

Mr. John Walker
Mead Johnson & Company
2400 West Lloyd Expressway
Evansville, Indiana 47721

Re: 129-14992
First Minor Revision to
FESOP 129-5036-00021

Dear Mr. Walker:

Mead Johnson & Company, located at State Highway 62 East, Mt. Vernon, Indiana 47620 was issued a permit on December 11, 1996 for a pharmaceutical packaging, and research and development operations. A letter requesting changes to this permit was received on October 29, 2001. Pursuant to the provisions of 326 IAC 2-8-11.1 a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document.

- (a) The installation of one (1) new natural gas-fired boiler with the capability of using No. 2 fuel oil as a back-up fuel. The boiler has a heat input capacity of 31.7 million British thermal units per hour (mmBtu/hr).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval 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.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval 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. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Aida De Guzman, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Aida De Guzman or extension (3-4972), or dial (317) 233-4972.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

APD

cc: File - Posey County
U.S. EPA, Region V
Posey County Health Department
Southwest Regional Office
Air Compliance Section Inspector - Scott Anslinger
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
Office of Air Management**

**Mead Johnson & Company
State Highway 62 East
Mt. Vernon , Indiana 47620**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F129-5036-00021	
Original issued by Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: December 11, 1996

First Significant Permit Revision: SMF129-8570, issued on October 2, 1997
 Second Significant Permit Revision: SMF129-9060, issued on March 6, 1998
 First Administrative Amendment: AA 129-10859, issued on May 14, 1999

First Minor Permit Revision: 129-14992	Pages Affected: 26 Pages Added: 26i, 26j, 26k, 26l, 26m, 26n
Issued by Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: December 3, 2001

- (11) One (1) coating unit for dry tablets from facilities 1120,1121 and 1122, designated as S-21 which utilizes one (1) coating pan, controlled by a Baghouse designated as DC-20601 and exhausts to a stack designated as SV-13.
- (12) One (1) coating unit for dry tablets from facilities 1120,1121 and 1122, designated as S-22 which utilizes one (1) coating pan, controlled by a Baghouse designated as DC-20801 and exhausts to a stack designated as SV-14.
- (13) One (1) coating unit for dry tablets from facilities 1120,1121 and 1122, designated as S-23 which utilizes one (1) coating pan, controlled by a Baghouse designated as DC-21001 and exhausts to a stack designated as SV-15.
- (14) One (1) coating unit for dry tablets from facilities 1120,1121 and 1122, designated as S-24 which utilizes one (1) coating pan, controlled by a Baghouse designated as DC-8 and exhausts to a stack designated as SV-16.
- (15) One (1) coating unit for dry tablets from facilities 1120,1121 and 1122, designated as S-25 which utilizes one (1) coating pan, controlled by a Baghouse designated as DC-9 and exhausts to a stack designated as SV-17.
- (16) One (1) new natural gas-fired boiler with the capability of using No. 2 fuel oil as a back-up fuel. The boiler has a heat input capacity of 31.7 million British thermal units per hour (mmBtu/hr).

A.3 Insignificant Activities [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (1) One (1) 20,000 gallon underground storage tank containing No. 2 fuel oil.
- (2) One (1) 1,130 gallon aboveground storage tank containing gasoline.
- (3) One (1) 1,130 gallon aboveground storage tank containing diesel fuel.
- (4) One (1) 300 gallon aboveground storage tank containing diesel fuel.
- (5) One (1) 250 gallon aboveground storage tank containing diesel fuel.
- (6) Cold solvent cleaning station (2 square feet)
- (7) Cold solvent cleaning station (3.75 square feet)
- (8) Light vehicle traffic on paved roads
- (9) Power mixing cabinets
- (10) Pharmaceutical packaging lines with rotoclone
- (11) Research and development operations
- (12) Natural gas fired boiler - 150 hp (exemption received but never placed into operation)

These insignificant activities do not generate nitrogen oxide (NOx) or hazardous air pollutant emissions (HAPs) and therefore, are not included in the nitrogen oxide and hazardous air pollutant emission limits established in this permit.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

SECTION D.6

FACILITY CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (16) One (1) new natural gas-fired boiler with the capability of using No. 2 fuel oil as a back-up fuel. The boiler has a heat input capacity of 31.7 million British thermal units per hour (mmBtu/hr).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.6.1 Sulfur Dioxide (SO₂) [326 IAC 2-8-11.1] [40 CFR Part 60, Subpart Dc] [326 IAC 12]

- (a) The boiler's fuel oil no. 2 usage shall be limited to 676,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.5%.

