation of any conditions of this permit.

   (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

   (c) Changes in regulatory requirements that mandate either a temporary or permanent

reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM and Evansville EPA, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, Evansville EPA or other public official having jurisdiction.

Performance Testing

7. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests for SO_2 emissions, when burning No. 2 distillate fuel oil, and NO_X emissions, when burning natural gas, shall be performed for the 95.0 MMBtu per hour boiler (Unit ID No. 6-5) within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

(a) A test protocol shall be submitted to the OAM, Compliance Data Section, and Evansville EPA, 35 days in advance of the test.

(b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.

(c) All test reports must be received by the Compliance Data Section and Evansville EPA within 45 days of completion of the testing.

(d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

(e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

PSD Minor Source Limit

9. That the input of No. 2 distillate fuel oil to the 95.0 MMBtu per hour boiler (Unit ID No. 6-5) shall be limited to 1,690,000 U.S. gallons per year, rolled on a monthly basis. This production limitation is equivalent to SO_2 emissions of 36 tons per year, rolled on a monthly basis. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

During the first 12 months of operation, the input of No. 2 distillate fuel oil shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 140,833 gallons per month.

Emission Offset Minor Source Limit

10. That the NO_X emissions from the 95.0 MMBtu per hour boiler (Unit ID No. 6-5) when burning natural gas or No. 2 distillate fuel oil shall not exceed 0.08 pounds per million Btu of heat input. This limitation is equivalent to NO_X emissions of 33.3 tons per year.

Annual Emission Reporting

11. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Evansville EPA
101 N.W. Martin Luther King Jr. Boulevard, Room 250
Evansville, Indiana 47708

The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30.

Opacity Limitations (when burning natural gas)

12. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions from the 95.0 MMBtu per hour boiler (Unit ID No. 6-5) shall meet the following at all times of natural gas firing:

    (a) Visible emissions shall not exceed an average of 30% opacity in 24 consecutive readings.

    (b) Visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Opacity Limitations (when burning No. 2 distillate fuel oil)

13. That pursuant to 40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units):

    (a) The opacity from the 95.0 MMBtu per hour boiler exhaust shall not exceed 20 percent as a 6-minute average of 24 consecutive readings as determined by 40 CFR 60.45c; and

    (b) The opacity from the 95.0 MMBtu per hour boiler exhaust shall not exceed 27 percent during one 6-minute period per hour.

Pursuant to 40 CFR 60 Subpart Dc, the opacity limits apply at all times of No. 2 distillate oil firing, except for start-up, shut-down and malfunction periods

Particulate Matter Limitation

14. That pursuant to 326 IAC 6-2-4, the particulate matter (PM) emissions from the 95.0 million Btu per hour boiler using natural gas or No. 2 distillate fuel oil shall be limited to 0.23 pounds per MMBtu heat input.

Fugitive Dust Emissions

15. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Sulfur Dioxide Emission Limitations

16. That pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations), 40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units):

(a) The sulfur dioxide (SO_2) emissions from the 95.0 million Btu per hour boiler shall be limited to 0.5 pounds per million BTU heat input.

(b) To avoid the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), the sulfur content of the fuel oil shall not exceed three-tenths percent (0.3%) by weight when firing No. 2 distillate oil. This limitation will also satisfy the requirements of 326 IAC 7-1.1 and 40 CFR 60, Subpart Dc.

(c) Pursuant to 40 CFR 60, Subpart Dc, the distillate fuel oil sulfur content limit applies at all times, including periods of startup, shutdown, and malfunction.

Reporting Requirements

17. That a log of information necessary to document compliance with operation permit condition nos. 9 and 16 shall be maintained. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM).

(a) A quarterly summary shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Evansville EPA
101 N.W. Martin Luther King Jr. Boulevard, Room 250
Evansville, Indiana 47708

within thirty (30) calendar days after the end of the quarter being reported in the format attached. These reports shall include:

1) The gallons of No. 2 distillate fuel oil consumed per month;

2) The sulfur content of the No. 2 distillate fuel oil;

3) The heat content of the fuel;

4) Fuel oil supplier certifications containing, as a minimum, the following:

a) The name of the oil supplier; and

b) A statement from the oil supplier that certifies the sulfur content and heat content of the fuel oil.

5) A certification, signed by the owner or operator, that the records of the fuel oil supplier certifications represent all of the fuel combusted during the period; and

6) The SO_2 emissions in pounds per million Btu for each facility and the total SO_2 emissions in tons per month.

