

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT
and
EVANSVILLE ENVIRONMENTAL PROTECTION AGENCY**

**Whirlpool Corporation
5401 U. S. 41 North
Evansville, Indiana 47727**

is hereby authorized to construct

one (1) natural gas-fired boiler 3 (ID# EU-12) with the capability to burn no. 2 distillate fuel oil as a back-up. This boiler has a maximum heat input rate of 33.5 million BTU per hour and has no air pollution control devices. This boiler exhausts through stack S12. Whirlpool Corporation is also hereby authorized to convert from no. 6 fuel oil to no. 2 distillate fuel oil as a back-up fuel for boiler 5, which currently operates under Evansville EPA Certificate of Operation 022-005-021.

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-163-8917-00022	
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 debugging), the following requirements are met:
 - (a) The attached Affidavit of Construction shall be submitted to the Evansville Environmental Protection Agency (EPA) 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.

NSPS Reporting Requirement

7. That pursuant to the New Source Performance Standards (NSPS), 326 IAC 12, (40 CFR 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
Room 250
101 N. W. Martin Luther King Jr. Boulevard
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 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 household refrigerator and ice maker manufacturing plant 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, 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, OAM, and Evansville EPA or other public official having jurisdiction.

Malfunction Condition

- 7. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):
 - (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
 - (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
 - (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
 - (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Annual Emission Reporting

- 8. 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
Room 250
101 N. W. Martin Luther King Jr. Boulevard
Evansville, Indiana 47708

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

Emission Offset Minor Modification Limit

9. That the no. 2 distillate fuel oil input to the 33.5 million BTU per hour boiler 3 shall be limited to 1,100,000 gallons per 365 consecutive day period, rolled on a daily basis. This production limitation is equivalent to SO₂ emissions of 39 tons per 365 consecutive day period, rolled on a daily basis. Therefore, the Emission Offset rules, 326 IAC 2-3, shall not apply.

During the first 365 days of operation, the no. 2 distillate fuel oil input shall be limited such that monthly fuel input to the 33.5 million BTU per hour boiler 3 shall not exceed 91,600 gallons.

Opacity Limitations

10. 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 shall meet the following:
- (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.

11. Particulate Emission Limitation

That pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating that were Constructed After September 21, 1983), the particulate emissions from the 33.5 million BTU per hour boiler 3, when burning either type of fuel, shall be limited to 0.25 pounds per million BTU heat input.

Sulfur Dioxide Emission Limitations

12. That pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide (SO₂) emissions from the 33.5 million BTU per hour boiler 3, when burning no. 2 distillate fuel oil, shall be limited to 0.5 pounds per million BTU heat input.

NSPS

13. That the 33.5 million BTU per hour boiler 3 shall comply with the New Source Performance Standard 326 IAC 12 and 40 CFR 60.40c through 60.48c, Subpart Dc. This rule requires that the owner or operator of the boiler not discharge into the atmosphere:
- (a) SO₂ in excess of 0.5 pounds per million BTU heat input or, as an alternative, shall not combust in the boiler no. 2 distillate fuel oil that contains greater than 0.5 weight percent sulfur. If the owner or operator elects to demonstrate compliance with the sulfur content limit using fuel analysis, operation condition no. 15 must be met;
 - (b) gases that exhibit greater twenty percent (20%) opacity (6-minute average), except for one 6-minute period per hour of not more than twenty seven percent (27%) opacity. Compliance with this opacity limit shall also satisfy the requirements of 326 IAC 5-1.

NSPS Testing Requirement

14. That pursuant to the NSPS, Subpart Dc, a compliance opacity test shall be performed on the 33.5 million BTU per hour boiler 3 within 60 days after burning no. 2 fuel oil as the back-up fuel.

This test 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, 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 within 45 days of completion of the testing.
- (d) Whenever the results of the opacity 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 opacity 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.

15. No. 2 Distillate Fuel Oil Sampling and Analysis

That no. 2 distillate fuel oil samples shall be collected from the fuel tank immediately after the tank is filled and before any fuel 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.

These requirements shall facilitate in gathering data to determine compliance with operation condition nos. 12 and 13(a).

16. Record Keeping Requirements

- (a) That the Permittee shall maintain monthly records at the source of the following values in order to determine compliance with operation condition no. 12:
 - (i) Total amount of no. 2 distillate fuel oil used;
 - (ii) Average sulfur content of no. 2 distillate fuel oil used;
 - (iii) Average higher heating value of the no. 2 distillate fuel oil used;
 - (iv) Average sulfur dioxide emission rate (expressed in pounds per million BTU).