During the first twelve (12) months of operation of this boiler, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 676,000 gallons per year divided by twelve (12) months, which equals 56,333 gallons; or

- (a) The boiler's fuel oil no. 2 usage shall be limited to 1,128,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.3%.

During the first twelve (12) months of operation of this boiler, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 1,128,000 gallons per year divided by twelve (12) months, which equals 94,000 gallons.

- (b) Compliance with any of these fuel usage and sulfur content limits shall restrict the SO₂ emissions to less than 25 tons per year and make 326 IAC 2-8-11.1(f), Significant FESOP Revision not applicable, and satisfy the requirements of 40 CFR 60, Subpart Dc,

D.6.2 Opacity [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units), the opacity from the 31.7 mmBtu/hr boiler when combusting fuel oil no. 2 shall not exceed 20% opacity (6-minute average) except for one 6-minute period per hour limited to 27% opacity. This limit shall apply at all times except for start-up, shutdown and malfunction periods.

D.6.3 Particulate Matter (PM)

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating, the PM emissions from the 31.7 mmBtu/hr boiler shall be limited to 0.31 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input
Q = Total source maximum operating capacity rating in mmBtu/hr heat input.

D.6.4 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1] [326 IAC 7-2-1] [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the 31.7 mmBtu/hr boiler when combusting fuel oil no. 2 shall not exceed five-tenths (0.5) pound per million Btu heat input while combusting fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average. This limit shall satisfy the requirement of 40 CFR Part 60, Subpart Dc.

D.6.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.6.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.6.4 shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pound per million Btu heat input by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.6.7 Visible Emissions Notations

- (a) Visible emission notations of the 31.7 mmBtu/hr boiler stack exhaust shall be performed once per shift during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.6.8 Record Keeping Requirements

- (a) To document compliance with Conditions D.6.1 and D.6.6, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Conditions D.6.1 and D.6.6.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period. The natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); andIf the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
 - (3) The name of the fuel supplier; and
 - (4) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document compliance with Condition D.6.7, the Permittee shall maintain records of visible emission notations of the boiler stack exhaust while combusting fuel oil.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.9 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1-1(1).

- (b) The Permittee shall certify the new boiler in conjunction with the existing boilers, that natural gas was fired in the boiler at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 Office of Air Quality
 COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Mead Johnson & Company
 Source Address: State Highway 62 East, Mt. Vernon, Indiana 47620
 FESOP No.: F129-5036-00021
 Minor FESOP Revision: 129-14992
 Facility: 31.7 mmBtu/hr Natural Gas/fuel Oil No. 2 Fired Boiler
 Parameter: sulfur dioxide (SO₂)
 Fuel Oil No. 2 Usage Limits:

676,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.5%. During the first twelve (12) months of operation of this boiler, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 676,000 total tons per year divided by twelve (12) months, which equals 56,333 gallons; or

1,128,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.3%. During the first twelve (12) months of operation of this boiler, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 1,128,000 total tons per year divided by twelve (12) months, which equals 94,000 gallons.

Month	Column 1 (This Month)			Column 2 (Previous 11 Months)			Column 1 + Column 2 (12 Month Total)		
	Fuel Oil Usage (gallons)	Sulfur Content (%)	SO2 Emissions (tons)	Fuel Oil Usage (gallons)	Sulfur Content (%)	SO2 Emissions (tons)	Fuel Oil Usage (gallons)	Sulfur Content (%)	SO2 Emissions (tons)
Month 1									
Month 2									
Month 3									

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document (TSD) for a Minor Federally Enforceable
Operating Permit (FESOP) Revision**

Source Background and Description

Source Name:	Mead Johnson & Company	
Source Location:	State Highway 62 East, Mt. Vernon, Indiana 47620	
County:	Posey	
SIC Code:	2834	
Operation Permit No.:	F129-5036-00021	Issuance Date: December 11, 1996
First Minor FESOP Revision:	129-14992	
Permit Reviewer:	Aida De Guzman	

The Office of Air Quality (OAQ) has reviewed a FESOP revision application from Mead Johnson & Company relating to the operation of the following equipment to be used at the pharmaceutical packaging and research and development operations.