(b) Unless otherwise specified in this permit, any notice, report, or other submissions required by this permit shall be timely if:

(i) Postmarked on or before the date it is due; or

(ii) Delivered by any other method if it is received and stamped by IDEM, OAM and the Evansville EPA, on or before the date it is due.

(c) All instances of deviations from any requirements of this permit must be clearly identified in such reports.

(d) Any corrective actions taken as a result of an exeedance of a limit, an excursion from the parametric values, or a malfunction that may have caused excess emissions must be clearly identified in such reports.

(e) The first report shall cover the period commencing the postmarked submission date of the Affidavit of Construction.

Fuel Oil Analysis

18. That oil samples shall be collected from the fuel tank immediately after the tank is filled and before any oil is combusted.

(a) The Permittee shall analyze the oil sample to determine the sulfur content of the oil in accordance with 326 IAC 3-3-4.

(b) If a partially empty tank is refilled, a new sample and analysis is required upon filling. Vendor analysis of each delivered load is acceptable, in lieu of the above, if accompanied by a certification.

Open Burning

19. That the permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Emergency Reduction Plans

20. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within 180 calendar days from the issuance date of this permit.

(c) If the ERP is disapproved by IDEM, OAM and the Evansville EPA, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM and the Evansville EPA shall supply such a plan.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(g) Upon direct notification by IDEM, OAM and the Evansville EPA, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Natural Gas Fired Boiler Certification

21. That a certification of natural gas usage for the 95.0 MMBtu per hour boiler shall be submitted quarterly, to comply with operation permit condition no. 12, to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Evansville EPA
101 N.W. Martin Luther King Jr. Boulevard, Room 250
Evansville, Indiana 47708

Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section
and
Evansville EPA

Quarterly Report

Company Name: Mead Johnson & Company
Location: 2400 West Lloyd Expressway, Evansville, Indiana 47721
Permit No.: CP-163-8495-00015
Source: 95.0 MMBtu per hour boiler (Unit ID No. 6-5)
Pollutant: SO_2
Limit: The input of No. 2 distillate fuel oil to the 95.0 MMBtu per hour boiler (Unit ID No. 6-5) shall be limited to 1,690,000 U.S. gallons per year, rolled on a monthly basis. This production limitation is equivalent to SO_2 emissions of 36 tons per year, rolled on a monthly basis. During the first 12 months of operation, the input of No. 2 distillate fuel oil shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 140,833 gallons per month. Also, 0.5 pounds SO_2 per MMBTU heat input and No. 2 distillate oil fuel sulfur content of 0.3% (weight).

Year: _____

Month	Sulfur Content of #2 Fuel Oil (%)	Heat Content of #2 Fuel Oil (Btu/gallon)	No. 2 Distillate Fuel Oil Usage (gal/month)	No. 2 Distillate Fuel Oil Usage Last 12 months (gallons)	SO2 Emissions (lb/MMBtu)

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

State Form 47738 (5-96)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and EVANSVILLE EPA

NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: Mead Johnson & Company
Source Address: 2400 West Lloyd Expressway, Evansville, Indiana 47721
Mailing Address: 2400 West Lloyd Expressway, Evansville, Indiana 47721
CP No.: CP-163-8495-00015

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Report period
Beginning: _____
Ending: _____

Boiler Affected	Alternate Fuel	Days burning alternate fuel From	To

(can omit boiler affected if only one gas boiler at this plant)

I certify under penalty of law that at all times, except as otherwise noted above, only natural gas was burned in the indicated boilers during the report period. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Indiana Department of Environmental Management
Office of Air Management
and
Evansville EPA

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	Mead Johnson & Company
Source Location:	2400 West Lloyd Expressway, Evansville, Indiana 47721
County:	Vanderburgh
Construction Permit No.:	CP-163-8495-00015
SIC Code:	2834, 2099
Permit Reviewer:	Trish Earls/EVP

The Office of Air Management (OAM) has reviewed an application from Mead Johnson & Company relating to the construction and operation of a modification to the existing pharmaceutical and nutritional products manufacturing plant, consisting of the following equipment:

(a) one (1) natural gas fired boiler (Boiler No. 7, Unit ID No. 6-5) rated at 95.0 million (MM) British thermal units (Btu) per hour, using No. 2 distillate fuel oil as a back-up fuel, equipped with low NO_X burners, and exhausting through one (1) stack, identified as 6-5-s.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
6-5-s	Boiler No. 7	to be determined	to be determined	to be determined	to be determined