Records of sulfur content and higher heating value can be determined by information as obtained by the vendor. As long as the certified vendor analysis indicates that the sulfur

content is less than 0.5 percent and the higher heating value of the fuel oil delivered is greater than 140,000 BTU per gallon, the Permittee can note "less than 0.5 percent" and "greater than 140,000 BTU per gallon" for items (ii) and (iii) respectively.

- (b) That the Permittee shall maintain records at the source of the daily no. 2 distillate fuel oil usage in order to determine compliance with operation condition no. 9.

Reporting Requirements

- 17. (a) That a quarterly summary to determine compliance with operation condition no. 9 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
Room 250
101 N. W. Martin Luther King Jr. Boulevard
Evansville, Indiana 47708

within thirty (30) calendar days after the end of the quarter being reported using the format attached.

- (i) For the first 365-day period, these reports shall include the calendar month no.2 distillate fuel oil consumption.
- (ii) For the succeeding 365-day periods, these reports shall include the following:
 - (A) Daily no. 2 distillate fuel oil consumption; and
 - (B) No. 2 distillate fuel oil consumption for previous 365-day period.
- (b) That a summary to document compliance with operation condition no. 12 shall be submitted upon request to the address listed in (a), within thirty (30) days after the day of the request. These reports shall include items (i) through (iv) of operation condition no. 16.
- (c) 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 Evansville EPA, on or before the date it is due.
- (d) All instances of deviations from any requirements of this permit must be clearly identified in such reports.

- (e) Any corrective actions taken as a result of an exceedance 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.
- (f) The first report shall cover the period commencing the postmarked submission date of the Affidavit of Construction.

Open Burning

18. 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

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) for the entire source 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

and

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

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

- (c) If the ERP is disapproved by IDEM, OAM, and 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 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.
- (f) Upon direct notification by IDEM, OAM, and 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]

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967**

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? _____, 100 LBS/HR VOC ? _____, 100 LBS/HR SULFUR DIOXIDE ? _____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? _____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____

LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/19____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/19____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL * SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____
TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO₂, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

326 IAC 1-2-39 “Malfunction” definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Whirlpool Corporation
Evansville, Indiana
Permit Reviewer: Marco A. Salenda

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**Indiana Department of Environmental Management
Office of Air Management
and
Evansville Environmental Protection Agency**

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Whirlpool Corporation
 Source Location: 5401 U.S. 41 North, Evansville, Indiana 47727
 County: Vanderburgh County
 Construction Permit No.: CP-163-8917-00022
 SIC Code: 3632
 Permit Reviewer: Marco A. Salenda

The Office of Air Management (OAM) has reviewed an application from Whirlpool Corporation relating to the construction and operation of one (1) natural gas-fired boiler 3 (ID# EU-12) with the capability to burn no. 2 distillate fuel oil as a back-up. This boiler has a maximum heat input rate of 33.5 million Btu per hour and has no air pollution control devices. This boiler exhausts through stack S12. The application also includes the conversion from no. 6 fuel oil to no. 2 distillate fuel oil as a back-up fuel for boiler 5, which currently operates under Evansville EPA Certificate of Operation 022-005-021.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S12	boiler 3 (ID# EU-12)	40	2	10,000	350

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 August 26, 1997, with additional information received on September 18, 1997.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (two 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)	36.5	2.1
Particulate Matter (PM10)	2.0	2.0
Sulfur Dioxide (SO ₂)	73.6	74.4
Volatile Organic Compounds (VOC)	0.4	0.4
Carbon Monoxide (CO)	5.2	5.2
Nitrogen Oxides (NO _x)	21.0	21.0
Single Hazardous Air Pollutant (HAP)	0.0	0.0
Combination of HAPs	0.0	0.0

- (a) Allowable PM emissions are determined from the applicability of rule 326 IAC 6-2-4. Allowable SO₂ emissions are determined from the applicability of rule 326 IAC 7 and 40 CFR Part 60.40c through 60.48c, Subpart Dc. See attached spreadsheets for detailed calculations.
- (b) The potential SO₂ emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of SO₂ 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 NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. The Evansville Area of Vanderburgh County has been designated as marginal nonattainment for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) The Evansville Area of Vanderburgh County has also been classified as nonattainment for total suspended particulates (TSP). Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Source Status

Existing Source Emission Offset, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	857
PM10	982
SO ₂	160
VOC	715
CO	202
NO _x	530

- (a) This existing source is a major stationary source because at least one criteria pollutant is emitted at a rate of 100 tons per year or greater.