- (a) One (1) new natural gas-fired boiler with the capability of using No. 2 fuel oil as a back-up fuel. The boiler has a heat input capacity of 31.7 million British thermal units per hour (mmBtu/hr).

Existing Approvals

- (a) FESOP 129-5036-00021, issued on December 11, 1996;
- (b) First Significant Permit Revision 129-8570, issued on October 1, 1997;
- (c) Second Significant Permit Revision 129-9060, issued on March 6, 1998;
- (d) First Administrative Amendment 129-10859, issued on May 14, 1999; and
- (e) FESOP Renewal 129-13970, pending for issuance.

Recommendation

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

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

A complete application for the purposes of review was received on October 29, 2001.

Emission Calculations

(a) Boiler Emissions:

- (1) Uncontrolled PTE: See page 1 of 2 and 2 of 2 TSD Appendix A for detailed emission calculations.
- (2) Limited PTE:
 Fuel Oil Usage Limitation When Utilized as Primary Fuel Without Using Another Fuel:
 Fuel Oil No. 2 Limit = 24 tons SO₂/year * yr/70.4 tons SO₂ * 1983.5 gal fuel oil/yr
 with 0.5% sulfur content = 676 kgal/year @ 0.5 sulfur content

 Fuel Oil No. 2 Limit = 24 tons SO₂/year * yr/42.2 tons SO₂ * 1983.5 kgal fuel oil/yr
 with 0.3 % sulfur content = 1128 kgal/yr @ 0.3% sulfur content

Unrestricted Potential To Emit

This table reflects the unrestricted potential emissions of the new boiler, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions Using Natural Gas (tons/yr)	Unrestricted Potential Emissions Using Fuel Oil No. 2 (tons/yr)	Worst Case Unrestricted Potential Emissions (tons/yr)
PM	0.3	2.0	2.0
PM-10	1.1	2.0	2.0
SO ₂	0.1	70.4	70.4
VOC	0.8	0.3	0.8
CO	11.7	5.0	11.7
NO _x	13.9	19.8	19.8
Worst Single HAP	0.0	1.08 x 10 ⁻³	1.08 x 10 ⁻³
Combined HAPs	0.0	6.8 x 10 ⁻³	6.8 x 10 ⁻³

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

Justification of the Approval Level

- (a) The modification is subject to 326 IAC 2-8-11.1(d), Minor FESOP Revision, since the potential to emit of Nitrogen Oxides (NOx) is limited to less than 25 tons per year.

Potential to Emit After Modification

The Table below summarizes the potential to emit, reflecting all limits, of the significant emission unit after control.

Process/emission unit	Potential to Emit After Issuance (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Natural gas-fired/fuel oil no.2 Boiler	0.68	0.68	< 25	0.23	3.98	6.75	-
Total PTE After Issuance	0.68	0.68	< 25	0.23	3.98	6.75	-

Note: The fuel oil no. 2 is limited to restrict the SO₂ emissions to less than 25 tons per year. Therefore, emissions from other pollutants will also follow using the following equation:

$$\text{Limited Emission} = \frac{\text{Pollutant PTE} * \text{Limited SO}_2 \text{ Emissions}}{\text{SO}_2 \text{ unrestricted PTE}}$$

Source Status

Existing Source PSD and Part 70 Definition (based on the Limited/Controlled PTE in the following permits):

Pollutant	Proposed 31.7 mmBtu/hr Limited PTE	Limited PTE in FESOP 129-5036-00021 (ton/yr)	Limited PTE in 1 st Significant FESOP Revision 129-8570 (ton/yr)	Limited PTE in 2 nd Significant FESOP Revision 129-9060 (ton/yr)	Sourcewide PTE in This 1 st Minor FESOP Revision 129-14992 (tons/yr)
PM=PM10	0.68	11.5	11.5	11.5	11.5
SO ₂	<25	90.2	90.2	90.2	90.2
VOC	0.23	6.1	6.1	6.1	6.1
CO	3.98	35.8	35.8	35.8	35.8
NO _x	6.75	99.0	99.0	99.0	99.0
Single HAP	0.00	9.0	9.0	9.0	9.0
Combined HAPs	0.00	9.1	9.1	9.1	9.1

Note: As seen in the above table the source has kept the emission limits from the original FESOP on every FESOP revision, including this 1st Minor FESOP Revision.