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 22, 1997, with additional information received on July 8, 1997.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (2 pages).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	24.0	5.9
Particulate Matter (PM10)	14.0	5.8
Sulfur Dioxide (SO_2)	39.0	211.0
Volatile Organic Compounds (VOC)	39.0	1.2
Carbon Monoxide (CO)	99.0	25.4
Nitrogen Oxides (NO_x)	39.0	33.3
Single Hazardous Air Pollutant (HAP)	--	0.0
Combination of HAPs	--	0.0

(a) Allowable sulfur dioxide emissions are determined from the applicability of rule 40 CFR Part 60.40c through 60.48c, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), allowable PM10 and CO emissions are determined from the applicability of rule 326 IAC 2-2 (PSD), and allowable PM, VOC and NO_X emissions are determined from the applicability of 326 IAC 2-3 (Emission Offset). See attached spreadsheets (pages 1 and 2) for detailed calculations.

(b) The potential PM, PM10, VOC, CO, and NO_X emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.

(c) The allowable SO_2 emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.

(d) Allowable emissions (as defined in the Indiana Rule) of SO_2, CO and NO_X are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

(a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Vanderburgh County has been designated as nonattainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) The portion of Vanderburgh County in which the source is located has been classified as nonattainment for particulate matter. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(c) Vanderburgh County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(d) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (ton/yr)
PM	41.6
PM10	41.6
SO_2	149.2
VOC	101.2
CO	383.0
NO_x	290.3

(a) This existing source is a major stationary source because at least one attainment regulated pollutant is emitted at a rate of 250 tons per year.

(b) This existing source is a major stationary source because VOC and NO_X are emitted at a rate of 100 tons per year or greater.

(c) These emissions were based on the Facility Quick Look Report, dated July 24, 1997.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_x (ton/yr)
Proposed Modification	5.8	5.8	36.0	1.2	25.4	33.3
Contemporaneous Increases	0.0	0.0	0.0	0.0	0.0	0.0
Contemporaneous Decreases	0.0	0.0	0.0	0.0	0.0	0.0
Net Emissions	5.8	5.8	36.0	1.2	25.4	33.3
PSD or Offset Significant Level	25	15	40	40	100	40

(a) This modification to an existing major stationary source is not major because the PM10, SO_2 and CO emissions increases are less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

(b) This modification to an existing major stationary source is not major because the potential PM, VOC and NO_X emissions increases are all less than the Emission Offset significant levels. The potential NO_X emissions are 33.3 tons per year, based on a manufacturer's guarantee of 0.08 pounds of NO_X per MMBtu of heat input for low NO_X burners (see page 1 of Appendix A). Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

(c) The SO_2 emissions are limited to 36.0 tons/yr, therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply. This limit is equivalent to limiting the input of No. 2 fuel oil to the 95.0 MMBtu per hour boiler to 1,690,000 gallons per year and limiting the sulfur content of the No. 2 fuel oil used by the 95.0 MMBtu per hour boiler to 0.3% by weight (see page 2 of Appendix A).

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-163-7142-00015) application on November 12, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

40 CFR Part 60.40c through 60.48c, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

The natural gas fired (with No. 2 distillate fuel oil as back-up fuel) 95.0 MMBtu per hour boiler (Unit ID No. 6-5) is subject to the requirements of this rule. This rule requires:

(a) SO_2 emissions be limited to 0.5 pounds per MMBtu of heat input during distillate oil firing or distillate oil sulfur content be limited to 0.5 percent by weight (see page 2 of Appendix A) at all times including periods of start-up, shut-down and malfunction. The source will comply with this rule by accepting a federally enforceable emission limit of 0.3 pounds per MMBtu heat input when burning No. 2 distillate fuel oil in the 95.0 MMBtu per hour boiler.

(b) when burning No. 2 distillate fuel oil, opacity be limited to 20 percent as a 6-minute average, except for one 6-minute period per hour limited to 27 percent opacity, and except for start-up, shut-down and malfunction periods;

(c) initial compliance testing for opacity and SO_2 when firing No. 2 distillate fuel oil;

(d) SO_2 emissions monitoring, unless the affected facility is subject to the SO_2 emissions standard of §60.42c(h) (1), (2), or (3); and

(e) record keeping and reporting as required by Subpart Dc, including quarterly reporting of fuel supplier certification information, fuel oil sulfur content by weight, and the calculated sulfur dioxide emission rate.