- (b) 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	2.0	2.0	39	0.4	5.1	21
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	2.0	2.0	39	0.4	5.1	21
Offset Significant Level	25	15	40	40	100	40

- (a) This modification to an existing major stationary source is not major because the emissions increase is less than the Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (b) The SO₂ emissions are limited to 39 tons per 365 consecutive day period, rolled on a daily basis, therefore, Emission Offset requirements do not apply. This limit is equivalent to 1,100,000 gallons of no. 2 fuel oil per 365 consecutive day period, rolled on a daily basis.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted its Part 70 (T-163-7467-00022) application on December 11, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

40 CFR Part 60, Subpart Dc

This boiler (ID# EU-12) is subject to the New Source Performance Standard, 326 IAC 12 and 40 CFR Part 60.40c through 60.48c, Subpart Dc. This rule requires that the owner or operator of the boiler not discharge into the atmosphere:

- (a) SO₂ in excess of 0.5 pounds per million Btu heat input or, as an alternative, shall not combust in the boiler no. 2 distillate fuel oil that contains greater than 0.5 weight percent sulfur;
- (b) gases that exhibit greater twenty percent (20%) opacity (6-minute average), except for one 6-minute period per hour of not more than twenty seven percent (27%) opacity.

Enclosed is a copy of this federal rule.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This boiler (ID# EU-12) is subject to 326 IAC 2-6 (Emission Reporting), because the source is located in Vanderburgh County and emits more than 10 tons per year of VOC or NO_x. Pursuant to this rule, the owner/operator of this subject boiler must annually submit an emission statement for this facility. 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 (Visible Emissions)

Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- (1) visible emissions shall not exceed an average of 30% opacity in 24 consecutive readings.
- (2) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 6-1-2 (Nonattainment Area Particulate Emissions Limitations for Sources of Indirect Heating)

This 33.5 million BTU per hour boiler 3 (ID# EU-12) is not subject 326 IAC 6-1-2 (Nonattainment Area Particulate Emissions Limitations for Sources of Indirect Heating) since this boiler does not have the potential to emit PM more than 100 tons per year and does not have actual PM emissions more than 10 tons per year. Since this rule does not apply, 326 IAC 6-2 will apply.

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

This 33.5 million BTU per hour boiler 3 (ID# EU-12) is subject to 326 IAC 6-2-4. This rule requires particulate emissions from this boiler be limited to 0.25 pounds per million BTU (lb/MMBtu) heat input.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

This rule requires the sulfur dioxide emissions from the combustion of no.2 distillate fuel oil to not exceed 0.5 pounds per million Btu (lb/MMBtu) heat input.

Based on the emission calculations (see Appendix A), the potential SO₂ emissions when burning no.2 distillate fuel oil are less than the allowable emissions, therefore, this boiler complies with the rule.

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.

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

Conclusion

The construction of this natural gas-fired boiler 3 (ID# EU-12) with the capability to burn no. 2 distillate fuel oil as a back-up will be subject to the conditions of the attached proposed

Whirlpool Corporation
Evansville, Indiana
Permit Reviewer: Marco A. Salenda

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CP-163-8917
ID-163-00022

Construction Permit No. CP 163-8917, Plt ID 163-00022.

III. Limited Potential Emissions

Since the potential emissions of SO2 is greater than the 40 tons per year PSD significant level, the company has agreed to limit the annual fuel oil usage to the following:

no. 2 fuel oil: 1100 kgals/yr rolled on a daily basis

Potential Throughput of natural gas (MMcf/yr) = 293.5 S % sulfur content of fuel oil = **0.50**
 Potential throughput of fuel oil (kgal/yr) = 1100.0

Pollutant	Natural Gas			Distillate (No. 2) Fuel Oil			Worst Case	
	Ef3 * (lb/MMcf)	Potential Emissions (lbs/hr) (tons/yr)		Ef2 (lb/kgal)	Potential Emissions (lbs/hr) (tons/yr)		Potential Emissions (lbs/hr) (tons/yr)	
PM	13.7	0.5	2.0	2.0	0.3	1.1	0.5	2.0
PM-10	13.7	0.5	2.0	1.0	0.1	0.6	0.5	2.0
SO2	0.6	0.0	0.1	142.0 S	8.9	39.1	8.9	39.1
NOx	140	4.7	20.5	20.0	2.5	11.0	4.7	20.5
VOC	2.8	0.1	0.4	0.2	0.0	0.1	0.1	0.4
CO	35	1.2	5.1	5.0	0.6	2.8	1.2	5.1

* Worst case emission factor for natural gas

IV. Allowable Emissions per Applicable Requirements

A. The following calculations determine the maximum sulfur content of distillate fuel oil allowable by 326 IAC 7 and the NSPS, Subpart Dc:

limit: 0.5 lb SO2/MMBtu
 16.8 lb/hr
 73.4 tons/yr

$$0.5 \text{ lb/MMBtu} \times 140,000 \text{ Btu/gal} = 70 \text{ lb/1000gal}$$

$$70 \text{ lb/1000gal} / 144 \text{ lb/1000 gal} = 0.49$$

Sulfur content must be less than or equal to 0.5% to comply with 326 IAC 7 and to limit SO2 emissions to 99 tons per year or less.