- (a) This existing source is not a major stationary source for PSD because no attainment regulated pollutant is emitted at a rate of 250 tons per year. The source's operation involves pharmaceutical compounding and packaging and it is not a pharmaceutical product manufacturing source where chemical synthesis, distillation etc. is involved. Therefore, it is not one of the 28 listed source (Chemical Process Plant) categories.

- (b) This existing source is not a major stationary source for Part 70 because no criteria pollutant is emitted at a rate of 100 tons per year. No single HAP nor combined HAPs is emitted at a rate of 10 tons per year or 25 tons per year respectively.

County Attainment Status

The source is located in Posey County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Posey County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60):
 - (1) 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. This rule applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has maximum design heat input capacity of 100 million British thermal units per hour (mmBtu/hr) or less, but greater than or equal to 10 mmBtu/hr.

This rule is applicable to the new 31.7 mmBtu/hr natural gas-fired/No. 2 fuel oil , boiler and requires the following:

- (A) When firing fuel oil no.2, the boiler's SO₂ emissions shall be limited to 0.5 pounds per MMBtu of heat input, or as an alternative shall limit the fuel oil sulfur content to 0.5 percent by weight at all times including periods of start-up, shut-down and malfunction;
- (B) Within 60 days after achieving maximum production rate at which the boiler will be operated, but not later than 180 days after its initial start up, the owner or operator of the boiler shall conduct performance tests and furnish IDEM a written report of the stack test results;
- (C) Opacity shall be limited to 20% opacity (6-minute average) except for one 6-minute period per hour limited to 27% opacity.. This limit shall apply at all times except for start-up, shut-down and malfunction periods;
- (D) As an alternative to SO₂ CEMS, the owner or operator of the boiler shall determine the average SO₂ emission rate by sampling the fuel prior to combustion.
- (E) Record keeping and quarterly report of fuel supplier certification which shall include the following information:
 - (i) The name of the oil supplier;
 - (ii) Fuel oil sulfur content by weight;
 - (iii) A statement from the oil supplier that the oil complies with the

- (iv) specifications under the definition of distillate oil; and
The quarterly report shall include a certified statement signed by the owner or operator of the 31.7 mmBtu/hr boiler that the records of the fuel supplier certifications submitted represent all of the fuel combusted during the quarter.

All records required under this rule shall be maintained by the owner or operator of the boiler for a period of two (2) years following the date of such record.

- (b) National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14 and 40 CFR Part 63:
There are no NESHAPs applicable to this new 31.7 mmBtu/hr natural gas-fired/fuel oil no. 2 boiler.

State Rule Applicability

- (a) 326 IAC 2-8-11.1(f) (Significant FESOP Revision)
The new 31.7 mmBtu/hr natural gas-fired/fuel oil no.2 fired boiler has a significant potential to emit of SO₂ emissions at 70.4 tons/yr. However, the source requested a limit in the fuel oil usage to restrict the SO₂ emissions below 25 tons per year. Therefore, 326 IAC 2-8-11.1(f) (Significant FESOP Revision) is not applicable.
- (b) 326 IAC 2-8-4 (FESOP)
Although, the new boiler would be limited to <25 tons of SO₂ per year, the sourcewide SO₂ emission limit will stay the same, below the Part 70 threshold levels of 100 tons per year.
- (c) 326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is not located in one of the counties listed in the rule and does not emit one hundred (100) tons per year of sulfur dioxide (SO₂). Pursuant to this rule, the owner/operator of the source must submit an emission statement for the source. The statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6 and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8).
- (d) 326 IAC 5-1 (Visible Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (e) 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-4, the PM emissions from the 31.7 mmBtu/hr natural gas/ fuel oil fired boiler shall be limited using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input

Q = Total source maximum operating capacity rating in mmBtu/hr heat input.
= existing boilers + new boiler
= (30.64 + 30.64 + 31.5) + (31.7)
= 124.48 mmBtu/hr
= 0.31 lb/mmBtu

Using Natural Gas as Fuel:

$1.9 \text{ lb/MMCF} * 1 \text{ MMCF}/1000 \text{ mmBtu} = 0.0019 \text{ lb/mmBtu} < 0.31 \text{ lb/mmBtu}$. Therefore, the boiler is in compliance when combusting natural gas.

Using Fuel Oil No. 2:

$2 \text{ lb}/1000 \text{ gal} * 1 \text{ gal}/0.140 \text{ mmBtu} = 0.014 \text{ lb/mmBtu} < 0.31 \text{ lb/mmBtu}$. Therefore, the boiler is in compliance when combusting Fuel Oil No. 2.