There are no NESHAPs (40 CFR Part 63) applicable to this facility.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons/yr of both VOC and NO_X. Pursuant to this rule, the owner/operator of this source must annually submit an emission statement of the source. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1-2 (Opacity Regulations - Visible Emission Limitations)

This rule applies to visible emissions from a source or facility located in either attainment or nonattainment counties, except for those facilities otherwise regulated by a specific visible emissions limitation established in 326 IAC 11, 326 IAC 12, or 326 IAC 6. Since a specific visible emission limit has been established for this facility in 326 IAC 12, (40 CFR Part 60, Subpart Dc) during periods of distillate oil firing, the requirements of 326 IAC 5-1-2 do not apply when the facility is firing distillate oil. However, during periods of natural gas firing, the facility shall meet the following visible emission limitations pursuant to 326 IAC 5-1-2 (2):

(a) visible emissions shall not exceed an average of thirty percent (30%) opacity in twenty-four (24) consecutive readings; and

(b) visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes in a six hour period.

Submittal of the natural gas certification for the 95.0 MMBtu per hour boiler will indicate compliance with the opacity requirements when using natural gas.

326 IAC 6-1 (Nonattainment Area Particulate Limitations)

The 95.0 MMBtu per hour boiler (Unit ID No. 6-5) is not subject to 326 IAC 6-1 because it is not specifically listed in 326 IAC 6-1-16, and it does not have the potential to emit 100 tons or more of particulate matter per year or have actual emissions of 10 tons or more of particulate matter per year.

326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating)

The 95.0 MMBTU per hour natural gas fired boiler (Unit ID No. 6-5) is subject 326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating). Pursuant to 326 IAC 6-2-4, the particulate matter (PM) emissions shall be limited to 0.23 pounds per million BTU heat input (see page 2 of Appendix A).

Allowable PM emissions = (0.23 lb/MMBTU)*(95 MMBTU/hr)*(8760 hr/yr)*(1 ton/2000 lbs) = 95.94 tons/year

Based on this calculation, the limited potential emissions (0.01 lb PM/MMBtu) are less than the allowable emissions, therefore, this boiler complies with the rule.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The sulfur dioxide emissions from the 95 MMBtu per hour boiler (Unit ID No. 6-5), when No. 2 distillate fuel oil is used, shall be limited to 0.5 pounds per MMBtu heat input. This equates to an allowable distillate fuel oil sulfur content limit of 0.49%. Therefore, the sulfur content of the distillate fuel must be less than or equal to 0.49% in order to comply with this rule (See Appendix A for detailed calculations). The facility will comply with this rule by limiting distillate oil sulfur content to 0.3% or less.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

The 95.0 MMBtu per hour boiler (Unit ID No. 6-5) is subject to 326 IAC 7-2-1 (Reporting Requirements). This rule requires the source to submit to the Office of Air Management upon request reports of calendar month or annual average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rates in pounds per million Btu. The source will comply with the reporting requirements of 326 IAC 7-2-1 for boiler 6-5 by submitting on a calendar quarter basis the parameters recorded pursuant to this rule.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

The 95.0 MMBtu per hour boiler (Unit ID No. 6-5) is not subject to the provisions of 326 IAC 8-1-6 because potential uncontrolled VOC emissions are less than 25 tons per year. Therefore, 326 IAC 8-1-6 does not apply.

No other 326 IAC 8 rules apply.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) None of these listed air toxics will be emitted from this proposed construction.

Conclusion

The construction of this modification to the existing pharmaceutical and nutritional products manufacturing plant (95 MMBtu per hour boiler) will be subject to the conditions of the attached proposed **Construction Permit No. CP-163-8495-00015.**

Appendix A: Potential Emissions Calculations
Natural Gas Combustion Only
10 < MM BTU/HR <100
Small Industrial Boiler

Company Name: Mead Johnson & Company
Address City IN Zip: 2400 West Lloyd Expressway, Evansville, Indiana 47721
CP: 163-8495
PIt ID: 163-00015
Reviewer: Trish Earls
Date: August 4, 1997

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Throughput kgals/year	S = Weight % Sulfur
95.0	832.2	5944.3	0.5

Heat Input Capacity includes:
one (1) boiler capable of burning natural gas or No. 2 distillate fuel oil.