B. The following calculations determine compliance with the particulate limitation allowed by 326 IAC 6-2-4:

limit: $\frac{1.09}{Q^{0.26}}$ (lb/MMBtu)

Given: Q = 294.5 MMBTU/hr (total heat input capacity of all indirect heating facilities in the source)

limit: 0.25 (lb/MMBtu)
 8.3 (lbs/hr)
 36.5 (tons/yr)

Comparing to limited potential emissions:
 2.0 (will comply)

Indiana Department of Environmental Management
Office of Air Management
and
Evansville Environmental Protection Agency

Addendum to the
Technical Support Document for New Construction and Operation

Source Name: Whirlpool Corporation
Source Location: 5401 U.S. 41 North, Evansville, Indiana 47727
County: Vanderburgh County
Construction Permit No.: CP-163-8917-00022
SIC Code: 3632
Permit Reviewer: Marco A. Salenda

On November 19, 1997, the Office of Air Management (OAM) had a notice published in The Evansville Courier, Evansville, Indiana, stating that Whirlpool Corporation had applied for a construction permit to construct and operate one (1) natural gas-fired boiler 3 (ID# EU-12) with the capability to burn no. 2 distillate fuel oil as a back-up fuel; and to switch the back up fuel for boiler 5 from no. 6 fuel oil to no. 2 fuel oil. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 16, 1997, Whirlpool Corporation submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

Comment 1

In reference to operation condition no. 3 (Preventive Maintenance Plan), would the requirement for a preventive maintenance plan be required for the new boiler even though it does not have a control device? Whirlpool typically has individuals responsible for inspecting, maintaining, and repairing the boiler. A routine preventive maintenance program will be implemented shortly after installation. Does the preventive maintenance program apply to the boiler or strictly to emission control devices?

Response 1

Regular preventive maintenance (e.g., relining, replacing of fans, etc.) has to be performed to ensure that the boiler 3 is properly operating such that the opacity requirements, particulate emission limitation, and sulfur dioxide emission limitation are met. Therefore, a preventive maintenance plan is required for the boiler 3.

Comment 2

In reference to operation condition no. 14 (NSPS Testing Requirements), it is understood pursuant to NSPS, Subpart Dc, that compliance testing must be performed within 60 days after burning no. 2 fuel oil. It seems that no testing is required during the routine burning of natural gas. Whirlpool intends to use no. 2 fuel oil only as a back up fuel should natural gas curtailment occur. Please confirm that no testing is required with the burning of natural gas.

Response 2

For this case, the NSPS, Subpart Dc, requirements (i.e., SO₂ standard and opacity limitation) applies to the burning of no. 2 fuel oil only. NSPS testing is required when burning this type of fuel only in order to

determine compliance with the SO₂ standard and the opacity standard. Whirlpool Corporation has the option to use fuel oil analysis in lieu of the the SO₂ emission test to determine compliance with the SO₂ standard.

Comment 3

The quarterly reporting requirements seem to be aimed at no. 2 fuel oil. Whirlpool does not intend to use no. 2 fuel oil unless emergency curtailment of natural gas require this. Whirlpool intends to file the initial quarterly report indicating that no fuel has been used. Does Whirlpool have to continue the quarterly reporting even if no no. 2 fuel oil is used or can this report be eliminated until no. 2 fuel oil usage begins at a some later date? This would strictly be a measure to reduce unnecessary paper work.

Response 3

Since the NSPS, Subpart Dc, requires the submission of quarterly reports for compliance with the SO₂ limitation or fuel oil sulfur content standard, regardless of whether the affected fuel is used primarily or as a back up, Whirlpool is required to submit quarterly reports of no. 2 fuel oil usage.

On November 19, 1997, Scott Stacy, OAM Compliance Data Section staff, submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

Comment

On the first page of the permit, it is mentioned that Whirlpool Corporation is authorized to convert from no. 6 fuel oil to no. 2 fuel oil as a back up fuel for boiler 5. There is no other mention of this boiler in the proposed permit.

Response

The switch from no. 6 fuel oil to no. 2 fuel oil does not trigger any new applicable requirements, aside from what is already required in the previous permit.