- (f) 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)
The sulfur dioxide emissions from the 31.7 mmBtu/hr boiler shall be limited to 0.5 pound per million Btu when combusting fuel oil no. 2.

$0.5 \text{ lb/mmBtu} * 0.140 \text{ mmBtu}/\text{gal} * 1000 \text{ gal}/142 \text{ S} = 0.49 \%$ say 0.5%, the boiler shall utilize a maximum of 0.5% sulfur content of fuel oil in order to comply with the SO₂ limit of 0.5 lb/mmBtu. The boiler is in compliance since the source plans to use a sulfur content of 0.3 % fuel oil.

- (g) 326 IAC 7-1.2-1 (Sulfur Dioxide Compliance: Reporting Requirements)
The owner or operator of the 31.7 mmBtu/hr boiler shall submit reports of calendar month average sulfur content, heat content, fuel consumption and sulfur dioxide emission rate in pounds per million Btu upon request.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to the 31.7 mmBtu/hr boiler are as follows:

- (a) The 31.7 mmBtu/hr boiler fuel oil no.2 usage will be limited to 676 kgal/year when using an average sulfur content of 0.5%, and 1128 kgal/yr when using an average sulfur content of 0.3%.

- (b) Opacity reading shall be made and the opacity be limited to 20% as a 6-minute average, except for one 6-minute period per hour limited to 27 percent opacity. This limit shall apply at all times except for start-up, shut-down and malfunction periods.
- (c) As an alternative to SO₂ CEMS, the owner or operator of the boiler shall determine the average SO₂ emission rate by sampling the fuel prior to combustion.
- (d) Record keeping and quarterly report of fuel supplier certification which shall include the following information:
 - (1) The name of the oil supplier;
 - (2) Fuel oil sulfur content by weight;
 - (3) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil; and
 - (4) The quarterly report shall include a certified statement signed by the owner or operator of the 31.7 mmBtu/hr boiler that the records of the fuel supplier certifications submitted represent all of the fuel combusted during the quarter.

All records required under this rule shall be maintained by the owner or operator of the boiler for a period of two (2) years following the date of such record.

In order that the boiler be subject to a Minor FESOP Revision, the above monitoring requirements are necessary.

FESOP Changes

- 1. Section A.2 of the FESOP is revised to add the new 31.7 mmBtu/hr boiler and be labeled as item (16).
- 2. The following Section D.6 is added in the FESOP:

Facility Description [326 IAC 2-8-4(10)]:

- (16) One (1) new natural gas-fired boiler with the capability of using No. 2 fuel oil as a back-up fuel. The boiler has a heat input capacity of 31.7 million British thermal units per hour (mmBtu/hr).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.6.1 Sulfur Dioxide (SO₂) [326 IAC 2-8-11.1] [40 CFR Part 60, Subpart Dc] [326 IAC 12]

- (a) The boiler's fuel oil no. 2 usage shall be limited to 676,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.5%.

During the first twelve (12) months of operation of this boiler, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 676,000 gallons per year divided by twelve (12) months, which equals 56,333 gallons; or
- (b) The boiler's fuel oil no. 2 usage shall be limited to 1,128,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.3%.

During the first twelve (12) months of operation of this boiler, the fuel usage shall be

limited such that the total usage divided by the accumulated months of operation shall not exceed 1,128,000 gallons per year divided by twelve (12) months, which equals 94,000 gallons.

- (c) Compliance with any of these fuel usage and sulfur content limits shall restrict the SO₂ emissions to less than 25 tons per year and make 326 IAC 2-8-11.1(f), Significant FESOP Revision not applicable, and satisfy the requirements of 40 CFR 60, Subpart Dc,

D.6.2 Opacity [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units), the opacity from the 31.7 mmBtu/hr boiler when combusting fuel oil no. 2 shall not exceed 20% opacity (6-minute average) except for one 6-minute period per hour limited to 27% opacity. This limit shall apply at all times except for start-up, shutdown and malfunction periods.

D.6.3 Particulate Matter (PM)

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating, the PM emissions from the 31.7 mmBtu/hr boiler shall be limited to 0.31 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input
Q = Total source maximum operating capacity rating in mmBtu/hr heat input.

D.6.4 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1] [326 IAC 7-2-1] [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the 31.7 mmBtu/hr boiler when combusting fuel oil no. 2 shall not exceed five-tenths (0.5) pound per million Btu heat input while combusting fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average. This limit shall satisfy the requirement of 40 CFR Part 60, Subpart Dc.