	Pollutant					
	PM	PM10	SO2	NOx*	VOC	CO
Emission Factor in lb/MMCF (natural gas combustion)	14.0	14.0	0.6		2.8	61.0
Emission Factor in lb/kgal (No. 2 fuel oil combustion)	2.0	1.0	142S		0.2	5.0
Emission Factor in lb/MMBtu (low NOx burners)				0.08		
Potential Emissions burning natural gas, tons/yr	5.8	5.8	0.2	33.3	1.2	25.4
Potential Emissions burning No. 2 fuel oil, tons/yr	5.9	3.0	211.0	33.3	0.6	14.9
Worst Case Potential Emissions, tons/yr	**5.9**	**5.8**	**211.0**	**33.3**	**1.2**	**25.4**

Note:
* NOx emission factor based on manufacturer's guarantee of 0.08 lb/MMbtu for low NOx burner.

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for CO from natural gas combustion: Uncontrolled = 35, Low NOx Burner = 61, Flue gas recirculation = 37
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors for natural gas combustion are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02
Emissions from natural gas combustion (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu
Emission Factors for No. 2 fuel oil combustion are from AP 42, Tables 1.3-2 and 1.3-4 (SCC 1-02-005-01/02/03)
Emissions from No. 2 fuel oil combustion (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Appendix A: Limited Emissions Calculations
Natural Gas Combustion Only
10 < MM BTU/HR <100
Small Industrial Boiler

Company Name: Mead Johnson & Company
Address City IN Zip: 2400 West Lloyd Expressway, Evansville, Indiana 47721
CP: 163-8495
Plt ID: 163-00015
Reviewer: Trish Earls
Date: August 4, 1997

Heat Input Capacity MMBtu/hr	Limited Throughput MMCF/yr	kgals/year	S = Weight % Sulfur
95.0	832.2	1690.0	0.3

Heat Input Capacity includes:
one (1) boiler capable of burning natural gas or No. 2 distillate fuel oil.

	Pollutant					
	PM	PM10	SO2	NOx*	VOC	CO
Emission Factor in lb/MMCF (natural gas combustion)	14.0	14.0	0.6		2.8	61.0
Emission Factor in lb/kgal (No. 2 fuel oil combustion)	2.0	1.0	142S		0.2	5.0
Emission Factor in lb/MMBtu (low NOx burners)				0.08		
Emissions burning natural gas, tons/yr	5.8	5.8	0.2	33.3	1.2	25.4
Limited Emissions burning No. 2 fuel oil, tons/yr	1.7	0.8	36.0	0.0	0.2	4.2
Worst Case Limited Emissions, tons/yr	**5.8**	**5.8**	**36.0**	**33.3**	**1.2**	**25.4**

Note:
* NOx emission factor based on manufacturer's guarantee of 0.08 lb/MMbtu for low NOx burner.
Limited emissions are based on a No. 2 fuel oil usage limitation of 1,690,000 gallons per year, and a sulfur content limit of 0.3% by weight.
Natural gas usage is not limited.

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for CO from natural gas combustion: Uncontrolled = 35, Low NOx Burner = 61, Flue gas recirculation = 37
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors for natural gas combustion are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02
Emissions from natural gas combustion (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu
Emission Factors for No. 2 fuel oil combustion are from AP 42, Tables 1.3-2 and 1.3-4 (SCC 1-02-005-01/02/03)
Emissions from No. 2 fuel oil combustion (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Compliance with 326 IAC 6-2-4

The following calculation determines the allowable PM emission limit pursuant to 326 IAC 6-2-4:

Pt = 1.09 / Q^0.26, where: Pt = allowable emission limit expressed as lb /MMBtu
Q = total source maximum heat input rate as MMBtu/hr (298.23 MMBtu/hr for existing boilers #3 through #6 and the basement boiler and 95 MMBtu/hr for proposed boiler #7)

Pt = 1.09 / (393.23)^0.26 = 0.23 lb PM / MMBtu **(allowable)**
= 21.90 lb PM / hour (equivalent allowable emissions)
= 95.94 ton PM / year (equivalent allowable emissions)

The following calculation demonstrates compliance with the allowable PM emission limit pursuant to 326 IAC 6-2-4:

Potential Limited PM emission rate = 5.8 tons/yr / 4.38 lb/hr / tons/yr / 95 MMBtu/hr
= 0.01 lb PM / MMBtu **(will comply)**

Compliance with 326 IAC 7-1.1-2

The following calculations determine the maximum sulfur content of #2 distillate fuel allowed by 326 IAC 7-1-.1-2:

0.5 lb/MMBtu x 140,000 Btu/gal = 70 lb/1000 gal
70 lb/1000 gal/ 142 lb/1000 gal = 0.49 %

Sulfur content must be less than or equal to 0.49 % to comply with 326 IAC 7-1.1-2.
Facility will comply with 326 IAC 7-1.1-2 by using fuel oil with a limited 0.30% sulfur content.