D.6.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.6.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.6.4 shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pound per million Btu heat input by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

- (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.6.7 Visible Emissions Notations

- (a) Visible emission notations of the 31.7 mmBtu/hr boiler stack exhaust shall be performed once per shift during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.6.8 Record Keeping Requirements

- (a) To document compliance with Conditions D.6.1 and D.6.6, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Conditions D.6.1 and D.6.6.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period. The natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

 - (3) The name of the fuel supplier; and
 - (4) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document compliance with Condition D.6.7, the Permittee shall maintain records of

visible emission notations of the boiler stack exhaust while combusting fuel oil.

- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.9 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1-1(1).
 - (b) The Permittee shall certify the new boiler in conjunction with the existing boilers, that natural gas was fired in the boiler at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.
3. The following quarterly report form for the new boiler is added in the FESOP:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR MANAGEMENT
 COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Mead Johnson & Company
 Source Address: State Highway 62 East, Mt. Vernon, Indiana 47620
 FESOP No.: F129-5036-00021
 Minor FESOP Revision: 129-14992
 Facility: 31.7 mmBtu/hr Natural Gas/fuel Oil No. 2 Fired Boiler
 Parameter: sulfur dioxide (SO₂)
 Fuel Oil No. 2 Usage Limits: 676,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.5%. During the first twelve (12) months of operation of this boiler, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 676,000 total tons per year divided by twelve (12) months, which equals 56,333 gallons; or
 1,128,000 gallons per twelve month period, rolled on a monthly basis, when using an average sulfur content limit of 0.3%. During the first twelve (12) months of operation of this boiler, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 1,128,000 total tons per year divided by twelve (12) months, which equals 94,000 gallons.

Month	Column 1 (This Month)			Column 2 (Previous 11 Months)			Column 1 + Column 2 (12 Month Total)		
	Fuel Oil Usage (gallons)	Sulfur Content (%)	SO2 Emissions (tons)	Fuel Oil Usage (gallons)	Sulfur Content (%)	SO2 Emissions (tons)	Fuel Oil Usage (gallons)	Sulfur Content (%)	SO2 Emissions (tons)
Month 1									
Month 2									
Month 3									

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

5. The new boiler is added to the existing boilers being certified in this form when using natural gas as fuel.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Mead Johnson & Company
Source Address: State Highway 62 East, Mt. Vernon, Indiana 47620
Mailing Address: 2400 West Lloyd Expressway, Evansville, Indiana 47721-0001
FESOP No.: F129-5036-00021
Minor FESOP Revision: 129-14992

**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

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:

Conclusion

The operation of this 31.7 mmBtu/hr boiler shall be subject to the conditions of the attached approved **Minor FESOP Revision 129-14992-00021**.

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

Company Name: Mead Johnson & Company
 Address City IN Zip: State Highway 62 East, Mt. Vernon, Indiana 47620
 Minor FESOP Revision: 129-14992
 Pit ID: 129-00021
 Reviewer: Aida De Guzman
 Date Application Received: October 29, 2001

Heat Input Capacity Potential Throughput
 MMBtu/hr MMCF/yr

31.7
boiler

277.7

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.3	1.1	0.1	13.9	0.8	11.7

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Industrial Boilers (< 100 mmBtu/hr)
#1 and #2 Fuel Oil
HAPs Emissions**

Company Name: Mead Johnson & Company
 Address, City IN Zip: State Highway 62 East, Mt. Vernon, Indiana 47620
 Minor FESOP Revision: 129-14992
 Pit ID: 129-00021
 Reviewer: Aida Dr Guzman
 Date Application Received: October 29, 2001

Emission Factor in lb/mmBtu	Arsenic 4.0E-06	Beryllium 3.0E-06	Cadmium 3.0E-06	Chromium 3.0E-06	Lead 9.0E-06
Potential Emission in tons/yr	5.55E-04	4.17E-04	4.17E-04	4.17E-04	1.25E-03

HAPs - Metals (continued)

Emission Factor in lb/mmBtu	Mercury 3.0E-06	Manganese 6.0E-06	Nickel 3.0E-06	Selenium 1.5E-05
Potential Emission in tons/yr	4.17E-04	8.33E-04	4.17E-04	2.08E-03

Methodology

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton